



### The Honors College at the University of Maine

# 2014



**GROWING A SIGNATURE PROGRAM** 



François G. Amar, Dean

#### MINERVA

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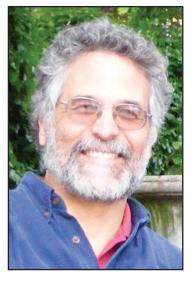
Front Cover: An aerial shot of the Honors campus featuring (from left to right) Balentine, Colvin, and Estabrooke Halls. Photo courtesy of University of Maine.

Opposite: One of the light fixtures in newly renovated Estabrooke Hall.

Back Cover: Photographs of (clockwise from top) Colvin, Balentine, and Estabrooke halls taken in the evening.

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A happy concordance of the calendar has us celebrating the 80th year of Honors at the University of Maine during its sesquicentennial. In this issue of MINERVA you will see evidence of the huge changes since Honors started as a program in 1935, graduating its first cohort of 4 students in 1937. That number has grown steadily over the years and in 2014, 83 students graduated with Honors. 2015 also marks the 13th year since we transitioned from a Program to a College and are on track to graduate about 90 students this year, one of the largest classes in the history of the College.

The cover of this issue shows another big change: the expansion of the Honors College into part of

Estabrooke Hall. Our 'Honors campus' within the campus comprises Colvin Hall and the Thomson Honors Center in the middle of the photo with Balentine and Estabrooke Halls on the left and right, respectively. We moved the administrative center of the College into the northwest corner of Estabrooke (nearest to Charlie's Terrace) in August of 2014. The space also houses offices for the Honors faculty as well as a beautiful new classroom and lobby/lounge spaces for students and visitors. Colvin remains a student center open 24/7 to our students and they take full advantage of it as a study space, as well as a space to meet and to socialize. An exciting development is the upcoming renovation of the 3rd and 4th floors of Estabrooke as dorm space for juniors and seniors, a significant portion of which will be dedicated Honors housing. With the Honors dorms in Colvin, Balentine, Penobscot and Estabrooke, the new space will expand our living-learning communities to about 300 beds.

FROM THE DEAN

The expansion of the College into new space is the physical manifestation of the vibrancy of the Honors enterprise at UMaine. New initiatives in research and international collaboration such as our new Sustainable Food Systems work and our strengthening connections with Tembusu College in Singapore are outlined in these pages. Also notable is the College's selection as one of seven Signature Programs at the University, all programs that are identified by their strengths in research and education. We welcome new faculty and staff as we also bid fond farewell to several stalwart members of our community who retire this year.

If you are an Honors graduate, family member, or friend, I hope you will visit to see the changes in the College first-hand. If you are a prospective student, we welcome inquiries about Honors at UMaine and hope you will join this community of engaged scholars that is so enriched by the help and support of its dedicated faculty and staff, its interdisciplinary student body, loyal alumni and other supporters who make it possible for us to "ignite a passion for learning."

François Ama

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# HONORS NEWS The Honors College Is Growing

A tour of the new space in Estabrooke Hall

The Honors College recently moved into the newly renovated northwest corner of Estabrooke Hall in order to accommodate its growth and expansion. We moved some administrative offices, including the office of the Dean, from Colvin to Estabrooke; Colvin remains our student center while Estabrooke is now our administrative center.



The entrance is just across the road from Colvin Hall.



Dean François Amar in his new office in Estabrooke 145.



New lounge space in Estabrooke Hall, decorated with canvases depicting student activities such as classroom discussions, research, study abroad, and service.



New classroom in 152 Estabrooke Hall.





Preceptor Edie Elwood reviewing some artistic final projects in her new faculty office.

### **Updates to Colvin and Balentine Halls**







New projectors have been installed in Colvin and Balentine. This multimedia technology is helpful for preceptorials studying "texts" in audio, film, and picture forms. From left to right, these classrooms are ready to view a performance of Berlioz's *Symphonie Fantastique*, an image of the Acropolis, and the film *Man With A Movie Camera* by Dziga Vertov.

As the Honors College grows, so too does our collection of published and bound theses. We have expanded our library from the Thesis Archives room to the Gershwin classroom. You are welcome to stop by to view yours.





We renovated a new space for research collaboration in the basement of Balentine Hall.

Pictured: Students Danielle Walczak and Audrey Cross of the Sustainable Food Systems Research Collaborative (more information on this group and their work can be found on page 11).



### Honors in the Community - A Lasting Impact

The Honors College's emphasis on community engagement creates a lasting impact from the moment students enter in the first year until long after they've graduated, an impact that changes the students as well as their communities. In the Honors College, students are immersed in serving communities at a number of levels, from the global underprivileged, to local towns, to the wider academic world.

### Global Community

Minerva 2014



Service is an essential element of the Honors experience and students are encouraged to get involved from the moment they get here. After being moved in with the help of some experienced students, first year students are all involved in a campus-wide service event. The organization Stop Hunger Now worked with us again for another successful event. Stop Hunger Now is an organization that provides large groups the tools to package food as quickly as possible for impoverished people around the world and at home. Honors students packed 20,088 meals in 77 minutes, which was 13 minutes faster than the previous year.

Service continues beyond this first experience, as students like Bryer Sousa show. Bryer formed an organization, WaterForME, to help people around the world gain access to potable water. He gathered students across disciplines to unite in the mission to provide water to those that need it. Independent service projects like this show how dedicated our students become and how they lead others in service.



### Student Community

Every year, the College hosts a Welcome Back barbecue inviting new and returning students to come together and forge relationships over burgers and hot dogs. Students ate a lot of food and played many lawn games as they got to know each other. During homecoming weekend, alumni from all years were invited to our new space in Estabrooke to catch up with one another. It's always wonderful to hear how well our students are doing and to see them reconnect with the professors that helped them get there.

The Student Advisory Board has recently been expanded as more students are being invited to join and a structure has been implemented that includes a President and Vice President. Numerous committees have already been formed, such as an outreach program that will help connect Honors to high school students and local communities, a mentor committee that will engage older students with helping younger students, and an academic affairs committee that will involve students in decisions to revise the Honors curriculum.

Local Community





Two Honors students, Daniella Runyambo and Kate Spies, took the lead in bringing Georges Bundagu Makoko to lecture in Estabrooke Hall to a group of students and faculty in the Honors community and beyond. Makoko is originally from the Democratic Republic of the Congo and has written a memoir about his journey from the Congo to America, specifically to Portland, ME. The talk was a resounding success and the Honors community is proud to support our students in such endeavors.

In spring 2014, the Honors College piloted a one-credit civic engagement course, Citizen Scholar: Introduction to Civic Engagement (HON 175) created and taught by Melissa Ladenheim. Intended to compliment HON 180 A Cultural Odyssey and HON 170 Currents and Contexts, this course asks students to take part in a variety of community-based projects connected to classroom learning. Students explored the nature of civic engagement in relation to ideas about civic identity, civic responsibility, volunteerism, community membership, and social connectedness. As students participate in and reflect on their experiences, the goal is to nurture and strengthen their civic identities and relationships, encouraging them to become more engaged citizens.

### DIGITALCOMMONS®

Successful, Sustainable Institutional Repositories

Almost the entire collection\* of Honors College theses is available either physically or digitally, in the libraries at Colvin Hall and/or on the digital commons site at http:// digitalcommons.library.umaine. edu/honors/

Erica Berry's thesis "A Comparative Study of African American Representations in Film from Original to Remake as Influenced by the Civil Rights Movement" has 4,401 downloads as of 3/11/15!



### Academic Community

In total, Honors theses have been downloaded by scholars across the world 55,119 times! We're proud of our students for having such a wide impact in their fields of scholarly research.

Jenna Bowley's thesis "Robin Hood or Villain: The Social Constructions of Pablo Escobar" is the fifth most popular recent article in the entire UMaine system with 4,127 downloads as of 3/11/15!

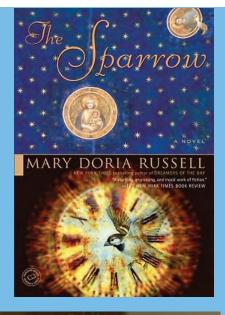
\*If you believe your thesis hasn't been bound or hasn't been uploaded to the digital commons and you would like it to be, please contact us and we can make it happen!

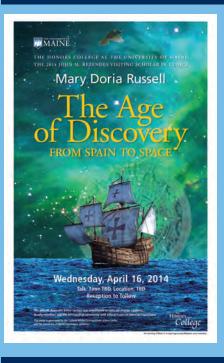


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### LECTURES

# 2014 John M. Rezendes Visiting Scholar in Ethics Mary Doria Russell





On October 12, 1492, Columbus arrived in what would become known as the New World. Should that day be celebrated as the beginning of the Age of Discovery or regretted as the beginning of a catastrophe for the native peoples of the Americas? Anthropologist and author Mary Doria Russell looks to examine these questions. Her novel *The Sparrow* asks, "How well would modern, intelligent, well-meaning people do if we were placed in a state of radical ignorance as

profound as that of Columbus and the early explorers? Even if we meant no harm, we would surely make mistakes as tragic as those that followed First Contact between Europeans and Native Americans.

Mary Doria Russell, author of the 2013 Honors Read, *The Sparrow*, provided the 2014 Rezendes Ethics Lecture on the "Ethics of Discovery".

#### 2014 John M. Rezendes Ethics Essay:

The theme "Ethics of Discovery" prompted students to explore the ethical dimensions and moral ramifications of the act of discovery, as well as what it means to seek.

Winner: Kate Spies (English): "Voices: Morally Addressing the Conflict in the DRC Through Kantian Ethics"

Runner Up: Abigail Feuka (Wildlife Ecology): "The Ethics of Lengthening the Human Lifespan Through Biochemical Technology"

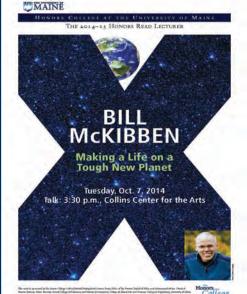
Runner Up: Priscilla Langlais (Animal and Veterinary Science): "Designer Babies: An Experiment in Genetic Stigmatization"



For more information on the John M. Rezendes Ethics Lecture visit: honors.umaine.edu/traditions/



# 2014 Honors Read *Eaarth* Bill McKibben





Bill McKibben, author of *Eaarth*, the 2014 Honors Read, gave an inspiring call to action in the Collins Center for the Arts on October 7, 2014. The audience of more than 800 people included about 300 UMaine Honors students and faculty along with students from colleges around the state as well as many other members of the community. McKibben, a renowned environmental writer, activist and founder of the world-wide organization 350.org, also met with local groups and citizens confronting climate change in a Climate Change Focus Group after his lecture. This gathering allowed folks to share experiences and exchange ideas about ways to confront climate change on our campus and in our community. The Honors College hosted a reception and dinner for McKibben, giving Honors students and others a chance to interact with him on a more personal level.



For more information on the Honors Read visit: honors.umaine.edu/traditions/

### Research

### **Honors Goes to New Orleans for NCHC Conference**

Thank you to Betsy and Bill Leitch for their support enabling us to send 15 students to New Orleans, LA for the National Collegiate Honors Council Conference.

#### Presentations:

What Makes a Winning Honors Newsletter?
Samantha Paradis, Bre Bennett
Characterization of Eight Novel Microbacteriophage
Eliot Gagne
For the Love of all Disciplines: Keeping Demanding Majors in the Thesis
Process
Eleni Anderson, Nicole Begley, Bre Bennett
Measuring Automatic Emotional Responses to Homosexuals
Morgan Kinney
Reading Other Voices: The Role of the Outsider in the Honor's Curriculum
Ciarán Coyle, Haley Poston, Mark Haggerty
Creolizing Perspectives: A Greener Approach to the Honors Curriculum
Taylor Cunningham, Andrew Estrup, Sarah Harlan-Haughey, Katie
Lees
Fundamental Research in the Classroom: The Role of the Student/Faculty Relation-
ship in Developing Autonomous Learners Who Embrace Challenge
Eliot Gagne, Sally Molloy
Transforming Assessment in Honors: The role of data, student engagement, and eth-
ics in addressing the conflict over measured outcomes
Shannon Brenner, Robert Glover, Jordan LaBouff, Nick Moore, Chris
Paradis
Salaam: Building Bridges with Islam in our Honors College Community
Kyle Franklin, Hina Hashmi, Mimi Killinger, Melissa Ladenheim
A Course on the Honors Thesis: Demystifying the Process
Breanna Bennett, Jennifer Chalmers, Christine Gilbert, Mark Haggerty,
Samantha Paradis
Finding Our Way: Creating Community From the Diversity of an Evolving Honors

College Faculty

François Amar, Rob Glover, Mimi Killinger, Melissa Ladenheim



Christine Gilbert was named Student of the Year for 2013 by the National Collegiate Honors Council!





(From left to right) Professor Sarah Harlan-Haughey and students Katie Lees, Taylor Cunningham, and Andrew Estrup ready to present.



Sam Paradis and Bre Bennett accepting the Newsletter Award for their work on MINERVA.



gan Kinney presenting her poster.



Nicole Begley enjoying the French Quarter.

# Sustainable Food Systems Research Collaborative

SFSRC is an interdisciplinary group of faculty, students and community partners working to address food systems issues.



Faculty and students participating in the Hunger Dialogue (L-R: Mark Haggerty, John Jemison, Audrey Cross, Melissa Ladenheim, Ashely Thibeault, Danielle Walczak, and François Amar)



Summer 2014 SFSRC Research Fellows: (L-R) Ashley Thibeault, Danielle Walczak and Audrey Cross The SFSRC aims to foster undergraduate research; host seminars, workshops, and informal gatherings; and build sustainable relationships throughout the university and out to the community.

The SFSRC hosts a number of opportunities for students, including thesis research topics, research fellowships, conversation and collaboration with peers, off campus opportunities and conferences, community engaged research, and a newly created Honors Tutorial called Sustainable Food Systems: Principles, Policies & Practices.

Work to date includes Shannon Brenner's 2014 Honors thesis "Bridging Gaps and Building Solidarity," based on research with Food & Medicine's SNAP benefits program at the Bangor farmer's market, three summer undergraduate research fellowships, attendance at the Maine Food Summit, Bangor Food Summit, and the ASFS/AFHVS Annual Meeting, and presentations at the Hunger Dialogue, the Maine EPSCOR conference, and National Collegiate Honors Council conferences.

Photographs by Corallina Breuer and Danielle Walczak

### **The Maine Hermit Lab**

The traditional model of humanities research is that of a student hunkered in the library surrounded by books, reading and note-taking long into the night. The lab model commonly used in the sciences however, shows how research can benefit from open collaboration.

Professor Sarah Harlan-Haughey has designed a way to adapt collaborative lab research to the humanities. By tapping into current community interests in the recently discovered North Pond Hermit, she created a humanities lab that has researched and produced work studying the culture around hermits through interviews, ethnographic research, songs, and more. The lab hopes to eventually produce a collectively written book that will explore hermit culture in Maine.

This project was funded by the Humanities Initiative.



Pictured: Hilary Warner-Evans presenting some of her research at the NCHC conference.

# Faculty-Student Partnership for Cuba Research



Fourth-year student Blaise Collett and Rezendes Preceptor for the Arts Mimi Killinger travelled together to Cuba this October on an educational tour related to their respective research. Blaise is writing an Honors thesis on organic farms in Cuba and Mimi is writing a biographical profile on the American Jerry Buttrey, who has been bringing gifts and supplies to a Havana pediatric hospital and to the Cuban AIDS sanitarium, Los Cocos. Their collaborative adventure brought Blaise and Mimi to fascinating sites including a Cuban eco-community, numerous organic farms, Los Cocos and the homes of Cuban friends of Buttrey's, who helped guide their research. Blaise was grateful to have received help from the Charlie Slavin Research fund, and Mimi was likewise appreciative of a 2014 University of Maine Summer Faculty Research Award that supported her work.

# Awards

### **INBRE**

The Honors College and the Maine IDeA Network for Biomedical Research Excellence (INBRE) are pleased to announce the recipients of six Honors Thesis Fellowships and three Junior Year Research Awards for Spring 2014.

#### THESIS FELLOWSHIPS:

Gwen Beacham (Biochemistry) with Sally Molloy Katrina Harris (Microbiology) with Keith

Hutchison

Hina Hashmi (Microbiology) with Julie Grosse Jay Knowlton (Biology) with Rebecca Van Beneden Samantha Kwok (Molecular and Cellular Biology) with Roger Sher

Stephanie Woods (Biology) with Sharon Ashworth

JUNIOR YEAR RESEARCH AWARDS: Campbell Belisle Haley (Biochemistry, Spanish) with Sally Molloy Margaret Pasquarella (Zoology) with Clarissa Henry Emily Whitaker (Molecular and Cellular Biology) with Sally Molloy

### **CLAS Awards**

These fellowships were developed to enhance and increase undergraduate student involvement in faculty supervised research and creative activity.

Cameron Huston (Political Science) mentored by Robert Glover and Melissa Ladenheim Nellie Kelly (Theater/History) mentored by Marcia Douglas Shayne Plourde (Mathematics) mentored by Andre Khalil Samuel Reynolds (Psychology) mentored by Alan Rosenwasser Julia Sell (Physics) mentored by Robert Lad Patric Skigen (Journalism) mentored by Jennifer E. Moore Bryer Sousa (Chemistry) mentored by François Amar



### CUGR (Center for Undergraduate Research)

Honors College students Danielle Walczak '15 (Journalism), Gwen Beacham '15 (Molecular and Cellular Biology), Tyler Roy '15 (Psychology), Julia Sell '15 (Physics), Katrina Harris '15 (Microbiology), Torey Bowser '15 (Marine Sciences), and Amy Fish '15 (Animal and Veterinary Science) were all awarded CUGR summer fellowships

There were 2 awards for oral presentations:

1st: Paige Martin, (Molecular and Biomedical Sciences), "Exosome-Mediated Drug Delivery for Treatment of Brain Cancer;" adviser: Carol Kim (first place)

2nd: Christine Gilbert, (International Affairs), "Sustainability's Inconvenient Discourse;" adviser: Mark Haggerty (second place)

### **Student Achievements**

Gwen Beacham '15 (Molecular and Cellular Biology) was awarded the Goldwater Scholarship.

Morgan Gustin '16 (Animal and Veterinary Science) and Hilary Warner-Evans '16 (Anthropology) were both recipients of the George J. Mitchell Peace Scholarship.

Kimberly Dao '14 is the first recipient of the Carolyn Reed Medical Scholarship to study medicine at Tufts University.

Evelyn Fairman '14 was a finalist for the Society of Women Engineers Collegiate Technical Poster competition.

Berkay Payal received an honorable mention in the Dorothy Clarke Wilson Peace Writing Prize.

Emily Illingworth and Robert Soohey presented at the Howard Hughes Medical Institute.

Hilary-Warner Evans presented at The Plymouth Medieval and Renaissance forum.

### Carolyn E. Reed Pre-Medical Thesis Fellowship

The Reed Fellowship is awarded annually to support Honors students whose thesis research embodies the passion for and dedication to medicine evident in the work of Dr. Carolyn Reed.

Andrew Vetter (Biology) '15 Samantha Kwok (Molecular and Cellular Biology) '15

### Maine Campus Compact

Maine Campus Compact is a coalition of 17 campuses whose purpose is to catalyze and lead a movement to reinvigorate the public purposes and civic mission of higher education.

Dr. Robert Glover, CLAS-Honors Preceptor of Political Science, received the Donald E. Harward Award for Faculty Service-Learning Excellence

Kimberly Dao '14 (Biology) and Bryer Sousa '16 (Chemistry) were both recipients of the Heart and Soul Award



### **Faculty Achievements**

Dr. Jordan LaBouff, CLAS-Honors Preceptor of Psychology, and Dr. Sarah Harlan-Haughey, CLAS-Honors Preceptor of English, both received College of Liberal Arts and Sciences Pre-tenure Research and Creative Activity Fellowships

Dr. Robert Glover (CLAS-Honors Preceptor of Political Science) and his class won a 2014 Maine Studies Research and Creativity Award for the research project entitled, "Building a Better Orono Together: Cultivating Organic Community Connection with University and Orono Stakeholders."

Dr. Mimi Killinger, Rezendes Preceptor for the Arts, was awarded tenure at the rank of Associate Professor

Dr. Mark Brewer, Political Science, was promoted to Professor and won the 2014 CLAS Outstanding Faculty Award in Teaching/Advising

Drs. Melissa Ladenheim and Jordan LaBouff were recognized for their mentorship to members of the All Maine Women Class of 2014



### **Charlie Slavin Research Fund**

The Charlie Slavin Research Fund was created to support undergraduate students who are inquisitive and passionate about learning, and to help them reach their full potential.

Spring 2014 Award Recipients Kristyn Daigle (Biochemistry) '14 Kimberly Dao (Biology) '14 Chad McKoy (Mathematics) '15 Emma Wilson (Management/Marketing) '14

Fall 2014 Award Recipients Andrew Wilson (Biology) '15 Blaise Collet (International Affairs) '15 Stephen Soohey (Molecular & Cellular Biology) '17 Robert Soohey (Microbiology) '17 Gabrielle Price (Psychology) '15 Hillary Morin (Biology) '15 Marissa Rublee (Food Science & Human Nutrition) '15 Mackenzie Mazur (Marine Science) '15 Emily Illingworth (Biochemistry) '15 Conner Lajoie (Molecular & Biomedical Sciences) '17 Evan Amabile (Biology) '15 Rachel Chase (Animal & Veterinary Sciences) '15 Andrew Estrup (Chemical Engineering) '15

### **Alumni Achievements**



The 2014 Bernard Lown '42 Alumni Humanitarian Award was presented to M. Dennis Rezendes '57



The 2014 President Abram W. Harris Award was presented to Deb Gervais '86

Photographs courtesy of the UMaine Foundation and Alumni Association

### ACADEMICS

### Why I Teach in the Honors College



#### Rob Glover, Assistant Professor of Honors and Political Science

There's a simple answer. The students. There. I'm done.

Just kidding. I'll elaborate. In honors education, we talk about the value of "student-centered learning." That's a dull and somewhat bureaucratic-sounding phrase for something that can be exhilarating and magical. In practice this means that honors education puts talented and motivated students in close contact with professors. Students and professors work together to grapple with important questions, challenging texts, and collaborate on research and creative activity.

The author John Steinbeck once wrote an essay about the most memorable moments of his own education. He spoke of one particular class that had driven him and his fellow students to "...shouting, bookwaving discussions," a teacher who "...had the noisiest class in school and she didn't even seem to know it," a

class where the students' "...speculation ranged the world." Steinbeck said that this experience had "...breathed curiosity into us so that we brought in facts or truths shielded in our hands like captured fireflies." This is what we mean when we speak of student-centered education.

This may sound overly sentimental, but those of us who teach in the Honors College know the power of these moments. They produce a "teaching high" that can carry you through the towering stacks of grading that should have been done a week ago or the mind-numbing faculty meetings that always seem to last an hour too long. However, these remarkable moments are impossible without enthusiastic, thoughtful, and engaged students. Our students come from diverse disciplines, with very different perspectives on the questions we ask in Honors. But, in general, they share a willingness to ask, and attempt to answer, almost impossible questions about the human condition, how we should structure our lives and societies, how civilizations evolve over time and where they might be moving in the future. Students bring the knowledge they have gained to their more specialized thesis research.

At its best, honors education is the vehicle for talented students to develop and excel as thinkers, researchers, artists, scholars, and citizens. And if you ask this honors preceptor, getting to watch that process unfold may be the most rewarding part of my job.

#### Sally Molloy, Assistant Professor of Molecular and Biomedical Sciences

Sometimes at scientific meetings, in between sessions, I'll sneak in a few lines of the Aeneid or The Republic, whatever the upcoming Honors read is. This looks pretty strange to most of my microbiologist peers and I am almost always asked, "Why are you reading that?" followed by "why would you be teaching a Western Civilization course?" Sometimes I imagine they are thinking, "How ridiculous, she must be completely out of her element." And I am. But being out of my element is the first reason why I love teaching Honors. The second reason is my answer to my scientist peers: "I know it may not seem to make any sense, but actually the materials are all interconnected. It doesn't matter whether the students are learning about gene regulation or Plate's theory of forms. The learning goals are the same



about gene regulation or Plato's theory of forms. The learning goals are the same and my role is the same."

Sometimes reading Honors texts is a struggle for me. I am certainly more comfortable reading about mechanisms of homologous recombination than Plato's The Republic. But it is the struggle that draws me to these courses and to the material. And I know from my own experience that when I struggle, I am about to do my best work.

My goal in the classroom is to help students learn not only to embrace struggle and challenge, but to seek challenge in their learning pursuits. The challenges students face in science courses, research laboratories, or Honors civilization courses are the same. And the process of students accepting the struggle and nudging the fear aside to reach a deeper understanding of the molecular or metaphysical world is also the same. I love watching students use their deepening understanding to solve new problems in the laboratory or to make new connections in the civilization classroom. Their ideas are different from mine and are inspiring.

Teaching in the Honors Civilizations series has made me a better scientist and a better educator. One might think that a seminar focused on reading classic literature and a research laboratory course each pull from different strengths, and in some ways they do. However, in my experience, the study of one enhances the other. Beneath the structure of the academic material, there are concepts that are all interconnected. I love bringing Honors concepts into the science classroom, particularly Socrates. In a classroom, our goal is to collectively come as close as possible to some truth. Whether that truth is related to the biology of a microorganism or how we understand the nature of reality, students reach that goal by achieving a new level of awareness of themselves, their peers and the world around them. I love teaching Honors. And I can't imagine being an effective scientist or an educator in its absence.

### **Honors Through The Years**

Four Honors students at different stages of the Honors journey share their experiences

I am from Bronx, New York and I chose to focus on engineering, specifically, civil engineering. I hope to inspire girls to become engineers; I want them to know that there is no reason they should be scared in a field that is dominated by men, because I believe that women can change that. I am a first year student and I have come to the realization that college is like an extended summer camp...now. The reason I say "now" is because the transition from high school to college was not as easy as I thought it would be; being away from my family and friends was very hard for me. But with the help of my adviser and new friends, I was able to find my way in college and now I am getting the hang of things.



Jodaliza Feliz '18, Pre-Engineering



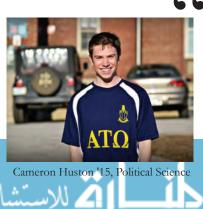
Isaiah Mansour '17, Marine Science

It's funny, being shocked when hindsight again proves twentytwenty. Of course the Honors College has more than it shows! Last year, my first, I experienced the core aspects. The small discussion-based courses: comfortable, creative, and collaborative. The lectures: entertaining, enraging, or awe-inspiring, but always engaging. This year, through conversation with my preceptors, I entered a wonderland—the Honors Community, an incredible realm of opportunity for artistic expression, private guest lectures, dinners, performances, and networking with industry-leaders. The Honors College is tethered to an elaborate web of businesses, research opportunities, scholarships, internships, etc., many of which I have been encouraged to pursue, and some of which I am grateful to have achieved.

I have to admit, balancing playing Division I basketball, taking classes for my Biology Major with a Pre-Med Concentration and Chemistry Minor, leading the Student Athlete Advisory Committee on campus and being a student in the Honors College is a lot of work and does take some time management skills, but the growth I've seen in myself as a player, student and person because of my involvement in the Honor's College is definitely worth it. As a third year Honors student, I am so thankful for the opportunities my experience has created for me to think critically, create important connections, and to gain experience in the medical field through an internship to fulfill my third-year tutorial requirement. The Honors community has allowed me to surround myself with many different types of people with different interests that all drive me to become a better me.



Elizabeth Wood '16, Biology



From my first Honors class to now, I've had the opportunity to experience and learn more than I ever thought I would. Honors has shaped my views on the importance of citizenship and civic engagement and has allowed me to pursue a thesis topic that not only excites me, but that I feel has important, real life applications. I'm working to write a new policy for Student Conduct involving students living on campus based on the concept of Restorative Justice. My thesis has been challenging, but it has also been one of the most rewarding academic experiences I've had thus far. Beyond this, the faculty and professors, the other students, and the Honors community in general has also been amazing to be a part of. There's nowhere else on campus where you'll find as many like-minded students and professors that really push you towards success.

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### TRAVEL

### University of Glasgow in Scotland Principia Consortium



I learned about the Enlightenment Period in Scotland from some of the most renowned lecturers in Europe and took day trips to historic sites across Scotland. I also enrolled in a bagpiping class, where I studied the history of the pipes and had weekly lessons with an instructor. Studying abroad is an incredible, life-changing experience for anyone, and the Consortium Principia provides Honors students with extra opportunities.

- Amy Fish '15, Animal and Veterinary Sciences

The Principia Consortium is a select group of 20 U.S. colleges and universities—of which the University of Maine is one—that have collaborated with the University of Glasgow to offer students enrolled in their Honors programs a unique international Study Abroad opportunity at the University of Glasgow.



### Pommern, Tanzania Rezendes Global Service Scholarship

Thanks to the generous support of Dennis and Jacqueline Beau Rezendes, we were again able to send one of our students to Tanzania with Global Volunteers. The Dennis '57 and Beau Rezendes Global Volunteers Fund was established in conjunction with Global Volunteers to encourage student volunteerism abroad.



Our mission in Tanzania, one of the most impoverished countries in the world, was to "wage peace and promote justice" in the rural village of Pommern through various educational, health and community building projects. This region of Tanzania has the highest rates of HIV/ AIDS in the country. I worked closely with the doctor and two nurses on the Public Health Team to teach Rural Medical Aides healthcare basics from the rural medicine guide, Where There is No Doctor. We also worked in two clinics- the first, a government clinic primarily for HIV/AIDS stricken patients, and the second, a



free clinic (not legally recognized) with no doctor or any trained healthcare worker. I was able to work with an epileptic child, work at the orphanage, and also care for a three-year-old burn victim whose 18 year-

old single mother walked several kilometers to seek our help every day. My three weeks in Pommern mark the most valuable, lifechanging experiences I have gained. Despite the challenges, not a day went by without receiving cheerful greetings of "Kamwene" on the street, hearing beautiful singing from the churches, or anticipating children gathering around the Mission House every evening to play.



### Tembusu College in Singapore Student and Faculty Exchange

The Honors College is thrilled to be partnering with Tembusu College in Singapore to enhance educational and cultural exchanges. This past year, we welcomed a faculty member from Tembusu College to teach a May Term course and sent two of our students to Singapore for our first exchange. We look forward to continuing this opportunity and expanding our students understanding at home and abroad.

### Asia Now! The Archaeology of the Future City (At Tembusu College)



Over the previous summer, I was fortunate enough to be given the opportunity to study at Tembusu College in Singapore with another UMaine Honors student, Laura Donovan. To me, the Honors experience has always been about exposure to people, places, and ideas that

are thought-provoking and challenge my views of the world. During the three weeks that we spent studying urban architecture and city planning at Tembusu, I learned a great deal about culture, about education, and about myself. Laura and I were able to work sideby-side with students from over twelve other countries under the tutelage of accomplished professors - and not just in the classroom. Through various excursions, we

were lucky enough to be able to see both the industrialized facade of modern Singapore as well as the traditional, heartfelt, and spontaneous soul of the city-state. It was an incredible experience and I am profoundly grateful to the Honors College for their support and assistance. - Kate Pouliot '16, Animal and Veterinary Sciences



### Antwerp, Belgium Charles V. Stanhope '71 Study Abroad Fellowship

Charles V. Stanhope '71 Study Abroad Fellows are students in the Honors College whose interest in study abroad resembles the passion for different cultures exemplified by Charles Stanhope's life and work at the Library of Congress.

In Fall 2014, I studied orthopedagogy which roughly translates into social educational care work in Antwerp, Belgium. I interned at the Intercultural Women Center of Antwerp where I worked with mothers and their children, planning programs to help connect and develop attachments with their children. I was able to work with women from all over the globe like Morocco, Turkey, Ghana, India, etc. The Stanhope Scholarship impacted my time abroad because it provided me the means to obtain a greater experience during the semester. I was able to explore more places and cultures because of this scholarship. I am grateful to Charles Stanhope for the blessing of being able to travel.

- Mary Borer '15, Social Work





# Alumni & Friends

### Class of 2005 Follow Up Andrea Pelletier, MD MPH (B.S. Biology)



I was flattered to be invited to provide an update on what I've been doing since graduating from the Honors College in 2005. At the University of Maine, I majored in Biology and minored in Human Nutrition. I was encouraged by Dean Charlie Slavin to combine these two interests for my Honors thesis, where I studied the Folic Acid (an important nutrient in fetal development) intake of female students on campus. I believe my dear friend Charlie would be pleased that I have continued to develop my passion for women's health, and have devoted my career to taking care of women.

After UMaine, I attended the University of Vermont College of Medicine. Between my 3rd and 4th years of medical school, I earned a Masters in Public Health at Harvard. My

concentration was Family and Community Health with a special interest in Women, Gender and Health. During my year in Boston, I also worked with various organizations to improve contraception access and improve family planning training in medical school and residency programs. I graduated from UVMCOM in 2010 and started my residency in Obstetrics and Gynecology at Maine Medical Center. I graduated from residency in June 2014, and now I am working in an OB/GYN practice in Portland, Maine.



Andrea, her husband, Jeff, and their dogs

As a science major, the Honors College encouraged me to pursue a well-rounded college experience, which forced me to think critically and ask questions that I may

not have otherwise been inspired to ask. Yet, more importantly than the books I read or the courses I took, the people of the Honors College inspired me. Charlie was a personal and professional mentor to me throughout my time at UMaine. His wisdom and guidance had a huge impact on who I am today as a physician and as a person.

### Class of 2014 Follow Up Joshua Jones, (B.S. Biochemistry)



After a relaxing post-graduation summer at home in Presque Isle, ME, largely spent catching up on reading, I am now working towards my PhD in microbiology at the Massachusetts Institute of Technology in Cambridge, MA. As the temperatures drop and this busy and exciting first semester of coursework and laboratory rotations approaches its conclusion, it is highly appropriate to reflect on my experiences at UMaine and in the Honors College.

During my second year at UMaine I found my passion for microbial research in Dr. Robert Wheeler's lab, where I used transparent zebrafish embryos to study fungal pathogenesis in a living host. Somewhere along the path

between struggling through technical difficulties while attempting my first experiment to the day I finally defended my Honors thesis, I discovered my ability as a student researcher to transform my curiosity into new knowledge. Through this I found my motivation for pursuing advanced study and a career in research. This was one of many ways that my study at UMaine was truly an education beyond the traditional classroom.

Even more than I initially expected, the Honors College complemented my science education by fostering in me a deeper appreciation for the arts and literature and by enriching my capacity for thoughtful self-reflection. Even further from academic walls than the laboratory or the pages of an Honors text, I learned some of the most important lessons in my fraternity, Sigma Phi Epsilon. It was there that I made some of my closest friends, made the greatest strides in personal development and found the lifelong support of a brotherhood. In sum, the opportunities and support I found during my time at UMaine, within the Honors College, SigEp and elsewhere, were essential components of my education.



### Associate Catch Up: Benjamin Wooden '10



It has been three-and-a-half years since I worked as an Honors Associate in the "Experiment Station" (Holmes Hall) with my partner in Honors-related crime, Jonathan Erde. A lot has happened in that time! I am currently in the middle of my third year at the Icahn School of Medicine at Mount Sinai, in New York City, and although I still have quite a ways to go, the muddy waters are starting to clear in terms of what specialty I want to go into (currently the leading candidates are cardiology, gastroenterology, or general surgery—something procedural, anyway). New York is tons of fun, and I have thoroughly enjoyed living on the Upper East Side a block away from Central Park, but my wife and I are both Mainers at heart, and we are looking forward to moving back to New England when I finally graduate.

Speaking of which, I got married earlier this year!!! My wife Mandy and I actually met in Tina Passman's Honors small group class, on our second day of college as first-years at UMaine in August, 2006. And to add to the Honors currents running through our relationship, the officiant at our wedding was none other than my fellow Associate in 2010-11, Jonathan Erde. Mandy and I were married in Hermon, ME on August 29th, 2014, and at the time I am writing this piece, we are looking forward to our honeymoon in Cancun shortly after Christmas!



The Honors College has been a huge part of my life ever since that first class in 2006, and although it has been several years since I was last on campus, I still look

back on my time studying and working in the Honors College as the transformative period that put me on the path to the life I wanted to live. To those of you in the midst of (or just starting) your Honors experience, make sure to enjoy it! These are some of the best years of your life, and you never know who might walk through the door and sit next to you in tomorrow's small group...:)



THE NEW ASSOCIATES: JENNY FERGUSON '14 AND NICK MOORE '14

Jenny graduated with a degree in Political Science with minors in French and International Affairs. She has a passion for working with students and is thrilled to be able to start her career in Higher Education within the Honors College. Nick graduated this year with a degree in English and a minor in Philosophy. After a year working for the Honors College, he plans to go to graduate school to pursue a career in publishing.

Jenny and Nick see themselves primarily as student ambassadors and have used their positions in the Honors College to elevate the student voice. One of the most important projects that they have begun is the rejuvenation and expansion of the Student Advisory Board. By installing a traditional officer distribution with a multitude of committees, such as mentoring, media, and outreach, they hope to create a self-sustaining organization that will promote student action.



Another important initiative that Jenny and Nick have tackled is enhancing the video quality for students that are unable to attend the weekly Civilizations lectures. With the help of AV services' Serge Drage, Jenny and Nick are thrilled to announce a new Polycom system for Spring 2015 that will enhance the quality and distribution of the lecture videos. A big thank you goes out to Professor Jordan LaBouff who graciously lent his video camera during the transition

the transition.

Jenny and Nick most enjoy working with students and helping them achieve their goals in the Honors College.



### HONORING LEGENDARY PROFESSORS



#### Steve Cohn

Professor of Sociology Lectures: *The Lucifer Effect by Philip Zimbardo, Second Treatise on Civil Government* by John Locke, *The Social Contract and Discourse on the Origin of Inequality* by Jean-Jacques Rousseau, and Zimbardo, Durkeim, Weber

"I started teaching in Honors in Fall 1981, and, with the exception of two sabbatical years, I have taught courses in Honors until Fall 2010. Primarily at the 100 and 200 levels but also at the 300 level. My decision to teach in Honors was not a well thought out decision but it turned out to be one of the best decisions of my life. I joined The University of Maine in 1971 as an assistant professor of sociology and taught here until Spring 1978 when I left the university for two years to serve as policy analyst at The National Science Foundation. In Spring 1980 I resumed teaching in sociology. I felt a need of an additional challenge, and a position in Honors opened up.

Although I did not know this at the time, I was very ready to study the traditional great books curriculum that the first year Honors courses had partially adopted. In college, I was very interested in the social sciences and mathematics and uninterested in the major questions raised in the humanities, believing that, if they could not be definitely answered, they were not worth considering. In my early forties, I was, though I did not know it at the time, very ready to encounter these issues. My teaching in Honors has been a blessing for me, allowing, and forcing, me to deeply consider what I now regard as the most important questions in human life. I have been able to talk about, and reflect upon, these questions with outstanding students and very challenging colleagues. I have learned a great deal, and what I have learned has greatly changed my life for the better. I would like to express my gratitude to my students and colleagues and to invite them to contact me at 20 Blueberry Lane, Falmouth, ME 04105 or steve.cohn@umit. maine.edu."

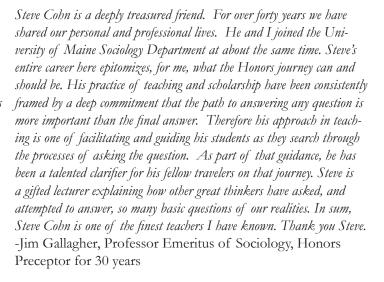




It's hard to put in words the impact that Steve Cohn has had on my life. I first met Steve Cohn and was introduced to sociology during my junior year when I took his Macrosociology course. I would take several courses with him during my college career, before he served as my Honor's thesis advisor. Anybody who has taken a class with Steve understands and has been blown away by his immense knowledge in an array of areas and his passion for teaching–years later, I still find myself returning to my old notes from my meetings and courses with Steve, and even today I'm still learning from him. Most importantly, Steve cares deeply about teaching and his students. He is, without a doubt, the best teacher I have ever had. He was the first person to suggest that I should apply to graduate school, and it is in large part because of him that I pursued a career as an academic.

-Jason Houle, PhD, UMaine Sociology & Honors '05 Assistant Professor of Sociology, Dartmouth College

MINERVA 2014



#### Tina Passman

Associate Professor of Classical Language and Literature Lectures: *The Odyssey* by Homer, *Aeneid* by Virgil, *The Golden Ass* by Apuleius, *Confessions* by Saint Augustine, and *The Inferno* by Dante Alighieri



"I was recruited into the Honors Program almost as soon as I arrived at UMaine in 1985. I had a long history with Honors Programs: at the University of Iowa I went through the Honors Program and graduated with Honors; when I taught at the University of Utah, part of my teaching assignment as a Classicist was to teach in their undergraduate Honors sequence.

The late Ulrich Wicks invited me to work with three other faculty members, Jim Gallagher, Mel Gershman, and Bob Strong to create a second year sequence, and I happily joined the team. It was an exciting experience, and although the sequence was changed later, was a most stimulating introduction to UMaine and Honors.

I began teaching and lecturing in Honors, sometimes lecturing 4 times per academic year, depending upon the texts chosen. In 1995, when the Director went on Sabbatical, I was appointed Interim Director. Later, as chair of my department (MLC), I continued lecturing, teaching tutorials, guiding Honors theses and teaching preceptorials. In time, I cut back on my teaching, but remained available for faculty meetings and Peer Committees, as well as thesis committees.

I will always cherish the intellectual excitement, the social fun ("Tea with Tina"), the research opportunities that came with every tutorial and lecture, and the friends I made with students and faculty in my many years with Honors."



Tina Passman was to me, appropriately enough, a Mentor in Homer's original sense of the word, a voice of divine wisdom appearing in the guise of trusted friend. And it was by her guidance that the myths of antiquity, with their descents into Hell and ascents to the sublime, came to make sense of my own journey through life. Her mentorship attests to the fact that quality scholarship depends as much upon forming personal relationships as upon individual effort. As a teacher, leader, and friend, her approach to education puts the human in studia humanitatis.

-Jeremy Swist, M.A. in Classics from University of Iowa, BA in Latin and European History from UMaine & Honors '10 Teaching Assistant in the Classics Department at The Uni-

versity of Iowa





Tina's independent energies are deeply creative. Her suggestion that I lecture on Apuleius (before I had even read The Golden Ass!) was such a display of confidence and vision. Her generous support in that lecture helped me find a new angle on my study of the voice. The Greek travel course we put together with Jay Bregman was a fabulous experience, fondly remembered by all. We couldn't have done it without her!

-Nancy Ogle, Professor of Music since 1982, Honors preceptor for 20 years

### PROFILES

# Special Recognition

The Honors College would like to recognize the following Honors College students for their outstanding achievements during the 2013-2014 academic year. Congratulations!

> Salutatorian: Jennifer Chalmers '14 (English/History)

Outstanding Student, Liberal Arts and Sciences: Ariel Bothen '14 (International Affairs, Anthropology)

Outstanding International Student, Natural Sciences, Forestry, and Agriculture Jinlun Bai '14 (Biology)

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

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

Elise Nosel '17 (Nursing) Isabel Bohrer '17 (Mathematics, Music Performance) Afton Hupper '17 (Ecology & Environmental Science) Abigail Lochala '17 (Financial Economics) Priscilla Langlais '17 (Animal & Veterinary Science)

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

Gareth P. Warr '15 (Political Science) Jillian Pelto '15 (Studio Art, Earth Science)

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

Campbell Belisle-Haley '16 (Biochemistry, Spanish)

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

> Christine Gilbert '14 (International Affairs) Nicole Begley '14 (Education, French)

Minerva 2014

# HONORS INDEX\* 2014 Honors Graduates at a Glance

Average GPA of 2014 Graduates: 3.70 Percentage of graduates in Phi Beta Kappa: 25% Number of graduates who presented at an academic conference: 25 Number of graduates who published while an undergraduate: 3 Percentage of graduates who studied abroad: 26% Number of graduates who completed a tutorial alternative: 27 Number of graduates who attended at least one Honors trip: 11 Number of graduates who were officers of a student organization: 49 Percentage of graduates who worked while in school: 84% Number of graduates who lived in Honors housing at least one semester: 31 Number of graduates planning to attend graduate school: 27 Number of graduates who submitted a Rezendes Ethics Essay: 7 Number of graduates who had the dean of the Honors College on their thesis committee: 5 Number of graduates with a double major: 10 Number of graduates with a double degree: 3 Number of graduates with at least one minor: 44 Percentage of graduates from Maine: 74% Percentage of graduates from out of state: 26% Number of graduates from the College of Natural Sciences, Forestry, & Agriculture: 27 Number of graduates from the College of Liberal Arts & Sciences: 35 Number of graduates from the College of Business, Public Policy, & Health: 8 Number of graduates from the College of Engineering: 6 Number of graduates from the College of Education and Human Development: 4



CAITLYN AHLBERG Biochemistry Chemistry

Los Angeles, CA Westchester High School

Parkinson's Disease: An Experimental Approach to Model the Visuo-Spatial Learning and Memory Deficits and An Analysis of Evidence Implicating α-Synuclein in Lewy Body Formation

#### Adviser: Dorothy Croall

**Thesis description:** The motor symptoms of Parkinson's Disease (PD) are often accompanied by non-motor symptoms (NMS) including visuo-spatial learning and memory deficits. PD is characterized by protein aggregates termed Lewy Bodies (LBs). The means whereby LBs form is unclear, although the aggregation of  $\alpha$ -synuclein seems to be a critical contributing factor. My thesis reports the development of a mouse model to study PD NMS using 6-Hydroxydopamine. An analysis of mechanisms reported to underlie LB formation revealed the potential importance of the protease calpain and the peptidyl-prolyl isomerase PIN1 in  $\alpha$ -synuclein fibrillization.

**Future Plans:** This summer I will be traveling around Europe for six weeks beginning in Iceland and spending time with my family. In the future I plan to attend medical school to become a trauma specialist with a focus on anesthesiology.



GRACE AVAKIAN Psychology Dance

Gouldsboro, ME Narraguagus High School

Correlates of Disability in the Maine-Syracuse Longitudinal Study

Adviser: Michael Robbins

**Thesis description:** In my research, I analyzed data from the Maine-Syracuse Longitudinal Study, a 38-year study. I looked at how disability correlates with depression, anxiety, and aspects of general well-being. I adjusted for variables such as gender, education and age, along with use of psychotropic medication usage.

**Future Plans:** I will be attending Nova Southeastern University in Fort Lauderdale, Florida to obtain my Master's in Occupational Therapy. I wish to one day open an orphanage and do missionary work in third-world countries.



JINLUN BAI Biology Chemistry, Neuroscience

Kungming, China

Effects of Calcium Regulatory Protein Dysregulation on Cardiac Function in Drosophila melanogaster

#### Adviser: Harold Dowse

MINERVA 2014

**Thesis description:** As a ubiquitous intracellular messenger ion, calcium is involved in many critical biochemical processes in the cell. In cardiomyocytes, Ca2+ interacts with a variety of calciumsensing proteins and regulates cardiac pacemaking, excitability and contractility. This study examined two typical calcium-sensing proteins: calpain and Ca2+/calmodul independent protein kinase II (CaMKII). Drosophila melanogaster was used as a model to explore the roles of these proteins in cardiomyocyte and how their dysregulation affects cardiac function. We show here that calpain mutations, calpain knockdowns, and CaMKII knockdown result in increased cardiac frequency and rhythmicity. In contrast, mutation in CaMKII causes a decreased cardiac frequency and rhythmicity. The findings deepened our understanding of the roles of calpain and CaMKII in heart cells and how their dysregulation could affect the heartbeat.



**MAXWELL BERUBE** Economics, Mathematics

South Portland, ME South Portland High School

Modeling the Costs of Cellulosic Biofuel

#### Adviser: Gary Hunt

**Thesis description:** My thesis examines the economic costs associated with the production of a certain type of biofuel produced from woody biomass. More than just looking at the explicit revenues and costs, it also explores the social costs involved by taking into account externalities produced throughout the process. I conducted a Monte Carlo analysis to explore the profitability of a plant producing this biofuel under different situations and used the information to evaluate ideal conditions for the plant.

**Future Plans:** I will begin working for Milliman Inc., as an actuarial assistant and continue my education by studying to pass the actuarial exams.



KILEY BICKFORD History Anthropology, French

> Pemaquid, ME Lincoln Academy

#### Nationalism in the French Revolution of 1789

Adviser: Richard Blanke

**Thesis description:** The French Revolution of 1789 was instrumental in the emergence and growth of modern nationalism. But national ideas, often with their source in the otherwise cosmopolitan Enlightenment, were also an important cause of the Revolution itself, as demonstrated in the speeches, artwork, pamphlets, and other historical records of the period, which this thesis examines. The idea of 'la nation francaise' also shaped the continued development of the Revolution toward republicanism, Jacobin radicalism, and military expansion into neighboring countries.

**Future Plans:** I plan on attending Simmons Graduate School of Library and Information Science as a part of the dual degree program in Archives Management leading to a MA in History and a MS in Library and Information Science, after which I would like to work in a museum where I can share my passion for history with visitors of all ages and interests.



HANNAH BLAKEMAN Anthropology French, Business Administration

Sutton, NH Kearsarge Regional High School

The Muslim Veil: A Symbol of Oppression or Empowerment?

#### Adviser: Lisa K. Neuman

**Thesis description:** The purpose of this thesis is to look at Muslim women in America who veil and how Americans perceive them. The U.S. media has presented a common theme of negative stereotypes about women who veil, including the idea that they are oppressed or associated with terrorist groups. Here, I examine how Americans perceive beauty and how those perceptions may be associated with the negative images of Muslim women who veil. To examine these issues, I utilized secondary research and two supplemental personal interviews, one with a non-Muslim American woman and the other with a Muslim woman who used to—but no longer does—veil. The results I found were that, in America, women who veil are believed to be oppressed due to the fact that they are seen as hiding their beauty.

**Future Plans:** I hope to find a job and be able to make some money before applying to graduate school. My long-term goal is to be able to travel around the world!



### SIOBHAN BOLINGER Animal & Veterinary Sciences, (Pre-Veterinary)

Gorham, ME Gorham High School

#### Observing the Location of Nematocysts through Aeolidiae stephanieae

#### Adviser: Ian Bricknell

**Thesis description:** Aeolidiae stephanieae is a small organism that has gained explosive popularity due to its specific diet of Aiptasia, an invasive enidarian species of sea anemones. A. *stephaniae* consumes the tentacles and nematocysts of Aiptasia. Nematocysts are cells located in the tentacles that cause the stinging sensation in enidarian species. My thesis project focused on finding a live stain suitable for staining Aiptasia, so that the nematocysts could be located within the Aeolidiae *stephaniae*. Sections of the A. *stephaniae* would then be observed under light microscopy to determine the location of nematocyst cells at different times after feeding.

**Future Plans:** My plan following graduation is to hopefully be accepted for an internship working with the veterinary department at the Indianapolis Zoo. I hope that experience will be beneficial in acceptance to attend a college of veterinary medicine to obtain my DVM. I am also considering attending graduate school to further my education or applying to work in a company that develops animal science related products.



ARIEL BOTHEN International Affairs (Political Science), Anthropology Spanish, History

Mt. Desert, ME Mount Desert Island High School

The Basque Question: An Analysis of the Political Position of the Basque People Within Spain

#### Adviser: James Warhola

Thesis description: My thesis examines a nearly 80-year-old conflict between the Basque people in Spain and the Spanish government over a struggle for increased autonomy. While the aspects of the conflict that I am examining date back to roughly the beginning of the Spanish Civil War, the struggle of the Basques far predates this. They are a minority population within Northern Spain and Southern France, and they are culturally, linguistically, and in part ethnically distinct from Spaniards and French alike. Under Franco's dictatorship, they endured a cultural genocide but managed to preserve not only their language, which is a language-isolate, but also many of their cultural practices through clandestine organizations. This oppression only increased the Basque people's sense of unity, nationalism, and desire for increased autonomy/independence. The goal of my thesis is to assess the current state of the independence movement and then make a recommendation to the Spanish government on how to address the Basque independence issue.

**Future Plans:** The summer following graduating I will be interning in Senator King's office in D.C. I hope to go to graduate school in the next two years and pursue a career in foreign policy advising.

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MONIQUE BOUTIN Art History, Studio Art

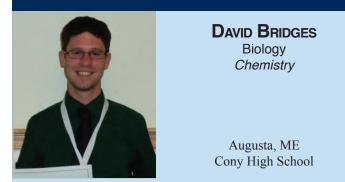
> York, ME York High School

#### Somaesthetics and Aesthetic Transactions: Art and Phenomenology

#### Adviser: Justin Wolff

**Thesis description:** This thesis inquires into the application of American pragmatist philosopher Richard Shusterman's somaesthetics with respect to contemporary art, through an analysis of the work of Yann Toma and Tatiana Trouvé included in the exhibition Aesthetic Transactions, 2012. In exploring somaesthetics in relation to art, this thesis addresses John Dewey's aesthetics and idea of the consummatory experience, and Maurice Merleau-Ponty's phenomenology with respect to art and experience as parts of the foundation of Shusterman's ideas of somaesthetics. In today's decentralized, global art world, can somaesthetics offer a means of understanding and maintaining art's vitality for viewers and/or artists? In this thesis, I argue for somaesthetics' potential utility in approaching contemporary art.

**Future Plans:** I plan to complete internships in museum education and other areas in the fields of art history and studio art in Boston, MA before pursuing an advanced degree in studio art or art history.



Using Passive Acoustic Monitoring to Determine Temporal Patterns and Mixed-Species Flocking Associations of Migrating North American Warblers in the Gulf of Maine

#### Adviser: Rebecca Holberton

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**Thesis description:** Recent development of plans for offshore and land-based wind energy projects has created a need to better understand migration in the Gulf of Maine region, an important flyway for countless migrant birds. To better understand migration in this region, the University of Maine's Lab of Avian Biology, working in collaboration with the U.S. Fish and Wildlife Service, deployed acoustic recording units at various sites throughout the Gulf of Maine in order to quantify and detect nocturnally migrating songbirds. For my thesis, I looked at the temporal patterns of warblers detected by these units and documented species flock composition. Historically, there has been a discrepancy with whether or no nocturnally migrating songbirds fly in flocks and my data provides evidence that songbirds could sometimes not only be flying in congregations at night but communicating with each other as well.

**Future Plans:** I am staying at the University of Maine and working on a Masters degree and I hope to become a professor eventually.



#### SHANNON BRENNER

Sociology Women, Gender and Sexuality Studies

> Casco, ME Lake Region High School

Bridging Gaps, Building Solidarity: The Potential of Social Relationships to Build Resilient and Inclusive Local Food Economies

Advisers: Mark Haggerty and John Jemison

**Thesis description:** As the cultural movement towards locally produced food grows, many are pointing out the drastic inequalities that exist in food access. Following this movement to support local food and farmers while simultaneously addressing the issues of unequal food access, the Brewer Maine based non-profit Food and Medicine sponsors a discount program at three farmers markets for purchases made with SNAP benefits. Through survey research, this study investigates the presence of social relationships between the market vendors and SNAP participants in the discount program. Drawing from the literature surrounding the solidarity economy, the study then analyses these relationships in the context of the long term sustainability of a more community centered economy.

**Future Plans:** I will be working on Black Kettle Farm, a four acre organic farm from May until October. After that, I plan on getting involved with community organizations addressing issues of food access in the Portland area before attending graduate school in the Fall of 2015 in a program of study related to food systems and/or community economics. I have dreams of staying in Maine and continuing to work with issues of local food and food access.



ROBERT BROWN Finance, Management Information Systems

> Mount Vernon, ME Maranacook High School

Bridging the Gap: Intergenerational Perceptions Towards Professional Usage of Social Networking Websites

#### Adviser: C. Matt Graham

**Thesis description:** The goal of my study was to identify the perception gap between Generation Y and older generations with regard to Social Networking Sites (SNS), more specifically, usage within a professional setting. I conducted an empirical study with two separate surveys for faculty and undergraduates at the University of Maine. My research question was as follows: Do different generations perceive the same professional value in Social Networking Websites? Results provided new insight into inter-generational perceptions of social media use within the workplace, and subsequently provided viable avenues for future implementation.

**Future Plans:** I plan to attend graduate school and get a master's degree in Finance or MIS.



DAVID CASS Computer Science

Durham, ME

#### The Odyssey: A Video Game Adaptation

Adviser: James Fastook

**Thesis description:** The adaptation from the book to the video game involved taking many details of the text and designing them into each level. The designs were then implemented using the Unity3d game engine to create the levels.

Homer's Odyssey is a one-player, 2D side-scroller that has an 8bit pixel retro art style. Each level incorporates different characters from *The Odyssey* such as Calypso, Polyphemus and the Sirens. The main goal of the game is to go through the story as Odysseus did. Homer's Odyssey is played with a keyboard, but it also supports Xbox controllers.



#### JENNIFER CHALMERS

English, History *Education, Spanish* 

Foxborough, MA Foxborough High School

Teaching Literature in America: Demonstrating Relevance in the Early Cold War (1945-1963)

Advisers: Nathan Godfried, Jennie Woodard

**Thesis description:** This historical research focuses on discovering how literature was taught in American high schools in the Early Cold War period and why it was taught that way. It examines articles by literature teachers between 1945 and 1963; it draws attention to the teaching methods discussed in the articles; and it analyzes teachers' concerns and choices within the historical context. In this period's push for conformity, teachers risked ruining their reputations and losing their jobs if they did not prove their lessons prepared students to be good Americans. From 1945 to 1956, teachers focused on preparing students for democracy; after 1957 and the launch of the Soviet satellite Sputnik, teachers adapted and demonstrated that literature also prepared students for a scientific and competitive society.

**Future Plans:** After graduation, I plan to pursue a career in education. I want to help change school environments and teaching strategies so that more students enjoy learning and feel encouraged. I have accepted a job with Teach for America, and I will be moving to southern New Jersey to teach special education English at the secondary level. After teaching, I plan to pursue a career in educational policy, government, or business, where I hope to make an impact on school programs and learning materials at a systemic level.



EMMA CHRISTIAN Animal and Veterinary Science Equine Studies

Wakefield, RI South Kingstown High School

Silence is the Loudest Sound

#### Adviser: Martin Stokes

**Thesis description:** Silence is the Loudest Sound brings awareness to the drastic increase of rhinoceros poaching in the last four years. Rhinoceros have been poached for their horns primarily due to Traditional Chinese Medicine with the belief that it is a cancer cure. The rhinoceros horn black market has boomed, increasing 521% in the last four years. Because of this demand, all five species of rhinoceros are on the brink of endangerment. All done for a horn that if dehorned humanely, can grow back with time. Conservation of the rhinoceros has decreased because the price of rhinoceros horn is more than double the average household income in South Africa, being very profitable. The problem will not only be to stop the poaching, but to regain the population, educate the public and overall to understand the dynamics of the global black market.

**Future Plans:** I plan on working in conservation, hopefully returning to South Africa to work with rhinoceros. I would like to work on reproduction efforts to regain populations with different endangered species, preferably exotic wildlife. However no matter what the future holds, as long as I am working to better the animal world nothing would make me happier.



#### BENJAMIN CIRRINONE Political Science Anthropology

Hampden, ME Hampden Academy

Video Games As Free Speech

#### Adviser: Mark Brewer

**Thesis description:** My thesis is a broad look at the video games industry and its development from the cathode ray experiment in 1947. I look at how consoles have developed over the years and how that tech paved the way for more realized worlds and more meaningful narratives. Furthermore, the Brown v. Entertainment Merchants Association case and the court opinion on the matter is analyzed from a gamer's perspective. Finally, the relationship between real world violence and game violence is explored.

**Future Plans:** My plans are to, hopefully, acquire a full-time job for a while. I'll look into graduate school options down the road.



Tyler Cline History English

Melbourne, FL Brewer High School

#### Class Conflict and the Confederate Conscription Acts in North Carolina, 1862-1864

#### Adviser: Micah Pawling

**Thesis description:** The American Civil War brought about the first national conscription acts in United States history, as both the North and the South required more manpower for the increasingly large armies of industrial warfare. The Confederate States of America was the first to implement conscription, in 1862. My thesis analyzes the effect of conscription on the disruption of the balance that had existed for decades between the slave-owning elite and the middle class yeomen farmers who lived independently from the slave system. This led to a growth in class-consciousness among the middle class farmers of the South. North Carolina, as both a major source of troops to the Confederate Army and a reluctant secessionist state, provides an interesting contrast of Southern patriotism and opposition in the face of the centralizing government in Richmond.

**Future Plans:** I am returning to the University of Maine for my master's degree in History, and then hopefully I will continue my studies somewhere warmer for my PhD.



#### Hannah Dewey Mathematics *Music*

Southwest Harbor, ME Mount Desert Island High School

#### Wavelet Based Fractal and Multifractal Image of Brain Images

#### Adviser: Andre Khali

MINERVA 2014

**Thesis description:** This thesis provides a preliminary investigation into the structure of the brain, based on a roughness analysis of images of brain slices taken from several different species. The results vary as a function of the species as well as the brain regions examined, either the front portion of the brain or the middle. Additionally, we also performed an anisotropic analysis to assess potential preferential directionality of the tissue in the different parts of the brain.

**Future Plans:** My current plans are to attend grad school in the fall, studying applied mathematics with a focus in image analysis. Eventually I hope to be able to continue the research I've started here on my Honors Thesis, and apply it to other areas of neuroscience.



#### KIMBERLY DAO Biology Child Development and Family Relations

Saco, ME Thornton Academy

#### The Rapid Effects of Steroids on the Reproductive Processes in Goldfish, Carassius auratus

#### Adviser: Len Kass

**Thesis description:** It is traditionally understood that sex steroid hormones work through slow genomic pathways. It has also been discovered that sex steroid hormones also mediate rapid effects through a non-genomic pathway but much is still unknown about this mechanism. Goldfish have been used to investigate these behavioral effects and the receptors used in a sexual social context. The Thompson Lab and I tested if sex pheromones that increase testosterone could also increase milt and/or courtship behavior, and if any such effects are blocked by the administration of fadrozole (FAD). We also used immunohistochemistry (IHC) to see if we could identify traditional estrogen receptors that might participate in non-genomic regulatory mechanisms.

**Future Plans:** I will participate in an eight-week summer internship at the United States Agency for International Development. In the fall, I will attend Tufts School of Medicine and participate in their Maine Track MD program. My career goals include becoming a family physician, a public health administrator, and participating in Doctors Without Borders or Physicians for Peace.



#### SHANNON DUBOIS Food Science and Human Nutrition

Bangor, ME

Bangor High School

The Ability of Berry Extracts to Inhibit Alpha-Glucosidase In Vitro

#### Adviser: Mary Ellen Camire

**Thesis description:** Type 2 diabetes is a growing public health concern. This study compared the alpha-glucosidase inhibitory activity of extracts from Maine blueberries and blackberries to Acarbose (a drug used to treat diabetes). Varietal differences in cultivated highbush blueberries (Vaccinium corymbosum) and agricultural practices for growing wild or lowbush blueberries (Vaccinium augustifolium Ait.) were also experimental variables. Results were obtained through four assays, including alpha-glucosidase inhibition, total free phenolic content, total anthocyanin content, and DPPH radical scavenging activity (RSA). Blueberry and blackberry extracts inhibited more than fifty percent of alpha-glucosidase activity. Combined with high phenolic and anthocyanin content, as well as antioxidant capabilities, berries prove to be an effective phytochemical-rich nutrient source for diabetes management.

**Future Plans:** Upon graduation, I plan to receive my Master's Degree in Biochemical and Molecular Nutrition from Tufts University before starting my career in molecular nutrition research.



BRIANNA DUHAIME International Affairs *Religious Studies* 

> Hull, ME Hull High School

The Role of Culture in Social Dislocation: AfroReggae in the Favela's of Rio de Janeiro, Brazil

#### Adviser: Stefano Tijerina

**Thesis description:** This thesis looks at the role that the Brazilian organization AfroReggae has in combating the social displacement of the favelas of Rio de Janeiro. The favelas are subject to extreme prejudice and inequality that has resulted in communities that are externally displaced from the city of Rio. AfroReggae combats this displacement by using Afro-Brazilian culture to procure their citizenship and show the world that they are so much more than poor, drug-dealing criminals. AfroReggae shows the potential and capacity that bottom-up, grass roots movements can have in areas of social displacement. It also highlights the ability that culture has to create discourse in areas of inequality and displacement.

**Future Plans:** Attend graduate school at the University of Pittsburgh in the fall for a Masters in International Development.



TRICIA EVANGELISTA Mechanical Engineering

Old Orchard Beach, ME Old Orchard Beach High School

Quantifying the Mechanical Properties of Human Prepuce in Compression

#### Adviser: Michael Peterson

Thesis description: Circumcision has been found to be an effective preventative measure against HIV. So, a disposable device is being designed to provide the procedure on a large scale. In order to create a cost-effective design, it is necessary to know the precise mechanical properties of skin so that the minimum amount of material can be used to supply the pressure that will cut off bleeding in wound. Unfortunately, most documentation on the properties of skin are qualitative, noting only that "more" or "less" pressure is necessary to stop bleeding. This goal of this thesis is to quantify the compressive properties of the skin involved in the procedure.

**Future Plans:** Following graduation, I have accepted a position as a Test Engineer for the Naval Sea Systems Command.



CHRISTIE EDWARDS Biology Neuroscience

Scarborough, ME Scarborough High School

The effects of Ketamine on Alcohol-Withdrawal Induced Depression

Adviser: Alan Rosenwasser

**Thesis description:** Withdrawn human alcoholics are most susceptible to relapse months after the initial withdrawal period. This phase is characterized by behavioral depression and sleep disruptions. Moreover, in recent years, the street drug ketamine, in small doses, has been found to be a putative human antidepressant for major depressive disorder (MDD). Using mouse models treated with chronic intermittent ethanol vapor, I predicted that ketamine would alleviate the effects of the alcohol withdrawal induced depression state. Running on wheels is a pleasurable activity for mice, thus, lack of wheel-running shows a state of behavioral depression. We found that, while alcohol withdrawal induces disruption of biological clock and 'depressive' behavior, treatment with ketamine does not relieve these symptoms.

**Future Plans:** After graduation, I plan to work and/or travel for a year, before attending medical school



BRIEANA EVANS Nursing

Hermon, ME

Attitudes and Preventative Health Practices in Relation to Obesity

Adviser: Patricia Poirier

**Thesis description:** Over the past thirty years, obesity has become a health epidemic, affecting a large percentage of the United States population, leading to a decrease in quality of life related to comorbid illnesses, which are directly correlated to being overweight or obese. Due to these comorbid illnesses, obesity places a large fiscal burden on the healthcare system, directly associated with treating related diseases and indirectly through lost production due to "sick days". In 2013, the American Medical Association ruled to classify obesity as a disease, which has brought about an increased need for preventative health measures. Steps toward obesity prevention are taking place on the community, state, and federal levels through research, education, wellness programs, and policy reform. This thesis examines the attitudes of UMaine faculty and staff towards obesity and the amount of control individuals feel they have over their own health. These findings were then compared with the current preventative health services the University of Maine offers its employees. This thesis aims to highlight the importance of health and wellness at the local level to enact change in obesity rates on a national level.



Evelyn Fairman Chemical Engineering Renewable Energy Engineering, Mathematics

Hampden, ME John Bapst Memorial High School

Avoiding Aggregation During the Drying Rehydration Phases of Nanocellulose

Advisers: David Neivandt and James Beaupré

**Thesis description:** Nanocellulose has attracted attention from academic researchers and industrial corporations worldwide. The renewability of nanocellulose makes its commercial use highly affordable and environmentally friendly. The industrial production of nanocellulose is an aqueous process; however, many of its valuable properties are lost upon water removal. Indeed, once dried, nanocellulose irreversibly assembles into a plastic-like material. This study employs a cationic surfactant in an effort to both dry and rehydrate nanocellulose whilst maintaining the desired nano-scale morphology.

**Future Plans:** Upon graduation in May, I plan to pursue a postgraduate degree in Renewable Energy Engineering, Economics, and Policy.



JENNIFER FERGUSON Political Science French, International Affairs

Las Vegas, NV Edwardsville High School

Political Participation and Politics of the Possible: A Comparative Case Study of Political Activism in France and Maine

Adviser: Robert W. Glover

**Thesis description:** Political activism and political culture provide great insight into how movements not only form but attempt to enact change within society. However, political culture will vary by nation due to divergent historical foundations. Therefore, it is critical to cross-nationally examine the effect that political culture can have on current social movements. In this thesis, I examine the impact of political culture on the recent social movement activity in France and the state of Maine, with a focus on debates over the legalization of same-sex mariage. I argue that this reflects differing cultural influences in each society. I suggest that divergent collective memories of respective revolutions and the forms of government that resulted from the framers of each nation contribute to the organization and execution of same-sex marriage social movements today.

**Future Plans:** I am excited to return to the "College of Our Hearts Always" and serve in the Honors College as an Honors Associate. I plan to attend graduate school after helping others at the University that provided so many wonderful experiences for me as an undergraduate.



JAMESON FORD Psychology Neuroscience, Dance

Falmouth, ME Falmouth High School

The Effects of Ketamine on Motor Coordination and Thermal Nociception in Ethanol Withdrawing Mice

#### Adviser: Alan Rosenwasser

Thesis description: This experiment aimed to establish a model for long and/or short-term ethanol-withdrawal induced motor deficits and thermal sensitivity in mice. Additionally, the effects of ketamine on these phenomena were evaluated. Human studies of alcoholics have documented, along with behavioral depression, deficiencies in gait and balance, as well as an increase in pain sensitivity, immediately following abstinence, and in some cases, lasting many years. Ketamine has been shown alleviate behavioral depression in both animal and human models, but its physiological effects are still being evaluated. Ethanol dependence was induced using chronic intermittent alcohol vapor exposure. Ketamine was injected following ethanol vapor exposure and animals were then tested for motor coordination and for thermal nociception. Data show a significant, late-emerging effect of ethanol on motor coordination, establishing a model for longterm ethanol withdrawal-induced motor coordination deficiencies in mice. Additionally, no effects of ketamine were observed.

**Future Plans:** I will be taking a gap year to work and travel, then hopefully attend graduate school in the fall of 2015.





Kyle Franklin Economics

Guilford, Vermont Brattleboro Union High School

Oral History of the Islamic Center Of Maine, Orono

#### Adviser: Melissa Ladenheim

**Thesis description:** The Islamic center, located just off campus, was first built by a Muslim professor at UMaine to serve the growing number of Muslim students and faculty who previously prayed in the Union. My thesis is about the history of the Islamic Center of Maine, Orono and the experience of being Muslim in Orono, Maine.

**Future Plans:** My plans are undetermined, but I hope to live in Boston, find a career I like, and do some creative writing.



JORDAN GAGNE Animal and Veterinary Sciences *Microbiology, Chemistry* 

Goffstown, NH Goffstown Area High School

#### Prevalence and Speciation of Lungworms in Maine Moose

Adviser: Anne Lichtenwalner

**Thesis description:** This project analyzed 93 sets of moose lungs collected from 6 separate wildlife management districts; 33.3% presented with lungworm infection. Infections containing greater than 50 worms presented with a pattern of ischemia adjacent to areas of blood coagulation. Lungworms appeared consistent with Dictyocaulus morphology. A comparison of sample lungworm ITS2 gene sequences with published Dictyocaulus spp. sequences showed that lungworms in this study appeared most homologous to two Dictyocaulus spp. isolates previously identified in New Zealand Red Deer. They were not homologous to the expected species, Dictyocaulus viviparus. Together the prevalence of lungworms in Maine moose and the pathology associated with a heavy worm burden indicate that Maine moose populations may not be as healthy as previously suggested. Genetic and morphological analyses show that a potentially novel lungworm isolate of the genus Dictyocaulus may be a contributing factor to moose mortality in Maine.

**Future Plans:** I will be attending Iowa State University's College of Veterinary Medicine in the fall pursuing my DVM and concentrating on large animal medicine.



#### LINDSEY GORI

Biology Chemistry, Psychology, (Pre-Medical Studies)

South Berwick, ME Marshwood High School

A New Method for Measuring Color Acuity in Humans: A Pilot Study

#### Adviser: Len Kass

**Thesis description:** My thesis investigates whether there are differences in visual acuity when humans are asked to discriminate foreground from background images using different colors. This new method for measuring color acuity involved using an "open-door" in which participants had to decide if the door is open to the left or right. The size of the door, or opening, varied from 1 to 6 pixels (1 being difficult, 6 being easy). Using a computer program, this door was presented in a variety of colors against a variety of background colors. The study yielded enough results to conduct a detailed analysis of the acuities of 18 males and 18 females. The results showed that males exhibit superior color discriminating abilities in all color combinations analyzed, and that both genders experienced difficulty when discriminating any color combinations with yellow.

**Future Plans:** After graduating, I plan to take the MCAT, and begin applying to medical schools in the summer. During this upcoming gap year, I plan to work in either a laboratory or hospital setting. I hope to do some volunteer work as well, ideally with kids.



CHRISTINE GILBERT International Affairs (German) Business Administration

Doylestown, PA Central Bucks High School East

#### Sustainability's Inconvenient Discourse

#### Adviser: Mark Haggerty

**Thesis description:** My thesis is looking at the way that the public discourse is framing the word "sustainability". In recent years sustainability has become a buzz word used by a wide variety of businesses and organization, but all with variable definitions. Using themes generated from sustainability literature, I will be analyzing articles related to global warming and climate for the underlying themes of sustainability through discourse analysis. The time frame I am using is between 2004 and 2008, centered around Al Gore's publication of "An Inconvenient Truth". What I hope to find is if this movie, which certainly altered the conversation about global warming, had any influence on the way that the public was framing sustainability in the "New York Times" and the "Washington Post", two sources of national conversations in editorials and op-eds.

**Future Plans:** My plans immediately following graduation are to find a full-time position and begin my life-long journey of discovering exactly what I want to do with my life and how to get paid for doing it. I hope to stay in Maine, particularly southern Maine and extremely short-term I am looking to adopt my first pet!



PATRICK HALL Political Science

Glenburn, ME John Bapst Memorial High School

Media Portrayal and Public Opinion on the Supreme Court

#### Adviser: Amy Fried

**Thesis description:** This thesis studied the relationship between different methods of media portrayal of the U.S. Supreme Court and public approval and confidence in the Court. Specifically, this study analyzed the New York Times articles surrounding four cases concerning substantive due process over the last fifty years. It then compared the amount of reporting that highlighted the procedural and legal aspects of the Court with the reporting that showed the Court in a politicized light. It shows that the increase in political portrayal of the Court since the 1960s corresponds with a general decline in public confidence in and approval of the Supreme Court.

**Future Plans:** After graduation, I will attend the University of Maine School of Law.



Ryan Hall Psychology Neuroscience, Pre-Medicine

> Jefferson, ME Erskine Academy

#### Long Term Effects of Chemotherapy on Cognition; Preventative Potential of Antidepressants

#### Adviser: Thane Fremouw

**Thesis description:** This thesis project attempts to identify the underlying mechanisms that contribute to cognitive decline experienced by cancer survivors who undergo chemotherapy treatment. Impairments range from mild to severe; affecting the areas of memory, attention and processing speed. For some, these impairments are transient but for others they can be persistent or permanent. This research aims to uncover a histological basis for the cognitive decline at both short-term and long-term periods following treatment. In addition, investigation was conducted into the possible use of antidepressants to mitigate cognitive symptoms of chemotherapy when co-administered. Tissue samples were collected from three conditions: chemotherapy administration only, chemotherapy and antidepressant administration, and saline injections, all run utilizing a rodent model.

**Future Plans:** Following graduation, I plan to enter a gap year in which I will apply to medical school, serve as a live-in advisor for my fraternity and travel as much as possible. If fortunate enough, I hope to eventually move to Boston and continue my education there.



**ABRAHAM HAMILTON** Mechanical Engineering

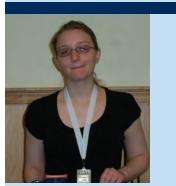
> Whitefield, ME Homeschooled

The Finite Element Analysis and Optimization of a Circumcision Device for HIV Prevention in Sub-Saharan Africa

#### Adviser: Senthil Vel

**Thesis description:** Millions of people around the world are affected by HIV. It has been demonstrated that the circumcision of heterosexual males leads to an approximate 60% reduction in the potential for the contraction of the virus from a female partner. Current circumcision techniques are not viable on a large scale in remote settings. The goal of this project is to develop a safe and effective device for large scale circumcision efforts in remote regions. This thesis will focus specifically on the analysis and optimization of the device. The analysis will be conducted through a full scale finite element analysis of the design, and will ensure that all performance requirements are satisfied. The optimization will assure that the design minimizes material use, while maintaining exceptional performance.

**Future Plans:** Following graduation I will be working at Chrysler in Detroit, MI. I will be participating in the Chrysler Institute of Engineering Program. As part of the program, I will have six 4-month rotations in various departments throughout the company while simultaneously completing a Master's Degree in Mechanical Engineering (at night and/or online).



#### Kaiya Hansen Chemistry Mathematics

South Portland, ME South Portland High School

Detection of Iron (III) Using Agarose Beads Derivitized with Desferrioxamine B

#### Adviser: Carl Tripp

**Thesis description:** It has been shown that an increase in phytoplankton in the ocean would lead to a decreased amount of carbon dioxide in our atmosphere. Furthermore, it has been shown that the amount of iron (III) present in the ocean determines the amount of phytoplankton. My thesis is part of a larger project directed toward developing a device which could be placed on a buoy to monitor the amount of iron in the ocean automatically. To detect iron (III), one can use a compound known as desferrioxamine B (DFB). This compound selectively binds iron (III) and forms a red complex. This color can then be detected with UV-visiblespectroscopy. My project focused on developing a column of agarose beads which were derivitized with DFB so the column could capture iron (III). Because agarose has a refractive index close to water, it is partially transparent in water. Therefore, one can detect the iron-DFB complex right on the column.

**Future Plans:** After graduation, I plan on remaining at the University of Maine to continue working on the project I used for my thesis. In the process, I will earn a Master's degree in Chemistry.



**EMMA HANZL** Elementary Education *Communication Sciences and Disorders* 

> Lebanon, ME Noble High School

Increasing Phonemic Awareness in the Pre-School Aged Child: A Parent Centered, Play Based Approach

#### Adviser: Susan Bennett-Armistead

**Thesis description:** Written as a reference for parents and early childhood educators, this compilation of studies and accompanying resources is intended to clarify misconceptions and build individual understandings of phonological, phonemic, and phonetic awarenesses. The relationship between phonemic awareness instruction and stronger reading and spelling abilities has been well established, however, most previous studies of phonemic awareness have utilized educators or trained researchers as the primary instructors and have focused primarily on school-aged children ranging from preschool to grade three. The purpose of this review was to extrapolate the potential effects of placing parents in the role of primary instructor of phonemic awareness for children ranging from bith to age 5, as well as create a set of parent resources informed by this research. The resulting 12 resources are targeted to specific periods of development and aligned to the well-child visits at which children and their families receive books from Raising Readers.

**Future Plans:** I will be continuing my education at UMaine and pursuing a Masters degree in Communication Sciences and Disorders on a Trustee Tuition Scholarship.



CAMERON HOLMES Psychology

Milford, NH Milford High School

#### Interviews with Transgender College Students: Social Aspects

#### Adviser: Sandra Caron

**Thesis description:** The purpose of this exploratory research was to begin the process of understanding the social experiences of transgender college students. The information was gathered through in-depth interviews with four self-selected transgender students within the University of Maine System. Participants were asked about their past and present relationships, including romantic relationships and friendships. The interviews revealed several strong themes, such as safety while dating, the importance of strong social connections, and the importance of validating language in relationships.

**Future Plans:** I will be moving to NYC to continue my work in the field of domestic violence activism on behalf of minority communities.



ALEX JENSEN Marine Sciences Fisheries

Granton, WI Marshfield High School

Assessment of Sea Lice Infestations on Wild Fishes of Cobscook Bay

Adviser: Gayle Zydlewski

**Thesis description:** I identified the species of wild fish in Cobscook Bay, ME, that were infected by sea lice as well as the species of sea lice present (the number of sea lice per fish and the proportion of fish in a given group with infections, respectively) in 2012. Sea lice are copepods that parasitize fish, and are major pests for salmon aquaculture. Sea lice were mostly attached to the fins of the fish, and the non-motile chalimus life stages predominated. Both infection intensity and prevalence varied among months, and reached maximal values in June.

**Future Plans:** Eventually, I plan to obtain a Master's degree in fisheries science and go on to pursue a career in fisheries management or a PhD in fisheries science. Immediately after graduation, however, I am considering a short-term position as a research assistant before continuing my education.



Joshua Jones Biochemistry

Presque Isle, ME Presque Isle High School

#### The Role of Morphology Transitions in Tissue-to-Bloodstream Spread of Infection

#### Adviser: Robert Wheeler

**Thesis description:** The fungal organism Candida albicans normally lives on and within most healthy people. Immunocompromised individuals, however, are at risk for developing a lifethreatening infection called systemic candidiasis. This involves entry of C. albicans into the bloodstream. We hypothesized that the ability of C. albicans to switch among different morphologies, or growth forms, helps to mediate its passage across cellular barriers and into the bloodstream. We used a zebrafish embryo model of infection to investigate the roles of C. albicans' morphologies during infection and in the process of tissue-tobloodstream dissemination.

**Future Plans:** In the fall of 2014 I will be attending graduate school at the Massachusetts Institute of Technology in their Microbiology PhD program. I intend to pursue a career in research, and I hope to have my own laboratory someday.



EBEN JORDAN Biology Neuroscience

Eddington, ME John Bapst Memorial High School

#### Darwin's Disciples

#### Adviser: Adam Crowley

**Thesis description:** The Earth's temperature rose as if in fever to destroy the sickness of us. Darwin's Disciples is a science fiction piece that integrates global warming, overpopulation, and eugenics. What lengths will one man go to in his effort to save mankind? What happens when this champion of the people is willing to decimate the global population to achieve his goal? Grounded in current population predictions and the science of genetics, it is a story of the culling of the human race and the desperate struggle that ensues.

**Future Plans:** To go to PA school is my real test, to heal people is my cause!



Morgan Kinney Psychology English, Sociology

Bowdoin, ME Mt. Ararat High School

What Shapes our Attitudes Towards Outgroups?: Measuring Implicit and Explicitly Homosexual Prejudice

#### Adviser: Jordan LaBouff

**Thesis description:** The emotional bases of homosexual prejudice are not completely understood, often times because implicit biases can go undetected even by the person holding them. Because they happen before conscious control of emotions is available, these attitudes may be best measured through physiological measures like startle eye-blink response. My honors thesis measured implicit and explicit attitudes towards homosexuals, while also investigating the religious correlates of such attitudes.

**Future Plans:** Attending Graduate School at the University of Maine for a Masters in Higher Education and working as a Graduate Assistant for Alternative Breaks, UMaine's largest student service organization. After that I hope to work at a University outside of Maine for a little while and travel as much as possible!



MINERVA 2014

**DARIEN LEWIS** Kinesiology and Physical Education (Exercise Science)

Ellsworth, ME Ellsworth High School

Improving Running Performance Using Non-Running Tasks

#### Advisers: Steven Elmer and Christopher Nightingale

**Thesis description:** For over 50 years researchers, coaches, and athletes have endeavored to improve endurance running performance. The aim of this study was to determine if running performance improved after training with non-running tasks when added to a regular running routine. Recreational runners were assigned to a resistance eccentric exercise (RENEW, n=7), plyometric (PLYO, n=7), or control (CON, n=7) running training group and trained for six weeks. 3 km time trial and 5-bound hop performance were assessed before and after training. Results from this study indicate that both RENEW and PLYO training have strong potential to be utilized by runners as a training modality.

**Future Plans:** Following graduation I will be moving to Portland, ME, and will be a student in UNE's Doctorate of Physical Therapy program.



#### THEODORE KOBOSKI Marine Sciences

Political Science

South Windsor, CT South Windsor High School

Socio-cultural and Economic Barriers to Small Vessel/ Indigenous Participation in the American Samoa Longline Fishery

Adviser: Teresa Johnson

**Thesis description**: American Samoans have been harvesting pelagic fish, such as tuna species, since the islands were settled some 3,500 years ago. Recently, most participants in the pelagic fishery have been indigenous American Samoans fishing out of small, locally built catamarans called alias. However, the fishery has seen a massive increase in the number of larger monohull vessels while small vessel/indigenous participation has dwindled. This research explored the possible factors that may have led to the decline of indigenous small-boat participation and discussed possible steps to revitalize the fishery.

**Future Plans**: I'll be attending Duke University in the fall to pursue my Master's degree in Environmental Management with a specialization in Coastal Resource Management.



VINCENT LOCONTE Public Management Legal Studies, Political Science

Winthrop, MA Winthrop Senior High School

University of Maine Students' Family Income and Its Relation to Alcoholism

#### Adviser: Kenneth Nichols

**Thesis description:** This study was designed to address the issue of alcohol abuse among University of Maine students' families and to look for correlating factors, mainly income. The project used an online, anonymous survey of on-campus students at the University of Maine. One purpose of this research study was to see if there is accurate, adequate education or counseling for students who have alcohol abuse problems or family members who are alcoholics.

**Future Plans:** Upon graduation, I plan to study law at New England School of Law in Boston Massachusetts and hope to concentrate in environmental law. I plan on moving back to the Boston area for law school to be close with family but later working for the national park system in the future.



JACOB LONGFELLOW Microbiology

Farmingdale, ME Hall-Dale High School

#### Characterizing Neutrophil Behavior in Zebrafish in Response to Ingested Compounds

Advisers: Carol H. Kim and Michelle F. Goody

**Thesis description:** I looked at arsenic and glucose as ingested compounds in zebrafish in order to ascertain the connection between neutrophils and wound healing and infection. Zebrafish were divided into three treatment groups: 1% glucose, 10 parts-perbillion arsenic, and a control group that neither contained glucose nor arsenic. After two to three days of treatment (depending on the treatment), half of the fish had their caudal tail fin amputated with a scalpel or were injected with Pseudomonas aeruginosa. The rest were either not cut or were injected with PBS. Then the total number and migration of neutrophils were measured by using a high-powered microscope.

**Future Plans:** I am staying here, because I was accepted to the Masters of Science in Microbiology program here at UMaine. After that, I plan on attending a medical school.



PAIGE MARTIN Psychology

Hancock, ME

#### The Effects of Cataract Surgery on Depression and Vision Related Quality of Live in an Elderly Population

#### Adviser: K. Lira Yoon

🚺 للاستشارات

**Thesis description:** Cataracts due to age affect the ability to perform daily visual activities, thereby reducing independence, which can leave a person feeling depressed. This project is designed to study the relationships between cataract surgery and depression and vision-related quality of life in an elderly population. Two groups were studied: Participants undergoing cataract surgery and a wait-list control group. Levels of depression and vision-related quality of life were assessed at baseline and at one-month post-surgery/baseline point. Changes in depressive symptoms did not differ between the two groups; however, vision-related quality of life and visual acuity are significantly increased with cataract removal surgery.



Beals, ME Jonesport-Beals High School

HAROLD LYONS Political Science

Unmanned Aerial Vehicles and Submarines: Similarities, Trends, and Future Policy

#### Adviser: G. Paul Holman

**Thesis description:** My thesis examines the many similarities shared by unmanned aerial vehicles and submarines. Specifically, my thesis examines Germany's use of unrestricted submarine warfare during WWI and WWII, as well as the numerous treaties and agreements that attempted to restrict submarine warfare. My thesis applies past debate on warfare technologies to the current conversation on unmanned aerial vehicles. The United States has the potential to shape the international dialogue over UAVs; it should not waste the opportunity.

**Future Plans:** Following graduation, I plan on taking a muchneeded break from higher education. This summer I will work at my father's business, and enjoy a few final days at home on beautiful Beals Island, Maine. I look forward to long weekends at Schoodic Lake with good friends and better beer. At the conclusion of the summer, I plan to begin a career in the armed forces and eventually transition into government work.



Rose McGLauflin Biology Chemistry

Mount Vernon, ME Maranacook Community School

Altered Integrin Alpha 6 Expression as a Rescue for Muscle Fiber Detachment in Zebrafish (Danio rerio)

#### Adviser: Clarissa Henry

**Thesis description:** In some muscular dystrophies, specific integrins are disrupted and muscle fibers detach and degenerate; this greatly harms the tissue over time. Congenital muscular dystrophy affects the integrin alpha 7 gene and prevents the muscle cell from producing the affiliated protein. In an attempt to rescue these dystrophies, my project over-expressed another integrin, integrin alpha 6, in zebrafish (Danio rerio). Preliminary data suggest it is possible to prevent fiber detachments in muscle, a characteristic of muscular dystrophy, by over-expressing integrin alpha 6 in zebrafish lacking integrin alpha 7. It may serve a useful therapeutic purpose if it can be both expressed uniformly and effectively in human skeletal muscle.

**Future Plans:** Following graduation, I plan to spend some time in the "real world." This summer, I am pursuing a fellowship with the American Cancer Society and hope to focus my research on cancer cell biology. Following my experience in the working adult world, I hope to attend medical school, finally earn my pilot's license and return to Tanzania.



JACKSON MCLAUGHLIN Theatre

> Oak Park, IL Greenville High School

Breaking the Emotional Barrier: How Actors Dive into a Character

#### Adviser: Sandra Hardy

Thesis description: Throughout my years with the UMaine Theatre department, I have been involved in many productions. The most difficult and fun aspect has been acting, but I have always found myself unable to utilize my emotions and connect with a character as fully as I would like. The purpose of this thesis is to work with two monologues and attempt to break my "emotional barrier" on a journey of personal growth. I researched the acting methods of actors who have played these roles before to understand their methods. My thesis will show the intensive psychological and research oriented process that is involved in acting through my personal journey and other actors.

**Future Plans:** I am currently interning at Oak Park Festival Theatre in the Chicago area. I intend on returning to Chicago to apply for jobs at local theatres', audition for roles, and apply to grad schools to hopefully get my MFA in acting.



#### CAMPBELL MILLER Molecular and Cellular Biology Anthropology

Rockport, ME Camden Hills Regional High School

The Role of TNFAIP8L1 in the Antiviral Innate Immune System

#### Adviser: Carol Kim

**Thesis description:** TNFAIP8L1 (TIPE1) is a gene that has been left relatively uncharacterized. Other members of the TNFAIP8 gene family have been linked to inflammatory disease as well as cancer. TIPE1's role in the antiviral response has been left unexplored. Therefore, using RAW264.7 macrophages as an in vitro model and the zebrafish, Danio rerio, as an in vivo model, we attempted to elucidate the antiviral innate immune function of TIPE1. Through stimulation of certain antiviral pathways in vitro, and subsequent real-time quantitative polymerase chain reaction (RT-qPCR), preliminary data revealed a possible inhibitory immune role for TIPE1.

**Future Plans:** I am continuing my current research path as a masters student in microbiology. Following completion of my masters, I will either apply to PhD programs at other universities or to medical school. Fortunately I have a year or so to decide, as the decision is very difficult.



LILY MCLAUGHLIN Animal and Veterinary Sciences Equine Studies

> Greenville, ME Greenville High School

Detection of Streptococcus Equi Subspecies Equi by Membrane Filtration

#### Adviser: Robert Causey

**Thesis description:** Streptococcus equi subspecies equi (S. equi) is a highly contagious bacterial species in equines. Detectability of S. equi in water was tested in order to improve strangles surveillance and move towards eradication of the disease. This study determined what membrane pore size is most effective in collecting and concentrating S.equi from an aqueous solution, and what the lowest level of detection that membrane can provide. The study also determined the dispersion pattern of S. equi in a water bucket and develop a sampling technique to be used by veterinarians.

**Future Plans:** I currently have a position at Massachusetts General Hospital in Boston working as a Research Animal Specialist, but have every intention to go back to school to attain a masters and doctorate in Equine Assisted Therapies.



NICHOLAS MOORE English Philosophy

North Berwick, ME Noble High School

Humanizing the Humanities: A Historical, Cultural, and Philosophical Examination of the Modern Disintegration of Humanities Education

#### Adviser: David Gross

**Thesis description:** This project is a study of the various reasons humanities education has lost support in colleges across the United States. A historical perspective shows the differences in funding since the 50s, a cultural perspective shows the differences in how funding is justified since the 60s, and a philosophical perspective shows how the modern vision of higher education has become limited to market based training rather than true education.

**Future Plans:** After a year working as one of the Honors Associates, I plan on attending graduate school for publishing and editing.









## **Kelsey Morin** English Peace and Reconciliation Studies

Caribou, ME Caribou High School

**Better Than Easy** 

### Adviser: Travis Baker

**Thesis description:** My thesis is a creative writing piece, a story that I hope will be something readers can connect to and learn from. The main character in the story has gone to school, and works in the family business. His life doesn't hold much purpose, and his thoughts are quite chaotic; it takes a difficult situation to help him realize he is meant for something different.

**Future Plans**: I really want to work for a non-profit organization, to put my education to use in helping people live happier and/or protecting the planet. Also, I hope to write books that are entertaining and educational.



MARIA NECASTRO Journalism Psychology

Machias, ME Machias Memorial High School

Muckrakers vs. Public Relations: Analytical Case Studies

### Adviser: Michael Socolow

**Thesis description:** The purpose of the three independent case studies in this thesis is to examine the complex relationship between investigative journalism and corporate public relations. By examining the journalistic works written by three of America's best-selling authors (Rachel Carson, Barbara Ehrenreich and Eric Schlosser), it becomes possible to understand the importance of strategic communication. Ultimately, the dynamic relationship between investigative reporting and public relations is one that produces visible change, within both society and corporations.

**Future Plans:** I plan to tour Italy with my family after graduation. Following the travels, I hope to find a job that involves communication or begin a master's program in marketing and communication.



LOGAN NEE Financial Economics, Political Science

Cornish, ME Sacopee Valley High School

Partisan Gridlock in the Contiguous States: Credit Ratings, Economic Stability, and the Ramifications of Political Competitiveness, Polarization, and Party Control in U.S. State Legislatures, 1992-2010

#### Adviser: Michael Montgomery

**Thesis description:** American politics have succumbed to gridlock: a phenomenon caused by an increasingly competitive political environment, amplified partisan polarization, and partisan preference. We believe this hinders government's sole and rather straightforward fiscal duty: to provide stable, healthy, and predictable economic conditions for its constituents. We use econometric analysis to examine gridlock and its affect on state credit ratings at the state house level.

**Future Plans:** I will start work as an economic consultant for FTI Consulting in New York City. I will be providing litigation assistance through econometric analysis in areas of legal dispute such as labor, antitrust, and intellectual property.



ZACHARY NICHOLS Economics, Business Administration (Finance)

Winthrop, ME Winthrop High School

Dealing with Procrastination in the Workplace

Adviser: Jason Harkins

**Thesis description:** Strategies for coping with and/or overcoming procrastination in the workplace have been under-researched. I consider extrapolations that can be made between findings in the existing literature in self-control, time management, task & trait procrastination, temporal constructs, goal-setting theory, and organizational behavior, among other areas. I use a series of vignettes to analyze situations in which certain strategies can be best applied.

**Future Plans:** I will begin work in a management training program at Kennebec Savings Bank, headquartered in Augusta, ME.



WHITNEY NORTON Communication Sciences and Disorders Education, Disability Studies

Jonesport, ME Jonesport-Beale High School

A Study of Personality Types Found Within the Speech-Language Pathology Profession and the Communication Sciences and Disorders Major

#### Adviser: Judith Stickles

**Thesis description:** The Myers-Briggs Type Indicator (MBTI) was used to analyze the personality types of speech-language pathologists and students within the field degree. The results are organized by the 4 dichotomies: extroversion/introversion, sensing/intuition, thinking/feeling, and judging/perceiving. The study analyzed the individual dichotomies as well as personality outcomes as a whole. The study was designed to discover trends within each data set both separately and jointly, aiming to research if further education and experience has an affect on personality.

**Future Plans:** I am attending graduate school to earn my Masters in Communication Sciences and Disorders which I will apply to my professional career as a Speech-Language Pathologist.



BAILEY O'BRIEN English Psychology

Gorham, ME Gorham High School

#### **Dice Hearts and Other Islands**

Adviser: Gregory Howard

**Thesis description:** This creative thesis is a collection of fiction that explores both the isolation of islands and the connections that can be made between them. While these islands can be the physical landmasses of the sea, in this collection, islands also refer to the isolated selves of the characters. Inspired by Elizabeth Strout's narrative style in her novel *Olive Kitteridge*, the short stories in this collection similarly unveil the two main characters through stories bridged with connections. The latter half of this collection, a play and a monologue, are influenced by the playwright John Cariani. These pieces focus on the connections between people and how these bridges are created and sustained.

**Future Plans:** I plan to pursue writing in whatever way I can, whether that be writing stories and novels or scripts and sketches. I would love to incorporate my interests in comedy, theater, and travel as well.



MINERVA 2014

MATTIE PARADISE Biology

Wells, ME

The Effects of Flooding on the Microbial Communities of Sparrow Eggs in a Temperate Maine Salt Marsh

#### Advisers: Farahad Dastoor, Brian Olsen

Thesis description: Microbial infection has been shown to reduce hatching success for the eggs of tropical birds. Humidity and temperature encourage bacterial growth and the transport of microbes through the pores of the egg shell. We explored the ability of microbial communities to colonize and flourish on eggshells in a temperate salt marsh. We analyzed the microbial communities of eggs from Saltmarsh (Ammodramus caudacutus) and Nelson's (A. nelsoni) sparrows in a tidal salt marsh in southern Maine. Eggs were swabbed every three days during June and July to test for present microbial communities. To determine if environmental factors affect the microbial community, we compared the microbial environment of eggshells that had and had not been flooded by the tides. We found no significant differences in the microbial communities of these eggshells.



N. SCOTT PARKHILL Wildlife Ecology

Winchester, MA Winchester High School

Effect of Forest Vegetation on Nest-site Selection by Spruce Grouse Across Two Spatial Scales

#### Adviser: Daniel J. Harrison

**Thesis description:** The spruce grouse (Falcipennis canadensis) is a secretive forest bird found in the conifer forests of Northern Maine. Distributed across North America, this bird is threatened, endangered, or in decline in much of the Southeastern portion of its range. I examined nest-site selection by 12 radio-collared spruce grouse in the Telos region of northern Maine by measuring vegetative characteristics of occupied and unoccupied sites. An understanding of the relation between forest structure and nest-site selection by spruce grouse can better help future forest managers.

**Future Plans:** I plan on furthering my experience, eventually entering a graduate program where I can continue to study how wildlife perceive their environment. I would like to end up in New England working in natural resource management, meeting wildlife management objectives while conserving our unique land use history.



ERIN PERRY Psychology

Rio Rancho, NM Rio Rancho High School

#### An Investigation on the Effects of Virtual Social Support on Working Memory and Stress

#### Adviser: Shawn Ell

**Thesis description:** Social support can influence a person's level of stress. Prior research has shown that social support can act as a buffer for a stressful experience. However, it is unclear if a virtual social experience (similar to Facebook use) will offer the same kind of social support and buffer for the stressful experience. Stress level can also influence how well a person performs on a working memory task: the higher the stress level, the worse a person will do on the task. This study aims to look at the relationship between a virtual social interaction and stress and how that relationship affects working memory task performance. By manipulating the type of support that is experienced (positive or neutral), we can expect to see a buffer created.

**Future Plans:** Following graduation, I plan to take a year off and continue to do research in psychology. After I've done some more research, I plan to apply to graduate school for a PhD. in Social Psychology.



MATTHEW PINKHAM Psychology Anthropology

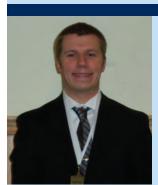
Sangerville, ME Piscataquis Community Secondary School

An Investigation into the Perceptions of International and Out-of-State Students on the University of Maine Campus

### Adviser: Ryan Pickering

**Thesis description:** Two studies were conducted over the 2013-2014 academic year. The first asked students who were from Maine to evaluate out-of-state and international students on multiple measures. Our findings showed that in-state students rated others as members of two distinct out-groups, which have different beliefs and world views. Participants also indicated that they would feel less comfortable interacting with these two groups of people than other in-state individuals. The second study asked international students to provide brief qualitative responses. These responses showed a desire for more interaction with American students, a lack of transportation off campus, and a supportive network on campus.

**Future Plans:** I plan to attend the UMaine Graduate School to obtain a Master's in Social Work.



ZACHARY PORTER Finance

Scarborough, ME Scarborough High School

Fannie Mae and Freddie Mac: What's Next?

#### Adviser: Robert A. Strong

Thesis description: The purpose of this research was to explore the mortgage market in the United States and determine an effective plan of action moving forward. At the heart of the mortgage debate are the two major lending institutions, Fannie Mae and Freddie Mac. Several questions arose during exploration of this topic. How can we help the secondary mortgage market in the United States run as effectively and efficiently as possible? Why are Fannie Mae and Freddie Mac often blamed for the housing crisis? What problems do the latest proposals address, and what problems does it fail to touch upon? After extensive research, it was determined that while the debate over moving forward with a public or private mortgage market is important, the problems in the mortgage market lie much deeper than that.

**Future Plans:** I plan to attend graduate school and attain a Master's degree in Finance. I also plan to complete the CFA program and become a Chartered Financial Analyst.



ARIELLE RANCOURT Psychology

> Bremen, ME Lincoln Academy

The Effects of Verbal Overshadowing and Social Anxiety on Facial Recognition: A Replication and Extension

## Adviser: Shannon McCoy

**Thesis description:** This study examined variables that may impact the accuracy of eyewitness testimony, starting with a replication of Jonathan Schooler's study on the verbal overshadowing effect. This study also examined the role of social anxiety at sub-clinical levels and how it may impair facial recognition. Participants watched a mock robbery video and completed multiple tasks in either the Description condition (verbally describing the robber) or Control condition. Results trended towards the original hypothesis that verbally describing a visual event impairs later recognition. Results showed that participants with higher social anxiety were significantly worse at identifying the robber than participants with lower social anxiety.

**Future Plans:** I plan on working and applying to Clinical Psychology programs for the following year.



ELIZABETH REYNOLDS Civil Engineering

> Ann Arbor, MI Dexter High School

Spans Across Time: Compliance of Historic Maine Coastal Bridges with Modern Geometric Design Standards

Adviser: Roberto Lopez-Anido

**Thesis description:** My thesis evaluates three unique historic bridges along the coast of Maine in order to determine if they are compliant with modern geometric design standards such as roadway width, sidewalk width, maximum incline or decline, and vertical and horizontal roadway curves. The results of this study indicates action that ought to be taken for the three evaluated bridges as well as historic bridges nation-wide in order to promote safety while maintaining historic significance.

**Future Plans:** I will be working for Kiewit Inc. in Chicago following graduation as an estimator and field engineer. Later, I hope to go on to graduate school to study historic preservation.



COADY RICHARDSON Bioengineering

Madison, ME

Engineering the Next Generation: Using Interactive Activities and Discussion-Based Classwork to Teach Elementary Students Science and Engineering Principles

Adviser: Michael Mason

**Thesis description:** The objective of this project was to create lesson modules that are based on the Next Generation Science Standards for use by teachers to teach science and engineering concepts. The goals of the modules are to provide interactive lesson plans imbedded with resources for teachers that teach the concepts of forces, the characteristics of life, and engineering design. The data collected from the surveys showed proof that the activities are interactive, teachers have intellectual and physical resources to complete them, and that the content is appropriate for the intended grade-level except for possible issues with general lesson language. This can be resolved by having the lessons evaluated by teachers specifically for language.



KyLE ROUSSEAU Biochemistry Chemistry

Lewiston, ME Lewiston High School

Method Development for the Analysis of Anthocyanine in Aronia Berries Via HPLC

#### Adviser: Angela Myracle

MINERVA 2014

**Thesis description:** My thesis looked into developing methods for analyzing anthocyanin contents in Aronia berries via High Performance Liquid Chromatography (HPLC). I tested different solvents and the effectiveness of sonication in extractions of anthocyanins from Aronia. I also tested multiple solvent and column combinations for HPLC analysis of anthocyanins to obtain clear peak separation in HPLC chromatograms. This research established a baseline for further analysis of anthocyanins in the future.

**Future Plans:** I am doing research with ion mobility mass spectrometry at Baylor University for 10 weeks over the summer and plan on finding a job in research and development to come back to for a couple of years before going to graduate school.



## JEFFREY SERVETAS Bioengineering

Hancock, ME Mount Desert Island High School

Surface Acoustic Wave-Based Manipulation of Intracellular Structures in Adherent Cultured Cells

#### Adviser: Paul Millard

**Thesis description:** Surface acoustic wave devices are unique devices that allow the propagation of waves over small, in this case solid gold, surfaces in a fashion similar to the way waves propagate over water. This thesis investigated the viability of using these waves as a method of moving and changing the insides of cells without moving or damaging the cells themselves.

**Future Plans:** I plan to take a research position at a bio-tech company, where I know that each day of work will challenge and interest me. As well, I plan to make ample time for the pursuit of my passions outside of the workplace, namely music, writing, and comedy.





DyLan Sirois Secondary Education, History

> Farmingdale, ME Hall-Dale High School

Imperial Impulses: The Influence of War and Death on the Writings of Rudyard Kipling

Adviser: Jennie Woodard

**Thesis description:** This historical inquiry will focus on Rudyard Kipling's life, his works, and relationships to British Imperialism. More specifically it will demonstrate how Kipling's attitude changed after World War One through his works. To understand Kipling and his place in the British Empire, it is essential to understand the framework of imperialism at the time. The circumstances of Kipling's upbringing were undoubtably what drove him into his passion for empire and staunch imperialism, while his later experiences were what drove him to reconsider.

**Future Plans:** Upon graduation, I plan to continue my studies and acquire a double degree while studying abroad in the United Kingdoms. I will also continue my work on a non-profit I co-founded called Respect Differences and spread the message of respect and good will. Afterwards, my aim is to become a high school or middle school social studies teacher somewhere in the state of Maine and spread my passion for history.



**KRISTYN SOULIERE** Pre-Veterinary Studies

> Saco, ME Thornton Academy

The Study of the Nutritional Effect of Grains in the Diet of a Dog

Adviser: Martin Stokes

**Thesis description:** This study was designed to address the lack of knowledge for what owners are feeding their dogs, and to determine if grain should be within the diet. The crude protein, crude fat, and first five ingredients listed were compared for four bags of feed chosen that varied in quality. It was found that an extremely high amount of protein in a diet is too much for maintaining a dog. The kidneys will be over worked and unable to remove urea efficiently, therefore, grains need to be in the diet. If there is too much fat in the diet, and the dog does not expend all the energy content from the feed, the dog will just layer on fat. Owners need to read bag labels before buying a feed for their dog and practice portion control to avoid causing obesity and kidney disease.

**Future Plans:** I plan to receive my Veterinary Technician license and continue working at Saco Veterinary Clinic. I will also be applying to Veterinary School in September 2014 to pursue a doctorate degree in veterinary medicine.



JEAN STEVENS Secondary Education, Mathematics

Albany, OR West Albany High School

Situational Interest in Professional Development

#### Adviser: Lauren Barth-Cohen

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**Thesis description:** This research took place at a professional development for middle school science teachers. We analyzed three cases where teachers became spontaneously interested in a geologic feature or phenomena. This type of interest we look at is situational interest. We then compared the three cases for similarities that can be implemented in future professional development to increase situational interest.

**Future Plans:** I plan to move back to Oregon to complete my teacher certification for the state of Oregon. I then plan to either stay in Oregon or move to California to teach high school math and coach. I also plan to get my masters in urban teaching.



THOMAS STEVENSON Psychology, English

Veazie, ME

Interviews with Transgender Students: Academic and Environmental Factors

#### Adviser: Sandra L. Caron

**Thesis description:** Although research on gay and lesbian students has taken off in recent years, there is a serious lack of research devoted solely to the transgender population, and even less specifically focused on transgender students. The research that has been conducted on transgender individuals is often focused on discrimination that they experience and the effects of that discrimination. College is a period of personal growth and discovery for all students, but perhaps especially for transgender students. This study, therefore, aims to better understand how being transgender affects the college experience.



ABIGAIL SZOTKOWSKI Psychology Sociology

> Monmouth, ME Monmouth Academy

#### Forming Impressions of Others: Does Sexuality Matter?

#### Adviser: Jordan LaBouff

**Thesis description:** Previous research suggests that the sexual double standard is still prevalent today, meaning that women face greater social repercussions for engaging in casual sex than men do. My thesis focuses on women's sexuality. To test this, we provided participants with a description of a hypothetical female who we named Amber. Amber was depicted as either having a single romantic partner or multiple romantic partners in the past year. We wanted to see if participants' level of religiosity, sexual conservatism, or moral foundations would affect their ratings of Amber. Overall, we found participants were more rewarding of Amber when she had a single partner.

**Future Plans**: I hope to take a little time off to travel, or maybe volunteer abroad. Once I figure out what career path I want to pursue further, I plan to go back to graduate school, possibly for social work or international affairs.



SAMANTHA TAYLOR Psychology English

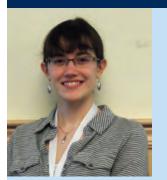
Union, ME South Hope Christian School

## The Effects of Literature on Childhood Anxiety and Attachment Issues

#### Adviser: Cynthia Erdley

**Thesis description:** Reading is often used to cope with difficult situations and deal with stress. My study was designed to investigate whether this theory can be applied in a practical way to a young age group. There are many children's books that have been written to help children answer specific questions—how to handle a bully, where babies come from, etc. In addition to this, many books have been written with the intention of helping children adjust to school and their separation from their parents. My study explored whether books that are targeted at anxiety and separation actually helped preschool-aged children deal with these issues as they began a new school year.

**Future Plans:** Following graduation, I will marry fellow UMaine graduate Colby Adolphsen. Beginning in Fall of 2015, I will attend the College of William and Mary where I will study School Psychology.



# Zoology

**DARLENE TURCOTTE** 

Dracut, MA Dracut Senior High School

Territorial Aggression Increases Along an Urban Gradient in Resident but not Migratory Song Sparrows

#### Adviser: Brian Olsen

**Thesis description:** During the breeding season, birds behave more aggressively toward rivals to maintain and defend territories. Resident birds are thought to be more aggressive than migratory birds because they need to maintain a territory year-round. In this study, we investigated how migration strategy and landscape composition interact to affect territory defense in two subspecies of song sparrows (Melospiza melodia). We found that neither migration strategy nor landscape composition alone correlated with territorial aggression, but the interaction between these two predictors was significant.

**Future Plans:** In Fall 2014, I will be attending the Graduate School at UMaine in pursuit of a Master of Science in Teaching. I will also work towards the certification required to teach at the secondary level. My hope is that by completing this graduate program, I will be able to teach biology and science at Maine public high schools.



### **RAYMOND UPDYKE** Business Administration

(Accounting) Sustainable Agriculture

East Lyme, ME East Lyme High School

Biodegradation and Feasibility of three Pleurotus species on Cigarette Filters

#### Adviser: Marianne Sarrantonio

**Thesis description:** Oyster mushrooms (genus Pleurotus) have been shown to degrade many industrial wastes. Cigarette filters are a major waste that persists in the environment primarily due to the fiber within the filter which is made out of cellulose acetate. I conducted an experiment where I attempted to grow three different oyster mushroom species on three different cigarette filter substrates over six weeks. I calculated the biodegradation via weight loss and the feasibility of growing these mushrooms on cigarette filter waste. Pink oyster mushrooms (P. djamor) show the most promise and the model may be economically feasible if filters were incorporated in hay or straw mixtures and if labor rates were low.

**Future Plans:** I plan on working in the private accounting sector following graduation.







Hannah Vall Political Science Legal Studies

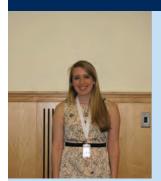
Waldoboro, ME Medomak Valley High School

#### Polarizing Issues in the American Political Parties: Women in Party Platforms

### Adviser: Mark Brewer

**Thesis description:** This thesis focused on the relationship between polarization and cultural issues, specifically cultural issues relating to women; issues such as abortion, access to contraception, women's role within the family and society, access to healthcare, discrimination based on gender, and equal pay. An analysis of American National Election Studies data was used to establish that polarization is in fact growing. Then, in order to investigate the relationship between polarization and women's issues, a content analysis of presidential-cycle party platforms from 1952 through 2012 was conducted. Using the findings from the content analysis, the parties' positions on these topics were compared and analyzed for how and where they diverge and how they have changed over time. The data compiled indicates that a political secular realignment has led to an increase in polarization where women's issues are concerned.

**Future Plans:** I will be attending Suffolk University School of Law in the fall.



**Sydney Walker** Psychology, Theatre

Naples, ME Lake Region High School

It's Not All Just Child's Play: A Psychological Study on the Potential Benefits of Theater Programming with Children

Advisers: Cynthia Erdley and Tom Mikotowicz

**Thesis description:** For my thesis, I designed a theater curriculum based around the techniques of Creative Drama. I taught this curriculum to students in grades Kindergarten through Fourth Grade at the Stillwater Montessori School in one hour sessions twice a week over the course of a month. The class collectively worked on different elements of theater. I administered surveys to the children, their parents, and teachers before and after the theater programming to examine the children's changes in self-esteem and empathy throughout the process.

**Future Plans:** I have accepted a teaching position at The New England Center for Children in Southborough, Massachusetts. While starting my career with this organization, I will also be pursuing my Masters Degree in Severe Special Education from Simmons College through NECC's onsite education program. I hope to work at a children's theater dedicated to working with children with developmental delays and disabilities.



SOPHIE VEILLEUX Psychology

Montville, ME Mount View High School

Dealing with Dissonance: Psychological Mechanisms that Enable Ambivalent Attitudes Towards Animals

#### Adviser: Cliff Guthrie

**Thesis description:** I have always found our ambivalence towards animals quite fascinating. Loving animals is such a cherished and important aspect of our culture, yet we simultaneously cherish the profits of their brutal exploitation. I wondered how, psychologically that is, humans are able to maintain such conflicting attitudes amidst such a sophisticated moral standard. It turns out there is a bounty of philosophers, researchers, and authors also questioning this strange paradox. My thesis is a critical literature review, which aims to compile a variety of the research and discussion that has been directed at this question.

**Future Plans:** I will be moving to Portland's East End following graduation, where I hope to waitress for the summer while studying for the GRE. Ultimately my goal is to return to England for my post-graduate degree; my dreams are to one day be a counselor or therapist.



SARAH WATTS Ecology & Environmental Sciences, Spanish

Bowdoin, ME Mt. Ararat High School

Where I Tread

Adviser: Sarah Harlan-Haughey

**Thesis description:** During my junior year, I studied abroad in Bilbao, Spain and Cork, Ireland for one semester each. During that time, I wrote an extensive travel blog about my experiences amounting to about 90,000 words (web address: www.sarah-goestobilbork.wordpress.com). My thesis includes a selection of posts, as well as an accompanying essay elaborating on some of the themes found in the blog. These themes are how different people with different attitudes respond to religion and to pilgrimage specifically and what the differences between a traveler and a tourist are.

**Future Plans:** Following graduation, I plan to go into the Peace Corps in Central America (preferably Costa Rica or Nicaragua); following that, I plan to go to graduate school.



## HONORS MEMORIES

# **Celebration 2014**



Campbell Miller and his advisor Carol Kim





Darlene Turcotte and her advisor Brian Olsen

Dean François Amar

The Honors College continued its annual celebration honoring every graduating student by reading the title of their thesis and having their advisors bestow each of them with an Honors Medallion and Stein.

## Announcing the Barbara A. Ouellette Honors Thesis Fellowship



Barbara Ouellette, Assistant Dean, will retire from the Honors College in June 2015 after almost forty years of service. Students who have registered for classes, finished their honors theses, or even just walked the halls of Colvin know the presence and impact Barbara has had on our growing Honors community. She has coordinated student academic services, organized conferences and scholarship opportunities for our students, served as an administrative leader in the College, but just as importantly, she has been a mentor and a friend to us all.

Dr. Ruth Nadelhaft, former Director of the Honors Program testifies to Barbara's centrality in our community: "Directors and Deans come and go, [but] Barbara Ouellette was-and still is-the constant at the heart of what is now the Honors College. Barbara came in early and left late. She knew and remembered the names of students, even former students from years past. Barbara understood that the students were the real reason for the existence of the Honors program, and she mentored them as an advisor."

Dr. Sam Schuman, another former Director and long time friend of Barbara, spoke to the vast impact she has had on the evolution of the program: "More than any other individual, Barbara Ouellette has been responsible for the steady progress and effective operation of the Honors Program/Honors College at the University of Maine. When Barbara joined the program, it was led by a part-time faculty director and housed in a temporary facility: today, it is an Honors College, led by a Dean, and with a fine and permanent home on campus. Barbara has not just

seen all these changes, she has been instrumental in making them happen. Honors directors and deans have relied on her knowledge of the operation, and her good sense. Honors instructors have depended upon her assistance. Most of all, generations of honors students have considered Barbara a friend, counselor and facilitator before, during and after their honors careers."

Please join us in honoring Barbara's dedication to the College by generously supporting the Barbara A. Ouellette Honors Thesis Fellowship. In keeping with Barbara's deep commitment and compassion, this fellowship will take into account financial need in the selection of the recipients.

Thank you for your service and friendship, Barbara.





## 2015 80 Years of Honors

We are looking forward to celebrating our 80th anniversary soon! Please stay tuned for upcoming events by liking our page on Facebook.









Honors College

# In Memoriam: Sam Schuman, Honors Director '77-'81

Arlene Thomson Art Collection

The Honors community is saddened to announce the passing of Sam Schuman, the director of the University of Maine Honors Program between 1977 and 1981. After leaving UMaine, he joined the faculty at Guilford College, then became Chancellor of the University of North Carolina, Asheville. He eventually worked at the University of Minnesota, Morris as Chancellor. He returned to Asheville as Interim Dean of the faculty and remained there until his retirement.

Throughout much of his career, Sam was deeply involved with Honors at a national level, including acting as president of the National Collegiate Honors Council. He consulted with over 35 Honors programs during his time and organized workshops and authored books for the improvement of Honors, including the widely used *Beginning in Honors Handbook*.

Dean François Amar notes, "Sam Schuman was so generous with his time and willing to share his depth of knowledge of all things 'Honors' when I asked him for advice during the first few months of my time as Dean of the Honors College here at the University of Maine."

Assistant Dean Barbara Oullette reflects, "Sam was the first full time Director of the Honors Program and he was such a joy to work with.



This was his first administrative position and he showed such promise as an administrator, as his record exhibits. He was kind, compassionate, bright, and students loved him. After leaving UMaine in 1981, he remained in touch with me during these last 33 years. I was at Honors for just one year when he was selected as the first fulltime Honors Director of the University of Maine Honors Program. We flourished together and I thought we made a great team. He was my boss, but always treated me as a colleague. He had a wonderful sense of humor, and was a very humble person. He certainly had a great love of Honors as he showed while he was here, and in the years that he was at other institutions. I will miss hearing from him, and sharing a meal with him at all the Honors conferences that I attended. I and all those who had the pleasure of getting to know him will miss him."



## THANKS FOR YOUR GENEROUS SUPPORT!

Much of what we do here in Honors to enrich the educational opportunities available to our students is only possible because of the gifts of generous donors. Your gifts make possible scholarships and study abroad opportunities, research funding and thesis fellowships, conference travel for students, and our distinguished lecture series. The continued support for Charlie's Terrace this past year also showed the dedication and commitment of our Honors community. We truly appreciate all that you do.

## It is a pleasure to acknowledge the following donors to the Honors College between January 2014 and December 2014:

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> THE HONORS COLLEGE LEGACY FUND CHRISTINE M. GILBERT CLASS OF 2014

The Honors College Legacy Fund was established in Fall 2013 to provide the Honors community a means of creating a lasting acknowledgement of student achievement, faculty mentoring, and memorable experiences in Honors. Personalized bricks are displayed in Charlie's Terrace, and all funds will be used to support the mission of the Honors College. Please join our tradition and cement your Honors College memories. Bricks can be sponsored online at umainefoundation.





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Private support enriches the University of Maine Honors College experience and is vital to the programs offered. University of Maine Foundation and University Development staff are available to assist donors in learning more about different ways of giving to benefit the University of Maine Honors College. Gifts can be given in the form of bequests, outright donations of tangible and intangible assets, pledges, charitable trusts, annuities, retirement funds and life insurance proceeds. Gift designations can support scholarships, fellowships, travel, guest lectures, facilities and other needs of the students and faculty of the Honors College. Immediate online gifts to existing Honors College funds or legacy bricks may be processed at umainefoundation.org/ honorscollege.

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