

Symposium

Student Works

2017

Symposium 2017

University of Maine at Farmington

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Welcome to the Michael D. Wilson Symposium

April 26, 2017

Credit Ancient Greeks with the **symposium**, one of their many contributions to education and learning. As opportunities for debate, exchange of ideas and social interaction—fueled by ample food and drink—symposia built a social and intellectual foundation for the vibrant community the Greeks created for themselves and posterity.

UMF is pleased to follow suit with our campus-wide **Symposium** celebrating undergraduate research and creative achievement. Together with Arts Night, Symposium showcases what's possible when you mix student passion, ambition, hard work, creativity and talent with faculty joy, mentorship and care. It is no surprise that many members of the UMF community count Arts Night/Symposium as their favorite and most uplifting time of the year.

It's possible that Greek participants of long ago engaged, as we will in the 2017 Arts Night/Symposium, with writers at work, the geometry of undetectable motion, human-animal relations, Utopian society, the art of magic, and Shamanism, but it's a good bet that our UMF presenters are far ahead on the language of hip-hop, the web comic *Monsterkind*, the Staten Island Project, the Vermont Eugenics Survey, optimal baseball batting lineups, sea level rise in Saco Bay, and dozens of other fascinating topics you'll encounter in posters, presentations and installations on campus.

This beloved UMF tradition is the product of hard work, inventiveness, financial support and deep commitment. For these we offer our thanks to the University Culture Committee, Paul Stancioff, Professor of Physics and chief Symposium organizer, our vital faculty mentors, devoted staff, generous supporters of undergraduate research, and, not least, the enterprising and intrepid students who put before us the fruits of their labor.

Feast heartily on Symposium, UMF's annual groaning board of creative and intellectual sustenance.

Kathryn A. Foster

President

For eighteen years, UMF's annual Symposium has provided a singular opportunity to experience the outstanding academic work of students from across the university. The range of scholarly and creative projects is dazzling in itself, and represents untold hours of study and preparation, in addition to guidance and mentoring by faculty sponsors. No less dazzling is the commitment our entire campus makes to attending these papers, posters, and presentations, enlivening UMF like no other day on the calendar.

As a university invested in the liberal arts and committed to undergraduate research in all disciplines, UMF proudly supports its students in the public rendering of such work. Indeed, as the English writer John Milton proclaimed, "I cannot praise a fugitive and cloistered virtue, unexercised and unbreathed." For all the good work that goes on in our classrooms throughout the school year, Symposium Day offers a chance to uncloister that work, to let it exercise and breathe, and it is a privilege to once again take part in the richness of such an event.

Congratulations to all those who contribute to this unique day on our campus!

Eric C. Brown, Interim Provost and Vice President for Academic Affairs

Symposium Day provides a wonderful opportunity for students from all disciplines to share their impressive scholarly and creative work with the UMF community. The incredible array of presentations, poster sessions, readings, installations, and performances highlights the many talents of our student body and the multiple opportunities students have to engage in rich, rigorous research and learning experiences throughout their UMF education. Congratulations to all of the student presenters and faculty mentors, and many thanks to the organizers of this special event!

Kathy Yardley, Associate Provost and Dean of the College of Education, Health, and Rehabilitation

Education is at its best when it's active, and there's no better way to take charge of one's own education than by doing one's own research. The students presenting today come from all fields, all levels, all backgrounds, but they all have this in common – they had an idea and they pursued it on their own.

The result, for the rest of us, is a feast of knowledge. Thanks to those who, by attending, provide an audience for these students to share their work. I know you join me in giving kudos and thanks to all the presenters, of whom we are proud and from whom we are pleased to be learning.

Jonathan Cohen, Associate Provost

This symposium is organized by the University Culture Committee:

Misty Krueger (Chair)

Paul Stancioff

Patti Bailie

Gail Lange

Olivia Donaldson

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Special Presentation

“Last Lecture”

By

Associate Professor of Special Education, Rick Dale

Student Center CR 123

Wednesday April 26th at 7:00 PM

My Teachers

Dr. Rick Dale is an Associate Professor of Special Education at UMF, where he has been a faculty member since 2006. Prior to his time at UMF, he was an Assistant Professor of Special Education at Mansfield University in Pennsylvania. He has spent his entire 39-year career in the field of special education, serving in various roles including teacher, consultant, and administrator. For several years he was the special education policy adviser for the Pennsylvania Department of Education. Dr. Dale lives in Augusta with his partner, Crystal, and Karma the cat.

The “Last Lecture” is a yearly event sponsored by UMF’s Alpha Lambda Delta, now in its fifth year. Alpha Lambda Delta is a nationally recognized honor society for students who achieved a grade point average of 3.5 or higher in their first year at UMF. The UMF chapter focuses on community service and academic excellence through a variety of events.

“The Last Lecture” gives a retiring UMF professor one last opportunity to address the UMF community. The speaker can reflect on what she/he has learned while at UMF, and/or it gives the opportunity to teach one final life lesson to students.

UMF Trustee Professorship

Symposium is a day to honor the value of scholarly and creative endeavor at UMF. Toward that end, we have chosen Symposium as an opportunity, not only to showcase the work of our students, but also to bestow the university's most prestigious award for scholarship to a faculty member. The Trustee Professorship is given each year to one UMF faculty member in recognition of her/his distinguished record of scholarly or creative work. The Trustee Professor receives a cash stipend, a professional development allowance, and a half-time reassignment for an academic year in order to focus on a scholarly or creative project.

Each year at Symposium we invite the current Trustee Professor to deliver a public lecture. This year's Scholar is Nic Koban, Professor of Mathematics. He will speak at 11:35 in Lincoln Auditorium. All students, faculty, and staff are invited.

2016-2017 Trustee Professor

11:35 - 12:15

The Geometry of Undetectable Motions

Nic Koban

When given a geometric object, one can wonder about the collection of undetectable motions of the object. For example, if you have a picture of a square, and your friend rotates that square 90 degrees without you present at the time, you would never know that someone turned your square. If, however, your friend rotates the square 45 degrees, then you know that someone was messing with your square. We will investigate the collection of these undetectable motions and generate new geometric objects from these. The study of these new geometric objects will help in studying the collection of undetectable motions.

Past UMF Trustee Professors

Spring 1999 – Mark McPherran
1999 – 2000 – Ronald Butler
2000 – 2001 – Jennifer Reid
2001 – 2002 – Chris Magri
2002 – 2003 – Dan Gunn
2003 – 2004 – Ming-Ming Pu

2004 – 2005 – David Daniel
2005 – 2006 – Mike Muir
2006 – 2007 – Tiane Donahue
2007 – 2008 – Paul Outka
2008 – 2009 – Drew Barton
2009 – 2010 – David Gibson

2010 – 2011 – Jeffrey Thompson
2011 – 2012 – Eric Brown
2012 – 2013 – Gretchen Legler
2014 – 2015 – Allison Hepler
2015 – 2016 – Patricia O'Donnell

Michael D. Wilson Research Fellows and Scholars

The Michael D. Wilson Scholars and Fellows represent some of UMF's best students from across all disciplines. The program recognizes UMF students' tremendous creativity, and expands UMF's commitment to undergraduate research and faculty mentoring. Each student was awarded funding to help underwrite an original undergraduate research or creative project. The Program has been providing single-semester support for research, scholarship and creative projects at UMF since the fall of 2006. It was expanded in the fall of 2007 to include two full-year Wilson Research Fellow awards to support even more substantive research projects. In the years since its inception, the Wilson program has supported the investigative research and creative activities of more than 200 students at UMF. During this time over 60 UMF faculty members have developed strong mentoring relationships with individual scholars, providing guidance with proposal development, research methodology and continuing pre-professional and post graduate opportunities. The awards honor UMF alumnus, Michael D. Wilson, class of 1976, an avid environmentalist, aspiring teacher, and dear friend whose untimely death in 1977 deeply saddened the UMF community. The students are nominated by a UMF faculty mentor and, after a competitive selection process, are chosen by the UMF Undergraduate Research Council.

2016 – 2017 WILSON FELLOWS

Brigid Chapin - *Drawn: The Reclamation of Personal Identity in Women's Graphic Memoirs*
Faculty Advisor: Sabine Klein

Eli Kidson - *Mapping the Boundary at Infinity for the Baumslag-Solitar Groups*
Faculty Advisor: Nicholas Koban and Chris Bennett

Cassie Scott - *American Outliers: The Debated Existence of American Maroon Societies*
Faculty Advisor: Michael Schoeppner

FALL 2016 WILSON SCHOLARS

Jamie Austin - *The Expanding Executive Branch: Have the Anti-Federalists Fears Been Realized?*
Faculty Advisor: Chris O'Brien

Joseph Needle - *The Vermont Eugenics Project: Science and Prejudice in the Green Mountain State*
Faculty Advisor: Allison Hepler

Ben Rodriguez - *The Shadow of the American Freedom Train: An Explicit and Implicit Image of American History*
Faculty Advisor: Chris O'Brien

Richard Southard - *Literature and Magic: An Adaptation Study*
Faculty Advisor: Michael Johnson

Kristen Tarr - *Bridging the Gap Between Interactive Technology and Nature Play with Young Children*
Faculty Advisor: Patti Bailie

SPRING 2017 WILSON SCHOLARS

Sean Cabaniss - *Creating the Optimal Baseball Batting Lineup*

Faculty Advisor: Nicholas Koban and Chris Bennett

Curtis Cole - *Zombic-Machines: or, Culture Re-animated*

Faculty Advisor: Michael Johnson

Laura Dickey - *Beauty | Futility*

Faculty Advisor: Dawn Nye

Courtney Frost - *Predicting Medical Anxiety and Avoidance of the Doctor: The Role of Parents, Doctors, and Access to Medical Care*

Faculty Advisor: Natasha Lekes

Rachel Goding - *In the City of Spindles: Urbanization and Protest in the Lowell Mills*

Faculty Advisor: Allison Hepler

Sumaya Hamdi - *Field Relationships, Petrography and Geochemistry of the Eastern Part of the Flagstaff Lake Complex, Northern Maine*

Faculty Advisor: David Gibson

Rayanna Howard - *Perceptions of Individuals with Missing Teeth in the Justice System*

Faculty Advisor: Karol Maybury

Haley Jaramillo - *The Romance of Nature: Maine's National Monument*

Faculty Advisor: Brad Dearden

Brittany Jones - *Applied Behavior Analysis: Improving Communication and Peer Interactions for Young Children with Autism*

Faculty Advisor: Allison Jackson

Katie LeBlanc - *The Importance of Marginalized Voices in the Dominant Philosophical Discourse: A Problematic*

Faculty Advisor: Jonathan Cohen

Jonathan Petrey - *Reconstructed Being*

Faculty Advisor: Dawn Nye

Kaylee Pickering - *Examining Perceptions of Bisexuality: Differing Interpretations of Male and Female Bisexuality*

Faculty Advisor: Karol Maybury

Connor Wagner - *Chizzle Whizzle: The History of Minstel Shows in Maine*

Faculty Advisor: Michael Schoeppner

Corey Wallace - *Apparatus Exfoliation: A Perspective of Commodity Culture, with a Tendency toward Comedic Interpretation; Also Includes Sorro*

Faculty Advisor: Dawn Nye

Arts Nights 2017

Project III

On Tuesday, April 25, as an exciting prelude to UMF's University-wide Symposium Day, Arts Night will highlight the Visual and Performance Arts Senior Projects. The day will feature back-to-back artistic, sound, cultural and theatrical presentations throughout the Emery Community Arts Center beginning at 5:30 p.m., and continuing into the evening. Admission is free and all events are open to the public.

Abigail Parkinson – *Fandom Fortunes*

Exploring the spiritual and almost religious sides of fandom, Abigail Parkinson will be presenting a tarot deck of her own making in the form of a live card reading for volunteers. She has spent the last semester studying the symbolism of tarot in connection with recognizable figures in geek culture, and her deck features characters from Star Wars, Lord of the Rings, Harry Potter and more. She has illustrated each card herself and hopes to use her skills as an illustrator to further a future career in theatrical and concept design.

Danielle Lefebvre – *Players' Market: A Farmington Music Blog*

Players' Market is a local music blog set out to capture the culture of the live music scene in Farmington, Maine. Currently, there is no one stop for information about bands, venues or schedules. We hope to keep the community updated at least weekly with musical events they can see around town and how to find out more about their favorite local artists. Videos of local performances each week give a sneak peek into the musical community thriving in Farmington to entice site visitors to attend.

Zack Peercy - *Writer at Work*

Based on the Philosophy and Performances of Harlan Ellison, Zack Peercy will attempt to demonstrate to the UMF community that writing is a job, not an artistic whimsy. On April 24, from 9AM to 5PM, he will set up his work station, comprised of a writing desk, typewriter, and chair, in the Olson Student Center. Over the course of the workday, he will show passersby that writing, like any other job, requires time, focus, and skill. His hope is to complete eight short pieces, based on sealed prompts from the community and abroad, before punching the time clock.

Keith Clark – *2 Late: A Radio Talk Show*

Humanity has long wondered what seeing the afterlife could be like. But what if we could hear it? This evening, the afterlife's own talk radio show, *2 Late*, will be broadcasting live, even though its ghostly host is not so lucky. Each living caller to this show gets a unique chance to ask questions about the afterlife, and they will all use it differently. Infused with Keith J Clark's unique brand of humor, this performance hopes to bring some light to a dark part of human existence.

Parker Chapin – *The Fiddle in Celtic Music*

A talk that aims to draw a history and analysis of Celtic music with a focus on the fiddle, how the fiddle was invented and entered the Celtic musician's toolkit, how it influenced composition of Celtic folk tunes, and how these tunes are intertwined with culture and history.

Devin Gilman - *I Feel Powerful When I Am Naked: A Brief Examination of the Neo-Burlesque Scene*

For many decades both women and men have flocked to the stage, and have embraced the power of striptease to enhance the visual aesthetic of the burlesque performance. By examining the historical influences the burlesque culture in the United States, we can see the impacts it still upholds today to the performers reimagining the Neo-Burlesque scene. By paying tribute to the traditional practices used in the classical burlesque movement, artists push the boundaries and between art and performance by mixing pop culture with the art of the striptease and fetish performance.

Samuel Cobb - *The War of Lost*

When a world has known nothing but war, and a time of peace finally falls across the land, will things finely begin to change? Or will a dark shadow fall over the land, which has already seen so much bloodshed? *The War of Lost* is an effort to examine these questions and many other questions of our own fights.

Samuel Burnell - *Signal Decay*

Nostalgia has a quiet intensity. We attach it to present moments, old possessions and vague auras, manipulating its warmth to our benefit. Through it, we indirectly inform our feelings towards media of the past. This audiovisual performance is built from culturally decayed media, colored by instances of affection, epiphany and melancholy through destructive, additive processes. Bringing together analogue electronic synthesis, heavily-treated footage and sound improvisation, *signal decay* addresses the uncertain present by invoking the recent past.

Venue 1, Lincoln Auditorium

Wilson Scholars, Trustee Professor

9:00 - 9:20

The Vermont Eugenics Survey

Joseph Needle

In 1937, Vermont began the forced sterilization of hundreds of social “undesirables” and “defectives.” Arising in the 1920s and driven by several factors, including the national eugenics movement; a sense of Vermont “identity” that was defined by whiteness and Anglo-Protestantism; and a university-housed program called the Vermont Eugenics Survey. These factors coalesced in the 1930s, and cast a dark shadow over the state’s minority, mentally ill and handicapped populations for decades to come. *(Faculty sponsor: Allison Hepler)*

9:20 - 9:40

“Our Unity as a Nation:” The American Freedom Train, the Bicentennial and Debating the Past

Benjamin Rodriguez

In 1975 and 1976, the American Freedom Train, packed with 12 cars of “historical” artifacts, visited each of the 48 contiguous states. In the wake of the tumult of the late 1960s and the early 1970s, the architects of the project, and their supporters in business and government, hoped that a reminder of the American past would unify an increasingly fractious public. Their hopes were not to be realized as the very selection of the artifacts proved profoundly divisive. This presentation explores that train, its cargo, and how the line between “story” and “history” has so often proved difficult to navigate. *(Faculty sponsor: Michael Schoeppner)*

9:40 - 10:00

Applied Behavior Analysis: Improving Communication and Peer Interaction for Young Children with Autism

Brittany Jones

A defining characteristic of children with autism spectrum disorders (ASD) is their difficulty in understanding the emotions of others which results in a lack of social skills and peer interactions. Teachers and parents play a crucial role in helping children with autism to improve their social skills in order to increase the frequency of peer interactions. One approach to intervention for children with ASD is applied behavior analysis (ABA). Applied behavior analysis is a naturalistic intervention that involves the use of materials within the child’s natural environment and has shown effectiveness in improving communication, play, joint attention, social interaction, and speech intelligibility (Donaldson & Stahmer, 2014). Through the review of literature on applied behavior analysis, such as research studies from well-known professionals Amy L. Donaldson and Aubyn C. Stahmer, and self-conducted research in an ABA-based setting, I will examine the effectiveness of utilizing ABA-based interventions to improve the social skills and peer interactions of children with autism. This examination will help to demonstrate the feasibility of implementing strategies that will improve the outcomes of children with autism and bridge the gap that exists between these children and their typically developing peers. *(Faculty sponsor: Allison Jackson)*

10:00 - 10:20

The Significance of Freedom: The Contested Existence of American Maroons

Cassie Scott

Maroons, the communities built by runaways that dotted the maps of most slaveholding nations, have rarely appeared in histories of the peculiar institution in the United States. Yet tangible evidence exists to document their presence in this country. This paper explores the evidence for the existence of a maroon community in the Great Dismal Swamp and asks why, in a subject seemingly so important to understanding slavery and the experience of African Americans, historians have so long denied or discredited the significance of these communities. *(Faculty sponsor: Michael Schoeppner)*

10:20 - 10:30

Break

10:30 - 10:50

Literary Adaptation and the Art of Magic

Richard Southard

Works of literature have been historically adapted to film, visual art, theater, and other mediums. Much less explored, however, are the adaptations of literature in the art of magic. This presentation will explore instances of literary adaptation in magic performance. I will also discuss my own adaptations of poems to card magic, and the difficulties that come with adapting the two arts. *(Faculty sponsor: Michael Johnson)*

10:50 - 11:10

In the City of Spindles: The Impact of Leisure Time on Protest in the Lowell Mills

Rachel Goding

Most of the laborers in the 19th century Lowell textile mills—among the earliest factories in the United States—were unmarried New England farm girls. They were also among the first industrial workers to protest for better working conditions. This presentation examines an oft-overlooked reason for the mill girls' protests: free time. The women of the mills used their off-work hours to enhance their respectability. In so doing, they also built worker solidarity that eventually blossomed into workplace protests. *(Faculty sponsor: Michael Schoeppner)*

11:10 - 11:30

Perceptions of Physical Appearance Within the US Justice System

Rayanna Howard

Dion, Berscheid, and Walster (1972) first tested the “what is beautiful is good” theory, that beautiful physical appearance is often equated with what is considered “good” in our society. However, studies examining perceptions of particular physical appearances (such as a missing tooth) within society are less prevalent. This study, an extension of an earlier study (Howard, 2016) examined perceptions of individuals with a missing tooth within the United States judiciary system. It was hypothesized that an individual with a missing tooth would be judged more harshly than an individual with a nice smile that was charged with the same crime (a misdemeanor). Using a between-subjects design, participants read about a sketch-artist's observations in a courtroom. Following the scenario, they answered survey questions regarding their perceptions of the defendant. Findings, limitations, and implications are discussed. *(Faculty sponsor: Karol Maybury)*

11:30 - 11:35

The Presentation of the Walter Sargent Undergraduate Research Mentor Award

Lori Koban

In 2012, the Undergraduate Research Council presented the first Undergraduate Research Mentor Award. In 2013, the award was named to honor the late Walter Sargent, a UMF history professor and URC member. Walter was not only a council member, but a mentor of many undergraduate research projects that built a culture of undergraduate research in his discipline. We will present the 2017 Walter Sargent Undergraduate Research Mentor Award to a faculty member with a similar record of mentoring and establishing a culture of undergraduate research within the discipline.

11:35 - 12:15

The Geometry of Undetectable Motions

Nic Koban

When given a geometric object, one can wonder about the collection of undetectable motions of the object. For example, if you have a picture of a square, and your friend rotates that square 90 degrees without you present at the time, you would never know that someone turned your square. If, however, your friend rotates the square 45 degrees, then you know that someone was messing with your square. We will investigate the collection of these undetectable motions and generate new geometric objects from these. The study of these new geometric objects will help in studying the collection of undetectable motions.

12:15 - 1:10

Lunch

1:10 - 1:30

The Boundary at Infinity of Baumslag-Solitar Groups

Nathaniel Kidson

Multiplication is understandable enough regarding the concept of commutativity. As we know, for any two numbers X and Y , $X*Y=Y*X$. But what if we changed this property in a set of numbers to be something slightly off, such as $X*Y=(Y^2)*X$? Well, this is exactly what happens in our most trivial Baumslag-Solitar Group. This talk, which is deeply rooted in Group Theory and Topology, will be dedicated to exploring the research my professor and I have done on this topic in the last year. (*Faculty sponsor: Nicholas Koban*)

1:30 - 1:50

Drawn: Women's Identity in Graphic Memoir

Brigid Chapin

The goal of my project is to explore how women use the graphic memoir to craft their own identity. To fully engage this creative research project, I created a sketchbook journal of the academic year, which captures a mix of day-to-day life, current events, religious and spiritual exploration, and political activism, to address the question of how these disparate plot points come together to form one real-life narrative, and how the story of my self is captured in my journal. In this presentation, I will demonstrate how identity functions in this genre by reading my work alongside that of other graphic memoirists. (*Faculty sponsor: Sabine Klein*)

1:50 - 2:10

Zombic-Machines: How the Past Becomes Re-animated

Curtis Cole

Through the lens of Gilles Deleuze's philosophy, this project offers a critique of a contemporary commodity production that too often relies on reanimating the dead (e.g., classic novels) for market-driven (rather than artistic) purposes and favoring pop culture sensationalism over artistic value. Drawing on Deleuze's own repurposing of terminology to create new concepts (as did Deleuze with the "rhizome"), this project proposes the term "the Zombic-Machine" to describe this process of commodity production: the creation of shambling, reanimated, money-producing assemblages comprised of the dead parts of prior texts. *(Faculty sponsor: Michael Johnson)*

2:10 - 2:30

Predicting Medical Anxiety and Avoidance of the Doctor: The Role of Parents, Doctors, and Access to Medical Care

Courtney Frost

In a time when the rate of chronic health issues is steadily increasing in developed countries, approximately 20% of Americans are avoiding or delaying healthcare visits, with a 62% increase in unmet healthcare needs among insured individuals (Cunningham & Felland, 2008). For some people, going to the doctor is a habit and item to check off of a to-do list; for others, however, this task causes anxiety and discomfort, leading to avoidance. This study examines the factors that predict whether an individual chooses to go to the doctor or not. Study participants responded to a hypothetical situation that would necessitate a doctor's visit and answered questions on health anxiety, parental healthcare habits, finances and insurance coverage, and perceived autonomy in healthcare settings. Results and implications for research and medical practice will be discussed. *(Faculty sponsor: Natasha Lekes)*

2:30 - 2:40

Break

2:40 - 3:00

Finding the Optimal Baseball Batting Lineup

Sean Cabaniss

During this semester the optimal baseball batting lineup was researched using computer simulations, data analysis, and linear algebra. There were over 360,000 possible lineups from which the best lineup could be derived. Previously researched data from a Wilson Scholar last year as well as several new methods of research were used to find an answer to the question of the optimal lineup. *(Faculty sponsor: Nicholas Koban)*

3:00 - 3:20

Bridging the Gap Between Interactive Technology and Nature Play with Young Children

Kristen Tarr

Children are exposed to technology at young ages; phones, iPads, and laptops are becoming part of their everyday lives. Often technology is viewed as an obstacle to outdoor play that diminishes children's connection to nature. The purpose of this study was to see if and how interactive technology enhances and supports nature play. The research focused specifically on the usage of a multi-touch table and digital microscope. Preschool children were observed using interactive technology outdoors. The results varied depending on the type of

interactive technology used. The multi-touch table supported social interaction while the digital microscope enhanced nature investigations. *(Faculty sponsor: Patti Bailie)*

3:20 - 3:40

The Romance of Nature? Katahdin Woods and Waters National Monument

Haley Jaramillo

In 2016 the Katahdin Woods and Waters National Monument was one of many designations established by President Obama under the Antiquities Act of 1906. The recent application of that authority has generated concern among some members of congress, state and local officials, and residents of Maine. This research investigates the designation of public land in the case of Katahdin Woods and Waters National Monument within the frameworks of preservation vs. conservation and the romanticization of nature. Using this conceptually unique approach, semi-structured interviews have been conducted of those living near the monument vs. those from 'away' for comparative purposes. *(Faculty sponsor: Brad Dearden)*

3:40 - 4:00

The Plight and Project of Marginalized Voices in College Philosophy

Katie Jo LeBlanc

Philosophy, when considered the philosophical works that are commonly taught at the undergraduate and graduate levels in America, has a problem with diversity. There are as many ways of doing philosophy as there are people, but the Philosophy represented in our nation's undergraduate programs is far more limited... which may explain the lack of women, people of color, and other groups structurally marginalized in American society. My project included analyzing and contextualizing the significant effects this philosophical lack of representation has had as well as highlighting the importance of diverse perspectives (in many senses!) directly in university contexts. *(Faculty sponsor: Jonathan Cohen)*

4:00 - 4:20

Double Standards for Dual Attraction: Perceptions of Gender and Bisexuality

Kaylee Pickering

Despite recent strides for equality for the LGBTQ community, bisexuality is still largely overlooked and stigmatized. This study aimed to illuminate negative perceptions of bisexuality as well as how the gender of a bisexual individual may influence those perceptions. Using a between-subjects design, the study examined differing perceptions of male and female bisexuals in terms of the perceived legitimacy of the sexuality as well as perceptions of promiscuity. The hope is to bring to light how male and female bisexuality are both perceived to be illegitimate; but that this monosexism is expressed in different ways toward men and women bisexuals. *(Faculty sponsor: Karol Maybury)*

4:20 - 4:40

The Expanding Executive Branch: Have the Anti-Federalists Fears Become Reality?

Jamie Austin

It may seem that the recent presidential election brought new and unexpected concerns to the American people. Yet even before the Constitution was adopted, a group of dissenters, now known as the Anti-Federalists, warned of a presidency run amok: "His power of nomination and influence on all appointments... his control over the army, militia, and navy... the unrestrained power of granting pardons for treason... these, and various other principles evidently prove the truth of the position, that if the president is possessed of ambition, he has power and time sufficient to ruin his country." This presentation explores recent expansions of presidential power and asks a simple question: Were the Anti-Federalists right? *(Faculty sponsor: Christopher O'Brien)*

4:40 - 5:00

Reconstructed Being

Jonathan Petrey

This piece is an introduction to the concept of the Cyborg and how it affects the nature of identity. The storyline follows a half-organic, half-mechanical cyborg and a female human artist engaged in dialogue. They discuss how identity today is used to categorize and limit people's self-determination, and what it means for technological integration to render once seemingly fixed identifiers, like sex, race, and gender, malleable. This conversation is increasingly relevant in a world of gene therapy, sex changes, online personas, and biomechanical augmentations. *(Faculty sponsor: Dawn Nye)*

Venue 2, C-23, Roberts Learning Center

Anthropology, International Studies

9:00 - 9:20

Changing Relations: Impacts of Different Human and Animal Relationships over the Course of Human Existence.

Jacob Legere

From early hominids collecting scraps of meat left behind by large carnivores to the complete domestication of livestock and pets, the relationship between humans and animals has changed immeasurably throughout history, forever changing the human and animal worlds. Animals today and in the past provide food, hides, fibers, and other resources usable by humans that have contributed to the growth and development of civilization. Understanding the past relationships between humans and animals, as well as negative and positive consequences of these relationships, can help societies understand their impact and attempt to create relationships that are as mutually beneficial as possible. *(Faculty sponsor: Nicole Kellett)*

9:20 - 9:40

The Gender Divide of Sports: The Fans and the Players

Amber Duffus

The goal of this research is to understand why males and females age 18-23 like and dislike sports. The data were collected through literature reviews, focus groups, surveys, and interviews. Some primary findings include: male sports are more popular than women's; the role of violence/contact is key in why women and men watch sports; and women often feel their interest in sports is de-legitimized. These conclusions suggest that there is a huge potential for women as fans and athletes to gain more popularity and equality; however, violence/contact appears to be a prerequisite to acquire a solid fan base. *(Faculty sponsor: Nicole Kellett)*

9:40 - 10:00

Overextended Foster Care Systems: Exploring Contributing Factors and What Can Be Done

Amber Webber

This research evaluated the contributing factors to the growing number of children entering into foster care, and what professionals and community members can do to help this issue. Through literature reviews,

interviews, and surveys, no two responses were the same; however, the majority of participants said neglect and drug use by the parents were common reasons for children to enter foster care. Participants agreed that lack of education was a major factor in why parents do not become foster parents. Implications of this research will help identify factors to reduce the number of children entering the system and raise awareness. *(Faculty sponsor: Nicole Kellett)*

10:00 - 10:20

Video Games and Social Media: The Impacts of Virtual Worlds on American Society

Benjamin German

Positing that social media and video games are rapidly progressing technological extensions of basic human behavior and examining their effects on individuals, this project analyses the impact that virtual worlds have on American society as a whole - focusing on research that points to impacts on mental health, learning, and interpersonal relationships. This is followed by a discussion of how humans might enhance the positive impacts of engaging with virtual worlds while simultaneously minimizing the associated or prospective harms of doing so moving forward. *(Faculty sponsor: Nicole Kellett)*

10:20 - 10:30

Break

10:30 - 10:50

Is “Feminism” a Dirty Word?: What It Means to “Be a Feminist” in Contemporary Society

Jocelia Pease

The word “feminism” seems to mean a lot of different things to a lot of different people these days. With millions attending the hundreds of Women’s Marches across the globe in January, the feminist movement has cemented its position in the current social and political discourses of today’s world. This presentation will examine the evolution of feminist—the term, the movement, and its intersectionality/inclusiveness—by exploring the movement’s history and through analyzing survey and interview responses on what it means to “be a feminist” today. *(Faculty sponsor: Nicole Kellett)*

10:50 - 11:10

Climate Change and Refugees: An Analysis on Human Rights

Jubilee Macleod

Climate change is often equated with injustice and economic inequality. Research demonstrates that those who contribute the least to climate change are often the ones subject to its burdens. This paper, drawing from analysis of academic literature and human subject’s research, explores the issue of climate change, particularly looking at displacement and health risks to humans. Also, examined is the question of who should take responsibility for climate change response and what policies should be in place to protect the vulnerable. Overall, my research argues that climate change needs to be addressed as a human rights issue. *(Faculty sponsor: Nicole Kellett)*

12:15 - 1:10

Lunch

1:10 - 1:30

On the Beaten Path: A Comparative Case Analysis of Two Ecotourism Destinations in New Zealand and Peru

Patricia Smith

Unregulated tourism often leads to heavy environmental degradation. Ecotourism seeks to reverse this trend by allowing travel to natural areas that promotes environmental conservation, while also improving the well-being of local communities. This project critically examines the contrasting environmental degradation in two popular tourism destinations -- Queenstown, New Zealand and Machu Picchu, Peru. It will analyze why Queenstown has been better able to develop ecotourism and furthermore, what mechanisms and strategies from Queenstown could be implemented in Machu Picchu to protect the environment while still supporting the tourism industry. *(Faculty sponsor: Linda Beck)*

1:30 - 1:50

The Impact of Conflict Minerals in the Democratic Republic of the Congo

Abbott Mackay

In the Democratic Republic of the Congo, valuable minerals such as gold, coltan, tantalum, and cobalt, which are present in all of our electronics, are mined and sold as a way of funding violent armed movements. I researched how these minerals have affected both the economy of the Democratic Republic of the Congo and its people, how the discovery has fueled violent conflict, what efforts were being taken to fight back against them, and why this issue has been largely ignored. The correlation between what I expected and what I found was interesting to say the least. *(Faculty sponsor: Nicole Kellett)*

1:50 - 2:10

The Consequences of Secularism: A Comparison of Interfaith Relationships in France and the United States

Celeste Carpenter

Throughout history the United States has had rather good interfaith relationships compared to France. This paper will explore the reasons that have contributed to these differences including varying histories with immigration, and differences in religiosity in the two countries. The focus of this project will be on the contrasting models of secularism employed by France and the U.S. and how they have been a factor in either helping or hindering interfaith relationships. With the current political climate in the U.S. it is important for the country to learn from how others have dealt with their own religious diversity. *(Faculty sponsor: Nicole Kellett)*

2:10 - 2:30

Redefining Convivencia in Medieval Spain

Emmaline Waldron

The theory convivencia was formulated by Américo Castro in 1948, arguing that during the time between 711 and 1492, Muslims, Christians, and Jews coexisted and interacted peacefully within medieval Iberia. Since its initial publication, there have been numerous debates about the historical relevance and contemporary applicability of this theory. By reviewing previous research on convivencia and taking an anthropological approach, this research explores the viability of this concept by studying how understandings of tolerance, coexistence, and violence differed between medieval and modern times. *(Faculty sponsor: Nicole Kellett)*

2:30 - 2:40

Break

2:40 - 3:00

Profiting from Exodus: Consequences and Global Perceptions of Migrant Smuggling

Sarah Gould

Every day individuals around the world make the life changing decision to leave their homes and pursue safety, freedom, and economic opportunities abroad. Profiting from those desperate to escape are migrant smugglers offering a way out when no other safe and legal options exist. This project looks beyond the statistics and analyzes the smuggling situations in both Turkey and Libya. Delving deeper, I consider the relationship between smugglers and their “clients” as well as how migrant smuggling is perceived among migrants, policy makers, and the smugglers themselves. *(Faculty sponsor: Nicole Kellett)*

Venue 3, Thomas Auditorium

Natural Sciences

9:00 - 9:20

Are There Strains of Phages That Can Enter the Lytic Cycle in *Mycobacterium smegmatis* After it Has Achieved Lysogenic Immunity?

Brooklyn Brown, Hailey Mealey, and Jared Stinson

Super bacteria, or bacteria immune to antibiotics, are becoming a growing problem in the United States. Bacteriophage, which are viruses that infect bacterial cells, show promise as an alternative treatment for bacterial infections. This study looked to see if *M. smegmatis* that has been infected with temperate bacteriophage in the lysogenic state could be infected with virulent phage that would then undergo lysis and eventually kill the bacteria. *(Faculty sponsor: Jean Doty)*

9:20 - 9:40

Testing the Food Aversion Hypothesis: The Effects of Food Extracts on Zebrafish Embryos

Benjamin Cloutier and Meghan Foye

The objective of this experiment was to observe the effects of foods that are known to trigger pregnancy sickness in women on the embryonic development of zebrafish. Zebrafish are a good model organism for humans, and they are often used to study embryonic development. It is believed that foods that cause food aversion in women could potentially be harmful to embryonic development. Research question: is food aversion adaptive? Zebrafish embryos were exposed to three substances obtained from common foods. Different concentrations of these extracts were tested to determine at what point they become harmful to the embryo. *(Faculty sponsor: Jean Doty)*

9:40 - 10:00

Phage Evolution: Broadening the Host Range of T4 Phage Over Generations

Katherine Greenlaw, Emmalyn Madison, and Jacob Montgomery

The project was designed to determine whether repeated exposure to a bacterium outside of the host range of a bacteriophage can result in evolution of the bacteriophage to target the new host. We exposed strains of the *E. coli* T4 bacteriophage to *M. smegmatis*. Repeated trials using successful bacteriophage were evaluated to confirm infection of the new host. Bacteriophage therapy is a suggested alternative to antibiotic therapy to avoid creation of treatment-resistant strains of bacteria. Our findings may be relevant to the development of more effective bacteriophage for medical use. (*Faculty sponsor: Jean Doty*)

10:00 - 10:20

Effects of Arsenic on *D. rerio* Development

Samantha Cross and Lauren Wadleigh

Arsenic contamination of groundwater is an ongoing problem which can occur naturally from groundwater levels significantly dropping as well as by pollution. Groundwater is commonly used as drinking water and for irrigation to grow crops. High levels of arsenic in groundwater has been known to cause skins changes as well as cancer of the skin, lungs, bladder, and kidney. Effects of varying arsenic levels could be observed on *D. rerio* in a controlled environment. In this study, *D. rerio* embryos were exposed to increasing levels of arsenic contaminated groundwater in order to observe effects on overall development. (*Faculty sponsor: Jean Doty*)

10:20 - 10:25

Harvey Aft Award for Excellence in Chemistry

Terry Morocco and Michael Sherrod

Each year the chemistry faculty recognizes a student who has excelled in upper-level chemistry courses, has outstanding general scholarship, has demonstrated interest in chemistry, and projects a good attitude toward the field. Please join us when we announce the winner and present the award. (*Faculty sponsor: Mariella Passarelli*)

10:25 - 10:30

Break

10:30 - 10:50

Implications of Bacteriophage Therapy Against Rising Antibiotic Resistance

Margaret Bertocci, Veronica Manasco, and Serge Nyirikamba

Antibiotics have been used since the 1940's and have contributed to reducing illnesses and deaths caused by bacterial infections. Unfortunately, some of these drugs have been used incorrectly for so long that various bacteria have developed resistance. The use of bacteriophage is a potential, alternative treatment for antibiotic resistant bacteria. Using *Escherichia coli* (*E. coli*) and Enterobacteria phages, we tested whether or not phage therapy could effectively treat bacterial infections. Trials demonstrating the efficacy of bacteriophages and various antibiotics on *E. coli* were conducted. Some antibiotics seemed to work better than phages. (*Faculty sponsor: Jean Doty*)

10:50 - 11:10

The Battle Between Bacteria and Antibiotics

Nicole Mercier and Colby Stevens

Researchers in the United States are working to combat the rise of antibiotic resistance. As antibiotics became more popular, physicians began using them for a wide variety of infections. As a result, bacteria started to evolve the ability to survive the effects of antibiotics. Research shows that resistance profiles are unique for each community, so we conducted a survey to determine the resistance profile for bacteria isolated on the UMF campus. To do this, bacteria from several locations on campus were collected and tested for antibiotic resistance. This resistance profile shows the types of bacteria circulating in the UMF community. *(Faculty sponsor: Jean Doty)*

12:15 - 1:10

Lunch

1:10 - 1:30

An Assessment of the Sustainability and Environmental Impact of the UMF Biomass Central Heating Plant

Christopher Beahm, Nickolas Bray, and Sumaya Hamdi

One of the major goals of UMF's Climate Action Plan is to achieve carbon neutrality by 2035. Our new biomass plant is expected to play a central role in reaching this goal. The system replaces the 390,000 gallons of heating oil previously used annually to heat this campus, thereby lowering overall energy costs and boasting greater efficiency while greatly reducing carbon emissions. Our research will focus on an environmental assessment of each stage of the project, from the harvest of local trees and transportation to campus, to how the biomass plant itself functions. *(Faculty sponsor: Andrew Barton)*

1:30 - 1:50

Stocking Native Atlantic Salmon Eggs in Maine's River Kilometer Networks to Promote the Endangered Anadromous Fish Population Statewide

Brittany Bissell

The Division of Sea-Run Fisheries and Habitat of the Maine State Department of Marine Research dedicate their efforts to conserving, restoring, and managing diadromous fish populations in state waters. In order to secure research opportunities and successful recreational fishing scenes, Atlantic salmon populations are promoted by planting hundreds of thousands of "eyed" eggs throughout the river watersheds of Maine. These watersheds are mapped and referenced by river kilometer networks, a set of points that follow streams from confluence to headwater. These points help many professionals in Atlantic salmon fields reference egg planting sites, electrofishing sites, locations of redds, and more. *(Faculty sponsor: Nancy Prentiss)*

1:50 - 2:10

Effects of Bushtit (*Psaltriparus minimus*) Vocalizations During Nest Building and Incubation on Nest Success

Faith Purdy

Bushtits are tiny birds, found mostly in the Western US, that build elaborate nests during their breeding season. Though they are quiet when incubating eggs they are very vocal and active during nest construction. This noise and activity along with their small size make them extremely vulnerable to predation, especially by corvids, such as crows and magpies. In this study I looked at the rates of vocalizations near the nest during the building and

incubation stages in order to determine if there was a correlation between vocalization and predation rates.
(Faculty sponsor: Sarah Sloane)

Venue 4, Roberts 101

Geography, Political Science

9:00 - 9:20

UMF's Perceptions of Immigrants and Their Perceived Security Threats

Mena Boyah

Throughout the past year in this nation, immigration policy and the perceived associated security threats of immigrants have been widely reported on to a varying degree of accuracy. This research is focused on the perceptions of the UMF community on immigrants and national immigration policy. The first section of this research is focused on competition theory and its effects on varying racial and ethnics groups within the confines of class and socioeconomic status. The second section is comprised of data that was collected through multiple surveys and interviews of the UMF community. From this data, I hope to extrapolate perceptions that either match or diverge with national trends. (Faculty sponsor: Brad Dearden)

9:20 - 9:40

How the Selloff of Public Land Could Affect Outdoor Recreation in Wyoming

Austin Chase

Throughout the western US there are large parcels of public land that are regulated through government agencies. Wyoming has the 7th most acreage of public land out of all 50 states; approximately 48% of the state's total acreage is considered public land. This land brings numerous outdoor recreationalists that hunt, ski, climb, and camp; the opportunities are endless. Recently there has been a push to sell off some of this land, which in turn has brought push-back from the recreationalists. This paper will identify how the loss of land may affect recreationalists and those that benefit from the activities. (Faculty sponsor: Brad Dearden)

9:40 - 10:00

Spring Water Awareness and Usage in Oxford County, Maine

Tad Caldwell

Oxford County, Maine has an alternative source of water in the form of freshwater springs located in various places. These sources of water are completely free to the public and offer a supplement or alternative to private well water, public water, or bottled water. This research assesses awareness and usage primarily in Buckfield, Paris, and Norway. These towns represent a denser population of people in Oxford County and much of the population lives within ten miles of a spring water source. Methods include closed-ended surveys of townspeople and open-ended interviews of people at the springs. (Faculty sponsor: Brad Dearden)

10:00 - 10:20

Perceptions of Sea Level Rise in Saco Bay, Maine

Danica Lamontagne

Sea levels in Maine are expected to rise significantly over the next 50-100 years, putting coastal communities at risk of damage to seaside infrastructure and flooding and resulting in dramatic changes to the coastlines of the Saco Bay communities of Biddeford, Saco, Old Orchard Beach, and Scarborough. This research assesses, via semi-structured interviews, the concerns that stakeholders express regarding sea level rise in these communities. Focus is on seaside business owners whose properties are at risk in established sea level rise scenarios and local government officials in the position to create legislation to address its impacts. *(Faculty sponsor: Brad Dearden)*

10:20 - 10:30

Break

10:30 - 10:50

Effects of Climate Change on the Fishing Industry of Gloucester, Massachusetts

Jacquelyn Rose

Climate change is an issue that is affecting the world in many different ways. One of these ways is the changes to coastal ecosystems and the negative effects upon fisheries. Coastal communities such as Gloucester, Massachusetts that rely on fisheries culturally and economically are at risk for future implications caused by climate change, such as warming ocean temperatures. This study will examine the views of local fisherman, local government representatives, and the National Oceanic and Atmospheric Association to determine which impacts, if any, climate change will pose to the fishing industry and corresponding community of Gloucester. *(Faculty sponsor: Brad Dearden)*

10:50 - 11:10

Implementation of Proficiency-Based Learning in Maine High School Math

Julianne Mclaughlin

One of the most controversial areas of current education policy is the Common Core State Standards. CCSS is an initiative presented as the best means to prepare students for today's professional setting, which is most concerned with interdisciplinary critical thinking, problem-solving, and technological skills. This project, part of the Maine Policy Scholar program, examines the impact of implementing proficiency-based learning through CCSS with a specific focus on Maine's high school mathematics programs, with the goals of identifying what problems exist in the initiative and offering recommendations on how the system may be improved. *(Faculty sponsor: James Melcher)*

Venue 5, CR 123

Humanities, Social Sciences, Education

9:00 - 9:20

Gertrude Stein's Use of Language in Tender Buttons

Zackary Lavoie

Stein's ability to create a collage of words seems to fall in line with the Surrealist movement of the 1920's. Let's explore the use of language in Gertrude Stein's poetry and delve into the way she manipulates words and sentence structure to portray a feeling or textures as well as her keen ability to insert meaning into everyday objects, as she does in *Tender Buttons*, where her descriptions of objects lies within the sounds and forms of words as much as their meaning. *(Faculty sponsor: Michael Johnson)*

9:20 - 9:40

The Art of Reviewing

Curtis Cole

Have you ever wondered about reviews? We see them every day, online and in the newspapers. There is reviews for everything--books, films, even professors! Though we live in a world of reviews, few people think about what a review is or its purpose; join us, for a brief overview of "the review" and what it means to be a "reviewer". Learn how reviews function in the contemporary world and what separates good reviewers from bad reviewers. Learn about the philosophy and history of reviewing, different kinds of reviews, and what you can do to better your own reviewing skills. *(Faculty sponsor: Michael Johnson)*

9:40 - 10:00

In Search of the Living Image: Barryan Philosophies and My Sketchbook

Brigid Chapin

I spent the Fall 2016 semester on a deep search into the artistic philosophy of Lynda Barry, particularly fascinated by her concept of the Image as a thing which lives inside of everyone and, if properly channeled, may appear in a work of art and bring that work to life. While researching the parallels between Barry's Image and several Lacanian ideas (primarily the abject), I was searching within my own art to see if I could find the Image there. In this presentation, I will demonstrate how Barry's philosophy coincides with some psychoanalytic principles, and share some of the personal work I created during the semester. *(Faculty sponsor: Michael Johnson)*

10:00 - 10:20

Shamanism in Modern Context: Technology and Consciousness

David Deprey

The ancient religious tradition of Shamanism will be examined in light of modern technology having the capability of being used as a means for controlling consciousness. The shaman, utilizing archaic techniques, has access to transcendent realms for the purposes of healing and the overall reduction of suffering. This shared energetic landscape, which the shaman works with, is being manipulated through an over reliance on mass-quantification and algorithmic predictability as natural states of instinctive being give way to programmed existence. Ultimately, awareness of shamanic perspectives can illuminate hidden intentions of control which are in opposition to free and spontaneous being. *(Faculty sponsor: Jonathan Cohen)*

10:20 - 10:30

Break

10:30 - 10:50

What happened here? A Feminist Telling of the Story of Sandra Bland

Kendra Burgess, Olivia Cyr, Abigail Hasson, John Kaminski, Kristine Sarasin, and Eva Schneider

On July 10, 2015, Sandra Bland, a 28-year-old black woman, was stopped by a Texas officer for failing to signal a lane change. Three days later, she was found hanged in her jail cell. How did this happen? More particularly, why is her case not an anomaly? Through the presentation of her story as a public policy case, our project hopes to illuminate the structural injustices that led to her death and to provide feminist frameworks for understanding her case within the context of the U.S. legal system, with a view to changing that system. *(Faculty sponsor: Tanya Kennedy)*

10:50 - 11:10

God Has a Plan for Everything: Using Religion as Framework for Interpreting Attributions

Samuel Birch

Religious beliefs often influence the attributions one makes regarding the causes of various life events. For example, a religious person may attribute a personal crisis to “God’s will” or to a desire on God’s part to foster personal growth. But how do religious beliefs affect interpretations of other people’s lives? More specifically, how might an individual’s religiosity influence responses to the attribution made by the other regarding the cause of an event? *(Faculty sponsor: Steven Quackenbush)*

11:10 - 11:30

Poetry Reading by Alice James Books’ D.C. Fellow

Elizabeth Kane

Psychologists Loftus and Palmer, in 1974, proved that memories were malleable, breakable, untrustworthy things, manipulated often only by language. It follows that what we remember, our perceptions, and even our bodies are thus shaped by our beliefs, the things we hold closest inside us, that influence us to the highest. I will read from my recent work that uses surrealist language to broach topics of dissociation, possession, and discord within the human body. *(Faculty sponsor: Carey Salerno)*

12:15 - 1:10

Lunch

1:10 - 1:30

Pensions, Bounties, and the Struggle of Maine Veterans and Widows during the Civil-War Era

Shaun Sawyer

The tale of the Veteran’s pension in the wake of the Civil War is a tale of woe. One historian estimates that of the 1,830,000 surviving soldiers at war’s end, only 1.96% of Veterans or their families were enrolled and receiving a pension. This presentation looks at Maine, a state which should be notorious for its failure to aid those who had fought so nobly to advance the nation’s aims. Drawing on the Maine Adjutant General’s report, it seeks to answer the question: What did Maine soldiers expect during and after the war, and what did they actually receive? *(Faculty sponsor: Michael Schoeppner)*

1:30 - 1:50

The Ghost Ship of Harpswell, Maine: Community and Death in the Casco Bay

William Eaton

In 1815, the Dash, a privateer recently engaged in the War of 1812, went missing. Since that fateful date, the specter of that ship has haunted Harpswell, Maine, lurking ever ready to transport the souls of the departed to the other side. Or so goes the legend. This presentation looks at the folklore and poetry surrounding the Ghost Ship of Harpswell with an eye toward how that legend intimates local understandings of both community and death through time. *(Faculty sponsor: Michael Schoeppner)*

1:50 - 2:10

Zapatistas, NAFTA, and the Revolution against Global Free Trade

Tyler Daigle

Presented by the faculty of the History Department, in memory of Tyler Daigle, whose untimely passing kept him from completing the final write up of his senior thesis. Tyler's work explores the ways in which the indigenous rebellion, so often portrayed as a revolt against Mexico City, was actually an effort by the Zapatistas to combat the rise of international free trade which threatened the livelihood of the farmers of Chiapas. In this light, the end of the armed rebellion need not be thought of as the end of resistance but as a mere step along the way in a perpetual battle to ensure that globalization serves communities rather than destroys them. *(Faculty sponsor: Allison Hepler)*

2:10 - 2:30

Traveling in Search of Home

Gabrielle Lagross

In the past year I have travelled and immersed myself into 11 different countries and cultures, not including readapting to my life in the US once I returned home. I'll be talking about what my life was like while living in Uganda, Ethiopia, India, and Malaysia. As well as discussing how the process of adapting to these cultures has given me a new sense of home and identity. *(Faculty sponsor: Joel King)*

2:30 - 2:40

Break

2:40 - 3:00

#TRIOworks

Allison Bernier, Aislinn Forbes, and Sitey Muktar

An interactive presentation by the LBJ Fellowship, on the Johnson Scholars program and other TRIO organizations. The presentation will discuss the history of the programs, and their purpose through the decades of operation and expansion. In the recent national budget suggestion, TRIO programs are subject to significant cuts. This would limit the support and resources currently offered to High School, College and Graduate students all over the country, as well as on the UMF campus. *(Faculty sponsor: Lawrence Ronco)*

3:00 - 3:20

Operation Giveback UMF: The Importance of Higher Education in Today's World

Stephen Riitano

Operation Giveback UMF's vision was to strengthen the connection between the community and its schools. It started in the spring semester with a tentative timeline of events and the hope of making a difference in the community for students who live in poverty. Through a grant, provided by the NEA, the Student MEA started the campaign to make a dent in the future and success of students in the area. Establishing a healthy relationship between these two is imperative to the overall functionality of the school itself. By forging relationships between the community and school district that it serves, the institution can adapt to meet the needs of the community and provide the tools to be a successful individual in society post-secondary. Education is the way out of poverty and through it, everyone can rise. This message is ever more so true in today's world. Members of the Student MEA will be discussing how the project went, its implications, and the importance of a strong connection between the community and the school in which it serves. Presenters will also touch upon how this model is so important in today's world in promoting higher education and success for all. *(Faculty sponsor: Theresa Overall)*

3:20 - 3:40

Hope and Opportunity: Some Insights from the UMF Rotaract Club's Recent Trip to Safe Passage

Blair Bailey, Samuel Carignan, Melissa Eelman, Bryce Neal, Hannah Somes, and Elizabeth Thompson

During February break 2017, the UMF Rotaract Club, along with Mt. Blue High School students, Maine teachers, and members of the Farmington Rotary Club traveled to Guatemala to volunteer with Safe Passage (Camino Seguro), a non-profit organization dedicated to providing educational opportunities to children and families living around the Guatemala City garbage dump. This presentation will document poverty in Guatemala City, Safe Passage's work to fight this poverty, and our own experiences while on the trip. *(Faculty sponsor: Gaelyn Aguilar)*

3:40 - 4:00

Student Teaching: #CountOnLearning

Chelsey Oliver

In preparation for the Student Teaching Portfolio Presentations coming up during the first week of May, the goal of this session is to educate and excite participants about the day-to-day life of a student teacher. As a secondary education math major, I split my experience between a high school and a middle school. Join me to learn about where I found resources, how I integrated technology, and why the middle level is where I hope to stay. If all goes well, participants will leave eager to start (or wishing they could go back to) their own student teaching experiences. *(Faculty sponsor: Grace Ward)*

Venue 6, The Landing, Student Center

Humanities

9:00 - 9:40

Aging in America

Flynn Chiappetta, Matthew Dotson, Aislinn Forbes, Devon Hall, Abbie Hartford, Cady Phalen, Kelsey Rohman, and Andrea Stemm

The purpose of this presentation is to explore salient aging-related narratives in American culture. Special attention will be focused on cultural “artifacts” (e.g., greeting cards, television commercials, internet memes) that reflect common conceptions regarding the aging process. Implications for the experience of aging in America will be discussed. (*Faculty sponsor: Steven Quackenbush*)

9:40 - 10:20

Victorian Stories

Olivia Bates, Aimee Degroat, Elizabeth Foley, Steffon Gales, Cameron Gelder, Nova Jarvis, Zackary Lavoie, Cassidy Marsh, Julianne McLaughlin, Rosemary Penny, Astra Pierson, Justine Walp, and Aleah Whitten

Narratives of various kinds—such as the multiplot novel, the adventure novel, the Bildungsroman, autobiography, and Parliamentary testimony—were important in Victorian Britain. This presentation explores the multiple purposes served by narratives for Victorians and for today’s readers of Victorian literature. (*Faculty sponsor: Christine Darrohn*)

10:20 - 10:30

Break

10:30 - 11:10

Reading by Members of Advanced Fiction Class

Abigail Brown, William Doehring, Aliza Dube, Zachary Roberge, Phoebe Shaw, and Richard Southard

Members of the Spring 2017 class in Advanced Fiction will read from fiction written during the current semester. (*Faculty sponsor: Patricia O’Donnell*)

11:10 - 11:30

Maine Memories: Oral Histories of Maine Residents

Chyanne Cray, Joseph Haggerty, Faith King, and Madison Lessner

Students from English 100: Writing Maine will read selections from their Oral History Papers composed after partnering with family or local volunteers for a series of interviews about their Maine communities. Students will answer questions about the interview and drafting process at the conclusion of their presentation. (*Faculty sponsor: Shana Youngdahl*)

12:15 - 1:10

Lunch

1:10 - 1:30

Reading by Winners of the “On Our Minds” Writing Contest.

Names TBA

Winners in this writing contest, sponsored by Mantor Library, will read from their work. This year’s topic is: “Heart is Greater than Hate.” Winners will be chosen from contest applicants after the deadline of April 7th. Work may be either fiction or nonfiction. *(Faculty sponsor: Patricia O’Donnell)*

1:30 - 1:50

A Utopian Society

Abigail Brown, Jessica Freeborn, Julie Guerra, Nikki Hodgkins, Belanna Morales, Amanda Swart, and Christina Taylor

The students from Honors 377: Utopias will present the Utopian society that they have designed over the course of the semester. They strive to answer: what makes a true Utopian society? *(Faculty sponsor: Marilyn Shea)*

1:50 - 2:10

What’s Past Is Prologue: Proto-Science Fiction and The Tempest

Constantine Pollak

Science fiction can be considered a genre of the future, but every genre still has a past. This past can be found in the precursory body of works known as Proto-Science Fiction. This presentation will explore how the elements of science fiction in the characters, plot, and setting of Shakespeare’s *Tempest*, establish it as an example of Proto-Science Fiction, and introduce themes that can be found in science fiction classics such as *Doctor Who* and *Bladerunner*. *(Faculty sponsor: Misty Krueger)*

2:10 - 2:20

Break

2:20 - 3:40

HON 377 Creates a SF Role-Playing Game

Gail Bello, Heather Boland, Jessica Casey, Julia Fletcher, Joshua Heath, Nikki Hodgkins, Meagan Jones, Jonas Maines, Annie Moloney, Benjamin Rodriguez, Sylvia Schulze, Elizabeth Thompson, and Abby Waceken

Students from HON 377: Science Fiction will provide an overview of the role-playing game they are creating in the course, and particularly each student’s role in designing the game. The game will be based on content from the course, as well as students’ interests and expertise from a range of disciplines (including English, creative writing, history, international/global studies, psychology, and education). *(Faculty sponsor: Misty Krueger)*

3:40 - 3:50

Post-Milton: Click Adventures and Adaptation in the New Age

Curtis Cole

John Milton is one of the greatest English poets ever to live. Best known for his epic, *Paradise Lost*, Milton lived an intellectual, politically charged, and faithful life; his beliefs show in his work and color all of his writings with his belief in the Ptolemaic universe, militant Protestantism, and anti-monarchical views. What does this mean

today, though? Is it possible for a humanity living in a post-Truth, postmodern age to re-engage with Milton and find radical new meaning? I saw ‘yes’ and will prove how Milton can not only be adapted into a subversive product but can potentially educate and enthrall modern readers through the medium of a Click Adventure. *(Faculty sponsor: Sabine Klein)*

3:50 - 4:00

Magical Realism: A Genre of Defiance

Mariah Haggan

Magical realism exists to serve people whose political opinions conflict with the tyrannical leaders of their time. Julio Cortázar exemplifies the connection in his first successful short story “Casa Tomada,” or, “House Taken Over.” The story is an allegory of Juan Perón’s rise to power in 1940’s Argentina. *(Faculty sponsor: Sabine Klein)*

4:00 - 4:10

Writing the Mind: Exploring the Process and Implications of Writing Memoir

Olivia Cyr

How do people write memoir? How can one person possibly summarize and reflect on each and every event in their lives, and write that story well? And what does it mean to write about your life, anyway? In this meta-memoir, I track and explore my own process of life-writing by looking through the manuscript of my memoir, “My Father’s Daughter.” Paired with a short explicatory paper, which attempts to situate my work within the field of life-writing scholarship, this paper is the result of a semester-long research project that opens wide the space between a thought and the words. *(Faculty sponsor: Sabine Klein)*

4:10 - 4:20

Word is Bond: Language of Hip-Hop

Andrew Davis

My presentation will focus on the development of a national language of hip hop from its origins as regionally specific dialects. I will focus on six cities as the roots, and using lyrics and interviews with various artists, I will show how the language of hip-hop has become nationally unified, and how it has begun to affect not only those in the hip-hop community, but also the American community as well. *(Faculty sponsor: Sabine Klein)*

4:20 - 4:30

“More Than Just Noise” Metal Lyrics as Discourse in Contemporary Society

Tyler Gadaire

My project examines the lyrics of metal music as a commentary on society and contemporary social justice topics, examining them as a multi-media form of expression in an academic light. *(Faculty sponsor: Sabine Klein)*

4:30 - 4:40

The Pitfalls of Television: Challenges of Representation in Jason Rosenberg’s The 100

Nikki Hodgkins

When The CW’s The 100 first premiered, reviewers praised the show for its diverse cast and myriad of storylines. As the seasons progress, the show’s handling of race, sexuality and gender roles has been called into question. Through a series of videos I aim to analyze where The 100 serves as an example of representational media and where it continues to fail. *(Faculty sponsor: Sabine Klein)*

4:40 - 4:50

“Sofia the Worst?”: Presentations of Diversity in Disney’s Sofia the First

Janelle Noonan

This project is an investigation into the one-dimensional representations of diverse characters in Disney’s Sofia the First. Because of Disney’s growing ubiquity in the lives of children, and the increasingly diverse world in which these young people are growing up, Disney’s presentations of difference hold particular weight. Race, class, and gender will be discussed as realms of difference that fall into stereotyping and are particularly one-dimensional in the show. *(Faculty sponsor: Sabine Klein)*

4:50 - 5:00

TBA

Tucker Tardiff

TBA *(Faculty sponsor: Sabine Klein)*

Venue 7, Ricker 217

Psychology

9:00 - 9:20

Authoritarian Parenting Style and Its Link to Right-Wing Authoritarian Political Ideology

Allyson Hammond

Bob Altemeyer has defined, cataloged and researched the end of the political spectrum that he calls Right-Wing Authoritarianism (RWA). Diana Baumrind has categorized three distinct parenting styles, one of which is Authoritarian. I am conducting a study that explores a possible correlation between one’s parents having been authoritarian, and their political beliefs later developing into that of the RWA style that Altemeyer defined. *(Faculty sponsor: Karol Maybury)*

9:20 - 9:40

Perceptions of Gender and Vehicle Repair Knowledge

Cary Kerr

This study examined perceptions of gender roles with regards to vehicle repair knowledge. The study asked participants to read a scenario of an emergency vehicle repair featuring a man versus a woman making the repair. The hypothesis was that a woman would be perceived to be less knowledgeable and successful at the repair than the identical repair made by a man. *(Faculty sponsor: Karol Maybury)*

9:40 - 10:00

The Impact of Perceptions of Tattoos Between Professionals and College Students

Eli Simmons

Research in the past has discussed perceptions of tattoos among college students and found that gender plays a significant role in how people perceive tattooed people. Similarly, this study explored the effect of cohorts: namely, the perceptions of tattoos between college students and working professionals, hypothesizing that

college students would have more accepting views of tattoos and would blame the tattoo artist more for mistakes than the tattoo client. *(Faculty sponsor: Karol Maybury)*

10:00 - 10:10

Mood Swings and Hunger

Alexander Sicard

This study examined the relationship between mood and how full one felt. There are currently no published studies that have focused on the relationship between these two variables. This study examined whether women experience greater mood changes while hungry than their male counterparts. *(Faculty sponsor: Karol Maybury)*

10:10 - 10:20

The Effect of Sleep Deprivation on a Student's Academic Performance

Gavin Brickley

Sleep hygiene is a very important aspect of an individual's physical and mental well-being. This study explored the relationship between sleep hygiene and a student's academic performance in the form of GPA. For this study, I used the Pittsburgh Sleep Quality Index, which is a popular sleep hygiene measure. I hypothesized that the longer duration a student slept and a higher score on the PSQI survey would be positively correlated with a student's GPA. *(Faculty sponsor: Karol Maybury)*

10:20 - 10:30

Break

10:50 - 11:10

Context Dependent Learning as a Function of Play-Doh

Haley Murano

Research has shown that individuals are more likely to remember information if the context that was present upon intake is also present upon recall. This study explored the concept of context dependent learning in individuals as a function of a fidget sensory toy. The hypothesis stated individuals who multitask while learning and multitask upon recall of that information will retain more information than those who try to focus on the sole task of information intake. *(Faculty sponsor: Karol Maybury)*

12:15 - 1:10

Lunch

1:10 - 1:20

The Effect of Number of Siblings and Birth Order on Self-Esteem

Kylie Cunningham

Self-esteem is a frequently researched topic in psychology. This study analyzed whether or not a person's self-esteem is affected by the number of siblings they have as well as their birth order. It was hypothesized that there would be a negative correlation between family size and self-esteem and that birth order would have a significant effect on a person's self-esteem. *(Faculty sponsor: Karol Maybury)*

1:20 - 1:30

Cats and Your Health

Lindsey Locklear

Cats are one of the most popular pets in the United States. With rising numbers of hypertension, could your cat make you healthier? For this study, people were asked to vent about what makes them stressed. Blood pressure and heart rate were recorded before and after the 5-minute vent session and recorded for both groups. *(Faculty sponsor: Karol Maybury)*

1:30 - 1:40

Music and Evaluation

Rubymae Scribner

The effects of being exposed to a genre of music that one might prefer compared to being exposed to a genre of music one may dislike. One group will be exposed to a genre of music one likes and filled out an evaluation of ten photos and the other group performed the same task but while listening to disliked music. *(Faculty sponsor: Karol Maybury)*

1:40 - 1:50

Stress Levels of College Students Involved in the Arts

MacKenzie Thomas

Research involved measuring individuals' stress levels along with their involvement in various art activities. It was hypothesized that college students who participate in voluntary art activities have lower stress levels than college students who do not. Participants were given a survey that had questions about their ability to handle situations in their lives, as well as how many minutes/hours they spend doing a list of art activities. The stress survey results (compiled by computing an overall stress score for each individual) was correlated with the total time the individual spends each week doing art. The relationship between art and stress levels, the kinds of art activities that were measured, and problems with the study will be discussed. *(Faculty sponsor: Karol Maybury)*

1:50 - 2:10

Student Perceptions of Transgender Safety

Matthew Wyman

This study examined UMF students' perceptions of transgender safety on campus. Participants were asked to rate several areas of a fictitious student's life on campus, including the feelings of acceptance and likelihood of victimization. The hypothesis driving this study predicted that the transgender students described in the study would be perceived as less safe and less likely to succeed in college than the students who were described as being cisgender. *(Faculty sponsor: Karol Maybury)*

2:10 - 2:30

Boston Strong

Matthew Yellis

Many horrifying or damaging events cause psychological harm, but none more so than terrorist attacks carried out with the goal of eliciting fear in innocent civilians on as grand a scale as possible. The goal of this study is to establish whether there is a link between the negative feelings and thoughts an individual experiences in the aftermath of a terrorist attack and the political positions that person holds. I am hypothesizing that people in New England who experienced high levels of anxiety, fear, and insecurity following the 2013 Boston Marathon

bombing are more likely to support nationalist/isolationist policies like the President's recent temporary travel ban on refugees. *(Faculty sponsor: Karol Maybury)*

2:30 - 2:40

Break

2:40 - 3:00

Stress by Academic Year

Michelle Mcintire

This study examines the relationship between a college student's academic year (freshman, sophomore, etc.) and how this relates to their stress levels. Students were asked to rate their stress in eight areas of life, including academics, finances, and extracurricular activities. The hypothesis behind this study was a higher academic year would mean a student had higher stress levels in total. *(Faculty sponsor: Karol Maybury)*

3:00 - 3:20

The Effect of Gender Variance in Uncomfortable Situations

Sarah Haas

This study examined if there is a correlation among people who score higher on gender variance self-assessments, and the ability to empathize with people dealing with uncomfortable situations. Students were asked to evaluate their perceptions of people being pulled over, coming out, and dealing with an agitated customer, then asked to evaluate their own expression of traditionally masculine and feminine traits. The hypothesis was that those who score higher in gender variance will be more comfortable in these kinds of uncomfortable situations. *(Faculty sponsor: Karol Maybury)*

3:20 - 3:40

Presumptions with Race and Music

Jonae Hill

Previous research has shown that presumptions can be made about an individual's race based on voice alone. But could an assumption also be made based on a singing voice, or even musical genre? In this study, people were asked to listen to several musical clips from different genres of music and were asked to answer several questions based on their own personal assumptions while they listened. The hypothesis of this study was that for genres of stereotypical Caucasian and African-American music, the participants would assume their voice accordingly. *(Faculty sponsor: Karol Maybury)*

Venue 8, Art Gallery

Senior Artists

1:10 - 3:10

Senior Artist Talks: Five to Nine

James Corcoran, David-tristan Cynewski, Laura Dickey, Gabrielle Ganiere, Timothy Stokes, and Corey Wallace

Senior art students in the Division of the Arts exhibit the culmination of their capstone research in their group show titled Five to Nine. The exhibition is a diverse collection of works that range conceptually from the

humanization of strangers, deconstruction of nostalgia, the search for meaning, exploration of the uncanny, reflexivity of form and representation, and the exposure of consumption as a mechanism. James Corcoran, D.T. Shane Cynewski, Laura E. Dickey, Gabrielle Ganiere, Tim Stokes and Corey Wallace will discuss the ideas and theories that inform their work on display in the UMF Art Gallery and Emery Community Arts Center. *(Faculty sponsor: Jesse Potts)*

Beauty | Futility

Laura Dickey

The characters in my animation are often unaware of the machinations surrounding them, the false meaning that distorts their perception of reality, and the deceitful mundane which sneaks in and instills psychological contortions. Their lives can be defined by their habituation; stumbling through the repetition of existence, suffering with profound loneliness and an inability to communicate, and fighting with uncertainty and impressionability to traverse the inclinations of the institutions surrounding them. In the presence of this conditional struggle it is my goal to examine how we live, how we struggle, and how we are, in order to unwrap the human condition. *(Faculty sponsor: Dawn Nye)*

Apparatus Exfoliation

Corey Wallace

Do you ever get your hands really dry and flakey, the skin starts peeling off and exposing fresh pink skin underneath? Do you just want to smear yourself across the face with the pile of lifeless skin cells? No? Then please come down to my presentation on how my animations are going to change the way you feel about doing something that particular day. These animations focus on the absurdity of society and the ridiculous habits or vices that we see as normal re-presented as visual spectacles. Revealing the illogical nature of these activities that has been lost through generations of desensitization. It is through these critical observations of my work that I hope others will take up and apply to everything that they do in the hopes to better themselves. I plan to explain further in my presentation and reveal the influences and themes that characterize my work, though I have a feeling that you'll have to see to believe. *(Faculty sponsor: Dawn Nye)*

Venue 9, Ricker 114 Computer Lab

Computer Science

1:10 - 2:40

Databases Systems and Their Applications

Tyler Eustis, Derek Guerrette, Bradley Hodges, Brandon Johnson, Jayram Keshavan, Jessica Labrecque, Samantha Melton, Alan Smat, Zachary Sylvester, Michael Taylor-hampton, and Christopher Wren

Each student has designed a database of their interest. Students will demonstrate both the inner and the outer workings of a database. *(Faculty sponsor: Gail Lange)*

Venue 10, Spenciner Curriculum Materials Center

Education, Special Education

9:00 - 11:00

Learn, Explore, and Discover at Spenciner Curriculum Materials Center!

Kyleigh Roberts, Elizabeth Nelson, Brittany Wakefield, Lauren Wheelock, William Robinson, Katharine Walker, Madison Porter, Leanne Kugelman, Carson Hope, Allie Pandora, Alex Peterson, Katelyn Gervais, Caitlin Raye, Erika Tardif, Emilee Bogh, Katarina Howland Sophy Furlong, Madi Follett, Emma Brown, and Haley Chase

Have you ever wondered where teachers get their fun and creative resources? Spenciner Curriculum Materials Center provides materials and educational experiences for pre-service and in-service teachers, education professionals, individuals with disabilities, and their families. The collection includes children's literature, textbooks, teaching aids, math and science manipulatives, educational games, toys, technology, and other helpful resources. Students from Early Childhood and Elementary Education will be on-hand to lead tours of the center and to provide interactive demonstrations. Join us and get your hands on some of the "tools of teaching" and learn about the many ways children learn, explore, and discover! *(Faculty sponsors: Patti Bailie, Leigh Ann Fish, Char Moffit, and Kathryn Will-Dubyak)*

10:00 - 3:00

Assistive Technology at UMF

Elicia Nickerson, Alisa Tibbetts, and Taylor Marcotte

The goal of assistive technology is to establish, maintain, increase, or improve a daily life function. The Assistive Technology Student Specialists at the Spenciner Curriculum Materials Center (SCMC) aid students, faculty, and members of the community to research, demonstrate, and implement assistive technology in school and community settings. This presentation will provide an overview of best practice when using assistive technology as well as hands-on opportunities to explore a range of assistive technology available at the SCMC. Tours and assistive technology demonstrations will be available throughout the day. There will be a formal presentation in the Bjorn Lobby of the Education Center from 1:10-2:10 on some of the adaptive technology. *(Faculty sponsor: Lance Neeper)*

Venue 11, North Dining Hall

Poster Session

Please note that all poster presenters are expected to be at their posters for at least one hour, either between 10:00 and 11:00 or between 1:15 and 2:15. The posters will be set up between 8:00 and 8:30 AM and should be left up until 3:00.

Poster # 1

Diversity in Webcomics

Stephanie La Freniere

This project investigates the diverse sexuality and portrayal of race and racial tensions in Taylor C.'s webcomic, *Monsterkind*, to determine what it says about the world we live in and the impact these themes could have on the reader as well as on the greater scale of comics. *(Faculty sponsor: Sabine Klein)*

Poster # 2

Memes: The Language Of The Internet

Love Call

An exploration into the role of memes in online identity construction and what these pop cultural artifacts can tell us about our relationship with digital media and the internet. *(Faculty sponsor: Sabine Klein)*

Poster # 3

Women, Infants, and Children

Leah Brown

This display will present upon the experience of being an intern at Women, Infants, and Children (WIC). Included in this presentation will be the organization's mission, their purpose, the impact of breastfeeding, what I did as a student intern, the positive attributes of my experience, as well as, a thorough and complete history of the WIC program. *(Faculty sponsor: Stephanie Swan)*

Poster # 4

Audio Samples

William Addelson, Gail Bello, Rachel Flannery, Julia Fletcher, Christa Grohoski, Ethan Harmon, Mikayla Henry, Brittany Paradis, Sophie Schell, Carter Veilleux, Thomas Weeks, and Dorine Wright

This Display of collective audio sounds is the product of the Audio class taught by Professor Gretchen Legler. We have learned to edit and manipulate sounds to create various projects such as Podcasts, Sound collages, and Audio Essays. The goal of this class is to get students more comfortable in the world of technology and to build the skills necessary to be able to continue to create things like Podcasts after the class has ended. In this presentation you will hear various pieces of students own work created throughout the semester. *(Faculty sponsor: Gretchen Legler)*

Poster # 5

Does the Water Quality of Lemon Stream in Starks, Maine Vary From One Year to the Next?

Heidi Smith

Water samples were collected from the same six sites along Lemon Stream in Starks, Maine two years in a row. The samples were taken up stream, then immediately downstream from three areas, each having different neighboring land uses associated with them. Various non-point source pollution (NPS) whether from agriculture, forestry, failing septic tanks, electrical dams, or storm water runoff from rainfall or snowmelt end up in the stream. An analysis was conducted to see if there was an annual change in the water quality at those specific locations. (*Faculty sponsor: Cathleen McAnneny*)

Poster # 6

Annotation of Cluster L2 Mycobacteriophage Miley16

Mia Comis, Madison Davick, Kaleb Fletcher, Liesel Krout, and Jose Carlos Berdeja Cortez

Mycobacteriophage research helps to develop a better understanding of evolution and could lead to medical advancements, yet these viruses are amongst the least genetically understood organisms. This study aims to increase that limited knowledge by investigating the novel phage, Miley16. Miley16 was isolated from an environmental sample, and its DNA was sequenced and annotated to further understand the genome. Miley16 is an L2 cluster siphoviridae phage consisting of 76,653 bp, 133 genes, and 12 potential tRNAs. Completed research will provide information regarding mycobacteriophage genetic diversity and further our understanding of genome evolution. (*Faculty sponsor: Timothy Breton*)

Poster # 7

Genetic Identification of Kelp (*Saccharina latissima*) in Downeast Maine using Ten Microsatellite Markers

Margaret Bertocci and Brennah O'Connell

Increased demand for kelp has created an opportunity to develop an aquaculture industry in Maine. More information, however, is needed about population structure, before strains are established at Passamaquoddy tribe kelp farms. *S. latissima* were collected from Castine (n = 25), Starboard (13), and Reversing Falls (25) for DNA analyses using microsatellites. DNA was extracted, amplified in PCR with fluorescent-labeled primers, and sent to Mount Desert Island Biological Laboratory for fragment analysis. All populations were found to be in Hardy-Weinberg equilibrium with no linkage disequilibrium among the ten loci. FST analysis indicated significant differences between Castine and the other sites. (*Faculty sponsor: Timothy Breton*)

Poster # 8

Field Relationships, Petrography and Geochemistry of the Eastern Part of the Flagstaff Lake Complex, Northern Maine.

Sumaya Hamdi and Matthew Lulofs

The Flagstaff Lake complex (FLC) is exposed from just east of Rangeley through Stratton, continuing to eastern side of Flagstaff Lake. The FLC has been designated as a composite pluton, containing at least three different rock types (Nielsen et al., 1989). The relative ages of the rocks, field relationships, and geochemistry have not been well determined. This project will examine the field relations, mineralogy, and chemistry of these rocks to understand their crystallization history, determine whether these rocks originate from the same magma series and identify the type of subduction that occurred to form them. (*Faculty sponsor: David Gibson*)

Poster # 9

Isolation and Annotation of Mycobacteriophage Michley

Chelsey Frank, Eli Michaud, Bailey Shevenell, and Sarah Stanley

Mycobacteriophages are obligate, intracellular parasites, that invade bacterial populations by rapidly occupying a host, replicating DNA, and destroying the cell. These viruses are model organisms in evolutionary biology and could potentially treat human bacterial infections through phage therapy. To contribute to a national genomic database, a novel mycobacteriophage (Michley) was isolated from an environmental sample, and its DNA was extracted and sequenced using Illumina technology. The Michley genome was then annotated through bioinformatic analysis. Michley, a siphoviridae morphotype, belongs to subcluster A1 and is 51,527 base pairs with 91 genes. This research contributes to our understanding of mycobacteriophage evolution. (*Faculty sponsor: Timothy Breton*)

Poster # 10

Petrography and Geochemistry of the Nehumpkeag Pond Gneiss.

Daniel Mason, Bryce Neal, and Alexandra Umstadt

The Nehumpkeag Pond gneiss (NPG) is a variable body of metamorphic rock that outcrops in south-central Maine. There are a wide variety of rock types, which could have resulted from the metamorphism of either an igneous or sedimentary source to form an ortho- or para-gneiss respectively. Using standard petrographic and geochemical techniques we will attempt to unravel the geological history of NPG and elucidate possible protoliths. (*Faculty sponsor: David Gibson*)

Poster # 11

Petrography, Geochemistry and Age of Peraluminous Granites South of Farmington, Maine.

Justin Caron, Brett Hofland, and Dylan Szymbor

A group of peraluminous granites, which contain both biotite and muscovite mica +/- garnet, outcrop from North Jay to Norridgewock to the south of Farmington. These form the North Jay, Chesterville, Cape Cod Hill and Rome – Norridgewock plutons and could all be linked together at depth within the earth's crust. This study will examine the petrographic and geochemical characteristics of these rocks to determine if they are individual intrusions or a single larger igneous body. (*Faculty sponsor: David Gibson*)

Poster # 12

Mafic Dikes in Sebago Pluton

Michael Paradis, Chase Rerrick, and Paul Simoneau

Numerous mafic dikes intrude the igneous and metamorphic rocks of western Maine. The objective of this project is to look at the petrographic and geochemical data from mafic dikes collected along the eastern margin of the Sebago pluton. The petrography of the dikes will be examined to determine their general classification. In addition, their geochemistry will permit their detailed classification and to examine their tectonic setting and provenance. The major goal is to determine if these dikes are a part of the magmatism of the Sebago granite or if they are related to Mesozoic rifting. (*Faculty sponsor: David Gibson*)

Poster # 13

Walking on Murky Water: Using GPR to Look at Sedimentation in Walton Mill Pond

Brianna Leonard, Daniel Mason, Bryce Neal, Michael Paradis, and Paul Simoneau

In this study, ground-penetrating radar (GPR) was used to investigate sedimentation in Walton Mill Pond, a small pond in West Farmington located behind a discontinued dam. Specifically, we were looking for sediments that

could be mobilized following dam abatement. Using a low frequency resolution, we discovered distinct layering in the stream bed, including a top layer of potentially mobile sediment underlain by glaciomarine clay. These findings have implications for wetlands surrounding the pond, which may require further investigation through sediment cores and other methods. *(Faculty sponsor: Julia Daly)*

Poster # 14

Locating Historic Burials with Ground-penetrating Radar

Brianna Leonard, Daniel Mason, Bryce Neal, Michael Paradis, and Paul Simoneau

This study surveyed the Farmington Center Meetinghouse Cemetery using ground penetrating radar (GPR) in order to determine two things: 1) whether headstones respectively mark burials, and 2) whether there are burials unmarked by headstones. GPR is a geophysical method that transmits and receives low-frequency radio waves. The reflection of waves off contrasting objects in the ground allow the user analyze subsurface conditions. A burial was indicated by a hyperbolic-shaped reflection interrupting the sedimentary layering. Locations of hyperbola were compared to GPS locations of headstones to determine whether gravestones were associated with burial sites. *(Faculty sponsor: Julia Daly)*

Poster # 15

Characterizing River Ice-Out and Spring Discharge for the Sandy River

Brianna Leonard, Michael Paradis, Dylan Szymbor, and Alexandra Umstadt

The objective of this project is to predict ice out on the Sandy River based on previous years of ice out and precipitation data. With this information we can attempt to predict flooding events along the Sandy and potential groundwater levels. We intend to obtain this data from the USGS, NOAA, and Weld, ME Center Hill. We are taking photographs of the Sandy every week, and will determine the extent of the ice on a week to week basis. River height will be monitored as the ice is melting. *(Faculty sponsor: Julia Daly)*

Poster # 16

Changing Sea Ice Extents: Comparing the Bering Strait to the Baffin Region

Daniel Mason, Wyatt Mccurdy, Bryce Neal, and Chase Rerrick

A rapidly warming Arctic has resulted in new record low measurements of sea ice extent, but there is significant spatial and temporal variability. In this study, sea ice extent in the Bering Strait and Baffin Bay were investigated using image processing software. This helped to determine how sea ice extent changed seasonally and annually during the time period from 1979-2016. Seasonal and annual trends for the two regions were examined, and sea ice extent data were compared with atmospheric and surface temperature data. *(Faculty sponsor: Julia Daly)*

Poster # 17

Lake Ice-out and the Transition to Spring: Historic Trends and 2017 Data

Christopher Beahm, Linda Dudley, Joseph Principe, and Jacob Violette

Is climate change affecting recent lake ice-out dates in compared to decades past? The importance of this question lies in the fact that earlier ice-out dates could cause spring mixing to occur sooner. If spring mixing ends earlier, an extended period of summer stratification could diminish lake habitats by decreasing oxygen availability before fall turnover. Data loggers are collecting lake temperatures beneath the ice this spring, and ice-out timing will be compared to historic records. Using current temperatures and ice-out dates, as well as historic values, we will assess how climate change is altering the winter/spring transition of local lakes. *(Faculty sponsor: Julia Daly)*

Poster # 18

How Much Warmer is a Greenhouse? Soil Temperatures inside a Local High Tunnel Greenhouse

Donald Hutchins, Alyssa Tironati, Kelly Toomey, and Josephine Tulloss

How long could a greenhouse extend the growing season? Building a greenhouse or hoop house could allow growers throughout Maine to extend their growing season, increase crop yield, and be more financially successful. Additional crops produced could also help address food insecurity in the state. Using data loggers buried in shallow soil at a local greenhouse, we measured soil temperature every 30 minutes from March - June 2016 and winter 2016 - 2017 to evaluate how warm the soil remained. First results shows that the soil never went below freezing, showing that the greenhouse is well insulated through the winter and into spring. *(Faculty sponsor: Julia Daly)*

Poster # 19

Spring Snowpack: Characterizing Melt Timing and Estimating Snowpack Water Content

Audrey Elliott, Brett Hofland, Tristan Price, and Matthew Wilson

The purpose of the study was to identify precipitation events, SWE (Snow water equivalent), and melt periods in local snowpack data for Farmington, ME. The study is important to both identify the extent of precipitation and melt periods on a local level as well as fill in gaps that state data collection may have missed during earlier melt events diverging from climate history. We manipulated this data by identifying layers indicating several different precipitation events in correlation with temperature and melt to retrieve data on max seasonal snowpack during the months of February and March 2017. *(Faculty sponsor: Julia Daly)*

Poster # 20

The Staten Island Project

GEY 104N students

Humanity's unprecedented attack on the climate system will, should greenhouse gas concentrations continue to escalate, require an unprecedented response. The top secret and highly confidential Staten Island Project aims to achieve negative carbon emissions by sequestering atmospheric CO₂ in carbonate minerals. Lime solution released from a seafloor-based kiln (nuclear powered) passively collects carbon from the surface ocean, while hot CO₂ from the kiln injected into drill holes results in hydrofracturing and conversion of seafloor peridotite to carbonate. The kiln's location, based on optimal geologic and oceanographic factors, will be disclosed on Symposium Day. *(Faculty sponsor: Douglas Reusch)*

Poster # 21

Visualizing the Scale of a Carbon Sink Needed to Offset CO₂ Emissions

GEY 104N students

The weathering of silicate minerals consumes carbon dioxide. In principle, fossil fuel carbon emissions might be offset by artificially enhancing this natural carbon sink. We calculate the volume of reactive rock such as peridotite that would be required to neutralize a year's worth of emissions (8 billion tons carbon), and find it to be on the order of 14 cubic kilometers. In Yosemite National Park, the volume of the iconic Half Dome is approximately 1/4 cubic kilometer. Hence, a volume of rock equivalent to 56 Half Domes, similar to the volume of coal extracted per year, might suffice. *(Faculty sponsor: Douglas Reusch)*

Poster # 22

Petrographic and Geochemical Analysis of Cores from Hancock, Maine: New Data on the Ellsworth Terrane

Cody Smith

The peri-Gondwanan Ellsworth terrane of midcoast Maine comprises a structurally complex assemblage of Middle Cambrian bimodal volcanic and related sedimentary rocks. A recent model proposes a rift setting within Ganderia (Camden Hills to the northwest) that became the northern margin of the Rheic Ocean. In order to evaluate this hypothesis, the current study examines six shallow (up to 71 feet) cores (MW 1-6) collected in 2001 by Maine DEP from the Hancock landfill site in the poorly documented area east of Ellsworth. This scenario is evaluated using petrographic description of the cores, thin section, and XRF analysis of the geochemistry. *(Faculty sponsor: Douglas Reusch)*

Poster # 23

An Investigation of Heavy Metal Contamination on the Marine Periwinkle, *Littorina littorea*.

Brittany Dubuc

This study focuses on organisms living in the tidal marine sediments of a former copper mine site in Brooksville, ME. The Callahan mine (now a Superfund site) liberated high levels of copper, zinc, cadmium and lead to the sediment and water. Mining commenced at this site in 1887 and ceased in 1972. The United States Environmental Protection Agency determined that all biota tested had accumulated heavy metals to levels unsafe for any predators and for human consumption. The common periwinkle, *Littorina littorea*, is frequently used as a bioindicator to determine the relative health of marine ecosystems. In this study, we used the periwinkle to determine if those living in heavy metal-contaminated marine sediments significantly expressed for more metal trafficking proteins compared with those living in "clean" sediments. This application of genomics may offer new perspectives when evaluating the overall health of organisms used by humans for food. *(Faculty sponsor: Nancy Prentiss)*

Poster # 24

Door Etiquette Reactions and Gender

Heather Hardesty

This study looks into female door holding and the reactions of both men and women. Research involved holding the door for both men and women. The verbal, physical, and facial reactions were documented and the results analyzed. The hypothesis is that men will have a more negative reaction and object more to a woman holding the door for them than a women. *(Faculty sponsor: Karol Maybury)*

Poster # 25

Attitudes About Materialism

Joy Cognata

Research has shown that there has been a rise in material consumption in western civilizations over the decades. My research intends to explain the correlation between purchasing material goods and overall happiness. This study has two surveys: one asks a series of lifestyle questions regarding attitudes about materialism; the other about everyday happiness and fulfillment. The two different questionnaires were used and then were scored on an individual basis comparing materialism scores to happiness scores; determining the relationship between them. Materialism can affect our internal experience and interpersonal relationships, as well as have an impact on our communities and the world at large. My hypothesis is that individuals that have high materialism scores will, as a result, have low happiness scores. *(Faculty sponsor: Karol Maybury)*

Poster # 26

Sexual Orientation and Perceptions of Depression

Melissa Coro

Not much research exists in the area of mental health as it relates to sexual orientation. The purpose of this study was to expand on this knowledge, specifically in regards to perceptions. Under the guise of a memory test, this study explored the difference in perception between a straight woman with depression and a lesbian woman with depression. This was done by using a between-subjects design with two scenarios given to participants. The scenarios were identical save for the gender of the main character's romantic partner. It was hypothesized that a lesbian woman presenting with depression would be perceived more negatively than a straight woman. *(Faculty sponsor: Karol Maybury)*

Poster # 27

Cup of Joe

Melissa Poulin

This study tests the hypothesis that men wearing skirts will be judged more harshly than men wearing pants. Using a between subjects design, two photographs of a 20 year old male named Joe were taken in the form of a coffee advertisement. Both photographs are identical, except in one he is wearing pants and the other he is wearing a skirt. A short scenario introduced the photograph as an upcoming advertisement for a local coffee brand. Participants were split into two groups. One group was given the photograph of Joe wearing pants and the other group received the photograph of Joe wearing a skirt. They were then asked to answer a series of questions relating to the advertisement and Joe. *(Faculty sponsor: Karol Maybury)*

Poster # 28

Men vs. Women; Who Gets Better Service?

Maria Creznic

Previous research has concluded that men and women are served at different rates and have differing quality of services in retail stores. The hypothesis of this study was that men will have better and more frequent service from salespeople than women. One male and one female confederate went into different stores on multiple occasions at different times of different days, each with two hidden stopwatches; one used to measure the time to take the salesperson to ask if they needed assistance, the other to time the interaction after the initial attempt for assistance. Findings, limitations and implications will be discussed. *(Faculty sponsor: Karol Maybury)*

Poster # 29

Materialism and Commitment Levels

Courtney Austin

Previous research has examined how materialism affects happiness as well as how happiness affects relationships. Although little has been done to reveal if there is an effect on relationships due to materialistic traits. This study aimed to show the correlation between materialistic traits and willingness to commit in relationships. The hypothesis of this study is that participants with higher reported materialistic tendencies will have lower commitment levels in significant relationships such as friendships, family, and romantic partners. *(Faculty sponsor: Karol Maybury)*

Poster # 30

Writing and Mood

Melissa Walls

Previous research has shown that writing is beneficial for mental health. In this study, the effects of writing on a person's mood were examined by giving participants one of two prompts: to write about their day in detail (one-half of the subjects), or to write about their day in detail focusing on joy, gratitude, or love (the other half of the subjects). Participants then completed a survey regarding their satisfaction with life and happiness. It was hypothesized that reflecting on positive words would lead to greater feelings of happiness and satisfaction with life. *(Faculty sponsor: Karol Maybury)*

Poster # 31

Parenting Styles and Emotional Regulation

Tabitha Huntoon

Previous research has concluded that parenting style affects children in many ways. The hypothesis of this study was that individuals who grew up with authoritarian type female parental figures will score lower in emotional regulation later in life, and that there will be gender differences between sons and daughters. Participants were given questionnaires that asked about their mother while they were growing up, as well as how they handled their emotions now as an adult. The mother questionnaire results in three subcategories after scoring (permissive, authoritarian and authoritative). The emotional regulation questions were also scored into sub groups (cognitive reappraisal, or what is felt on the inside, and expressive suppression, how emotions are shown). Findings, limitations and implications will be discussed. *(Faculty sponsor: Karol Maybury)*

A Tribute to Michael D. Wilson

Michael D. Wilson graduated from UMF in 1976. He loved teaching, helping children grow and develop. He reached out to help people whenever he could. He also had a deep love for the beauty and serenity of the wilderness where he felt a deep sense of connection.

Michael chose to live his life in a manner that was true to his beliefs. Many people remember him as a special person and a good friend. He died in a tragic accident in 1977, just as he was preparing to begin a new teaching position in a small town in Aroostook County.

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