

Academic Festival XVIII

A Celebration of Wheaton Scholarship and Creativity

12:30pm - 3:30pm

Poster Session

Balfour-Hood Atrium

12:30pm- 4:30pm

Macbeth Designs: **Faculty Exhibition**

Lobby of Weber Theater, Watson Fine Arts

12:30pm- 4:30pm

Framed: **Senior Art Majors Exhibition**

Beard/ Weil Galleries, Watson Fine Arts

12:30pm - 2:00pm

Student Paper Presentations

Media Center, Balfour-Hood

12:30pm - 2:10pm

Student and Faculty Readings

The Loft, Balfour-Hood

2:00pm - 3:00pm

Synergy: **Dance Recital**

Ellison Dance Studio, Balfour-Hood Campus Center

3:00pm - 4:00pm

Faculty-Led Roundtable Discussion

1962 Room, Balfour-Hood

4:00pm- 5:00pm

Music Recital

Cole Memorial Chapel

5:00pm- 6:00pm

Closing Reception

Haas Concourse, Watson Fine Arts

Wheaton College
Norton, Massachusetts

Academic Festival XVIII is organized and sponsored by the Filene Center for Academic Advising and Career Services at Wheaton College. Nominating faculty members and participants provided the information contained in this program.

Questions about Academic Festival XVIII?

Contact the Filene Center at 508.286.8215.

Campus Parking

Visitors to campus will find two college parking lots on the north side of Route 123 that may be used when attending Academic Festival XVIII. The lot on the western end of the campus may be entered from Route 123 (at the flashing yellow traffic signal) and Route 140; the other, at the eastern end of campus, can be accessed from Route 123 and from Elm. Travel directions and a campus map are also available at

www.wheatoncollege.edu/about.

A Message from the Provost | Elita Pastra-Landis

For eighteen years, Wheaton College's annual Academic Festival has served as a celebration of Wheaton's scholarship and creativity. In profound ways, the participating students and faculty demonstrate the extraordinary intellectual and creative possibilities a college can provide, and reaffirm the significance of a liberal arts education.

By accepting Wheaton's invitation to embrace a curriculum that stimulates intellectual curiosity and achievement, our students have become independent thinkers, responsible individuals, and determined leaders. In turn, our faculty provide inspiration, guidance and encouragement, and, along with their student co-presenters, offer the community an energetic exchange of ideas.

Academic Festival XVIII presents examples of what is possible when all necessary elements converge -- eager students, outstanding faculty, a nationally recognized curriculum, and a nurturing environment. But this is only a sampling. Every day, in every Wheaton classroom, studio, and laboratory, students, faculty and their work are celebrated.

Elita Pastra-Landis
Provost

Student Poster Presentations | Balfour-Hood Atrium

Italics denote Senior Honors Thesis Projects

12:30pm- 3:30pm



“You Have A Lot of Time to Think In Here:” Incarcerated Males and Their Expectations for the Future

Lea Goldstein '09

Today in the United States, approximately 3.1% of the adult population is incarcerated, in federal and local jails, on parole or probation. With more than 650,000 individuals leaving prison each year, the transition from prison to society for former prisoners is of significant importance to everyone. While a great deal of previous research examines rates of recidivism, causes of crime and barriers to re-entry, little has been done to investigate the personal plans and perceptions of the future that incarcerated individuals hold. The purpose of Lea's research is to explore the personal expectations, attitudes, fears, and plans of incarcerated males for their life after prison. Lea's analysis relies on qualitative data obtained through interviews with males currently incarcerated in the Maine State Prison System who anticipate release within five years. Lea's results indicate that while prisoners do make plans prior to release there is a discrepancy between the reality of post-prison life and the expectations that prisoners hold. Despite access to rehabilitation and education programs, prisoners' perceptions of their own futures underestimate the significant obstacles of re-entry. In other words, prisoners are seemingly not prepared for the significant barriers that they may face as they attempt to secure employment and housing and to reestablish family relationships. While prisoners are aware that stigma and discrimination against ex-convicts exists, they largely believe that they will not be negatively affected by these forces.

Nominated by Karen McCormack (Sociology)



Always Connected or Connectable: Social Competence, Patience and Communication Technologies

Annie Laurie Malarkey '09

The use of communication technologies has played an influential role in the lives of Generation Y. This thesis examines the use of communication technologies among college-level students and how these habits affect social interactions, social competence and patience. A correlation coefficient table created with results from a survey administered to Wheaton College students suggests varying levels of social competence among heavy communication technology users. Results also show that heavier users of these technologies tend to rate themselves as more impatient and that men and women utilize technologies differently. Men tend to be heavier users of one-way technology while women are more attracted to technology where they can receive an immediate response from their contact.

Nominated by Karen McCormack (Sociology)



Behavioral Observations at Southwick's Zoo: Report on Multiple Studies

April Greene-Colozzi '09, Anastacia Spang '09 and Morgan Jamiel '09

An investigation of the impact of exhibit changes on leopard behavior, visitor behavior and visitor attitude. Behavioral observations of hand-raised (by humans) versus parental-raised gibbons. Changes in species behavior with the addition of a Skyfari Sky Ride at Southwick's Zoo.

Nominated by Kathy Morgan (Psychology)



Both Systemic and Local Application of Tadalafil Stimulates Angiogenesis in the Zebrafish

April Greene-Colozzi '09

Previous research done at Wheaton has found that three common erectile dysfunction (ED) drugs, Sildenafil (Viagra), Vardenafil (Levitra), and Tadalafil (Cialis), have a potent effect on angiogenic growth in the zebrafish wound healing model. This is in agreement with reports by other investigations, which have focused mainly on Viagra. The ED drugs inhibit phosphodiesterase type 5 (PDE5), the enzyme that normally breaks down cGMP. As a result, the levels of cGMP are increased, producing smooth muscle relaxation, which allows an influx of blood into the corpus cavernosum, and thus an erection. The purpose of this research project was to confirm previous studies on dose response to Tadalafil by providing more statistically significant data. In addition, this study investigates the angiogenic effects of Tadalafil pretreatment at different time periods before tail fin amputation, in an attempt to determine how long the angiogenic effects of Tadalafil persist in the zebrafish, and the time necessary for the drug to reach the injury site. Both systemic and local application of tadalafil have significant angiogenic responses.

This work was funded by a Mellon Faculty/Student Summer Research Fellowship, a TriBeta Research Grant and a Wheaton Foundation Grant.

Nominated by Ed Tong (Biology)



Can the Constructive Power of Social Norms Reduce Wasteful Paper Printing?

Alicia Marshall '11, Kathy Morgan, PhD

In an effort to reduce excessive amounts of paper printing and in turn conserve energy and materials, Alicia has put social norms to work in the library at Wheaton College. She used paper usage data from 2008 to compare with her alternating experimental and control conditions for corresponding weeks in 2009. The experimental condition made use of the power of social norms to influence people's behavior: bold orange signs were posted on all computers in the library atrium, with subtly pressuring statements, and a picture of a stop sign. This behavior, choosing to print or not to print, was logged using trace method. Measurements of sheets printed came from the two printers' tickers and were totaled up weekly for analysis. This non-intrusive and simple study—aside from the inevitable history of break down that comes with dealing with technology—will give us insight into the effects of social norms on conservation and the reduction of paper printing.

Nominated by Kathy Morgan (Psychology)



Chemical Weathering along the Greenland Ice Sheet Margin

Samuel Beal '09

The amounts and types of chemical weathering occurring along the Greenland Ice Sheet margin are empirically explored in this study. As the ice sheets react first to escalating greenhouse gas concentrations, a better understanding of the impacts of increasing meltwater discharge, temperature, and glacial retreat on chemical weathering is needed. The glacial setting offers competing factors in the extent that chemical weathering can occur; glacially produced fine-grain sediments provide fresh, high surface-area mediums, but generally low temperatures limit kinetics. Water samples were collected along a 5.4 km stretch of stream exiting the western side of the ice sheet and analyzed for major ions. Alkalinity was determined as HCO₃⁻ using the Gran titration method. Concentrations of Na⁺, K⁺, Mg²⁺, Ca²⁺, Cl⁻, and SO₄²⁻ were determined by IC and ICP-ES. Major ion concentrations were low relative to global mean values and other glacial studies: 10-45 μM HCO₃⁻ and 2-26 μM for individual salts, a clear indication of dilution by ice-melt. Near equal amounts of Ca²⁺ to Na⁺ + K⁺ roughly indicate equal amounts of silicate and carbonate weathering. High concentrations of K⁺ suggest preferential weathering of sheet silicates (micas). In addition, high SO₄²⁻ concentrations and no significant along-stream trends in ion concentrations suggest anoxic subglacial weathering.

Nominated by Matt Evans (Chemistry)



Developing Enrichment for the North American Bullfrog (*Rana catesbeiana*) at the Buttonwood Park Zoo

Alexandra Hyszczyk '09

The S.P.I.D.E.R. process was used to assess the behavior and natural history of the North American Bullfrog and identify and develop enrichment possibilities.

Nominated by Kathy Morgan (Psychology)



Differential Gene Expression in Patients with Aspirin-Exacerbated Respiratory Disease

Beth Ashley Markens '09 and Elita Pastra-Landis, PhD

Aspirin-Exacerbated Respiratory Disease (AERD) is a hypersensitivity condition that affects 10-20% of the adult asthmatic population. These patients experience a systemic reaction within 30 minutes to one hour after ingestion of aspirin or any other non-steroidal anti-inflammatory drug (NSAID) and the symptoms can range from a runny nose to anaphylactic shock. AERD most often develops in asthmatic patients after the age of 30. Generally, such patients already suffered from nasal polyps, chronic sinusitis and asthma, but they previously tolerated NSAIDs without adverse reaction. Unfortunately, there is neither a method to predict which asthmatic patients will develop AERD nor a way to prevent the onset of the disease. Furthermore, the molecular mechanism underlying this disorder is not yet known. Aspirin and other NSAIDs inhibit both the enzymes cyclooxygenase 1 (COX-1) and cyclooxygenase 2 (COX-2). These enzymes, present in human white blood cells (WBCs), function to form several of the

down-stream products of the arachidonic acid pathway, including prostaglandin E2 (PGE2). PGE2 binds to several receptors and can exhibit both pro-inflammatory and anti-inflammatory properties depending on the receptor bound and the organ in which it is present. In general, PGE2 is thought to be protective in the lung. In most human WBCs, the levels of COX-1 enzyme are constitutive – meaning that they are present at constant levels regardless of substrate concentration or physiologic demand. Conversely, the COX-2 enzyme varies and is inducible depending on the inflammatory signals present. Other scientists have found that there are reduced amounts of COX-1 and COX-2 in nasal polyps of patients with AERD compared to non-aspirin-sensitive controls. We hypothesize that the known trends in gene transcript expression of COX-1 and COX-2 in nasal polyps will extend to the WBCs of peripheral blood in patients with AERD. Also, any decreased gene transcript levels at baseline for AERD patients is expected to be reversed once the patient is on a high-dose aspirin regimen.

This work was funded by a Mars Student/Faculty Grant.

Nominated by Elita Pastra-Landis (Chemistry)



Does Physical Activity Correlate with Mood States?

Arminueza Evora '10

This research will propose to investigate the relationship, if any, between frequency of exercise, exercise type, and mood. Specifically, the research will determine if students at Wheaton College who exercise more frequently than others score differently on the Profiles of Mood States (POMS) inventory, and the State Trait Anxiety Inventory (STAI) in comparison to students who report exercising less frequently. As a measure of exercise, a self-made survey, and also the Godin Leisure Time Exercise Questionnaire (GLTEQ) will be used.

Nominated by Kathy Morgan (Psychology)



Effects of Bisphenol A on Female Rat Sex Behavior

Liana Merrill '09

Bisphenol A (BPA), a monomer of polycarbonate plastics, is an environmental estrogen that is known to bind to estrogen receptors, mimicking estrogenic action. BPA is therefore known to be an endocrine disrupting chemical. BPA is environmentally important because these endocrine disruptors may have possible adverse health effects in humans. However, there is some debate about whether BPA has estrogenic or anti-estrogenic activity. In animal models, developmental exposure of low doses of BPA has been shown to cause adverse effects, particularly in the reproductive tract. The current study looks at the effects of the long-term administration of an environmentally relevant dose of BPA on adult female rat sex behavior. If BPA acts estrogenic, we will expect to see an increase in sexual receptivity in animals treated with BPA alone. If BPA acts anti-estrogenic, we will expect to see inhibition of receptivity in animals treated with estradiol benzoate and BPA.

Nominated by Meg Kirkpatrick (Psychology)



Effects of Drug Therapies for ADHD on Attention, Impulsivity, and Anxiety

Jessica Webb '09, Kathy Morgan, PhD

As a Psychology major with an interest in the neurosciences, Jessica is writing a senior honors thesis on the long-term effects of stimulant medications that are commonly used to treat attention deficit/hyperactivity disorder (ADHD) in both children and adults. This frequently diagnosed disorder causes an increase in activity level, low frustration tolerance, poor organization skills and the inability to sustain attention. Paradoxically, the likely treatments for the disorder are drugs from the stimulant class of psychoactive substances. The long-term use of stimulants as therapy for ADHD is controversial, but little data exist on the long-term effects of such treatment. As a result she has set out to further investigate the long-term effects, if any, of stimulant therapy on attention, impulsiveness and anxiety in Wheaton College students who have been diagnosed with ADHD.

Nominated by Kathy Morgan (Psychology)



Explain Yourself: How Individuals Account for Their Deviant Acts

Stephanie Redfield '09

This study deals with the question: Are the aligning actions, particularly accounts, given by violators of the Wheaton College Honor Code, and individuals who break the law inherently different? These accounts fall under the two categories of excuses or justifications as explained in the work of Marvin B. Scott and Stanford M. Lyman (1968). Based on a survey sample of 195 respondents and 10 interviewees it can be concluded that when there is a clear victim to a trespass the actor is likely to chose to excuse themselves and conversely when there was not a clear victim they are likely to chose to justify themselves. My interviews showed that drinking underage was a particular case where justifications of self-fulfillment were found. This means that these individuals saw nothing wrong with their actions. Subsequently the beliefs of these individuals are synonymous with those of other college students. It appears that in the college setting drinking under the age of 21 is not deviant even though the law says otherwise.

Nominated by Karen McCormack (Sociology)



Expression and Role of GPR30, a Novel Membrane Estrogen Receptor, in Human Ovarian Cancer

Hilary Magruder '09

Ovarian cancer, which is generally detected in late stages, often leaves patients with less than two years to live. Current treatment for most breast cancers and some ovarian cancers includes hormonal therapy, which targets the estrogen receptor (ER). In recent years, a novel seven-transmembrane estrogen receptor, present in reproductive tissues, has been identified. In breast carcinomas, this G-protein coupled receptor 30 (GPR30) is linked to the release of an epidermal growth factor (EGF). The presence of this growth factor has resulted in the presence of breast carcinoma metastasis. While GPR30 has been linked to breast tumor metastasis, we hypothesize that GPR30 also has biological significance regarding ovarian tumor growth, progression, and survival. If so, then GPR30 is a potential therapeutic target in addition to the estrogen receptor, ER. The first objective of this study is to investigate GPR30 and ER expression in ovarian cancer cell lines. The second objective is to create an ovarian tumor mouse

model to determine how GPR30 affects tumor growth and progression, and the tumor's response to hormonal therapy. To date, we have successfully determined GPR30 expression in three ovarian cancer cell lines, and ER expression in four cancer cell lines.

Nominated by Elita Pastra-Landis (Chemistry)



Foraging behavior of the Black-capped Chickadee in Relation to Seasonal Change

Lily Calderwood '09

Foraging behavior of Black-capped Chickadees (*Poecile atricapillus*) was observed for one-hour segments, three days a week, September through November of 2008. Foraging was hypothesized to become increasingly precise, a narrowing of the foraging niche, as winter approached. The hypothesis is based on the assumption that colder, harsher meteorological conditions will select for increased optimal energy expenditure. In this preliminary study, foraging bouts by individual birds were timed and foraging strata recorded as mixed species foraging flocks progressed through the evergreen-deciduous forest behind Wheaton College in Norton, Massachusetts. Black-capped Chickadees were observed as the nucleus species of their foraging flocks, often joined by other species such as the Tufted Titmouse (*Baeolophus bicolor*). Due to the unusually mild autumn and short study period, the hypothesized narrowing of foraging niche by Black-capped Chickadees was not confirmed. However, a trend toward more focused foraging in the upper canopy was evident as the study progressed. Further study is thus warranted, particularly during the height of winter.

Nominated by John Kricher (Biology)



Gay Men Throw Good Parties: A Sociological Analysis of an Intentional Community

Rose Ciccarelli '09

During the hippie era, thousands of communes were established throughout the United States; however, the majority of these communes have since completely disbanded. The Butterworth Farm commune was not one of those. It began as a commune in 1973 and while it disbanded as a commune, it has expanded and remains a community currently which raises the question as to how it has managed to do so. To answer this, 8 members of the Butterworth community were asked to give personal accounts describing their relationships to Butterworth and how those relationships formed. Since the interviews were not guided by questioning, and instead more narrative, the answers as to why Butterworth has remained a community were based on commonalities that came up within the interviews. Therefore, the interviews reveal that the early transition from a commune into a community, the members themselves, and the parties held at Butterworth have been the leading factors to its expansion and longevity. Furthermore, the answers to this question coincide with much of what the literature has to say on the subject of homosexuals and communes.

Nominated by Karen McCormack (Sociology)



Genetic Variation among Cape Cod Diamondback Terrapins

Julia Simundza '09

We have utilized six microsatellite markers to compare and assess Cape Cod clusters of the diamondback terrapin, *Malaclemys terrapin*. Such highly variable neutral genetic markers have the potential to reveal natural history traits, population structure, and other characteristics of populations that may be useful in conservation and management of threatened and endangered species. Our populations were sampled in Wellfleet Harbor, the Great Marsh in Barnstable and in Buzzards Bay. We have found some substructure among the Cape Cod clusters but overall, very little genetic variation. Based on these markers alone, it would not be possible to assign an individual terrapin to a specific cluster.

Nominated by Barbara Brennessel (Biology)



Genomic Analysis of the Sea Urchin Ciliome

Blair Rossetti '09, Bob Morris, PhD, Robert Manguso '10, Ali Hussain '11, David Perelman '11, Maeghan Ciampa '11, Jessica Emory '11

The sea urchin embryo has been a model of choice for studies of cilia formation and function for a half century. In most urchin species, the onset of ciliogenesis occurs on all blastomeres coordinately just prior to embryo hatching and is regulated thereafter in a tissue-specific manner to generate cilia with different lengths and behaviors. By probing the genome of the purple sea urchin, *Strongylocentrotus purpuratus*, using the ciliary and flagellar proteomes from human and from the single-celled alga *Chlamydomonas reinhardtii*, we have begun to study how urchin embryos regulate ciliogenesis differently in different germ layers and between developmental stages. Over 275 *S. purpuratus* genes have been identified to code for ciliary proteins by the reciprocal best BLAST hit method. Early analysis of *S. purpuratus* transcriptome data revealed that expression levels of putative ciliary genes vary between stages of development in four general patterns: predominantly maternal, predominantly blastular, initially blastular, and predominantly larval. Some groups of genes whose products presumably function together, for example intraflagellar transport (IFT) genes, share similar expression patterns during development, while members of other groups, for example dynein-related proteins, exhibit dissimilar expression patterns. Gene ontology analysis within and between expression pattern groups is being used to identify groups of genes that may work in concert. Genes whose products are central to specific ciliary processes, such as kinesin-2 family members that drive anterograde IFT, are being targeted by antisense morpholino knockdown to directly test their roles inferred by expression pattern and gene ontology analysis. Thus, generation of a draft ciliary proteome in a classic model organism with readily available transcriptome data is allowing us to study how the ciliogenic program can be modulated during development to generate cilia with tissue-specific morphologies, motilities, and functions.

This work was funded by a Wheaton Foundation grant and a Provost Travel Grant.

Nominated by Bob Morris (Biology)



Have It Their Way: The Impact of Junk Food Marketing on Children's Preferences and Intake

Katie Holleran '09

How well do children store the images and slogans they see on television? Is there any relation in the absorption of advertisements and the actual food preferences and intake of children? Do more children recognize Ronald McDonald, a fast food character constantly seen on children's television

commercials, than Chiquita Banana, a face advertised primarily on a piece of fruit? Through interviews with forty children in two socioeconomic groups, this study aimed to understand more about the issue of childhood obesity and how advertisements impact the eating habits of children. It was found that high levels of television intake, therefore television commercial exposure, exist alongside certain unhealthy food behaviors. In addition, children's recognition and familiarity with "spokescharacter" representations of junk food tend to lead to an affinity for such products.

Nominated by Karen McCormack (Sociology)



Lexomics: Patterns in Anglo-Saxon Literature

Christina Nelson '11, Mark LeBlanc, PhD, Mike Drout, PhD, Mike Kahn, PhD

Over the summer, Christina wrote programs in Perl to analyze the Anglo-Saxon corpus by counting the number of words with Professor LeBlanc. Then, she worked with Professor Kahn to statistically analyze the results, and used R to cluster similar texts together. Using these tools, she tests hypotheses about which texts should be grouped together, brought forward by Professor Drout, and fellow scholars in the Anglo-Saxon community. Christina also helped create a website to allow the public access to the results, and to "create their own" tests for their hypotheses in a way that is easy to understand, even for the non-technical person.

This work was funded by a Mars Student-Faculty Research Fellowship and the National Endowment for the Humanities.

Nominated by Mark LeBlanc (Computer Science)



Making it Modern: Wheaton College and the International Style

Mell Scalzi '09, Meghan Quigley '11, Jen Valentino '09, Andrea Bravo '09, Maria Escudero '10, Mollie Denhard '10

14 students, who were enrolled in the Exhibition Design course that is taught by Leah Niederstadt, created an exhibition in the Beard and Weil Galleries that track the history of the built environment at Wheaton College. The presentation will show the different steps the class took to create the exhibition as well as give a brief summary of the information presented in the exhibition.

Nominated by Leah Neiderstadt (Art History)



Magnetic Manipulation of Sea Urchin Embryos to View Ciliogenesis

Amanda Rawson '09, Bob Morris, PhD, Tatsu Shintaku '11, Justina Easow '11

Motile and non-motile cilia serve a number of roles that are important to cellular processes occurring in humans. Motile cilia perform a variety of functions such as clearing particles from the respiratory tract and moving cells in the reproductive system. Immotile cilia, otherwise known as primary cilia, are found on many cell types and are known to play a significant role in mechanoreception, olfactory reception, and photoreception (Witman, 1990). Furthermore, mounting evidence suggests that malfunctioning cilia are the cause of a number of human diseases and disorders such as Primary Ciliary Dyskinesia (Bisgove and Yost, 2006). Sea urchins have been chosen to complete this research because the cilia that are located on the different embryonic regions of a sea urchin display different lengths and behaviors. Investigating cilia and their growth during ciliogenesis was accomplished through magnetic manipulation of sea urchin embryos. Rendering the embryos magnetic has enabled us to change the orientation of the embryos and the use of microscopy has allowed us to image the embryos during

different stages of ciliogenesis. In addition to providing us with a deeper understanding of the impact cilia has on development, this has allowed us to view cilia as they form.

This work was funded by a Wheaton Foundation Grant and a Provost's Travel Grant.

Nominated by Bob Morris (Biology)



Monitoring of Lunar Transient Phenomena

Ian Strachan '09, Rose Ciccarelli '09, Timothy Barker, PhD, Gary Ahrendts (LIS)

Transient Lunar Phenomenon (TLPs) are described as short-lived changes in the brightness of patches on the face of the Moon. They last anywhere from a few seconds to a few hours and can grow from less than a few kilometers to a hundred in size. Very little is known about TLPs but the (lofty) goal of this project is to gain images and spectra using a spectrometer attached to light diffraction grating attached to a high powered telescope to gather scientific data to support the existence of TLPs.

This work was funded through the Wheaton College Astronomy Department.

Nominated by Timothy Barker (Physics and Astronomy)



Multiple Truths in Museum Representation

Chelsey Taylor '09

This study investigates the nature of two American institutions—the American Museum of Natural History and the National Museum of the American Indian—in terms of their presentation of native cultures with specific regards to stylistic elements manifest in the exhibits. Framed by a discussion of the evolution of museum theory, this study attempts to prove two interrelated concepts. First, the application of museum theory is analyzed based on its relevance and visibility in each of the exhibits. Additionally, the postmodern concept of pluralism is used as a basis for understanding the multiplicity of truths which can emerge from one singular artifact group. This study focuses on the importance of museums as commentators of cultures and how these institutions have altered alongside of museum theory to include exhibits which allow for the interaction of a multitude of stories.

Nominated by Donna Kerner (Anthropology)



Original Works of Children's Literature

Shannon Witter '11, Leah Rohner '11, Dana Schwendner '11 and Eleanor Bradford '11

In the Fall 2008 Semester, the "Multiple Perspectives on Literacy" class regularly visited Bennett Elementary School to help second grade "Reading Buddies" improve upon language fluency and comprehension skills. The culmination of this fieldwork resulted in the creation of an original piece of children's literature. Many students in the course designed their books to directly coincide with the interests and abilities of their Buddies. The books were given as gifts to the Bennett children so they always remember the fun in reading.

Nominated by Mary Lee Griffin (Education)



Relative Numerosity in Rats

Amelia Knight '09, Kathy Morgan, PhD, Stacy Zickl '09, Bhavleen Kaur '10 and Dania Tonelli '10

Throughout the semester, we will be testing rats in an 8-arm radial maze to determine their ability to recognize “more” from “less.” We have begun by assigning each rat a “more” arm and a “less” arm, while the remaining arms are blocked with wooden barriers. At the end of the “more” arm, 3 Cocoa Krisps are placed in a bowl, while the “less” arm contains only 1 Cocoa Krisp. During each testing period, the rat gets 5 trials with the “more” arm open and 5 with the “less” arm open. Each trial is limited to two minutes, but the time is stopped and recorded as soon as the rat eats the food. Behaviors such as rearing, grooming, defecating/urinating etc. are recorded as well. Each rat will be tested 10 times before we open all the arms of the maze and observe their behavior and choice of arm. Their choices will enable us to infer whether or not they learned the difference between more and less.

Nominated by Kathy Morgan (Psychology)



Shelf Space: Exploring the Relationships among Commodities, Consumer Culture and Space in the American Supermarket

Carrie Letourneau '11

Walking in to a grocery store in America may seem like an ordinary event. However, grocery stores are more than mere food merchants; they are museums, brimming with artifacts and symbols of American culture. As Americans, we live in a consumer culture in which our personal satisfaction and value to others is dependent upon our possession of commodities. In other words, for a wide variety of reasons, members of our society feel an addictive compulsion to buy, and our very identity depends on this compulsion. Although consumer culture is a relatively well explored topic in anthropology, very little has been done in regards to the impact of grocery store space on the meanings that commodities have, and how these meanings are related to the understandings we have of ourselves. Understanding the meanings associated with commodities, specifically food, enables us to see the environmental, health, and economic implications of mass consumption. This study is focused on how grocery stores both create new meanings for commodities and emphasize the meanings that are already in place.

Nominated by Megan McCullough (Anthropology)



Socioeconomic Status & Parental Involvement In Schools

Kelly Grant '09

Socioeconomic status and the family individuals are born into structures life opportunities and determines their chances of attaining goals that will make them more successful. This brings up the question of how class shapes parental involvement in schools. Kelly conducted and analyzed eight interviews at two elementary schools, a working to middle class school located in Taunton Massachusetts and a middle to upper class school in Lewisboro New York. Questions included topics regarding positive and negative interactions with parents, how involvement benefits children and what is the ideal role of parental involvement in their child's education. Levels of parental involvement were higher at the middle to upper class school and reported having greater parent turn out at at parent meetings. Both schools

agreed that parent support and enthusiasm was critical to the success of a child's education. However, teachers in Taunton wished parents would pay closer attention to homework and reading. When discussing teachers' perceptions of ideal parental involvement, all agreed that they were accepting of the open door policy as long as it benefits children. The school in Lewisboro expected parents to continue their child's learning outside school by taking trips to historic landmarks and museums. In the end, all teachers associated differences with socioeconomic status.
Nominated by Karen McCormack (Sociology)



Strain Measurement Across Fault Scarps on Dione

Noemie Goff-Pochat '10

Dione is one of Saturn's many icy satellites, discovered in 1684 by Giovanni Cassini. Since the late 1970's Dione has been imaged by Voyager and later by Cassini. The images from Voyager displayed hazy, wispy features on Dione's surface. Cassini images later indicated that these features are fault scarps. R. Wagner et al. previously wrote that the wispy material is shown to be of tectonic rather than cryovolcanic origin. Evidence of tectonic features led to questions concerning Dione's interior. Specifically, what activity is or has been taking place in the interior of Dione? Surface strain that produces faults may be due to a combination of different activities occurring in the interior of the icy satellite. Quantitatively determining the amount of strain a surface has undergone remains vital in elucidating the activities occurring. In this project we are measuring the horizontal displacement of selected faults on Dione's surface to analyze the overall surface strain.

This work was funded by a NASA Grant.

Nominated by Geoffrey Collins (Physics and Astronomy)



Studying Angiogenesis Using the Zebrafish Embryo

Erik Saksa '11, Kyle Glass '11, Patric Gritt '12 and Elizabeth Riley '10

We are beginning a preliminary study of angiogenesis in the zebrafish embryo. Approximately ten male and female adult zebrafish are placed in breeding tanks, which have a collecting basin in the bottom for eggs. Eggs are harvested daily and kept in embryo medium during early development. After one to three days, they are dechorionated (released from their protective chorion membrane). Videos of the developing embryo vasculature are then taken and analyzed using the Motion-Based Angiogenesis Analysis (MBAA) method developed by our lab.

This work was funded through a grant from the Wheaton Foundation.

Nominated by Ed Tong (Biology)



Tales From the Trashcan: An Analysis of Informal Waste Management Systems in Buenos Aires, Bangalore and Beijing

Kelly Maby '09

The survival strategy of the informal waste management circuit is that of self-installation in an informal collection system and the creation of a service. In its most basic form, it is living off the things that other people throw away. In exploring the process of fighting for resources and the potential of recuperation that exists within global informal waste management systems, the socio-political potential of waste scavengers is examined and the malleable nature of formality as demonstrated by scavengers in Buenos Aires, Beijing and Bangalore is defined. The investigation takes into account how collective perceptions of scavengers in cities around the world either hinder or encourage scavenging practices. Additionally, the study sets out to identify the diverse political, social, historical, economic and cultural forces that are leading to populations scavenging as a means of survival.

Nominated by Karen McCormack (Sociology)



The Ablation of Blue Ice Areas in Antarctica

Megan O'Sadnick '09

In Antarctica, areas of dense ice, blue in appearance, are first exposed due mainly to their geographical location and vulnerability to strong winds. These Blue Ice Areas experience ablation year round, a process attributed primarily to sublimation which is enhanced by the ice's lower albedo. In the winter, days of darkness persist leading to a steep decrease in sublimation. However, during this time ablation still occurs at a slower yet steady rate leading to the need to explore other mechanisms for surface ablation. The purpose of this project is to examine if wind scouring of the surface by snow particles may act as such a mechanism during the winter. The process of abrasion is still not thoroughly understood in its application to ice. By combining data collected in past field seasons to the Blue Ice Areas with results from lab experiments exploring the properties of ice, it is determined if and how much ablation of the surface during winter may be attributed to wind scouring. The research and results of this project may also be applied to ice surfaces on other planetary bodies such as Titan where abrasion of ice is possibly occurring due to flowing water.

Nominated by Geoffrey Collins (Physics and Astronomy)



The Apple Orchard Legacy at Wheaton

Michael Latner '10, Gerard Husikamp, PhD

The project will be a poster presentation looking into the history of the proposed apple-orchard to be created at Wheaton. In fact, Wheaton has had an apple orchard on campus before. The project will present the history of Wheaton's relationship to nature and sustainability, its departure from that relationship, and its recent return through on-campus efforts for sustainability.

Nominated by Gerard Huiskamp (Political Science)



The Heightened Galapagos Ecotourism Experience

Erin Boyd '09

This project explores if ecotourism trips to the Galapagos Islands have the ability to change tourists' anthropocentric views of the natural world. This research is based on the argument proposed by Stronza (2001) that current anthropological research needs to examine the impacts of tourism on tourists. This study views tourism as a personal, transitional experience. The data-collecting methods used were interviews, questionnaires and website analysis. The data collected showed that ecotourism trips to the Galapagos have the potential to change tourists' ideologies about the natural environment. Both the type of trip, ecotourism and the unique destination, the Galapagos, create a heightened experience that can have long lasting effects on tourists.

Nominated by Donna Kerner (Anthropology)



The Influence of Maternal Parenting Style on Drinking Behavior in College Students

Christopher Van Hise '11

College is an interesting time because, for most people, it offers them free rein over their behavior for the first time. In making their behavioral decisions, many rely on their childhood upbringings in order to identify good and bad life choices. In his study, Chris investigates one particular issue prevalent among college students. This issue is high-risk drinking behavior. His study seeks to understand the causes of high-risk drinking behavior through looking at the influence of the maternal parenting style. For, with a deeper understanding of the factors that underlie high-risk behaviors in college students, more effective intervention and prevention strategies may be able to be developed.

Nominated by Kathy Morgan (Psychology)



The Mechanism of Tadalafil-Enhanced Angiogenesis

Julia Chen '09

Angiogenesis, a natural mechanism during which new blood vessels grow from preexisting vessels, is sometimes considered pathological rather than physiological. Angiogenesis in vivo is controlled by a balance of angiogenic promoters and inhibitors. Vascular endothelial growth factor (VEGF) is a potent proangiogenic factor and the pro-angiogenic effects of the phosphodiesterase type 5 (PDE-5) inhibitor tadalafil (Cialis), have been demonstrated in the zebrafish (*Danio rerio*) model by the Angiogenesis Research Team at Wheaton. The objective of this thesis project was to determine tadalafil's mechanism in the zebrafish along the Vascular Endothelial Growth Factor (VEGF)-stimulated angiogenesis pathway in endothelial cells. This was accomplished using angiogenesis inhibitors to target specific intermediate molecules along the pathway. Prior to tadalafil exposure, the zebrafish were pre-treated with one of the following three inhibitors: 1H-[1,2,4]oxadiazolo[4,3-a]quinoxalin-1-one (ODQ), 2-(2-Amino-3-methoxyphenyl)-4H-1-benzopyran-4-one (PD 098059), or 4-(4-Fluorophenyl)-2-(4-methylsulfinylphenyl)-5-(4-pyridyl)-1H-imidazole (SB203580). The experiments provided evidence that sGC derived cGMP, the MEK/ERK MAPK pathway, and the p38 MAPK pathway are involved in tadalafil-enhanced angiogenesis.

This work was funded through the Wheaton Foundation and a Tri-Beta Biological Honor Society Research Award.

Nominated by Ed Tong (Biology)



The Montezuma Oropendola (*Psarocolius montezuma*): Male Call in Relation to Female Presence in the Nesting Tree

Alexandra Hyszczak '09, Ellen Perkins '11

This research project was conducted at La Selva Biological Station in Costa Rica during the Tropical Field Biology class in January 2009. The project observed the Montezuma Oropendola, a colonial nesting bird, and how the number of male calls related to female presence. The male birds have a distinctive call that is intended to attract the female. The group that was studied showed about 6 males in the group, with a clear dominant male that spent most of the time in the nesting tree. The study counted the number of male calls and from where they came from. It then compared that with the number of females in the nesting tree. The study showed that males tended to call consistently throughout the day, even if no females were present. However, males did call more frequently during active female hours.

Nominated by Scott Shumway (Biology)



Thru-Hiking the Appalachian Trail: A Study in the Physiological Changes of Endurance Hikers

Adam Thime '09

From May 28, 2008 through September 16, 2008 Kevin "Turok" Turko and Adam "Optimus" Thime hiked from Georgia to Maine on the Appalachian Trail, and became part of a study of the physiological changes experienced by endurance hikers. Turok completed the entire 2175 miles while Optimus completed about 1700 miles due to injury in June. Both subjects hiked with backpacks weighing up to fifty pounds, traveling as much as thirty-six miles a day at a pace of about three miles per hour. Over the course of the study, Optimus monitored the heart rate, respiratory rate, weight, blood pressure, and physical measurements of each hiker. This data was analyzed upon the completion of the hike, and changes for both individuals were examined and compared. While both Turok and Optimus began the study in good physical condition, observable physiological changes did take place. Comparing the two subjects to each other revealed how each individual's initial level of physical fitness explained the differences in physiological changes over the course of the study.

Nominated by Ed Tong (Biology)



Using Image J to Quantify Angiogenesis in Adult Zebrafish

April Greene-Colozzi '09, Julia Chen '09, Professor Ed Tong, PhD, Geoff Collins, PhD, Kyle Judkins '08, Joe Lee '08, Michael Ophir '08, Phil Manos '08, Farrah Laliberte '10 and Geoff Collins, PhD

Existing methods to quantify angiogenesis range from image analysis of photographs to fluorescent microscopy. These methods are often time-consuming and costly; they also may not detect capillaries if they are indistinct from the background of the image. We have developed a simple method based on the motion of blood to create an image that reveals the entire angiogenic vasculature. Using Image J, a video clip of regenerated tissue from the partially amputated caudal fin of a zebrafish is analyzed. The deviations among the frames in the video stack reveal pixels where motion has taken place. The resulting image highlights all vessels through which blood flowed and allowed for automatic quantification of the newly developed vasculature.

This work was funded by a Mellon Faculty/Student Summer Research Fellowship, a TriBeta Research Award and a Wheaton Foundation Grant.

Nominated by Ed Tong (Biology)



Young At Art: Building Cultural Capital in a Community Arts Center

Hannah Potler '09

This research is an investigation of the participatory arts. It demonstrates the importance of children being involved in the arts for developmental purposes. This research is qualitative and interview based. Hannah completed a case study with the Community Arts Center, located in Area IV, a lower income neighborhood in Cambridge Massachusetts. This center is an after-school program for children and young adults that focus on the fine arts, film production, and music production. She interviewed the staff members and two youth that participate in the CAC programs. Hannah also observed staff meetings as well as spent two full days observing the classrooms. This research reveals the usefulness of having young people learn how to be creative and to express themselves. It is an essential ability to develop at an early age; this ability encompasses gaining self-esteem, gaining opinions, a voice, initiative, adult friendships and adult roles. These results confirm that it is essential to incorporate the arts into young peoples lives.

Nominated by Karen McCormack (Sociology)

Faculty Poster Presentations | Balfour-Hood Atrium

12:30pm- 3:30pm



Assessing Fundamental Life Perspectives: The Faith Q-Sort

David Wulff, Professor of Psychology

Psychologists of religion have long sought ways to assess individual differences in human religiosity. Enough scales have been developed to fill a large reference book, yet none of them is satisfactory. Their most conspicuous limitation is their Protestant-Christian cast, but there are other problems as well. These scales assume at the outset that respondents are religious in some way, hence agnostics and nontheists are automatically excluded. Moreover, the scale items often do not accurately represent the intended construct and results are reported exclusively in simple numerical terms; thus the scales give hardly any clues to how the individual conceives of or expresses the constructs in question. These constraints also mean that the scales are useless for individual assessment in counseling and other such situations. The Q-sort entails a methodology by means of which one may address all of these concerns. One may include statements that encompass a broad range of "faith" perspectives, including both Eastern and Western viewpoints as well as agnostic and atheistic ones. Furthermore, while providing a basis for empirical research, a Q-sort yields summary groupings of statements that provide a discursive portrait of an individual's faith. This poster will introduce the Faith Q-Sort and invite viewers to complete it themselves.



Experimental Investigation of Fluvial Incision on Titan by Low-Velocity Sediment Impacts

Geoffrey Collins, Professor of Physics and Astronomy

This poster describes work done under extremely cold conditions to measure the tensile strength, fracture toughness, and abrasion susceptibility of polycrystalline water-ice "bedrock" stimulant. The goal is to constrain the rate of incision of observed river channels on Saturn's moon Titan.

This work was funded by the NASA Outer Planets Research Program.



Tectonics and Interior Structure of Pluto: Predictions from the Orbital Evolution of the Pluto-Charon System

Geoffrey Collins, Professor of Physics and Astronomy

The current tidal state of the Pluto-Charon system provides hard constraints on the nature of Pluto's interior. The most likely explanation is that Pluto had an internal ocean early in its history. When the New Horizons spacecraft arrives in 2015, we predict that it will discover Pluto is groovy (not dead).



Video Games Prime Speed/Accuracy Tradeoff in Attentional Task

Rolf Nelson, Professor of Psychology, Jared Floch '11, Sherri Conklin '10, Ian Strachan '09

To understand the way in which video game play affects subsequent perception and cognitive strategy, two experiments were performed in which participants played either a fast action game or a puzzle solving game. Before and after video game play, participants performed a task in which both speed and accuracy were emphasized. In Experiment 1, participants engaged in a location task in which they clicked a mouse on the spot where a target had appeared, and in Experiment 2 they were asked to judge which of four shapes was most similar to a target shape. In both experiments, participants were much faster but less accurate after playing the action game, while they were slower but more accurate after playing the puzzle game.

This work was funded by a Mars Fellowship and WRP.

Student Paper Presentations | Media Center, Balfour Hood

Italics denote Senior Honors Thesis Projects

12:30pm- 2:00pm

❖ 12:30- 12:55pm

Rape in Warfare: Its Development as a Crime Under International Law

Georgina Cannan '09

This presentation is based on an honors thesis that discusses the legal and historical development of rape as a war crime in international law. It also deals with the arguments for and against considering rape to be genocide. Rape has been such a common feature of warfare throughout history that many have accepted it as a normal byproduct of war. However, rape has been prohibited by laws dating back as early as 500 B.C., and the prosecution of rape as a war crime has a long and complicated history. This presentation will answer the following questions: what role has rape played in the history of warfare? What developments in law and changes in thought have led to classifying rape as a war crime? What role have international criminal tribunals played? What are the arguments for and against considering rape to be an act of genocide? What would be the implications of considering rape to be genocide?

This work was funded through a grant from the Wheaton Foundation.

Nominated by Darlene Boroviak (Political Science)

❖ 1:00- 1:25pm

African Perceptions of the U.S. and the Challenge of International Development

Sarah Mielbye '09

International perceptions of the U.S. have sharply declined over the past decade in nearly all corners in the world—except, in many cases, on the African continent. This study analyzes the construction of the American stereotype throughout African history from first contacts with the West in general, to America's current role in international aid and development throughout Africa. From analysis of historical accounts and celebrated African philosophy on development, interviews with Africans and Americans who have served as volunteers or in the development sector, and case studies on different approaches to "helping Africa" this study argues that the image of "the American" in Africa as a wealthy, powerful authority figure on development is both widely prevalent and significantly detrimental to the socioeconomic recovery—of the people, by the people, for the people—of developing countries in Africa.

Nominated by Darlene Boroviak (Political Science)

❖ 1:30- 1:55pm

HIV/AIDS, Health Disparities, and Communities of Color: Challenges and Opportunities

Romel Antoine '09

The first infection of HIV was reported in the United States thirty years ago. In the past three decades we have seen amazing advances in the prevention, treatment, and care of HIV positive people, enough so that rather than respond to them as death sentences public health officials and health care providers have begun to conduct conversations about repositioning HIV/AIDS as chronic illnesses. While this news illustrates the success of combating HIV/AIDS, it does not hold true for communities that the United States' healthcare system often disadvantages. Specifically, how do we accurately target,

manage, and prevent the spread of HIV in communities of color? How do we adequately capture and respond to the experiences of these disadvantaged communities? This presentation highlights the problem of HIV/AIDS and the challenges communities of color face when engaging with the healthcare system. It also explores many of the interventions that Community Based Organizations in the Greater Boston Area employ and introduces a new, comprehensive intervention and research tool that seeks to further but also complicate the conversations surrounding HIV/AIDS as chronic illnesses. This presentation is interactive and promises to be informative and mind opening.

This work was funded through the Porter Fellows.

Faculty and Student Readings | The Loft, Balfour Hood

Italics denote Senior Honors Thesis Projects

12:30pm- 2:15pm

❖ 12:30- 12:55pm

This Atlantean Instant: Poems

Meghan Smith '09

For the creative writing portion of her honors thesis in English, Meghan has written a collection of poems that explores the borders between geographical locations and the borders between genres. Some of the pieces in this collection, then, flow between poetry and prose as they travel to different countries, including South Africa, the Czech Republic, the United States, and Ireland. Other poems follow the story of a fictionalized character (named Pangaea, after the supercontinent), as she negotiates and redefines the old political maxim of "divide and conquer" to fit her shifting identity and place in the world.

Nominated by Claire Buck (English)

❖ 1:00- 1:25pm

Time Islanded

Emily Ayer '09

Emily is using her senior honors thesis to explore poetry of place, to explore why poets are drawn to certain places and what it means to write about those places and, in the process, expose them to the wider world. She has been researching different ways a place can be mapped narratively and has found that one of the ways this can be done is by focusing on boundaries, both metaphorical and physical. This is the motivating metaphor that has come to dominate her project. She has grounded her writing in her experience at one particular place, a small island in Maine she travels to every summer and that is rife with personal history for her and my family. Her thesis will include three sections – a crown of sonnets mapping out current island relationships and the way the relationships make up the island community; a series of postcard poems in the mode of Jennifer Rose, linking the history of the island through the people that have populated it and the events they have been present for; and a collection of poems that use traditional hymns and songs to explore ideas of religious and secular allegiance, among other things.

This work was funded through a Wheaton Foundation Grant.

Nominated by Sue Standing (English)

❖ 1:30- 2:15pm

27 Tips for Banishing the Blues

Professor Charlotte Meehan, Clara Bene '09

Clara Bene worked with Playwright-in-Residence Charlotte Meehan during the 2007-08 academic year on gathering initial research materials for the play. Over the summer they continued together to assimilate resources on America's "happiness industry" in the interest of Professor Meehan finishing a first draft during a MacDowell Colony residency. Ms. Bene will direct a reading of the play for the Academic Festival.

This work was funded through a Mars Fellowship and Wheaton Research Partner.

Faculty-Led Roundtable Discussion | 1962 Room, Balfour Hood

3:00pm- 4:00pm



Encounters in the Archives of Conflict

Professor Claire Buck (English), Professor Kim Miller (Women's Studies and Art History), and Professor Gabriela Torres (Anthropology)

Professors Kim Miller, from Women's Studies and Art History, Gabriela Torres from Anthropology, and Claire Buck from English will talk about the process of researching the histories and cultures of conflict. They will lead a discussion of the particular challenges each has faced in working with archives created by the same societies that have been shaped by the violence and war they study. Professor Miller's current research project, titled "Gender Blindness and the Shaping of Memory in Post-Apartheid South African Visual Culture," examines representations of women political activists in South Africa both during and after the struggle against apartheid. In her study of public representations of torture in Guatemala Professor Torres has gained insights from the, sometimes tenuous, relationships with those who manage the archive, as well as from encounters with documents- newspapers, military newsletters, and photographs. In researching her book on the relationship between First World War writing and travel writing, Professor Buck has made a study of the collecting and provenance practices of the British Imperial War Museum, founded during the war for the purpose of memorializing Britain's "war effort."

Faculty Exhibition | Lobby of Weber Theater, Watson Fine Arts

12:30pm- 4:30pm



Macbeth Designs: How That Stuff Gets on Stage

Clinton O'Dell, Professor of Theater

An exhibit of the design materials for the Department of Theatre and Dance Studies production of Macbeth will allow observers the opportunity to see evidence of the entire creative process behind the scenery and costumes for the show. Materials featured in the exhibit will include evocative and clothing research, preliminary drawings, scenic drafting, finished renderings, fabrics, costumes, and production photos. This display will also feature items constructed by Wheaton Students in the costume and scene shops based on design work by Clinton O'Dell and under the shared supervision of O'Dell and David Cook, created in truly hands-on, experiential circumstances. Featured design materials will highlight the relationship between the production and Patrick Dougherty's Twisted Sisters. Those interested will be able to see details of selected costumes up close and gain a deeper understanding of the production phase and creative process prior to opening night that helps determine what the audience sees when the curtain rises.

Dance Recital | Ellison Dance Studio, Balfour-Hood Center

2:00pm- 3:00pm

SYNERGY

The Wheaton College Dance Company presents movements from its spring production under the direction of artistic director Christianna Kavaloski.

Current members:

Lesley Backus '09 Captain
Elise Barrar '10 Captain
Kayla Rack '10
Erin Biles '11
Sarah Griffin '11
Marlowe Miller '11
Dalia Sapoznikow '11
Becca Seferian '11
Tanya Aritao '12
Natasha Holm '12
Kristen Stevens '12
Liz Mullen '12
Amy O'Neil '12
Laura Peters '10 (Abroad)
Julie Forrest '10 (Abroad)

For tickets and reservations to the full performance, featuring new works by alumni, students, and professional choreographers, with guest artists Trybe, Sole, and soloists from the American Academy of Dance in Mansfield, MA, please call 508-286-3575, or email boxoffice@wheatoncollege.edu.

Nominated by Cheryl Mrozowski (Theater Studies and Dance)

❖
Student Recitals

Select student performers demonstrate musical mastery.

Performers

- Katherine Anderson '10, *voice*
Nominated by Joanne Mouradjian (Music)
- Albano Berberi '10, *violin*
Nominated by Sheila Falls-Keohane (Music)
- Sarah Geocaris '11, *voice*
Nominated by Joanne Mouradjian (Music)
- Alexander Grover '09, *voice*
Nominated by Joanne Mouradjian (Music)
- Christopher MacDonald '10, *voice*
Nominated by Joanne Mouradjian (Music)
- Nina Murray '09, *flute*
Nominated by Seta DerHohannesian (Music)
- Emily Tran '11, *piano*
Nominated by Guy Urban (Music)
- Sena Selhep '11 *piano*
Nominated by Leslie Amper (Music)
- Benjamin Simms '12 *viola*
Nominated by Ilana Ringwald (Music)
- Ben Spalter '10 *trumpet*
Nominated by Earl Raney (Music)
- Jordan Trundy '10 *voice*
Nominated by Joanne Mouradjian (Music)
- Scott Wade '11 *piano*
Nominated by Guy Urban (Music)
- Eden Piacitelli '10 and April Greene-Colozzi '09, *cello duet*
Nominated by Zarina Irkaeva (Music)
- String Quartet:
Megan Winslow, *violin*, Ritwik Bhattacharya, *violin*, Benjamin Simms, *viola*, Elizabeth Gadilauska, *cello*
Nominated by Sheila Falls-Keohane (Music)
- Chamber Singers conducted by Alexander Grover '09
Nominated by Tim Harbold (Music)

Art | Beard Gallery/ Weil Gallery, Watson Fine Arts

12:30pm- 4:30pm



Framed: Senior Studio Art Majors Exhibition

Painting, printmaking, graphic design, drawing, sculpture, photography, textile and jewelry design, installation art, and video are typically included in this annual show, which is advised this year by Professor of Art Tim Cunard.

Artists

Tracey Babin '09

Sarah Ball '09

Andrea Bravo '09

Elizabeth Cogburn '09

Ross Culliton '09

Baily Edwards '09

Elyse Fortes '09

Paloma Gerber '09

Lena Isenberg '09

Galen Kerrick '09

George Kunardt '09

Jessica Landau '09

Kendra Lawrence '09

Ban Marlowe '09

Evan Morse '09

Ashley Pillsbury '09

Mel Scalzi '09

Adam Thime '09

Kaylie Thompson '09

Simone Weisz '09

Briana White '09

Nominated by Tim Cunard (Art)