

The University of Notre Dame  
Department of Anthropology  
Welcomes you to our Ninth Annual

# Undergraduate Research Exposition



April 26th, 2012  
4:00-6:30pm  
Sixth Floor, Flanner Hall



## **Introduction**

**Ninth Annual  
University of Notre Dame  
Department of Anthropology  
Undergraduate Research Exposition  
April 26th, 2012**

As a department our commitment to collaborative learning and “hands-on” engagement results in the annual production of innovative research projects by students in the classroom, the laboratory, and the field. This poster presentation and multi-media reception highlights the original research work of our undergraduate students and emphasizes the diverse and rich academic environment at the University of Notre Dame.

We are pleased that you have joined us to recognize and celebrate our students’ achievements in creating and disseminating knowledge. Thank you for attending this event.

## Senior Thesis Oral Presentations

625 Flanner Hall

**Sarah Kimball** 5:00pm-5:10pm

*An Gaeltacht i Meiriceá: The Irish Language in an American City*

**Melissa Wrapp** 5:10pm-5:20pm

*Left Empty: Subjective Morality and Squatting in London*

**Hanna O'Brien** 5:20pm-5:30pm

*Quality of Life for the Sick and Dying: Perspectives of Health Disparities, Challenges in Ugandan Palliative Care and its Relation to Disease-Modifying Services*

**Elise Alonzi** 5:30pm-5:40pm

*Dietary Variation on the Edge of History: Human Stable Isotopes and Maize Consumption at Protohistoric Caborn-Welborn Villages and the Angel Site in Southern Indiana*

**Shelly Birch** 5:40pm-5:50pm

*Investigating Women's Reproductive Rights and Physicians' Professional Environments in a Mexican Public Hospital*

**Michelle De La Cruz** 5:50pm-6:00pm

*The Evolution of Attractiveness*

**Faculty Host: Dr. Maurizio Albahari**

*An Gaeltacht i Meiriceá: The Irish Language  
in an American City*

**Sarah Kimball**

625 Flanner Hall

5:00pm-5:10pm

The Irish language has been struggling in the Republic of Ireland for the past couple hundred years. Despite this struggle in its mother country, the language continues in lands far from its home. With the use of text sources, ethnographic data, and interviews with speakers, this paper looks at the Irish language community in New York City and its parallels with the community in Ireland. The two language communities, although separated by an ocean, remain connected in their reasons and tactics used for maintaining and promoting the language. The survival of the Irish language in New York is dependent upon the language community in Ireland, as the New York group uses the cultural elements found in the original culture to promote its own. Looking at the historic and current day communities, one can see how a very minor minority language manages to survive in the increasingly global world.

Faculty Mentor: Dr. Susan Blum

*Left Empty: Subjective Morality and Squatting in London*

**Melissa Wrapp**

625 Flanner Hall

5:10pm-5:20pm

It is estimated that upwards of 15,000 individuals squat, or unlawfully occupy properties, in the UK. In London specifically, networks of politicized “conscious squatters” are living in the cracks of capitalism, either because they have fallen into them or out of a conscious effort to creatively reinterpret ambiguities in the British legal system. Although the legacy of squatting in Britain spans centuries, the current conservative-led coalition government has sought to demonize and criminalize the practice. Through conducting ethnographic fieldwork, I investigated the moral and cultural framework that informs squatters’ negotiation of the housing market and this emergent threat. I seek to problematize simplistic (mis)representations of the squat community that have been promulgated by politicians and elements of the popular press by allowing squatters’ own voices to illuminate on the ground realities. Further, I suggest that under threat of criminalization, the strain of austerity measures, and in constant, immediate danger of eviction, conscious squatters’ framing of their political cause has developed currents of consonance that coalesce around a seemingly more docile, yet also more durable, narrative of necessity. Finally, in light of this framing and a nascent campaign of physical resistance, I explore the tension between conscious squatters’ revolutionary aspirations and the quotidian constraints of living in the interstices of the spatial and the social.

Faculty Mentor: Dr. Catherine Bolten

Second Reader: Dr. Maurizio Albahari

*Quality of Life for the Sick and Dying:  
Perspectives of Health Disparities,  
Challenges in Ugandan Palliative Care and  
its Relation to Disease-Modifying Services*

**Hanna O'Brien**

625 Flanner Hall

5:20pm-5:30pm

Palliative care in Uganda has reached great heights in providing care to patients with life-threatening illnesses by serving as a “gate-keeper” for medical services and health support and promotion. Though value resides in relieving pain for the patients in extremis as well as addressing illnesses holistically, palliative care in Uganda is problematic in many ways: (1) conflicted history of Western biomedicine in sub-Saharan Africa and Uganda; (2) shortage of resources; (3) dissonance between pain relief and disease modification; and (4) stigmatization of diseases. This project examines these problems in Ugandan palliative care as they relate to cancer and HIV/AIDs.

Specifically, this research investigates the question of prioritization and focus on HIV/AIDs-related palliative care which dictates that cancer is not as important as HIV/AIDs. To explore this question in diverse contexts of a problematic palliative care system, critical local perspectives with respect to HIV/AIDs-related and cancer-related palliative care are collected. Through semi-structured interviews and participant-observation in seven facilities of central and eastern regions of Uganda, defining the broader institution of palliative care as well as the dominant discourses of patients and their providers reveal: (1) relationships of palliative care with disease-modifying services; (2) challenges faced by health care workers and patients; and, (3) medical knowledge and priorities. The collected narratives

illuminate the local logistics which influence the nature and impact of this medical disparity between cancer-related and HIV/AIDs-related palliative care. Ultimately, this study elucidates the mechanisms behind the contextual complexity of medical disparities in a resource-limited post-colonial country situated in a palliative care movement.

Faculty Mentors: Dr. Rahul Oka and Dr. Vania Smith-Oka

Funding: Kellogg Institute for International Studies,  
Kroc Institute for International Peace Studies,  
Center for Undergraduate Scholarly Engagement, and  
Institute for Scholarship in the Liberal Arts

*Dietary Variation on the Edge of History:  
Human Stable Isotopes and Maize  
Consumptions at Protohistoric Caborn-  
Welborn Villages and the Angel Site in  
Southern Indiana*

**Elise Alonzi**

625 Flanner Hall

5:30pm-5:40pm

The Caborn-Welborn phase was a protohistoric culture in southwestern Indiana composed of large villages, small villages, hamlets and farmsteads. In contrast, the neighboring Angel Site, which collapsed around A.D. 1400, was a heavily maize-dependent Middle Mississippian civic-ceremonial center. Comparisons between these two phases are used to determine the possibility of migration from Angel into the Caborn-Welborn sites during this transitional period. Using stable carbon-isotope ratios from human burials at the large village of Hovey Lake and the small village of Mann, inter-community and inter-individual dietary variations are compared to the patterns of dietary variation investigated at the Angel Site.

Faculty Mentor: Dr. Mark Schurr

Funding: UROP provided travel expenses

*Investigating Women's Reproductive Rights  
and Physicians' Professional Environments  
in a Mexican Public Hospital*

**Shelly Birch**

625 Flanner Hall

5:40pm-5:50pm

Women in marginalized populations are particularly vulnerable to issues of structural violence, which is clearly visible in health care delivery models that lead to unfavorable medical outcomes for these women. Medical outcomes have been shown to be directly related to patient satisfaction, in which the physician-patient relationship plays a vital role. This paper sought to understand how tangible stresses on the lives of physicians affect the relationship they had with their patients, and the consequent medical outcomes, during the birthing process of marginalized women in public hospitals in Puebla, Mexico. The study was carried out over a period of two and a half months using ethnographic methods. It was found that tangible emotional and physical stressors had a negative effect on the physician-patient relationship, adversely affecting the patient satisfaction with the medical experience. Findings elucidate a more global understanding of physician stress affecting the relationship with their patient, and an understanding of ways to increase socially just policies in the Mexican healthcare system.

Faculty Mentor: Dr. Vania Smith-Oka

Funding: The Marotta Family Grant through the UROP Program in the ISLA office

## *The Evolution of Attractiveness*

**Michelle De La Cruz**

625 Flanner Hall

5:50pm-6:00pm

The field of evolutionary psychology studies the universal human standards across cultures and environments that give rise to variations in a particular behavior. The evolution of attractiveness a field of study within evolutionary psychology that deals with human physical attractiveness and assortative mating patterns. This paper will review first some of the classic markers of physical attractiveness across cultures then delve into the biological and cultural bases for these factors. Using a modification of the original Darwinian theoretical basis, the field of evolutionary attractiveness is moving towards a more integrated and holistic view of physical beauty. In order to fully grasp the multifaceted concept of human attractiveness a critique of the field of evolutionary attractiveness must be made so as to test the validity and scope of these claims. Future areas for study in this field include the integration of multiple attractive markers, nonphysical attractive traits, and homosexuality.

Faculty Mentor: Dr. Susan Sheridan

## Poster Presenters

Catherine Ahern

Elise Alonzi

Kelly Colas

Samuel Costanzo

Kaitlyn Davis

Grace Deardurff, Clayton Smith, and Dr. Vania  
Smith-Oka

Sarah Kimball

Holden Lombard

Nicole Madrilejo

Caitlin Monesmith

Mac Kenzie Nunez, Lesley Gregoricka, Jaime  
Ullinger, Alicia Cooper,

and Dr. Susan Guise Sheridan

Charlie Otterbeck

Andrew Steier

Andrew Webster

*Women and Economy: Analyzing the Roles of Women in Irish-American Communities during the Late 19<sup>th</sup> and Early 20<sup>th</sup> Centuries*

**By: Catherine Ahern**

This paper describes the role of women within the local economy of the Irish community on Beaver Island, Michigan during the mid- to late 19<sup>th</sup> century and the early 20<sup>th</sup> century. With this project, I will compare women's roles on Beaver Island to that of those in the Irish communities in San Francisco, California, and Butte, Montana. I will illustrate the differences of resources, job availability, and social ideology within the three communities in an effort to understand how they account for the differences in women's roles in each of these Irish American communities. In order to explore this research question, I analyzed various forms of archival information, including censuses data from 1850 to 1930, house plans, extant oral histories, and photographs provided by the Beaver Island Historical Society. I also conducted oral history interviews of descendants of the original Irish inhabitants of Beaver Island. Fishing and farming were two of the main industries of Beaver Island's economy during the 19<sup>th</sup> and 20<sup>th</sup> centuries. Beaver Island women generally managed the household and the children. However, many women found themselves working outside of the home as well in order to support themselves and their families. Some women became proprietors of their own small-businesses on the Island. Butte and San Francisco were primarily mining towns. Like on Beaver Island, Butte women worked in and out of the home out of necessity, often taking in boarders who worked in the mines. In contrast, San Francisco had a much faster rate of development and had more resources at its disposal than did Beaver Island or Butte. The data suggests that the relative isolation and close-knit community of Beaver Island allowed female inhabitants to be less burdened by the popular ideologies that permeated American mid-

die-class culture than Irish women living in Butte or San Francisco.

Faculty Mentor: Dr. Deb Rotman

Funding: UROP award to conduct research on Beaver Island last summer

*Dietary Variation on the Edge of History:  
Human Stable Isotopes and Maize  
Consumptions at Protohistoric Caborn-  
Welborn Villages and the Angel Site in  
Southern Indiana*

**By: Elise Alonzi**

The Caborn-Welborn phase was a protohistoric culture in southwestern Indiana composed of large villages, small villages, hamlets and farmsteads. In contrast, the neighboring Angel Site, which collapsed around A.D. 1400, was a heavily maize-dependent Middle Mississippian civic-ceremonial center. Comparisons between these two phases are used to determine the possibility of migration from Angel into the Caborn-Welborn sites during this transitional period. Using stable carbon-isotope ratios from human burials at the large village of Hovey Lake and the small village of Mann, inter-community and inter-individual dietary variations are compared to the patterns of dietary variation investigated at the Angel Site.

Faculty Mentor: Dr. Mark Schurr

Funding: UROP provided travel expenses

*Empowerment and Education: Birth Experience for Young Mothers at a Public Mexican Hospital*

**By: Kelly Colas**

Teenage pregnancy remains at the forefront of public health issues in Mexican society. Particularly affected by teen pregnancy are women of lower income who seek services at free public hospitals. While studies have demonstrated detrimental relationships between teen pregnancy and effects such as decreased rates of breastfeeding, impaired infant cognitive development, lower standardized test scores, higher rates of obesity, and increased probability for the child to have a teenage pregnancy, little research has been performed to study the actual experience of birth for these young mothers. This work focuses on the quality of that experience by examining social factors contributing to a disillusioning, voiceless birth experience, especially for young mothers. This study was conducted with a total of 29 low-income women aged 18-23 and seven health-care professionals. My findings reveal that lack of sex education in the family, internalized patient stereotypes by physicians, an overcrowded public health system, and gender roles in Mexico all result in a disenfranchising birth experience for young mothers. An amalgamation of these factors lead to the product oriented, assembly line model of birth, which leads to women being void of a voice and lack of control of their bodies in a medical setting. Applications of this study include diminishing the gap between physician and patient perspectives during birth, leading to a more empowering and humanizing experience for women.

Faculty Mentor: Dr. Vania Smith-Oka

Funding: Rogers Grant

*Men in the Maghreb: Masculinity and  
Cultural Change in Fes, Morocco*

**By: Samuel Costanzo**

Morocco has experienced unique social and political trajectories during the national February 20th Movement as part of the larger “Arab Spring.” The past year has been marked politically by elections (constitutional referendums and parliamentary) that seem to follow from these larger currents of social and economic change. Scholarship on such issues frequently focuses political Islam, macro-economic systems, women’s rights, and youth culture. Anthropological research suggests that young Moroccan men and women now experience a liminal stage of cultural and sexual development, in which the economy prohibits young men from being fully capable of filling ideal masculine roles (i.e. finding secure employment and a marriageable wife to begin a family). Such economic difficulty, in addition to newer legislation enumerating the rights of women, is perceived by most men as a threat to the prevailing gender hierarchy. The current project complements this research with a reflexive and engaged study of masculinity that lends itself to understanding male subjectivities on a micro-level scale of analysis. Ethnographic research conducted primarily in Fes and other parts of Morocco reveals that younger, university-educated, middle-class men selectively embrace aspects of what they consider to be “Western” cultural values. However, many men still believe in traditional cultural notions of gender and power, grounded largely in essentialist notions of identity and informed by strong religious beliefs. In my ethnography, I use grounded narrative to document instances of discord, understanding, and intercultural experience that lend themselves to a highly-situated understanding of the lives of these men as historically mediated by the broader changes occurring in the Moroccan state and the North African/Middle Eastern culture area.

Faculty Mentors: Dr. Agustin Fuentes  
Dr. Cynthia Mahmood

Funding: UROP, Institute for Scholarship in the Liberal Arts, SLA, and Center for the Study of Languages and Cultures

*Identity and the Beaver Island Lumber  
Company*

**By: Kaitlyn Davis**

This project explored the effect of the Beaver Island Lumber Company (1903-1915) on the environment and identity of Beaver Island, MI. Oral histories, historical documents, and census records were used to note the Company's effect on islanders' identities and the identities and perceptions of the Native Americans who visited the island. The Company affected identity by lessening Irish homogeneity and reinforcing the idea of identity as a resourceful "islander" who does various jobs to survive. This project goes beyond the economic impact to the impact on people's sense of self to give islanders a holistic understanding of the BILC's effect on their island.

Faculty Mentor: Deb Rotman

Funding: UROP Research and Materials Grant

*Cultural Perceptions of the Symptoms and  
Treatments of Espanto  
Analysis of an Illness Found in Indigenous  
Veracruz, Mexico*

**By: Grace Deardurff, Clayton Smith, and Dr. Vania  
Smith-Oka**

*Espanto*, or *susto*, literally translates to “fright.” In many indigenous communities across Mexico, this term refers to one of the most widespread illnesses that has both physical and psychological symptoms. This poster investigates the cultural perceptions of this illness and the variety of treatment methods used in an indigenous village in the state of Veracruz. In this context, *espanto*, while a culture-bound syndrome, has tangible treatments to restore the well-being of the individual. Our data shows that among the people of this village sweet and herbal drinks, combined with a physical expression of expulsion of this fear, was the most common treatment for this illness. Whether in traditional indigenous communities or Westernized medical systems, we find the process of expressing symptoms, providing a diagnosis, and offering treatment to be a cross-cultural similarity.

Faculty Mentor: Dr. Vania Smith-Oka

*When Anasazi Meets Mogollon: Cultural  
Integration in Late Pueblo III Pottery*

**By: Sarah Kimball**

While the Snite Museum of Art has numerous artifacts, one bowl from the Southwest of the United States had little to no research done on its history prior to last year. This, of course, prompted the question, who made it? The 'who' does not simply encompass a people but also a time when and a place where the creation of this bowl was possible. Through careful research from a variety of texts and analysis of the design of the bowl itself, the piece proves to be the product of two large cultural groups, the Anasazi and the Mogollon, and dates to Late Pueblo III, a time of great change in Southwestern societies. The bowl results from an integration of two specific styles of the groups, and it relates the story of a larger cultural fusion. Through the medium of this bowl, we can find a tangible remnant of the cultural reordering during this time period.

Faculty Mentor: Dr. Joanne Mack

## *Maternal Origins Jamaicans Maroons*

**By: Holden Lombard**

The Accompong Maroons of western Jamaica have experienced a history marked with resistance, war, and geographic isolation. However, as a result of these historical events, there is some discrepancy regarding the ancestries of this community's first members. According to Maroon oral history, they are the descendants of Jamaica's indigenous population and escaped enslaved Africans. Other historians only acknowledge African ancestry as formative in this community.

To address the question of the biogeographic origins of Accompong Maroons, the maternal genetic ancestries of community members were examined. Fifty-one individuals with established genealogical ties to the Accompong Maroon community volunteered DNA that was genotyped for mitochondrial haplogroups. Each DNA sample was first screened at the 3592 HpaI restriction site, which is indicative of the most common mitochondrial haplogroup in Sub-Saharan Africa, macrohaplogroup L. If a sample did not belong to macrohaplogroup L, additional restriction sites were tested to identify the haplogroup. 80% of the samples were found to belong to haplogroups L1 and L2 while the remaining 20% belonged to L3 and other non-African mitochondrial haplogroups. Though additional samples and testing are needed, based on this preliminary study it appears that indigenous females either did not make a significant contribution to the contemporary Accompong community or that the resolution of mitochondrial DNA is not high enough to adequately detect possible ancestry. The results of this study provide a glimpse into the complex population history of the Accompong Maroons with a specific focus on the biogeographical ancestry of this community.

This project was funded with support from the Undergraduate Research Opportunity Program and the Balfour Hesburgh Scholars Program in conjunction with the Center for Undergraduate Scholarly Engagement at the University of Notre Dame. Additional support was received from an Annual Pilot Grant for Social Science Research from the Institute of Scholarship and Learning, in the College of Arts and Letters at the University of Notre Dame.

Faculty Mentor: Dr. Jada Benn-Torres

Funding: ISLA, CUSE, Balfour

## *Genetic origins of a rural Jamaican Maroon community*

**By: Nicole Madrilejo**

The maternal genetic ancestry of the Maroons of Accompong was examined in order to illuminate this community's ancestral origins. Some historical accounts note that the Maroons of Accompong are descendents of the indigenous people of Jamaica and escaped enslaved Africans that built their own semi-isolated communities to escape the abuses associated with Spanish colonial *encomiendas* and later English plantations. Other sources suggest that nearly all the indigenous people were gone by the time Africans arrived to Jamaica and that Maroons are only descended from African peoples.

Mitochondrial sequence data from hypervariable region I (mtHVI) was studied to determine the genetic origins of the maternal lineage of the study participants. DNA was collected from 53 Accompong Maroons and stored on FTA cards. Each sample was amplified and then sequenced at the mtHVI region. The DNA sequence was then queried using HaploGrep to learn of the mitochondrial haplogroup. Preliminary analysis of ten sequences demonstrates that the majority of sequences belong to African haplogroups, L1 and L2, while a small number belong to haplogroup H which is most common in Europe. Though no native ancestry was present among the study participants, this study indicates that the maternal origins of Accompong Maroon may be more complex than historical sources suggest.

Faculty Mentor: Dr. Jada Benn-Torres

Funding: ISLA

*In Lieu of Flowers, Status: Cemetery Placement as Evidence of Social Mobility*

**By: Caitlin Monesmith**

Undertaken during a semester abroad in London, this project is an attempt to detail the social conventions visibly present in London's Victorian cemeteries and understand how social factors such as gender and social class affected graveyard placement.

Death is a biological certainty, and cultural reactions to and the rituals surrounding it say much about the machinations and beliefs of any culture. No part of a funeral ritual is insignificant, including the physical evidence of the rites themselves, and a great deal of information can be garnered from studying the placement and demarcation of burial sites. Furthermore, these rites and practices are so deeply entrenched in a culture that they change very slowly- unless an overarching societal meme provides an incentive to encourage a swift change. This is the case of the Victorian British burial ground revolution that began to occur in the late 1840s. This project uses evidence gathered at Highgate, Kensal Green, and Nunhead Cemeteries to elaborate on the changing standards for mortuary structure and the societal values reflected in these changes. In addition, it discusses the effects of legislature regarding public perceptions of death and how commonly-held beliefs became validated under the law and what this meant for those living on the edges of proper Victorian society, notably the poor and unmarried women. In order to do this, the theoretical impact of death as it relates to honor and social status is discussed and contextualized within the cultural bounds of Victorian England and then applied to modern standards to create a full picture of the impact of these social changes.

Faculty Mentor: Dr. Patrick Gaffney

*Long in the tooth: tracing migration through stable isotopes in dental enamel from Byzantine St. Stephen's*

**By: MacKenzie Nunez, Lesley Gregoricka, Jaime Ullinger, Alicia Cooper, and Susan Guise Sheridan**

Stable isotope analysis of dental enamel is useful in investigating the geographic origins and migration patterns of ancient human groups. Both strontium ( $^{87}\text{Sr}/^{86}\text{Sr}$ ) (n=22) and oxygen ( $\delta^{18}\text{O}$ ) (n=15) isotope analyses were performed on samples from St. Stephen's monastery (5<sup>th</sup>-7<sup>th</sup> centuries AD), the largest monastic complex in Byzantine Jerusalem for approximately 100 years. Primary sources provide information on the identities of those who embarked on these journeys, indicating that many originated to the north and east of Palestine. Thus, it was expected that some of those interred at St. Stephen's were non-locals. This hypothesis was tested by evaluating local  $^{87}\text{Sr}/^{86}\text{Sr}$  bioavailability,  $\delta^{18}\text{O}$  values of regional precipitation, and the biogeochemical composition of enamel from the monks themselves.

$^{87}\text{Sr}/^{86}\text{Sr}$  ratios of archaeological fauna revealed a mean of  $0.70814 \pm 0.00010$  ( $2\sigma$ ). Human  $^{87}\text{Sr}/^{86}\text{Sr}$  values exhibit an average of  $0.70843 \pm 0.00069$  ( $1\sigma$ ) and are highly variable, ranging from 0.70763 to 0.71045. At least 50% of these individuals fall outside the locally defined range, indicating a considerable portion of those interred at the monastery were immigrants to Jerusalem. Human  $\delta^{18}\text{O}$  (n=15) produced a range of -7.9 to -1.8‰ with a mean  $\delta^{18}\text{O}_{\text{dw}}$  of  $-4.6 \pm 1.9\text{‰}$  ( $1\sigma$ ). Only 40% of these individuals fall within the expected local range (-5.9 to -4.0). These isotopic data confirm the geographic diversity of childhood residence among individuals and

validate claims made in the textual record that pilgrims not only traveled to these monasteries from some distance, but that they also stayed. This also confirms St. Stephen's importance as an early Christian center.

Faculty Mentor: Dr. Susan Guise Sheridan

Funding: UROP Senior Thesis Grant (award \$2,250.00) and NSF-REU (SES# 1005158) Summer Research Program in Biocultural Anthropology at the University of Notre Dame

*The Pipe is Wakan: A Study of the Diplomatic Significance of a Calumet Pipe in the Snite's Collection*

**By: Charlie Otterbeck**

Nothing was more sacred to the Siouan people than the pipe or calumet. Their most sanctified cultural artifact, the sacred pipe was present in all major religious and diplomatic ceremonies or councils. The pipe's importance to diplomacy cannot be overstated. This particular pipe, accession number 1975.040.001 in the Snite collection, has figured prominently in all major Sioux treaties since 1825, including the Council of the Black Hills treaty that occurred after the Battle of Little Bighorn. The pipe's historical consequence makes it all the more significant that it was given to a newborn White child in a naming ceremony. Yet as a sacred symbol of our common humanity, the pipe always greatly facilitated inter-tribal trade and political interaction. Thus, its presentation to the child of the superintendant of the Rosebud Reservation is consistent with its significance to the diplomatic relationships between two nations: the United States and the Lakota.

Faculty Mentor: Dr. Joanne Mack

*Investigating Paint Recipes of Mesa Verde  
Black-on-White Bowls through PIXE Analysis*

**By: Andrew Steier**

Particle Induced X-Ray Emission (PIXE) is used to analyze the paints and slips on 45 Mesa Verde black-on-white bowls (A.D. 1150-1300) from Aztec Ruins National Monument, New Mexico. Methodologically, the importance of taking multiple measurements on each sample is demonstrated by the substantial variation present in the measured chemical compositions of individual sherds. Differences in chemical compositions among the 45 sherds were detected. The most prominent distinction among the samples were differences in Sulfur (S) and Chlorine (Cl) concentrations. Other distinctions could also be made due to varying amounts of heavy metal elements in the paints. A small number of beeweed plants, traditionally believed to be a major source material for ancestral Puebloan paint, was also analyzed and compared to the paint composition of the bowls. One beeweed sample contained a lower Sulfur and higher Chlorine concentration than the other beeweed samples, possibly indicating a connection with the group of sherds with similar attributes. Through this analysis, I show that a variety of paint recipes were used at Aztec during the Pueblo III period and offer guidelines for future implementation of PIXE in archaeological studies.

Faculty Mentor: Dr. Donna Glowacki

Dr. Edward Stech

*Slicing through Our Past: Knives and Other  
Flatware at the Collier Lodge Site*

**By: Andrew Webster**

The Collier Lodge in Northwest Indiana served many functions in its diverse history, including a restaurant and inn near the private hunting grounds of the famed Kankakee Marsh. Among the material culture there are many knives and other types of flatware. Through stylistic analysis and comparison, as well as research of historical flatware available through publications and collections, this poster seeks to use the flatware of Collier Lodge to shed new light on the importance, origins, and use of flatware in a local and regional context, providing new insight into nineteenth century life in the rural Midwestern United States.

Faculty Mentor: Dr. Mark Schurr

Funding: UROP Grant for Conference Travel



**Thank You!**

The Department of Anthropology  
Thanks You for Supporting Our  
Students.