Crime Scene Investigations (CSI) Comes to Anthropology Laboratories

Two Department of Anthropology research laboratories provide important forensic analytical information. Dr. John Jones’ palynology laboratory is actively using pollen identification to identify the location of crimes and to assess the history of illegally transported antiquities. Dr. Brian Kemp’s newly built DNA laboratory not only explores ancient human DNA, but is also effective for providing solutions to problems related to missing persons, unknown victims, war dead, and mass fatality incidents. Both of these labs provide important outreach and extension services to our community, state, and nation in addition to training students and producing world class research.

Forensics in Pollen Lab
Palynology is an important tool in forensic investigation, and in the past we have aided in identifying the location where crimes have been committed, the source of illegally imported goods, and the source of prehistoric artifacts seized from an antiquities dealer. Recently, the palynology laboratory at WSU has been very active, and a number of forensic projects have been investigated.

For the PBS production History Detectives, we have been looking into the source of beeswax found on the northern coast of Oregon. This wax, spilled cargo from a late 17th or early 18th century shipwreck near Tillamook, was collected by Native Americans and was widely traded throughout the region. Wax blocks and fragments weighing as much as 100 pounds continue to be found along the beach today, as they are periodically liberated from the sands. The nature of the ship, however, remains a mystery, although it is presumed that it represents a trading vessel plying the waters between the Philippines and Acapulco. By analyzing the preserved pollen in the beeswax, we hope to be able to pinpoint the location of production of this wax, thereby shedding some light into the source of this fascinating wreck.

Another significant case involves the smuggling of allegedly illegally-obtained artifacts into the United States. The relic dealer maintains the artifacts were legally collected on private property in the United States, although preliminary evidence argued that this was not the case. Northern Mexico

Continued on back page
Department Welcomes New Faculty

By Stacy Rasmus

Where I come from research can be a matter of life and death. I have worked as both a mental health clinician and a researcher in Native communities, and have returned each time to anthropology to get closer to the fundamental question of what drives certain types of human behavior. As a Native anthropologist (Kaska/Coast Salish) working with Native peoples, I have had to negotiate complex issues related to ethics, identity, and advocacy. I have been asked in my fieldwork just what kind of Indian I am. I have had to struggle with the issue of just how a Native anthropologist does not "go Native."

My research program is based on addressing the widening gap in mental health disparities among aboriginal people worldwide. I investigate aboriginal substance use, suicide, and mental health with a focus on youth cultures and adolescence and have worked on several projects funded by the National Institutes of Health. I have worked on a participatory action research project exploring sobriety among Alaska Natives in rural communities. I have worked as a mental health clinician and researcher on projects related to suicide prevention, substance abuse, and the cultural adaptation of evidence-based practices among Yup'ik Eskimo youth in Southwest Alaska and I was the project director of a two-year study of children's mental health and youth culture in two Athabascan villages in the Interior of Alaska that became the basis of my dissertation research. I received my doctorate from the University of Alaska Fairbanks in 2008. Most currently I have been contracted by the Lummi Nation, a Coast Salish aboriginal group located in Bellingham, Washington, to be the lead researcher for a multi-year children's mental health initiative. This initiative is funded through the Substance Abuse and Mental Health Service Administration (SAMHSA) to promote the concept of creating "healing lineages" in the tribal community. The research aims of this six-year project are to document the existing health and mental health programs and services provided on the reservation to tribal members and to explore the relationship of culture to health and mental health of children and families on the reservation.

Recent Publications:

Rasmus, S.M., and C. Koverola
Forthcoming, March 2009 Those that Got on the Edge: Overcoming Obstacles to Mental Health in Alaska Native Communities. Transcultural Psychiatry.

Mohatt, G.V., S.M. Rasmus, L. Thomas, J. Allen, K. Hazel, G.A. Marlatt, The People Awakening Team
Recent Faculty Publications, Grants, and Appointments

Grants

Tim Kohler
Tim Kohler is the senior principal investigator for a $1.5 million grant from the National Science Foundation that will fund empirical and model-based research into the societies of the period A.D. 600-1500 in southwestern Colorado and the northern Rio Grande of New Mexico. This research also involves several current and former graduate students in Anthropology at WSU:

- **Brian Kemp**, assistant professor in anthropology and the School of Biological Sciences; Crow Canyon Archaeological Center in Cortez, Colorado; University of Notre Dame; University of Windsor, Ontario; Mesa Verde National Park; and Bandelier National Monument.

Faculty Book Publications

**William Andrefsky Jr.**

*Lithic Technology: Measures of Production, Use, and Curation*

The life history of stone tools is intimately linked to tool production, use, and maintenance. These are important processes in the organization of lithic technology, or the manner in which lithic technology is embedded within human organizational strategies of land use and subsistence practices. This volume brings together essays that measure the life history of stone tools relative to retouch values, raw material constraints, and evolutionary processes. Collectively, they explore the association of technological organization with facets of tool form such as reduction sequences, tool production effort, artifact curation processes, and retouch measurement. Data sets cover a broad geographic and temporal span, including examples from France during the Paleolithic era, the Near East during the Neolithic era, and other regions such as Mongolia, Australia, and Italy. North American examples are derived from Paleoindian times to historic period aboriginal populations throughout the United States and Canada.

**John Bodley**

John H. Bodley completed new editions of two of his books this year: *Victims of Progress and Anthropology and Contemporary Human Problems*. The first editions of these appeared in 1975 and 1976 respectively, and both are now published by Altamira Press.

Barry S. Hewlett

*Ebola, Culture and Politics: The Anthropology of an Emerging Disease*

In this case study, readers embark on an improbable journey through the heart of Africa to discover how indigenous people cope with the rapid-killing Ebola virus. The Hewletts are the first anthropologists ever invited by the World Health Organization to join a medical intervention team and assist in efforts to control an Ebola outbreak. Their account addresses political, structural, psychological, and cultural factors, along with conventional intervention protocols that are problematic for achieving medical objectives. They find obvious historical and cultural answers to otherwise-puzzling questions about why village people often flee, refuse to cooperate, and sometimes physically attack members of intervention teams. Perhaps surprisingly, readers will discover how some cultural practices of local people are helpful and should be incorporated into control procedures. The authors shed new light on a continuing debate about the motivation for human behavior by showing how local responses to epidemics are rooted both in culture and in human nature. Well-supported recommendations emerge from a comparative analysis of Central African cases and pandemics worldwide to suggest how the United States and other countries might use anthropologists and the insights of anthropologists to mount more effective public health campaigns, with particular attention to avian flu and bioterrorism.

Appointments

**Andrew Duff**

Andrew Duff became editor of the SAA Archaeological Record for a three-year term about this time last year (two years remaining).

**Colin Grier**

Colin Grier was appointed International Scholar at Kyung-Hee University in Seoul, Korea, an affiliation that will require his time there each summer collaborating in research with Korean archaeologists working on East Asian complex hunter-gatherers.

**William Andrefsky Jr.**

William Andrefsky Jr. was named the Edward R. Meyer Distinguished Professor and continues as board president of the Register of Professional Archaeologists.

Admission to Washington State University is granted without regard to race/ethnicity, color, creed, religion, national origin, gender, sexual orientation, age, marital status, disability, veteran or Vietnam-era veteran status, disability, or use of a service animal.

Washington State University provides access, equal opportunity, and reasonable accommodation in its services, programs, activities, education, and employment for individuals with disabilities. To request disability accommodation, contact the ADA Coordinator, Center for Human Rights, 509-335-8288, at least ten days in advance.

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AGO Notes
The new academic year brings many changes to the department, not the least of which is new students and leadership for the Anthropology Graduate Organization. This year's first-year graduate students have taken AGO by the reigns, and make up most of the officer and committee chair positions. Here are the 2008-09 AGO officers:

President Kyle Bocinsky
Vice President Rigden Glaab
Treasurer Nichole Bettencourt
Secretary Ethan McGaffey
GPSA representatives Whittaker Harpel and Joshua Johnson
Stream representatives to faculty meetings:
Cultural: Jack McNassar
Evolutionary: Chris Kiathipes
Archaeology: Claudette Casile
Representative to the Anthropology Club (undergraduates): Kelly Derr

AGO kicked off the year with a fundraising barbecue, which graduate students from numerous other departments attended. Nendel's Inn graciously donated its patio as a space for this event, and has volunteered its ballroom for future events, including the end-of-the-year banquet and awards ceremony in April.

AGO has always been dedicated to serving the community here at WSU and in Pullman, and this year is no different. On October 11, a group of AGO members participated in a trash pickup along a two-mile stretch of State Highway 27 between Pullman and Palouse; look for our Adopt-a-Highway sign next time you drive out there! Also, a portion of our fundraising barbecue proceeds went to the Pullman Food Bank, which AGO has partnered with to provide further service to the community. There are also plans for educational service with Pullman public schools and an enhanced mentoring relationship between graduate and undergraduate students at WSU.

The annual AGO silent auction will be held in December this year, just in time for your holiday shopping! Be on the lookout for more information as the end of the semester approaches. As always, AGO is looking for donations of items to auction, so if you can donate or know someone who can, please contact the fundraising chair, Nichole, at nicholebettencourt@gmail.com.

Graduate Student News
By Casey Roulette

I traveled to the Central African Republic (CAR) this summer to do research among the Aka foragers. I explored the cultural, ecological, and psychological factors impacting patterns of substance abuse and how these patterns relate to health issues. More specifically, WSU professor Ed Hagen and I examined the recreational use of "ndako" (things you smoke), such as tobacco and "motunga" (a leaf smoked like tobacco). My research focused on the cultural model of ndako, examining patterns of use across age, sex, and foraging camps.

We hope to conduct future research in the CAR exploring hypotheses from costly signaling, human behavioral ecology, and cultural transmission that may explain patterns of ndako and "mbako" (alcohol) use.

Recent Graduates
(Fall 2007-Summer 2008)

2007 Master's of Art Degree
Timothy Barela: Messages in Opposition: An Evolutionary Perspective on Elites' Use of Discourse During War.
Melissa Elkins: Serving Up Ethnic Identity in Chacoan Frontier Communities: The Technology and Distribution of Mogollon and Puebloan Ceramic Wares in the Southern Cibola Region.

2008 Master's of Art Degree
Karry Blake: Life and Times in a Late Formative and Classic Period Swamp Forest in Chipas, Mexico.
Heather Bonander: The Effects of Early Environment on Adult Health and Reproduction.
Jennifer Ferris: Lithic Technological Organization of Site J69E, Espiritu Santo Island, Baja California Sur.

2008 Doctor of Philosophy Degree
Ian Buvit: Geoarchaeological Investigations in the Southwestern Transbaikal Region, Russia.
Neal Endacott: The Zooarchaeology of Lime Hills Cave Paleoenvironmental and Taphonomic Insights.
Xianghong Feng: Economic and Socio-Cultural Impacts of Tourism Development in Fenhuang County, China.
Judson Finley: Rockshelter Formation Processes, Late Quarternary Environmental Change and Hunter-Gatherer Subsistence in the Bighorn Mountains, Wyoming.
Ming-Kuo Wu: The Jataka Tales of the Mogao Caves, China in Anthropological Perspective.

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Tim Kohler: NSF Funds Continuing Research on Pueblo Peoples in their Environment

For the last five years, archaeologist Tim Kohler, assisted by several WSU graduate students including Fumi Arakawa, Sarah Cole, Jason Cowan, David Johnson, and Aaron Wright, plus colleagues from several other institutions, has been studying the interaction of Pueblo peoples and their environments in prehistoric southwestern Colorado. This research, funded by the National Science Foundation’s Biocomplexity Special Competition, has resulted in a much better understanding of the role of climate change in culture change, the timing of human population growth in this part of the Southwest, and the impact of those growing populations on key environmental resources such as deer.

One major result of this research is a new view of the causes of the depopulation of the northern Southwest in the A.D. 1200s. This was the topic of a symposium at the Amerind Foundation in Dragoon, Arizona, in February 2008; the proceedings are now under review for publication. Several WSU faculty members, including archaeologist Andrew Duff and professor emeritus William D. Lipe, also participated in the symposium.

This research, funded by NSF’s Dynamics of Coupled Natural and Human Systems (CNH) program. This new research, which is called the Village Eco-dynamics Project II, will expand the research area to include Mesa Verde National Park in Colorado and a large portion of the northern Rio Grande culture area in New Mexico. Methods for understanding the prehistory and population movements in this larger area will include analysis of mitochondrial DNA from human coprolites, analyzed by molecular anthropologist Brian Kemp. As before, we’ll also be using more traditional methods of survey and new processing of existing site records in these areas to reconstruct human population sizes through time. This round of research will provide research opportunities and training for a new generation of WSU graduate students, including Kyle Bocinsky, Charles Reed, and Kristin Safi.

This is one of ten awards in fall 2008 by NSF’s CNH competition, which is in its second year as a multi-directorate NSF program. Other awards will address topics including the uncertain future of coastal barrier islands, urban areas and their vulnerability to climate change, tree growth and carbon cycling in agricultural areas changing to residential areas, and how best to integrate industrial ecology and ecological engineering.

Rob and Marsha Quinlan Study Modernization vs. Traditional Medicine in Dominica

Drs. Rob and Marsha Quinlan had a busy year at WSU. Rob recently published a series of cross-cultural studies focusing on the evolutionary ecology of the human family. Marsha published a study of the effects of modernization on knowledge of traditional medicine in rural Dominica. The Quinlans continued their Caribbean ethnographic research and also worked with three WSU graduate students and several undergraduates on their long-term, National Science Foundation-funded study of Caribbean families. You can read about some of the Quinlans’ research at www.wsu.edu/~rquinlan.

In the last two years the Quinlans have also been involved with community development in rural Dominica. In collaboration with the local government in the Commonwealth of Dominica, West Indies and the WSU Caribbean Ethnography Field School, and under the direction of the Quinlans, a kitchen and restroom were constructed for the Village Community Center, which were desperately needed. The field school also cooperatively developed a co-op store, collected field recordings of local “culture music” for cultural preservation (an ongoing project), and developed a summer preschool program cooperatively conducted by villagers and WSU students. The field school also helped to develop a food security program by building and supplying chicken coops.
Recent Publications

William Andrefsky Jr.

Andrefsky Jr., William Andrefsky Jr.

Wilson, Jennifer Keeling, and William Andrefsky Jr.

Quinn, Colin Patrick, William Andrefsky Jr., Ian Kuitj, and Bill Finlayson


Andrefsky Jr., William

Andrefsky Jr., William

Andrefsky Jr., William

Andrefsky Jr., William

Andrew Duff

Cameron, Catherine M., and Andrew I. Duff

Huckleberry, Gary, and Andrew Duff

Melissa Goodman-Elgar

Goodman-Elgar, M.

Goodman-Elgar, M.

Colin Grier

Corr, Linda T., Michael P. Richards, Colin Grier, Alexander Mackie, and Richard P. Evershed

Barry Hewlett

Hewlett, Barry S.

Hewlett, Bonnie L., and Barry S. Hewlett.

Hewlett, Barry S.
2008 Reviewer and co-editor of behavioral research sections of Filoviruses: A Compendium of 40 Years of Epidemiological, Clinical, and Laboratory Studies. J.H Kuhn. Springer.

John G. Jones

Reinhard, K.J., S.M. Chaves, J.G. Jones, and A.M. Iniguez

Jones, John G.


Pohl, Mary E.D., Dolores R. Piperno, Kevin O. Pope, and John G. Jones

Brian Kemp

De la Cruz, I., A. Gonzalez-Oliver, B.M. Kemp, J.A. Román, D.G. Smith, and A. Torre-Blanco

Cylubski, J.S., A.D. McMillan, R.S. Malhi, B.M. Kemp, H. Harry, and S. Cousins


Kemp, B.M., C. Monroe, and D.G. Smith

Tim Kohler

Kohler, Timothy A., Matt Pier Clade, Jean-Pierre Bouquet-Appel, and Brian M. Kemp

Kohler, Timothy A., and Matt P. Grove

Kohler, Timothy A.

Kohler, Timothy A., Mark D. Vann, Aaron Wright, and Kristin A. Kuckelman

Jeanette Mageo

Mageo, Jeanette

Mageo, Jeanette

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Forensics...Continued from page 1

is a more likely source, as the artifacts are inconsistent with materials known from west Texas. Based on pollen removed from some of the sandals, cloth, and basketry, a unique suite of pollen types was identified. The juxtaposition of a number of taxons of limited distribution points to a very specific region of Mexico, demonstrating that these goods were obtained and imported illegally into the United States. An independent investigation into the source of the artifacts based on the artifacts themselves points to nearly the exact same region of Mexico as the source.

Ancient DNA Research at WSU

Over the past 20 years, DNA studies have revolutionized the field of anthropology, ranging from insights about the origin of humans to understanding the biological variation that we see in our species today. Recent methodological advances have made possible the study of genetic material contained in ancient remains—"ancient DNA." This has opened up the possibility of directly reconstructing ancient demography, and prehistoric interactions and diet. For example, Dr. Kemp's current research at WSU is addressing the origin of the first farmers in the American Southwest and that of their domestic turkeys.

Working with very old DNA samples is a challenging enterprise and comes with a host of problems that are inherent to the samples themselves. The analysis of DNA extracted from ancient materials is complicated by the presence of contaminating modern DNA, impurities in the soils from which they were unearthed, and the fact that DNA strands accumulate damage with time.

These same problems are encountered in forensic DNA research, which has led to concerns raised by experts in both fields. In this case, methodological advances that address problems in ancient DNA have a direct impact on forensic science. Recently, the Kemp lab acquired a major National Institute of Justice grant to tackle these issues. The end goal of the project is not only to increase success in ancient DNA studies, but also to provide solutions for solving cases involving war dead, compromised samples, skeletal elements, missing persons, unknown victims, and mass fatality incidents.

Funds from the Department of Anthropology, the College of Liberal Arts, and the College of Sciences (where Dr. Kemp holds a joint appointment) allowed for the renovation of the newly established ancient DNA laboratory in College Hall (pictured). This workspace will allow WSU students and visiting scholars to be trained in the cutting-edge techniques used in both forensic and ancient DNA analyses.

Dr. Kemp's previous work has been on 5,000- to 10,000-year-old human remains from British Columbia and Alaska. Recently, he and his collaborators published a report identifying the sex of young children sacrificed to the Aztec god of wind and rain.