Hunter-Gatherer... continued from page 1

females actually contribute more animal protein to the household than males.

With the help of two graduate students, Tracer plans to test his theory among the Au. "I'm really looking forward to questioning some of the dominant notions in anthropology of the gender division of labor," Tracer says. "I think that's really going to make an important contribution." The team will measure both male and female protein contributions to the household as well as correlating family health.

David Tracer speaks with a member of the Au

This once-in-a-lifetime opportunity will allow the students a learning environment that cannot be duplicated in the classroom. "I hope the students gain an appreciation for how different the way of life is, but also how fundamentally human people are when you go around the world," says Tracer. "They're every bit as funny and challenging as any other person that you would meet on the street in Denver."

With the current lack of research in anthropology on female hunting, Tracer believes this study will spark the interest of those in and out of the field. He plans to use the data he gathers to prepare a National Science Foundation grant proposal for 2010. "It's been people's preconceived notions that have hindered the research to some degree," Tracer explains. "But obviously that's changing."

"I'm really looking forward to questioning some of the dominant notions in anthropology of the gender division of labor."

Sharing the Intimacy of Rooms

Mary K. Connelly

Working on an intimate scale, Assistant Professor Mary K. Connelly creates paintings of rich, distinctive hues that invoke perception and memory. The Morris Graves Museum of Art in Eureka, Calif., brings an average of 2,500 community members to the museum to enjoy musical performances and art exhibits. Together, Connelly and the museum will present a solo exhibit of her paintings, *Topophilia*, featuring small views of room interiors conveying a sense of love of place.

"The house is our first universe, a real cosmos in every sense of the word," Connelly explains. "My paintings are a distillation of perception and memory, where color and light convey a world psychologically and spiritually charged."

Topophilia will be on display in this prestigious museum Jan. 14 to March 8, 2009. "Being selected for a solo museum exhibition is a significant milestone," she notes. "The gallery space selected for my work is a perfect fit: The Mezzaine Gallery is small and intimate enough to complement the scale and subject matter of my paintings."

A faculty development grant to provide framing, shipping and lodging assistance has better enabled Connelly to ensure that every detail of the exhibit is in place.

"A museum show is considered the most sought after exposure and, one might say, of a higher caliber than a commercial gallery in any city – even New York," she says.

. . . And there's more!

Here is the full list of faculty development grant awardees:

- **Amir Ameri**: Architecture Pedagogy and Virtual Reality Imaging
- **Sharon Araji**: Listen to Our Voices
- **Leo Breuderle**: Evolution
- **Mary Connelly**: One Person Exhibition at the Morris Graves Museum of Art
- **Brian DeLevie**: The Radio Project
- **Tim Lei**: Development of a Non-Invasive Surface Cancer Screening Apparatus
- **Marjorie Levine-Clark**: Gender, Work and Welfare Liability in England, 1870-1930
- **Sean McGowan**: Health Education and Injury Prevention Strategies for Musicians
- **Steve Medema**: A History of Chicago Price Theory
- **Robert Metcalf**: Hermeneutics and the Critique of Religion
- **Charles Musiba and Tiffany Temeny**: Climate Change and Human Evolution at Laeotoli in Northern Tanzania
- **Paul Musso**: Tonescapes CD Project
- **Jeremy Nemeth**: Lost Space—Security Zones and the Shrinking of Public Space
- **Peter Schneider**: Linking Design, Construction and Research in an Architecture Curriculum
- **Donna Sobel**: Realizing a Conceptual Framework for Cultural Responsiveness in Classroom Practices
- **Thorsten Spehn**: Web-Based Overviews of Theories and Research in International Relations
- **Sherry Taylor**: Parent Involvement—Supporting Connections Across Language and Culture
- **David Tracer**: Woman the Hunter—Protein Procurement and Household Health in a Foraging Society
- **Bryan Wee**: Cross-Cultural Comparisons of Students' Everyday Ideas in Environmental Education
- **Westland, Summers, Townsend, Giullian, Dunlap**: Mentoring Each Other—Learning from Colleagues

Look for more information on these projects this fall in Latitude Online at **http://thunder1.cudenver.edu/CFD/**. Watch for the announcement in Network at **www.ucdnever.edu/**Network!

University of Colorado Denver
Downtown Campus

Center for Faculty Development
Campus Box 192

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Newsletter

latitude

FALL 2008

Challenging Long Held Hunter-Gatherer Beliefs

Deep in the remote lowlands of Papua New Guinea lies an untouched civilization with a reputation for being no more accepting than the malaria-ridden swamps its people inhabit. In 1988, graduate student David Tracer set out to challenge this claim and conduct field research among the Au people of the Anguganak Village.

Twenty years later, Tracer remains the only anthropologist to work among the Au—who have turned out to be a wonderful resource in more ways than one. "They're people I really value as research subjects and as friends," Tracer says. Within this hunter-gatherer society, he is discovering clues to human evolution and once again questioning the popular notion.

Under a grant from the Center for Faculty Development, Tracer will travel to the island of New Guinea on an endeavor to put the experts to the test. A main theory in anthropology maintains that male hunting has served as the central social activity responsible for the majority of human advancements throughout evolution. Through his years of field research with today's hunter-gatherer societies, however, Tracer has developed a contradicting theory—that

continued on page 4

Growing on You

We're growing. We're growing as a center, as a university and as a community . . . a global community. The faculty at the University of Colorado Denver take that growth seriously and embrace the opportunity to be productive, proactive and to boldly question convention in this universal evolution.

In this edition of Latitude, we'll explore this growth. We'll question with David Tracer the hunter-gatherer role among the Au tribe in Papua New Guinea; Sharon Araji will explain the importance of helping the judicial system recognize victims' rights; Jeremy Nemeth will seek the means to maintain security without intimidation. Those are just a few of the stories featured in this edition – important innovations that will help shape the future.

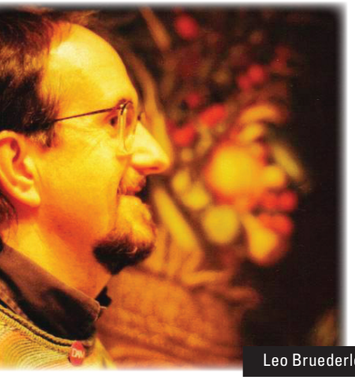
The Center for Faculty Development is evolving as well. In addition to offering faculty the latest online tutorials, blogs and research opportunities through faculty development grants, you can also look forward to live online faculty discussions each week, up-to-the-minute center updates on Twitter and an expanded version of Latitude online, featuring articles, photos and even video exploring the outstanding research and creative activities under way by grant recipients.

Stay tuned! Check out our site at **http://thunder1.cudenver.edu/CFD/** to find out more about – and explore ways to be a part of – this important growth.

Ellen Stevens
Director

Latitude: The University of Colorado Denver Downtown Campus faculty consistently reach for and attain new heights. The expanse of faculty and staff contributions to research and teaching enhancement go beyond the campus, encompassing, influencing and improving the globe. The Center for Faculty Development is a catalyst for inspiring and attaining this elevated level.

Planting the Seed of Discovery



Leo Bruederle

Analyzing the genetic makeup of plant samples from across the world is a rare treat for college students—and nearly unheard of for high school. Leo Bruederle, associate professor and chair of the Department of Biology at UC Denver, is using his own method of peer mentoring in the research laboratory to change this.

With 2,000 species worldwide, and new species being discovered every year, Carex is one of the largest genera of flowering plants in the world. At least six species within the genus Carex exhibit a "bipolar distribution," meaning they can be found in both extreme northern and extreme southern hemispheres. For well over a century, scientists have debated the cause of this unusual biogeographic pattern. Some argue that migratory birds dispersed seeds over these long distances. Others claim geological or climatic events disrupted historical biogeographic patterns.

Bruederle is using molecular biology to put these two hypotheses to the test. With the help of a faculty development grant, he is collecting plant tissue samples from locations across the globe including Alaska, British Columbia, Colorado and Argentina. Using genetic fingerprinting techniques, the scientist will develop genetic markers that he will use to clarify the evolutionary history of the species.

Bruederle is integrating this research with his own pedagogical model of peer mentoring. In what he calls "near-peer mentoring," college students who have had research experience are trained to mentor other students who are novices in the laboratory. Bruederle is developing a new model called "not-so-near-peer mentoring," which extends the opportunity to high school students. Students from the Denver School of Science and Technology will be mentored by experienced undergraduates at UC Denver, who in turn will have undergone training from a team of graduate students and Bruederle.

"I am interested in determining if a mentored research experience can influence attitudes toward science in high school students," Bruederle says.

"Although the practice of peer mentoring has been used extensively in the traditional classroom, its effects have not been studied in the research laboratory," he says. As such, the proposed research contributes to university initiatives to provide unique educational experiences for our students, training them to apply molecular techniques to solve evolutionary questions.

'Listening' Sheds Light on Injustices in Custody Disputes

It's an unpleasant reality that often gets buried in the legal system: victims of domestic violence who leave abusive partners are often again victimized during custody disputes. Now, Sharon K. Araji is bringing this overlooked problem to the forefront.

With the assistance of a faculty development grant, Araji, professor of sociology in the College of Liberal Arts and Sciences, is perfecting an educational video program focusing on contested custody and is developing training materials for organizations that deal with domestic violence.

"As a domestic violence educator, it was disappointing to learn in 2004 that in a large number of cases around the nation, domestic violence abusers were being given sole custody, joint custody or unsupervised visitation," Araji says. "Legal, judicial and social service communities were contributing to these outcomes."

Araji teamed with colleagues at the University of Alaska Anchorage in 2005 to conduct a survey on domestic violence and contested child custody.

"While collecting data it became clear, as a prevention effort, that there was a need to present this information in a format that the public – who does not read professional journals – could access," she says.

The resulting video, Listening to Our Voices, has been well received and is in high demand after being shown to the Pacific Sociological Association Conference in San Francisco, at UC Denver and at a conference in New York.

"Without exception, it has been very positively received. I was contacted by several agency personnel from the state to show the video and conduct workshops in their areas," she says. "However, based on the evaluations, the educational value of the program can be improved through editing and the development of training materials."

The video and training program – scheduled for completion in December 2008 – will benefit university students and academics as well as educate a wider audience that includes police, attorneys, judges, custody evaluators and shelters.

"Listen to Our Voices can serve as a prevention tool as more people become aware of the problem," Araji says. "Such awareness also increases the likelihood that the issue will be defined as a social problem and social solutions will be developed at local, state, national and international levels."

Sharon Araji talks with domestic violence victims in her educational video

Keeping Space with Security Needs

Jeremy Nemeth

Since the terrorist attacks of Sept. 11, 2001, Americans have become accustomed to heightened security measures. In many major U.S. cities, security zones surround high-profile buildings, oftentimes cutting off access to public parks and plazas. Safety is undoubtedly a priority, but as threat levels fall, what were once temporary safety measures have since become permanent barriers—walls that could be endangering the very freedoms they protect.

"We're losing public space," says Jeremy Nemeth, assistant professor at the College of Architecture and Planning. During a 2007 pilot study on security zones in New York City, Nemeth discovered that nearly 30 percent of lower Manhattan had been permanently closed to the public.

Temporary security zones accompanying major events are also gaining ground. Such was the case at the Democratic National Convention (DNC) in Denver this fall. Because a portion of Auraria Campus—a public space—was within the DNC security perimeter, the campus was forced to close for the week.

"Not only are we losing physical space," says Nemeth, "but we're losing the opportunity to be in democratic space and to express dissent." The freedom of expression and the right to petition are essential elements of democracy, but identifying the appropriate site to do so can be confusing when laws vary from city to city, says Nemeth. "Sometimes [protesters] don't really know whether they're crossing a line or not."

Aided by a faculty development grant, Nemeth is extending the research he began in New York to Chicago and San Francisco. Along with three graduate students, he is using GPS locating and mapping devices to measure the physical space of security zones in each city. The team will also assess the community impact of each site according to its level of security.

Instead of nurturing feelings of safety for the public, barricades and fences likely only provoke feelings of threat, Nemeth explains. He proposes that cities camouflage security measures into their infrastructure. The city of New York, for example, turned the entire block around the stock exchange into a pedestrian-only area. "It's a way to balance the need for security with the need to protect civil liberties and also do what every planner wants to do: create a vibrant public space."

Nemeth aims to empower community members through education and involvement in the planning process. Data from the study will enable him to create a community website where individuals can update neighborhood maps interactively and in real time. "I don't want my work to speak to professionals only," he stresses. "This is something we want to let the public know."

Research Could Produce Faster, Noninvasive Method for Identifying Cancer Cells

Tim Lei

Biopsy. It's a word that can strike fear in the strongest among us. Performing a biopsy – the removal and examination of tissue or cells – is the current procedure for determining whether cells are cancerous.

Developing new uses for noninvasive technology to identify human cancer cells may seem like a stretch for an electrical engineer. But that's exactly what Tim Lei has in mind. An assistant professor of electrical engineering, Lei was awarded a 2008-09 UC Denver faculty development grant for his proposal, "Development of a Non-invasive Cancer Screening Apparatus."

Lei's approach describes developing a noninvasive cancer screening and diagnostic tool that can determine whether a tissue structure is cancerous without having to do a biopsy. His plan is to measure the vibrational spectra of tissue through a nonlinear optical technique called 'coherent anti-Stokes Raman spectroscopy' (CARS).

"With this method, spectral differences can be used to distinguish malignant tumors from benign tissues rapidly without tissue removal," explains Lei. "This technique is not limited to detecting a particular type of cancer and can be applied to detect any surface cancer, such as oral carcinoma and melanoma in skin tissues."

Another driving factor in Lei's work is the importance of detecting cancers in the early stages when treatment can slow or even stop further development of cancer cells. Lei points to studies that have shown how the survival rate of patients increased dramatically if external interventions are applied before cancers are metastasized or spread throughout the patient's body. Lei notes that patients often are not prompt in having suspicious lesions, examined especially small ones. He attributes this in part to the costs and discomfort typically associated with biopsies.

"There's a strong need to develop new methods to identify tissue characteristics noninvasively and inexpensively," explains Lei.

To address the matter, Lei plans to build a prototype apparatus to measure the vibrational spectra of healthy and malignant tissue samples. He believes the approach will produce evidence of discernable differences. This is possible because the chemical composition of benign and malignant tissues is significantly different. By identifying the spectral differences the nature of the tissue samples can be distinguished. "Ultimately," Lei says, "the goal is to use this for screening surface cancers rapidly and without tissue extraction."

Collaborators on this project are Arlen Meyers, MD, otolaryngogy and Nick Barry, MD, medicine.