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Cover photographs by Dan Jarvis, PhD student whose research focuses on the mountain pine beetle outbreak in Colorado; see the feature *Going in Depth with Graduate Students, page 6*
This year's annual Wallace W. Atwood lecture series was held on Thursday/Friday October 21 and 22, 2010 when the department welcomed our Atwood Lecturer, Julie Guthman, Associate Professor of Community Studies at the University of California at Santa Cruz. Julie gave two very stimulating and provocative talks about food systems and the obesity “crisis” in the USA. Her Thursday evening lecture, which addressed some of the political-economic limitations on alternative food systems, was given to a packed house in Tilton Hall. After her presentation, and less formally during the reception that followed, Julie fielded many interesting and challenging questions that made it clear that she had provided significant “food for thought” and reflection by the faculty, students, trustees, and community members in attendance. The Thursday evening lecture was followed up by a second talk on Friday afternoon that was also well attended and stimulating. In this talk, Julie discussed the political-ecological dimensions of the obesity “crisis” in the USA today and argued that mainstream policymakers, obesity pundits, and media outlets are overlooking significant biological, political, and industrial factors behind the increasing number of morbidly obese Americans. Prior to and in between these talks Julie held many one-on-one meetings with graduate students and faculty who benefitted greatly from the chance to pose more in-depth questions to Julie about her research and to get feedback on their own research projects.

Thank you to all of you who came out for the events and joined the department in making its annual lecture series such a great success. Special thanks to Katie Shepard, Somer Jones, Brenda Nikas-Hayes and Jean Heffernan for their superb job in handling the arrangements for the two-day event.

The department continues to sponsor and co-sponsor guest lecturers throughout the semester on a variety of topics. Check out the list on our website for upcoming lectures and be sure to join us for anything you find interesting.

-Prof. Jim Murphy
Chair of the Atwood Committee
2009-2010
Each fall semester, Prof. Dianne Rocheleau and her Urban Ecology course take a field trip to the Big Apple where they think and learn in-depth about natural and human social processes in this urban icon. Continued on the next page

Photos courtesy of GISDE MA student Yue Zhang
The class visits sites and talks with people in order to better understand issues related to housing, waste management, urban food systems, urban green space, environmental toxins, and environmental justice in large urban systems. Sites/organizations that the class has visited on multiple trips, including this year, are Sustainable South Bronx, working in this borough and other underserved NYC communities on issues of environment and health, green jobs training, and sustainability; Park Slope Food Co-op, located in Brooklyn with 14,000+ members and focused on sourcing as much of their food as possible from local, organic, humane, and fair trade sources; West Harlem Environmental Action, working in northern Manhattan on environmental health and residents’ equal access to healthy food, affordable transit, and green space; community gardens in the Lower East Side; Central Park; The Bronx River Park; the Green Workers Co-op; the Bronxdale City Houses; and the Movement for Justice in El Barrio, working for housing justice in East Harlem (El Barrio) in Manhattan. This year Dr. Rocheleau, TA Connie Johnston, and the students also visited The High Line Park, a former rail line converted to park space in Manhattan; “Rising Currents” at the Museum of Modern Art, an exhibit showing potential design solutions to deal with climate-change induced rising water levels in NYC; and the Union Square Farmers’ Market. This year the group was very fortunate to have beautiful weather, and the trip was packed with information, memorable scenes of both beautiful parks and sites of waste processing, much walking, and (mostly successful) negotiating of the New York subway system.

-Connie Johnston
PhD student and Urban Ecology TA
Spending a summer, for the past few years Dan Jarvis has been conducting fieldwork in the picturesque Colorado mountains.

What does your research involve?

My research involves three objectives: First to reconstruct the historic frequency and extent of mountain pine beetle outbreaks in the Independence Pass area in Colorado. Secondly to try to determine the long-lasting (i.e. decadal) influences of mountain pine beetle outbreak on fire hazard, lastly to determine the spatial and temporal synchrony of mountain pine beetle outbreaks in Colorado, and how this relates to fire hazard.

How did you become interested in this topic?

I became interested in this topic through association of similar disturbance ecology concerns in Colorado that I began studying in 2004. I spent 4 years in Colorado studying fire and spruce beetle ecology, and when the mountain pine beetle outbreak became such a huge social concern, I decided to investigate the topic.

What is the end goal of your research?

The general goal of my research includes understanding some degree of the historic range of variability of mountain pine beetle outbreaks in Colorado. This will provide context for the current epidemic of mountain pine beetle in the Rockies. This current outbreak is thought to be of unprecedented extent and have serious ramifications for fire hazard, but these assumptions have yet to be verified.

You get to spend a good part of your summer in Colorado; can you explain what you are doing in the field? And what happens when you return to Clark?

Data collection has occurred thus far in Colorado with the assistance of undergraduate assistants. Summer 2009 assistants included: Amanda Lee, Chris Traft, Phillip Hanna. Summer 2010 assistants included: Philip Hanna (now BA/MA student), Carolyn Matthews (now BA/MA student), and Nate Maltais.

We first locate sites to sample using US Forest Service vegetation inventory GIS datasets, satellite imagery, and scouting. A site is an old Lodgepole pine forest with evidence of historic mountain pine beetle outbreaks, which includes the presence of large-diameter dead lodgepole pine on the ground that have specifically patterned beetle galleries and a distinctive blue stain in the wood left by a fungus associated with mountain pine beetles.

At each site, core samples are taken from the dead pine and surrounding large trees that were not killed by the outbreak. The dead trees are cored because there are methods used in the lab that can help to determine when the trees all died. The surrounding living trees are cored because when a large diameter tree dies, the neighboring trees that survive are able to benefit from the sudden increase in resources (solar energy, water, nutrients, etc.). This increase in resources results in a period of increased growth, resulting in visibly larger annual rings.

Later on in the lab, if it is discovered that the dead trees all died around the same time, and the living trees show increases in growth around that same time, then this is evidence of a past mountain pine beetle outbreak. Given that there are no other known causes of widespread Lodgepole pine mortality apart from fire, which is quite obvious, we can be confident that this conclusion is accurate.
Discover Worcester

For fall semester, Professor Deb Martin taught a new first year seminar, Discover Worcester!, a course aimed at introducing new students to the city and urban geography. Clark's location in the heart of urban Worcester provides an ideal opportunity to challenge students to engage, serve and learn about this particular corner of urban America. Through field trips like the one pictured above at Elm Park, the Worcester Art Museum, the American Antiquarian Society, the Worcester Historical Museum, the Main South/Kilby Hammond district, the Canal district and city hall, students get out of the classroom and discover Worcester historically, politically and ecologically. When not off campus, Prof. Martin has students conducting research, examining primary census data and reading broader scholarly reports on US urban development, and hearing from guest lectures like Clark's own Profs. Rogan and Greenwood. Prof. Martin's goal is helping students to make connections between what they are seeing and learning about Worcester and to critically and creatively think about an urban environment. In effect, with a stronger knowledge of Worcester, hopefully students take away a curiosity and commitment to the city in which they study.

NEWS FROM THE B.A./M.A. PROGRAM

As part of the 5th year program in GISscience students Brenna Schwert and Max Wright attended the Forestry Inventory and Analysis Symposium in Knoxville Tennessee to learn from some of the leading experts in forest management as well as present their own research. Brenna presented research on species distribution modeling in Massachusetts using classification tree analysis and Max presented work on the effect of forest fragmentation on Pitch pine communities.
I have just spent two days at a meeting of minds of some of Australia’s top writers, artistic directors and climate scientists, at an event designed to work out how the arts can respond to the threat of climate change. Two months ago I was in New Caledonia in the French Pacific, working with a team of French academics, and witnessing how a rapid expansion of nickel mining was fueling indigenous self-governance. Some mining is run by Kanaks who once fought against French rule in a country still overcoming significant racial disharmony. I’ve also studied environmental management in the Sahel of West Africa for many years and taught about 8,000 students over 17 years at Brunel, the London School of Economics, Oxford, Roskilde, Colorado, and the University of Arizona. Currently I’m an Associate Professor at the University of Melbourne, Australia where I run an interdisciplinary Environmental Masters with over 300 students.

Let me be honest - not all of these activities can be traced back to the decision to become a PhD student at Clark in 1987! But my PhD years in Worcester provide an international passport to employment in the university sector, an enduring fascination with human-environment relationships, and a strong sense of social and environmental justice.

Clark was rather striking to a first-time visitor to the USA in the 1980s, arriving from suburban London. The Main South neighborhood illustrated some of the less appealing elements of American capitalism I had read about as an undergrad. Our modest student stipends encouraged a culture of sharing, mutual support and hard work. The academic work of the Grad School in the Hanson and Turner years when I was in residence, was an antidote to Thatcherism - at times radical, critical, combative, engaged, rigorous, and certainly very international. PhD students were treated inclusively in the Department and there was a great deal of support for our evolving ideas (and false starts). Walking up and down the two corridors of faculty offices was like a precursor to the internet, in terms of the diversity of perspectives and information you could obtain. In 1990, running on empty, I left my Oldsmobile Cutless at a junk yard in Philadelphia, and left the country with $1 in my pocket.

My PhD dissertation, supervised by Doug Johnson, took two years to assemble all the funding, language skills and contacts. I worked in post-socialist Burkina Faso, allied to a large development agency examining the successes and failures of their efforts to build community resilience through innovative soil and conservation measures. Living 140km north of Ouagadougou brought its own challenges. Explaining the relevance of political ecology to development project managers (in French) was frustrating. Spending 18 months in and around near-subsistence Mossi communities in the Sahel was life-changing.

I obtained my first teaching job at a London college just one month after completing fieldwork in West Africa in 1992, and despite ending up in R1 (research) universities, I have had only two semesters off from teaching ever since. Career ambition has given way to career resignation, given the state of the higher education sector worldwide (I left a tenure track job in the US in 2004), but I have stuck with it, in part because of the fiery sentiments gained as a grad student. The Clark years have taught me that application of geographical expertise can take many forms, and in my case a combination of teaching, research, bringing people together, and activism seems to fit the bill. For this I am very grateful.
Prof. John Rogan and alum Laura Schneider conducting research in the Yucatan Peninsula, Mexico.

Photo by PhD alum Zach Christman