

GEOGRAPHY NEWS

Graduate School of Geography at Clark University

FALL 2010

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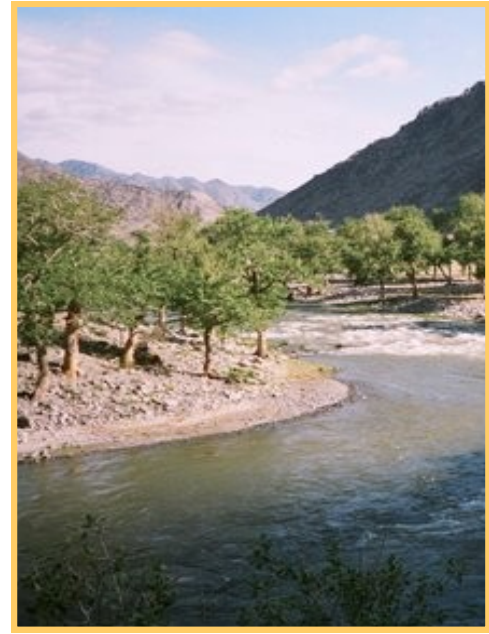
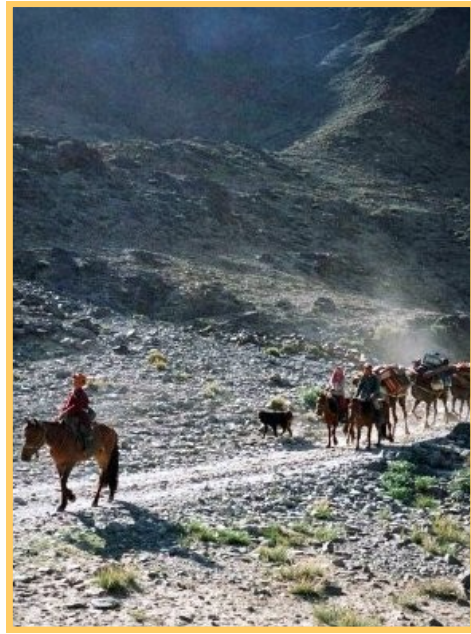
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Geography News is published four times a year by the Graduate School of Geography.

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Cover and this page photographs by Lauren Bonilla, PhD student whose research focuses on Mongolia's developing economy, specifically its mining sector and the country's relationship with China; see the feature *Going in Depth with Graduate Students*, page 6

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SPOTLIGHT ON: NEW ACADEMIC YEAR

Welcome to a new year in the School of Geography.

The School serves majors in Geography and Global Environment Studies (GES), and Earth Systems Science (ESS) concentrators in the Environmental Science Major. CUGA (Clark Undergraduate Geography Association) serves all these majors, while CUGS (Clark University Geographical Society) serves as the representative body for graduate students in Geography. Do participate in CUGA, CUGs and their activities. It is through this participation that you have direct input into the School of Geography (see, page 7)

This year marks important changes and achievements for our School. On September 24th, Professor David Angel will be installed as the ninth President of Clark University. When Professor Angel first came to Clark in 1987 it was as a member of our School, and he has previously served as its Director. Meanwhile Professor Colin Polsky will also join the University administration to become Associate Dean of the College, and Professor Karen Frey has just received the university's Hodgkins Junior Faculty Award. Our amazing doctoral students continue to excel, with recent awards including two National Science Foundation Graduate Research Fellowships, two NASA awards, two National Science Foundation dissertation awards, a Pruitt Fellowship as well as various prestigious "best paper" awards. In addition, a number of our undergraduates proudly represented the department and received praise for their research at the annual AAG meeting this past year in Washington, D.C. These are all prestigious recognitions and once again mark our School as a special place. (for more about our students, see pages 4-7)

On a sadder note for the School, Professor Doug Johnson retired this summer after 38 years of sustained commitment and dedication to both the School and the University (see page 9). Doug was an undergraduate at Clark who did his graduate work at the University of Chicago before returning to the School of Geography in 1972. He stayed with us ever since, teaching and touching the lives of thousands of undergraduates and hundreds of graduate students along the way.

Professor Johnson is an embodiment of something special about our School – it generates remarkable levels of loyalty and passion for what we try to be and achieve. I suspect many of you have felt this deep sense of loyalty already, and it is something that I am consistently impressed by as I have watched Clark geography graduates and postgraduates become professionals – the identity and pride that come from being Clarkies never seems to leave them.

Another change this summer is our own arrival. I am very proud (and not a little in awe) to follow Professor Jody Emel's leadership and become the new Director of the School of Geography having just spent seven years in the School of Environment and Development at the University of Manchester in the UK. This is a homecoming of sorts as I did my doctoral degree here in the mid to late 1980s, and I'm delighted to return to a School that I genuinely believe is remarkable – both for the skills it imparts as well as the national and international reputation it commands. Along with my partner Denise Humphreys Bebbington (who is joining the IDCE department) and our two daughters, we look forward to our new lives in Worcester and to becoming part of the Clark community.

Of various activities this Fall let me just mention a couple. As part of the celebration of President Angel's inauguration there will be a symposium from September 22nd to 24th, including panels on sustainability, the global economy, and the impacts of the recession. Then on October 21st Professor Julie Guthman, an expert in the analysis of food systems, alternative food movements and sustainable agriculture will give the School's annual Atwood Lecture.

So welcome and all my best wishes for the coming year.

Tony Bebbington

HERO Summer 2010

The HERO program was once again busy this summer. Led by their managers and faculty advisors, the three groups worked hard and will continue their work during this academic year. Below, each group outlines what they focused on this summer as well as the goal of their research.

The **holmes** (HERO Object-based Lawn Mapping Exploration of Suburbia) team is responsible for mapping the Plum Island Ecosystem (PIE), a group of twenty-six suburban towns north of Boston. Our maps are hundreds of times more detailed than existing datasets of the area, which is crucial for answering questions about how household level decisions create the suburban landscape. Our work, along with the data collected by

the **LLAWMAS** team, will help scientists and policy-makers better understand the suburban landscape.

The **LLAWMAS** (Land, Lawn, and Water Management Analysis) team is working on further exploring suburban land use change and residential land management decisions. We are doing this through in-depth ethnography style interviews with residents to explore the drivers of land/lawn management practices as well as a vegetation survey to see the composition of a sampling of yards in the study area. Finally, we are working on communicating some of this, along with past HERO research, into a children's book centered around suburban ecosystems and residential land management decisions

This summer **MaFoMP** (Massachusetts Forest Mapping) will be post-dating a pre-existing 2000

land-cover map to create a 2008-era land-cover classification. Map post-dating will employ the use of Kauth-Thomas change detection techniques in conjunction with independent classification of identified change areas using ASTER (Advanced Spaceborne Thermal Emission and Reflection Radiometer) imagery and ancillary environmental variables. Final map products will be used in independent research endeavors concerning species distribution modeling, habitat suitability assessment, forest disturbance mapping, and forest fragmentation and zoning policy analysis.

For a complete list of this year's participants and to learn more about the research visit, [HERO on the web](#).



The Polaris Project



This summer two Clark students headed to Siberia as part of The Polaris Project. Blaize Denfeld was returning to do more research while Cassandra Volatile-Wood became a new member of the team.

Blaize while enjoying her second summer in Siberia, was focusing on sampling more for her research on the recent climate trends and their effect on the carbon cycle. To get an idea of what Blaize was hard at work doing, she explains her research for us...

The Kolyma River basin is comprised of a diverse set of subwatersheds that vary in terrestrial characteristics and watershed size and is underlain by carbon-rich, permafrost dominated Pleistocene-aged loess deposits. Recent warming temperatures may

cause this stored carbon to be unlocked from permafrost and released to the atmosphere as CO₂ and CH₄, but also to adjacent streams and rivers as dissolved organic carbon (DOC). To understand the flux of carbon in Kolyma watershed, waters were analyzed for DOC and CO₂ concentrations from a diverse set of locations. The sampled locations varied spatially and in watershed size. Other biogeochemical measurements were taken at each site to help gain insight into the type and quality of carbon in the water. The collected data will be used as the basis for my Master's thesis in which I hope to "scale-up" the results with GIS models to estimate the regional CO₂ evasion.

Traveling for the first time to the Siberian Arctic, Cassandra was working as part of the bacterial analysis team...

My particular contribution was as part of the bacterial analysis team,

using a dissolved oxygen probe to measure microbial activity for other groups' data. I also had a personal project that focused on how a salinity gradient or nutrient availability (nitrogen and phosphorous) impacts bacteria processes as the water is transported through the system to the Arctic Ocean. All of this research is meant to gain insight on an area that has a dramatic impact on the global climate system, although it has not been studied in great depth. My involvement in Polaris not only enhanced my knowledge and field skills, but also connected me with a wonderful group of similar minded individuals that I will stay connected with for the rest of my life. It was definitely a life changing experience and I am grateful for the opportunity.

To learn more about The Polaris Project and hear stories from the field, visit the site and their blog at www.thepolarisproject.org

Condakes Fellow: Identity and Climate Movement

The recipient of this year's Peter Condakes Fellowship, Callista Perry was busy this summer conducting field research through participant observation and interviews with members of two youth climate movement groups, located in Worcester and Boston, MA: Worcester Summer of Solutions 2010, and Students for the Just and Stable Future Leadership Campaign in Boston. This award allowed her to dedicate substantial time to the project in hopes of publishing the findings as well as writing an honors thesis. She is a real credit to the

department and to Clark. She is a committed environmental and social justice activist and has developed this project with the intention of strengthening both social and environmental justice agendas within the movements to address local action on global climate change.

Also, listen to Callista on [Clark Voices](#), describing her hands-on experience working for Worcester Green Jobs Coalition and Summer of Solutions 2009.

MISSION ICESCAPE: Luke Trusel , Christie Wood and Prof. Frey take on the Chukchi Sea

In addition to conducting research on the impacts of climate warming on terrestrial and freshwater biogeochemistry (as she does with the Polaris Project), Prof. Frey also has active research projects investigating the impacts of climate warming on Arctic sea ice. For six weeks this summer, she was onboard the [US Coast Guard Cutter Healy](#) (a 420 foot icebreaker) in the Chukchi Sea, northwest of Alaska. In fact, she was really only ~600 miles away from the Polaris Project folks the whole time (about the distance between Seattle and San Francisco).

As part of [NASA's ICESCAPE](#) mission on the Healy, Prof. Frey and two of her Ph.D. students Christie Wood and

Luke Trusel were coring sea ice, collecting samples from the under-ice water column, and measuring light penetration at different



wavelengths through the sea ice and through the ocean waters below. All of these parameters will give them insight into how expected future sea ice declines will impact the biology and biogeochemistry of one of the most productive marine ecosystems in the world. Conducting research onboard an icebreaker is a unique experience – for one, most of the group's research was carried out by simply

walking off the ship (in the middle of the ocean, mind you), straight onto the sea ice below.

June and July is an incredibly dynamic time of year in the Chukchi Sea, when sea ice begins to degrade, melt ponds form on sea ice surfaces, and hot algae blooms run rampant throughout the region. At our sampling stations, we were able to investigate both melt ponds (which function as “skylights”) and bare white ice surfaces (which shade light much more effectively), each impacting the biology and biogeochemistry of waters below to different extents.

The Chukchi Sea is also home to some of the most charismatic mammals on the planet (which are at the top of a food chain that the presence and

seasonality of sea ice afford), to include polar bears (now deemed “threatened” under the Endangered Species Act) and walrus (which were just petitioned under the Endangered Species Act in 2008). These “ice-obligate” species have been given particular attention owing to recently observed declines in Arctic sea ice. We were lucky enough to see a collection of these critters, to include a mother polar bear and her three cubs (likely two seasons' worth).



Technology and Tanzania

Jim Murphy and PhD student Alex Sphar spent part (most in Alex's case!) of their summers conducting research on small enterprises in Tanzania's wood products sector. As part of an NSF sponsored project, they conducted more than 60 interviews with businesspeople with the goal of understanding the role that “new” information-communication technologies (ICT such as mobile phones, computers, and the Internet) play in their day-to-day activities. The

preliminary findings have been quite interesting in terms of what is, and is not happening with respect to ICT and Jim and Alex would be more than happy to tell interested persons about the specifics. The interview data gathered in Tanzania will be compared with data on ICTs from South Africa that Jim's co-PI on the project – Padraig Carmody of Trinity College in Dublin, Ireland has collected.



Amid mosquitoes, heat, busy buses and traffic jams and yet another Dar es Salaam blackout, graduate student Alex Sphar and Prof. Jim Murphy collected their data.



Animals and Society Institute Summer Fellowship



For the first time, during the early summer, the department served as host to the Animals and Society Institute summer fellowship program. The Animals and Society Institute is a nonprofit, independent

research and educational organization that advances the status of animals in public policy, and promotes the study of human-animal relationships. This summer a total of seven fellows from around the world were in residence at Clark working on their individual research projects ranging in topics from human-animal dynamics, ethics, cloning, and policy to literary and cultural themes.

Led by Prof. Jody Emel, in conjunction with Prof. Susan McHugh from the University of

New England fellows engaged in not only research, but were mentored, attended guest lectures and taken on local field trips.

The program commenced with a final week of public presentations by distinguished scholars and the executive director of ASI, Kenneth

Shapiro. The fellows presented their final projects as well, which are expected to be published within a year.



GOING IN DEPTH WITH GRADUATE STUDENTS:

DIFFERENT STUDENT DIFFERENT RESEARCH

Having read an article in high school about Mongolia's vast grasslands, the horse-based nomadic culture and its relatively unknown history, Lauren Bonilla was instantly intrigued and has been ever since.

How did you begin researching in Mongolia?

I first started my research on Mongolia by organizing independent study projects at Macalester College with my advisor and using the final projects in my classes to write about issues pertaining to Mongolia. This helped me work through a diverse body of literature on Mongolia and enabled me to have a more holistic understanding of the country.

What really helped me become more engaged with Mongolia was learning the language. My advisor introduced me to a Mongolian living in the Twin Cities who offered to tutor me. Every week for a year I met with my tutor to learn the basics of Mongolian. These classes built up my confidence to go to Mongolia and do research first-hand. In 2003, after my sophomore year, I was awarded a research grant from the Lilly Endowment to study post-socialist religious movements in Mongolia. This grant gave me the opportunity to travel to many regions of the country to interview people. Many of the contacts I made on this first trip have sustained me through my subsequent 5 trips to Mongolia for other research projects.

What does your current research focus on?

I have returned to Mongolia almost every year since 2003 for some sort of research project, ranging from studies on religious movements, cultural identity, history, and cartography. My dissertation research is on a topic I purposefully avoided addressing for years because it is so

intensely political and controversial -- mining. Mongolia is on the verge of a massive mining boom because of the country's copious reserves of gold, copper, coal, and uranium. I am interested in developing a clearer picture about the characteristics of China's involvement in Mongolia's mining sector. Mongolia and China share a long and tenuous history, and China is increasingly playing an active role in developing Mongolia's resources as well as its economy. There is a big question among Mongolians, from nomadic herders to government officials, as to what China's intentions are in Mongolia and at what level Chinese firms are and will be socially and environmentally responsible in the country.

What are some of the challenges you have faced in Mongolia?

Mongolia has been such a wonderful place to do research because Mongolians are genuinely interested in making their country better understood in the rest of the world. I've also found that research has become easier to do as time goes on because of my sustained engagement. I have a great network of research partners and am diligent about keeping in touch with people who have helped me over the years.

The challenges I have faced have been more physical in nature. Winter can be brutally cold. One time while riding a horse to interview a family in the Altai Mountains I had to keep propping my eyelids open so they wouldn't freeze shut. Spring time is even worse because frequent dust storms limit outdoor activity and travel, as well as stress nomadic families because the winds and scant rain weaken their animal herds. But, these challenges are easily forgotten come summertime when the land blooms with wildflowers, dairy products abound in every home, and I can go horseback riding to my heart's content!

"Mongolia has been such a wonderful place to do my research because Mongolians are genuinely interested in making their country better understood in the rest of the world."

Undergraduate Happenings:

TREE PLANTING

SPRING AND FALL SEMESTER

At the end of the spring semester, several geography, ges majors and CUGA members joined with professors and staff to plant two trees on campus, one by the Downing St. Goddard library entrance and another behind the library. Both trees are just the beginning of a service learning experience to plant trees around the University Park Neighborhood to serve as public landscaping and for the local wildlife habitat and refuge. In the fall, as part of Prof. Rocheleau's Urban Ecology course and her Agroforestry seminar students will identify both private and public sites in conjunction with local residents for several more trees to be planted. The hope is for students and residents to become certified tree planters who can then continue to participate in city programs that incorporate urban wildlife with city landscapes.



Photo: Brenna Schwert and Boyd Zapatka work to fill in the hole for the first tree



Photo: Micah Gensler gets to work piling on the dirt

GET INVOLVED: CUGA

CLARK UNDERGRADUATE GEOGRAPHY ASSOCIATION

CUGA (Clark University Geographical Association) is a student-run organization dedicated to enriching and expanding the experiences of students interested in the fields and majors of Geography and Global Environmental Studies and ES/ESS. CUGA provides an interface for undergraduates to communicate with faculty and graduates and with the opportunity for student representation at departmental meetings and the undergraduate studies committee. CUGA also sponsors university-wide events, bringing speakers to campus, showing films, organizing field trips and attending professional conferences. Keep an eye out for meetings this semester!

**NEED A PLACE TO DO THAT GIS HOMEWORK?
OR A QUIET PLACE TO WRITE A PAPER?**

HEAD TO THE J.K. WRIGHT LAB on the lower level of the Geography Building, [check out the open hours schedule](#)



THEN & NOW

Alumni Updates

PhD,
Geography, 1978
David Seamon

I was a doctoral student in Geography at Clark from 1970 to 1977 and worked with phenomenological geographer Anne Buttner, who also arrived in 1970 as a visiting researcher and faculty member. Those years at Clark were remarkable for then-Director Saul Cohen's effort to establish, with Clark's Psychology program, an interdisciplinary emphasis in "psycho geography" and "environmental psychology." During that time, students could take courses from such environment-behavior illuminaries as David Stea, Jim Blaut, Bob Kates, David Lowenthal, Ken Craig, and Robert Beck. Clark doctoral students who've become well known in the environment-behavior field include Roger Hart, Denis Wood, Graham Rowles, Irv Zube, and Gary Moore.

Perhaps the most intriguing quality of those years at Clark was the faculty and student openness to alternative ways of knowing. In the first-year graduate seminar on conceptual and methodological approaches, Gerry Karaska emphasized positivist research and insisted we read David Harvey's recently-published *Explanation in Geography*. In practice, however, many students rejected analytic science and turned to alternative approaches that included phenomenology, hermeneutics, and Marxist philosophy. My dissertation focused on a

phenomenon that I labeled "everyday environmental experience." This work was eventually published as *A Geography of the Lifeworld* (St. Martin's, 1979).

For those interested in the intellectual exuberance of this time, I direct them to the 1987 "Special Clark University Issue" of the *Journal of Environmental Psychology* (vol. 7, no 4) that includes reflective essays from students and faculty who were at Clark during this remarkable period. Contributors are Blaut, Buttner, Hart, Kates, Lowenthal, Rowles, Seamon, Stea, Wood, Zube, Wapner, Jeremy Anderson, George McCleary, and Sy Wapner. In total, these essays give readers a powerful lived sense of the dynamic intellectual energies that percolated through the Geography program at that time.

My graduate training at Clark eventually led me to design programs and an interest in a phenomenology of place and environmental design as place making. Today I am a Professor of Architecture at Kansas State University in Manhattan, Kansas. I have published a wide range of papers and volumes on what I've come to call "environmental and architectural phenomenology." I'm editor of the *Environmental and Architectural Phenomenology Newsletter*, published three times a year since 1990 and featuring research and practice involving phenomenological and related qualitative efforts in regard to environmental, architectural, design, and place concerns. Back issues are available at www.arch.ksu.edu/seamon/.

Congratulations

Just as he did as an undergrad, **John Mangiaratti '02**, the

newly appointed assistant town manager of Westford, MA uses GIS regularly. Before assuming his new role, John worked as the town's GIS coordinator.

After graduating from Clark, combining her interests in both environmental policy and French seemed like a difficult task, but much to her surprise, **Kaitlyn Sephton** has successfully done so. She has landed a paid internship with Pew Environmental Group based in Amherst, MA. Pew is an organization that works with the

government and other organizations on a boreal forest conservation campaign in Canada. To learn more about the project, check out www.interboreal.org.



HELLO OUT THERE

Are you an alum of the

department? Then we want to hear from you!! Whether you are an undergrad, graduate or master's alum let us know where and what you are doing.

Email us at geography@clarku.edu

“Dr. Doug” Retires

Geography’s Personal Landscapes

Douglas L. “Dr. Doug” Johnson

I came to Clark University and the Graduate School of Geography for the first time for the fall semester of 1961; maps brought me here. In my Little League years I evolved into my family’s backseat navigator on vacation trips, directing my father’s route because my Mom proved hopeless when faced with a road map and a strange location. Since two of my Dad’s Worcester childhood friends had gone on to careers in geography based on graduate work at Clark, it was axiomatic for my parents that the best place for me to attend college was Clark’s enlightening landscape. And they were right!

So much so that I ended my personal debate between history and geography in favor of joining the School of Geography’s then tiny major (less than 10 majors in 1965). When I came back in 1972 after my graduate studies in Chicago to teach in Clark’s geography program, the major had grown

enormously and remains a healthy and important part of the school’s program today. Somewhat to my surprise, I eventually spent almost the entirety of my academic career in Main South. Clark has proven to be a brilliant environment in which to base one’s academic life: full of interesting colleagues, supportive and stimulating friendships, and blessed with a host of challenging and memorable

students. As a base from which to travel to and study distant places, cultures, and environments, the Graduate School of Geography has been wonderful. But one of the curiosities of teaching for a long time at the same educational level is that you grow older while the students remain perpetually youthful. At some point it begins to seem important to find new ways to explore long-term interests, to discover new challenges and opportunities to learn, and to determine what life away from Clark might be like.

And possibilities abound! File drawers of data and projects unfinished or as yet not formally begun await renewed attention. A long-term interest in animals, and the people who base their lives upon them, has much unexplored terrain, and thus great opportunities for future writing. Dry places, so different from the temperate landscape around Clark, still exert a great fascination. By far the most exciting opportunity for the future is provided by seven little people, ranging in age from seven to “soon to appear,” who have entered our family, and whose future exploits promise a world of excitement. They present the chance to follow their development over the decades as they grow physically and intellectually. Already their ability to navigate in geographic space at different scales amazes this observer; their emerging verbal talents and acuteness of observation are a challenge and a delight. The location of these smurfs in different parts of the continent “forces” travel to varied and interesting landscapes that are geographically exciting! Now having more flexibility to pursue that travel is great!

Clark has occupied a large part of my life. The institution and the people associated with it will continue to do so in emerging new ways. But it certainly will be fun to be much more the master of my own time as well as my own space!



Dr. Doug, as his students often call him, launching his “evacuation” party.



Doug Johnson and Martyn Bowden, one of Doug’s undergraduate professors, sharing a laugh over more than forty years of reminiscences at the Sahara Restaurant celebratory dinner

CLARK UNIVERSITY™



A tundra walk this summer as
part of The Polaris Project.
Photo by Blaize Denfeld.