PAGE 03
Director’s Welcome
- A note from Director Tony Bebbington

PAGE 04
Faculty News
- Professor Pontius travels to China
- Faculty in the Media

PAGE 05
Doctoral Student News
- Introducing our 2016 Doctoral Student Cohort
- Photos from Field Camp 2016
- Recent Publications and updates
- Doctoral Student travel: Melishia Santiago and Elisa Arond

PAGE 09
Graduate Student News
- Introducing our 5th-Year M.S. GIS Student Cohort
- Landscape Ecology trip
- NASA DEVELOP spotlight: Hannah Rosenblum

PAGE 11
Undergraduate News
- Undergraduate Majors Fair
- Meet our 2016-17 CUGA reps
- Recent Events & Updates
- Photos from Fall Fest 2016

PAGE 14
Alumni News
- Alumni updates & recent careers
- Dr. Wallace E. McIntyre Makes $1 Million Gift to Geography

PAGE 16
Undergraduate Summer Research
- Peter J. Condakes Summer Research Award Winners: Anthony Jreije (GEOG & ECON ’18) and Claire Bayler (IDSC & GES ’17)
- UDSC Lois & Robert Green Scholarship winners: Madilyn Jacobsen and Devin Clarke (GEOG & UDSC ’17)

PAGE 18
HERO 2016-17
- Updates from the summer
- Stakeholder Summit link and presentation

PAGE 19
Upcoming Events
- Dates to Remember
- Wallace W. Atwood Lecture announcement: Arturo Escobar
- AAG Boston: Registration and Reminder
Dear All,

Many thoughts come to mind as I read this Fall 2016 newsletter once again caringly put together by Rachel Levitt with all your contributions. The most obvious one is that there is such a lot going on in Geography at Clark. Our newsletters are a helpful reminder that even when the corridors sometimes seem quiet, people are beavering away, preparing and producing the sort of work and initiative that brims over in these pages. You read the newsletter and you know why we feel both tired and excited by our work. The stories also show that Clark Geography is a research institution, make no mistake about it. In the newsletter you will see all the indications of truly impressive levels of research activity among our BA, MS and PhD students, as well as our faculty. The knowledge generated by research, and the knowledge and skills generated by doing research, are at the core of our approach to learning.

A second reflection from reading the newsletter is that Clark Geography is at once heavily involved in Worcester and New England, and also deeply and irrevocably globalized. Just look at where people are working, where they are travelling to and from, as well as where they and their families come from. These pages capture moments in time when these national and transnational trajectories come together and make Clark Geography what it is. Without these connections, these diverse histories and experiences, and the differences that they bring, there would be no Clark Geography, certainly not the one that we know and care for.

And indeed, my third thought is that what is reported in these pages is a product of care. Of course, students, faculty and staff all want to be excellent, to grow and to achieve, but they also do this by caring for each other and for Clark Geography at the same time. Why else do our students turn out to recruit majors for the program, why else do students give their time and minds to read and comment on each other’s work, why else did Wallace McIntyre give such a remarkably generous gift to the GSG, why else do faculty and students do work in such challenging environments far from home, why else do staff cover for all the rest of us ….. because they care, and want to take care of something that goes beyond all of us as individuals. At times when resources are scarce and financial savings are sought wherever they can be found, and when fear of this same resource scarcity can encourage us to turn inwards and diminish those we see as competitors, it is dangerously easy to forget that this all hangs together because people care for their institution and for each other. As feminist geographers and economists have reminded us many times, such caring work goes systematically under-recognized and unaccounted for. But it is what keeps us going. If ever there was a time to remind ourselves and others of this, and to tend to and reward such work, that time is now: on campus as much as beyond campus. These pages are a great read for lots of reasons, but one of them is because you see so much caring going on, in and for Clark Geography.

Take care, of yourselves, and of your others,

Tony
Professor Pontius travels to China
“I spent a month during summer 2016 at Hunan University of Science and Technology giving lectures and working with Professor Bin Quan and his students (shown below). We continued our research concerning land change in China. I also spent two weeks at the Luxembourg Institute of Socio-Economic Research delivering lectures and working with Dr. Hichem Omrani.”

As California’s wildfire risks grow, are home builders getting the message?
“With a historic drought and high temperatures, California is seeing longer and deadlier wildfire seasons — but the threat has not deterred developers from rebuilding homes in wilderness areas most prone to fires. ... ‘We are increasingly building our homes ... in fire-prone ecosystems,’ Dominik Kulakowski, an associate professor of geography at Clark University in Worcester, Mass., told The Christian Science Monitor in 2013. Doing that ‘in many of the forests of the Western US ... is like building homes on the side of an active volcano.’ The threat of fire has not diminished the thirst for development in wilderness, some analysts say, because the developers are not expected to shoulder the cost of firefighting — and the demand for housing in these areas is too high to ignore.”

‘Forests and Climate’ subject of NRWA Annual Meeting
“The Nashua River Watershed Association invited the public to attend its 2016 Annual Meeting at 7 p.m. Thursday, Nov. 3 at the Devens Common Center, 31 Andrews Parkway, Devens. Christopher A. Williams, associate professor of geography at Clark University in Worcester, gave the keynote address on ‘Forests and Climate: Vulnerable Protectors of the Planetary Life Support System.’ Williams, trained as a land surface hydrologist and terrestrial ecosystem ecologist, investigates how Earth’s biosphere responds to natural and human disruptions such as severe drought events, bark beetle outbreaks, fires, harvesting, and land cover changes. His approach combines field, lab, and remote sensing data with process-based modeling.”

The ‘frightening, real’ threat of gas leaks
“There is an invisible killer lurking in Worcester and it may be closer than you think. It’s killing trees, grass, and in some tragic cases, people. Natural gas. ... State Rep. Mary Keefe, D-15th Worcester District, believes a misunderstanding and lack of scrutiny is to blame for delayed progress in repairing leaking pipes. ... Two trees that appeared to be dying outside Keefe’s home were the catalyst for her interest in gas leaks. ‘... In trying to learn more about the impact on trees, I got in touch with the [Worcester] Tree Initiative to see if they were concerned about gas leaks and the trees here in Worcester and we did a little work with John Rogan at Clark University.’ It turns out they are.”

The increasing importance of atmospheric demand for ecosystem water and carbon fluxes
“Christopher Williams, associate professor of geography, co-authored this paper in Nature Climate Change, the abstract of which begins: “Soil moisture supply and atmospheric demand for water independently limit—and profoundly affect—vegetation productivity and water use during periods of hydrologic stress. Disentangling the impact of these two drivers on ecosystem carbon and water cycling is difficult because they are often correlated, and experimental tools for manipulating atmospheric demand in the field are lacking.”
Andrew Riely  
B.A., Geography | Macalester College, Minnesota; M.A., Geography | University of Texas at Austin  
Research interests: Urban geography, gentrification, development of sense of place and identity

Sam Khallaghi  
M.S. Geomatics | Lund University, Sweden; M.S. GIS & RS with focus on land and water resources | Tabriz University, Iran; B.S. Forestry Agriculture and Natural Resources | Gorgan University, Iran  
Research interests: Spatial databases, Web Mapping, Spatial Ontology, Applications of GIS and Remote Sensing

Brittany Lauren Wheeler  
M.A. Forced Migration Studies | University of the Witwatersrand, Johannesburg, South Africa; M.A. International Museum Studies | University of Gothenburg, Sweden; B.A. English | University of California Berkeley  
Research Interests: Repatriation, Protracted situations and durable solutions, Historical justice, dispossession and material culture, museology

Helen Rosko  
M.S. Geography | University of Tennessee - Knoxville; B.A. Political Science | College of Charleston, South Carolina  
Research Interests: rural livelihoods, development geography, climate services, aid and adaptation, vulnerability and resilience, vulnerable populations, information flows, gender and identity

Mario Machado  
M.S. Geography | Penn State University; B.S. Biological Anthropology | Penn State University  
Research Interests: Political ecology, small-scale agriculture, social justice, and development

Luisa Young  
M.Sc. Geographic Information Science for Development and Environment (GISDE) | Clark University; B.Sc. Natural Resources and Environmental Management (NREM) | University of Hawaii at Manoa  

Mara G. van den Bold  
MSc. Anthropology and Development | London School of Economics and Political Science (LSE), UK; B.A. Anthropology and Latin American Studies | Union College, New York  
Research interests: political ecology, development theory, natural resource conflicts, indigenous social movements, agrarian change, food sovereignty and nutrition, Latin America, West Africa.

Dan Santos  
B.A. (Honors), Geography and English Literature | University of Melbourne, Australia; B.Sc. Environmental Science and Genetics | University of Melbourne, Australia  
Research interests: environmental governance, environmental policy, science and technology studies, climate change, critical theory, nature-society theories.

Sarah SanGiovanni  
M.U.P. Urban Planning | The State University of New York at Buffalo; B.A. English | The State University of New York at Binghamton; B.A. Environmental Studies | The State University of New York at Binghamton  
Research Interests: Nature-society relationships, political ecology, urban

Photo (L-R, Back): Andrew Riely, Sam Khallaghi, Brittany Lauren Wheeler, Marc Healy. Middle: Helen Rosko, Mario Machado. Front: Luisa Young, Mara G. van den Bold, Dan Santos, Sarah SanGiovanni
CUGS (Clark University Geographic Society) Field Camp remains a tradition since 1939 for which doctoral students come together to initiate the incoming cohort and spend a weekend in the woods getting to know one another. This year we continued Field Camp at Camp Massapoag in Dunstable, Massachusetts in August 2016.

Dan Santos, Wenjing Jiang, Janae Davis

Yu Zhou, Second year doctoral student

CUGS relaxing around the campfire

First years Andrew Riely, Helen Rosko, Marc Healy, Mario Machado, Mara van den Bold, Sarah SanGiovanni, Brittany Wheeler

Jacob Chamberlain setting up camp

Enjoying some potluck food provided by David Lukens and Dylan Harris

On the dock of Massapoag Pond

Janae Davis and Alex Moulton

Mara van den Bold and Helen Rosko
Tony Bebbington, Elisa Arond and Juan Luis Dammert have a new working paper with the Effective States and Inclusive Development Research Centre (ESID) at the University of Manchester. Bebbington, A., Arond, E., Dammert, J.L. (2016) Scalar politics and transnational governance innovations: A political settlements lens on the Extractive Industries Transparency Initiative in the Andes. ESID Working Paper No. 66. Effective States and Inclusive Development Research Centre (ESID), The University of Manchester. Click here to view

Elisa Arond, PhD candidate in the GSG, together with colleagues at the STEPS Centre (Social, Technological and Environmental Pathways to Sustainability) at the University of Sussex in the UK, CENIT (Centro de Investigaciones para la Transformación) in Argentina, and Jawaharlal Nehru University in India, have a new book out on Grassroots Innovation Movements, with the Earthscan Pathways to Sustainability Series: Smith, A., Fressoli, M., Abrol, D., Arond, E., and A. Ely (2016) Grassroots Innovation Movements, Pathways to Sustainability Series. London: Earthscan/Routledge. Click here to view

College Town: Satellite imagery tracks tree growth in Clark study “High-resolution satellite imagery provided by the DigitalGlobe Foundation, which was first put to use in Worcester this year by the Human-Environment Regional Observatory program at Clark University, is helping doctoral student Bernadette Arakwiye to see the forest and the individual trees in her approximately 860-square-mile study area in the Gishwati and Mukura forests of western Rwanda. Ms. Arakwiye is conducting a pilot study in these two forests in preparation for her dissertation research, which will focus on monitoring forest degradation in western Rwanda with the aim of assessing opportunities for restoration.” Worcester Telegram and Gazette 7/24/2016 Click here to view

Ocean Color Satellite Remote Sensing Course, Cornell University

2015-16 TA Award: Arthur Elmes Congratulations to Arthur Elmes for receiving the Clark University Outstanding Teaching Assistant Award for 2015-16! This award was presented to Arthur by Associate Provost & Dean of Graduate Studies and Graduate Admissions, Bill Fisher (pictured above) during our GSG Fall 2016 Departmental Welcome Back Reception on September 7th. Arthur’s research interests include: Remote sensing, landscape ecology, invasive species, GIScience.

Melishia Santiago was awarded a fellowship by the Ocean and Biogeochemistry Program at the Woods Hole Oceanographic Institution to attend the Cornell Satellite Remote Sensing Training Program at Cornell University in Ithaca, New York from June 2nd to June 18th, 2016. For nearly three weeks, the fundamentals for ocean optics, pigment algorithms, atmospheric correction, sea surface temperature, and wind theory were discussed. These concepts were simultaneously reviewed with computer programming in Python and SeaDAS, an ocean color remote sensing processing software, to process ocean color satellite remote sensing imagery, including Aqua-Moderate Resolution Imaging Spectrometer (MODIS), Medium Resolution Imaging Spectrometer (MERIS), Visible Infrared Imaging Radiometer Suite (VIIRS), and the Sea-Viewing Wide-Field-of-View Sensor (SeaWIFS) datasets. This course will help Melishia with her dissertation work to study chromophoric dissolved organic matter (CDOM) distribution (using MODIS and MERIS datasets) and melt pond variability (using MODIS) in the Chukchi and western Beaufort seas in the Pacific Arctic Region.

Photo (L-R): Mohammed Uddin from the Institute of Marine Sciences and Fisheries in Bangladesh, Jan-Erik Tesdal from the Lamont Doherty Earth Observatory at Columbia University, Madhur Devkota from Mississippi State University, and Melishia Santiago from the Graduate School of Geography at Clark University. Picture by Carlos Lara (not pictured) from the Universidad Católica del Norte de Chile.

Elisa Arond is currently doing dissertation fieldwork in Colombia. See our Student Travel section (next page) to hear her story! Below Photo: Elisa in the main square of Popayán, the capital of Cauca department, in southwest Colombia.

Stay updated on our latest doctoral student news through our website
Fluorescent Dissolved Organic Matter Analyses at Florida State University | Melishia Santiago

Melishia Santiago (photo above) was awarded the Sussman Fund Graduate Scholarship for Summer Research 2016 to study the production of dissolved organic matter (DOM) and how it can be affected by sea ice decline in the Pacific Arctic Region. In the Arctic Ocean, DOM results from photosynthetic activity by phytoplankton decay in the surface ocean waters or terrestrially derived organic matter transported by riverine inputs to coastal areas. Colored or chromophoric DOM (CDOM), the optically active fraction of DOM in natural waters, absorbs light and affects the heating and propagation of light in the ocean water column. The absorption of light degrades DOM, converting organic matter into inorganic material and potentially leading to subsequent release of carbon dioxide to the atmosphere. Changes in sea ice cover can impact light penetration and CDOM distribution in the Arctic Ocean. Figure 1 (Above) The region of interest for this project. Sampling stations are shown in blue.

There is a fraction of DOM that fluoresces in the ultraviolet and visible regions of the electromagnetic spectrum also known as fluorescent DOM (FDOM). Analyzing water samples for FDOM provides information on the chemical composition and quality of the material source (e.g., ocean versus land). This past summer, Melishia analyzed approximately 300 ocean water samples. These frozen water samples were collected by Dr. Karen Frey, Melishia’s doctoral advisor, from 173 stations in June and July of 2011 in the Chukchi and western Beaufort seas (near Alaska) as part of the NASA-sponsored Impacts of Climate on the Ecosystems and Chemistry of the Arctic Pacific Environment (ICESCAPE) program (Figure 1). Since there is no fluorescence spectrophotometer instrument available in the Polar Science Research Laboratory at Clark University, Melishia analyzed the ocean water samples in the Spencer Biogeochemistry Laboratory at Florida State University in Tallahassee, Florida (Figure 2). Melishia worked with Dr. Robert Spencer, her external advisor, and Dr. François Guillemette, a post-doctoral researcher, as well as other laboratory members of the Spencer-Biogeochemistry Lab. In addition, Melishia collected additional samples in the Bering and Chukchi Seas in July onboard the Sir Wilfred Laurier Canadian icebreaker. These samples were also analyzed in the Spencer-Biogeochemistry Lab. Figure 2 (Above) The Aqualog (Horiba-Scientific) fluorescence spectrophotometer instrument with three ocean water samples in the front ready to be analyzed. Picture by Melishia Santiago.

Colombia Fieldwork | Elisa Arond

Elisa Arond, PhD candidate in the GSG, is currently doing dissertation fieldwork in Colombia. She is looking at the decentralization of science, technology and innovation policy, with a focus on whether decentralization enables inclusion of actors that have historically been excluded from formal science, technology and innovation efforts, including indigenous people, Afrocolombians, campesinos, women, youth and other historically marginalized groups. In particular, she is looking at the case of a new fund created in 2011, which draws on royalties from natural resource extraction to fund science, technology and innovation for regional development. Her research has been largely in the capital of Bogotá, but also includes case studies in the Pacific region of Colombia, including in Cauca. The photo on page 9 shows Elisa in the main square of Popayán, the capital of Cauca department, in southwest Colombia.
5TH YEAR M.S. GIS COHORT

Yuka Fuchino
B.A., GEOG '16
Advisor: John Rogan
Research interests: Wildlife Conservation, Vulnerability and Natural Disasters
Summer Internship: Worcester Division of Public Health GIS team

Chung Truong
B.A., GEOG & MUSC '16
Advisor: John Rogan, Gil Pontius
Research interests: Remote Sensing and GIS, Web Mapping, Tropical Forest Monitoring, Urban Forestry
Summer Internship: Urban Conservation Crew Member at The Nature Conservancy in NYC

Katherine Landesman
B.A., GES '16
Advisor: Ron Eastman
Research interests: Remote Sensing, Mangrove Forests and Coastal Habitats, land use and land cover change
Summer Internship: NASA DEVELOP, (the Southwest US Ecological Forecasting Team)

Hannah Rosenblum
B.A., GEOG & CSAC '16
Advisor: John Rogan
Research interests: Remote sensing and GIS, forests, fire, water resources, landscape ecology
Summer Internship: NASA DEVELOP (Middle East Water Resources team)

Kim Johnson
B.A., GEOG '16
Advisor: John Rogan
Research interests: GIS, children and green spaces, extractive industries, land change
Summer Internship: Worked for the City of Worcester making map templates for the Economic Development Department

Warren Scott
B.A., GEOG '16
Advisor: Karen Frey
Research interests: Cryosphere, Climate, Sea Ice, Remote Sensing
Summer Internship: Research intern at the Polar Science Research Lab at Clark University

Savannah Cooley
B.A., ECON '16, Minors in Math & GEOG
Advisor: Chris Williams
Research interests: Remote Sensing, Agricultural Water Resources, Drought Resilience
Summer Internship: NASA Jet Propulsion Laboratory ECOsystem Spaceborne Thermal Radiometer Experiment on Space Station (ECOSTRESS) mission

About the 5th Year M.S. GIS Accelerated Degree Program

Students majoring in geography, global environmental studies, earth system science, economics, international development and social change, environmental science and policy, or environment and conservation biology can apply to the accelerated B.A./Master's program in Geographic Information Science.

The M.S. degree in Geography specializing in Geographic Information Science requires the completion of 10 graduate courses credits, two of which are taken during the senior year two of which are completed during the summer between the senior year at the 300 level and the Accelerated Degree Program (ADP) year. Three of the 10 credits are devoted to the completion of a master's thesis.

Visit our website to learn more!
On Saturday, September 17th, Professor John Rogan took his Landscape Ecology class on a trip to Myles Standish State Forest in Carver, MA to learn about forest management techniques (photo below). Professor Rogan’s course considers the relationships between spatial patterns in landscape structure (physical, biological and cultural) and ecological processes. The role of ecosystem pattern in mass and energy transfers, disturbance regimes, species’ persistence, applications of remote sensing and GIS for landscape characterization and modeling are examined.

Incoming GISDE Cohort

Introducing our new GISDE cohort This fall we welcomed 23 new students to the GISDE (Geographic Information Science for Development and Environment) program:

- Adebisi Adeyemi
- Thomas Bilintoh
- Caitlin Cassisi
- Sarah Gates
- Erin Goh
- Yiwen Hu
- Wenle Jiang
- Jeanie Lai
- Daniel Lassila
- Lucy Lee
- Amy Leung
- Haoyu Li
- Youlou Lin
- Ricardo Llamas
- Nara McCray
- Kelsey Meisenhelder
- Alzahraa Mirza
- Zachary Peloquin
- Max Pschorr
- Erika Rivera
- Leta Spencer
- Laifei Xiong

About the GISDE Program

Clark’s STEM-designated Master’s in Geographic Information Science for Development and Environment (GISDE) is a joint program between Clark’s International Development, Community and Environment Department (IDCE) and Graduate School of Geography. In this unique program, students prepare to meet some of the world’s most pressing social, political and economic challenges by developing expertise in and applying geospatial technologies to: Earth system information science, Land-change modeling, Conservation GIS, Public health, and Environmental justice.

Middle East Water Resources - NASA DEVELOP Summer 2016

@ Langley Research Center

Check out this video done by the Middle East Water Resources team at the NASA DEVELOP National Program, including contributions by M.S. GIS 5th year student Hannah Rosenblum!

(Check image watch the video)

NASA DEVELOP is a NASA Science Mission Directorate Applied Sciences training and development program. Interns work on Earth science research projects, mentored by science advisors from NASA and partner agencies and extend research results to local communities. The projects demonstrate to community leaders how NASA science measurements and predictions can be utilized to address local policy issues. [http://develop.larc.nasa.gov/](http://develop.larc.nasa.gov/)
Undergraduate Majors’ Fair
On Wednesday, October 1st the university held its annual Majors Fair where undecided students filtered into Tilton Hall to peruse a variety of informational material and speak with students, faculty, and staff from a number of departments on campus. (Photo below)

This year we ran three tables to represent Geography, Global Environmental Studies, Urban Development Social Change (concentration), and all three tracks of Environmental Science: Environmental Conservation Biology, Environmental Science & Policy, and Earth System Science. Special thanks to the following people for representing our programs:

**Geography:** Will Heikes, Ali Filipovic

**Global Environmental Studies:** Claire Bayler

**Urban Development Social Change:** Devin Clarke, Madilyn Jacobsen

**Earth System Science:** Savannah Sanford

**Environmental Science & Policy:** Anthony Sensei, Sarah Maloney

**Faculty**
Mark Davidson, Tony Bebbington, Chris Williams

If you would like to volunteer for future events such as the Admitted Students Open House or the fall Majors Fair, please contact Rachel Levitt. Any and all help is extremely appreciated!

**NASA DEVELOP**
Shirin Esmæelii (below photo) presented 10-week research results at the NASA DEVELOP close-out at the NOAA NCEI Headquarters in Asheville, North Carolina. Shirin was part of a team of 4 students that focused on climate and land cover change impacts on the agriculture in Peru. Shirin is also a Clark Ambassador for Develop for the next year.

**CUGA: 2016-17 Reps**
Meet our 2016-17 student E-Board members of the Clark Undergraduate Geography Association (CUGA)!

**Will Heikes**
Co-President GEOG & ECON ’17
Will Heikes is a senior geography and economics major and one of the co-presidents of CUGA. A Colorado native, Will is interested in the application of Twitter data into GIS analysis. Will also enjoys listening to country music and watching an unhealthy amount of The Simpsons

**Ali Filipovic**
Co-President GEOG ’17
Ali Filipovic is a senior geography student specializing in GIS and is particularly interested in conservation and climatology applications of GIS and remote sensing.

**Eli Baldwin**
Treasurer GEOG ’19
Eli is a sophomore from Northern New York, and a geography major with an Economics minor. Eli is especially interested in development geography and political ecology. Eli is also involved in Hillel, and enjoys playing basketball.

**Maria Luisa Escobar Pardo**
Historian & Secretary GEOG & ARTHIST ’17
Maria Luisa is a fourth year geography and art history double major. She has an interest in pursuing architecture conservation as a way of bridging her double major and is this year’s CUGA historian/secretary.
The trip schedule changes each year, so an itinerary will be circulated to those who sign up once the date nears. The following activities have been included in past itineraries:

- Walking tour around Long Island City
- Lower Manhattan walking tour (Wall St., Zuccotti Park, WTC, Tompkins Sq. Park, Greenwich Village, Times Square)
- Coney Island trip, Brighton Beach tour
- Williamsburg bridge walk
- Manhattan Architecture walking tour

Any eligible undergraduate students who would like to attend this trip can fill out an application and return it to Rachel Levitt in the Main Geography Office (Jefferson 220) with a $30 deposit (cash or check) to secure your spot. Additional information is also available on the School of Geography Moodle page and in the Geography Main Office. If you have any questions, please email RLevitt@clarku.edu for more information.

Click to see some photos from previous Practicing Geography Weeks: [2016](#), [2015](#), [2014](#)

**“How to Get a Job in Geography” Workshop**
On October 20th, the School of Geography held its first workshop for undergraduates to discuss how to get a job/internship in Geography/GES/ESS, led by Professor Mark Davidson. With a great turn out, students were able to engage in Q&A with Professor Davidson and also hear from two students who recently held successful internship positions relevant to their area of interest:

**Amanda Canarios (B.A. GEOG ’17)**
Amanda is a Senior in the Geography department with interests in GIS and Planning. She spent her summer working at NPR in the Research and Development labs updating a live online map. She looks forward to sharing her experience using Geography and GIS in media.

**Eric Pasay (B.A. ESS ’16, M.S. ESP ’17)**
Eric is a fifth year Environmental Science and Policy student and former Earth System Science major. He worked as an environmental protection intern at the Smithsonian Institution last summer and is now a Graduate Assistant for Career Services. His interests are in conservation and climate policy.

**School of Geography Fall Kick-Off Event**
On Thursday, October 6th, the School of Geography hosted its third annual Fall Kick-Off event for current and prospective students in Geography, Global Environmental Studies, and Earth System Science! Students ventured over between classes to enjoy cider donuts, coffee, and games, including a raffle for one of our new School of Geography water bottles (congratulations to our winner, Ali Filipovic!). Check our Facebook page for similar events coming up in the spring semester.
Fall Fest celebrates the research and creative work Clark undergraduate students produce with the support and mentoring of the University’s distinguished faculty and staff, and illustrates the University’s commitment to LEEP. Many of the projects on display have been supported by various University programs, including a number of research experiences for undergrads (REUs) within the department such as the HERO program, Condakes Summer Research, UDSC Internship, and more.

01 Isabel Miranda: GIS Internship with the National Oceanic and Atmospheric Administration (NOAA) Office of Coastal Management | Faculty Sponsor: John Rogan

02 Alex Merriam: Working with Federal Law Enforcement in Hartford, Connecticut | Faculty Sponsor: Deborah Martin

03 Rishi Singh (and Tyler Anderson and Eli Simonson, HERO): Assessing juvenile tree status from plantings initiatives within ALB Quarantine Zone, MA | HERO/Faculty Sponsor: John Rogan

04 Amanda Canarios: Research and Development at NPR ft. GIS | Faculty Sponsor: Mark Davidson

05 Shirin Esmaeili: Monitoring and Forecasting Shifting Climate and Land Change Impacts in Peru’s Parque de la Papa for Enhanced Agricultural Management | Faculty Sponsor: Florencia Sangermano

06 Madilyn Jacobsen: Addressing Youth Mobility: Recommendations for Including Youth Needs in Transit Planning | Faculty Sponsor: Deborah Martin

07 Will Heikes: Education and Urban Green Space: A GIS Analysis of Graduation Rates and Green Spaces in Denver, Colorado. Faculty Sponsor: Mark Davidson

08 Devin Clarke: Are Worcester Employers Ready for TMA Services? | Faculty Sponsor: Deborah Martin

09 Tom Smith: Assessing Landscape Vulnerability to Drought and Climate Change in National Parks of the Western United States | Faculty Sponsor: John Rogan
“Loudoun historian Eugene Scheel preserves legacies and memories”

“Eugene Scheel (B.A. GEOG ’57) -- Scheel began his exploration of Loudoun County when he moved to Waterford in 1965 while working for the National Geographic magazine. Originally from New York, his journey to the area and as a map maker is as curiously direct as he is. “I grew up during World War II and I doodled maps just like people doodle everything else,” said Scheel. “When I completed high school, I thought I wanted to go into mapping so I wrote to Gilbert Grosvenor, the editor of the National Geographic magazine, and told him what I wanted to do and asked where he recommended I go to college.” Grosvenor, the first full-time editor of National Geographic from 1899 to 1954, advised Scheel to attend Clark University to Worcester, Mass. and so he did. Following some time spent in the U.S. Marine Corps, Scheel wrote to him again saying he was ready for a job. Grosvenor invited him to come for an interview and offered Scheel a position.” View the full article here

“Alumni discuss American Indian policy, law – and trust issues”

“Judy Dworkin (PhD Geography, ’78), and David Pijawka (PhD Geography ’83), recently returned to Clark University to talk about their experiences in Arizona working with American Indians. Their talk, titled “The Challenges in Indian Country in the 21st Century: Planning, Law and Community,” was sponsored by the Graduate School of Geography and the Strassler Center for Holocaust and Genocide Studies.

Dworkin, head of the Indian Law and Tribal Relations Practice Group for Sacks Tierney Law in Phoenix, Arizona, gave a brief history of federal Indian law and explained how it has swung between two extremes: from a melting-pot approach, where Indians are assimilated into the majority culture, to one that focuses on their differences and allows tribes to self-govern and work in conjunction with the federal government. (Dworkin also mentioned that while some universities and organizations have adopted the term “Native Americans,” she uses the term “American Indians” or “Indians” because that is how legislation refers to Native people.)” Click here to view the full article

Alumnus wins best paper in Journal of Map & Geography Libraries

“Steven M. Manson (PhD ’02) co-authored a paper titled “Terra Populus: Workflows for Integrating and Harmonizing Geospatial Population and Environmental Data”, which was selected for JMGL’s Best Paper Award! In the words of the authors, “The goal of TerraPop is to enable research, learning, and policy analysis by providing integrated spatiotemporal data describing people and their environment.” The paper describes TerraPop’s collection strategies, details the geospatial workflows involved in preparing data for ingest into the project database and those used to transform data across formats for dissemination, and discusses the system used to capture and manage provenance metadata throughout the project. A key aspect of the project is the development of global current and historical administrative unit boundaries that can be linked to census data.” Click here to view

Careers & Paths of Recent Graduates

Sam Blanchard (M.A. GIS ’10) -- Data Scientist at UrbanSim, Inc.
Alexandra Cohen (B.A. GEOG ’16) -- Science Assistant at NSF (National Science Foundation)
Moriah Day (M.S. GIS ‘16) -- Summer job with NEON, Inc. as Temporary Field Technician, Botany Group
Casia Terenzoni (M.S. GISDE ’16) -- Technical Writer at Textron Systems Geospatial Solutions

Alumni at NASA DEVELOP
This summer, GISDE alumni Alison Thiem (M.S. GISDE ’16), Sean McCartney (M.S. GISDE ’15) and 5th Year alum Erin Glennie (M.S. GIS ’16) interned with NASA Develop Goddard Space Flight Center. McCartney worked as Center Lead and Thiem and Glennie were Team Members.

Apply to NASA DEVELOP for upcoming opportunities! Click to learn more

Alumni Survey
Tell us what you’re up to! Please take a minute to complete our brief survey linked here. About life after Clark. The survey can also be found linked on our Facebook page. Thank you!
Dr. Wallace E. McIntyre Makes $1 Million Gift to Geography
Written by Brenda Nikas-Hayes

The Graduate School of Geography recently received a generous gift of $1 million to support graduate student scholarship and the department more generally. We want to take this time to acknowledge and thank Dr. Wallace “Mac” McIntyre for his generosity to the Graduate School of Geography. Dr. McIntyre’s gift establishes two endowed funds at Clark: The Wallace E. McIntyre, MA ’47 and PhD ’51 and Margaret P. McIntyre Endowed Fund for Graduate Students in Geography and The Wallace E. and Margaret McIntyre Endowed Fund for Geography.

Although this gift is not the first for Clark from the McIntyre family, the bulk of this one is directed for graduate student support in the GSG. In 1997, Dr. Wallace and his wife, Margaret, an accomplished academic herself and one of the founders of the Head Start program, set up a charitable remainder trust with Clark University, which will provide general support to the Geography Department. Dr. McIntyre’s son, Dr. William McIntyre (who helped to facilitate this gift) recalls that his father believed that education is the key to achieving success in the United States and long credited Clark for his own satisfying career.

Dr. McIntyre came from humble beginnings in Chicago, IL where he lived on the family farm. Because of his father’s battle with tuberculosis the family moved for a time to Arizona. After his father passed and his mother remarried, they returned to the family farm in Illinois but later lost it during the Great Depression. He credits his mother for her emphasis on education (she only attended high school) – she pushed him to attend college. His academic areas of interest were the economic implications of geography and geology. He received his undergraduate degree from Illinois State University and then served in the Army during WWII, as a Coastal Artilleryman. With the GI bill and after searching through geography journals, he landed at Clark because of its reputation in the field of geography. Receiving his Masters in 1947, he continued on to his doctoral degree, completing it in 1951.

Prior to coming to Clark and while still in the Army, Dr. McIntyre received a Fulbright and taught for a year at the University of the Philippines in Quezon City. He also taught at the University of Maryland Extension Program for the armed services including a year teaching through this program in Frankfurt, Germany. Meeting his wife at Northwestern University while still in the Army, Dr. McIntyre career was mostly spent working for the CIA. On a year-long, sabbatical from there he studied economics at Harvard.

Dr. Wallace McIntyre credits his successful career to his time at Clark University as a graduate student in Geography saying that being here opened up the world to him, giving a poor farm boy the chance to experience a life he would not otherwise have known.

On November 18, 2016, Dr. Wallace “Mac” McIntyre will turn 98 years old. Thank you Dr. “Mac” for your service and lifelong love of learning, education and for your support of future Clark Geographers.

Dr. McIntyre is pictured below in the first row, third from the right, featured in Volume 21, No. 1 of The Monadnock, published in December 1946. Click here to view the full issue, linked on our website.
The Peter Condakes Research Fellowship provides a stipend for an undergraduate student to work as a summer research assistant with a faculty member. This fellowship is made possible by a generous gift from Peter Condakes, an alumni and geography major from the class of 1978. Visit our website to learn more about this award.

Anthony Jreije | GEOG & ECON ’18
Faculty Sponsor: Mark Davidson

“As I arrived in Beirut and started working with one of the organizations that I had been interested in, Public Works, I realized that they were doing much more interesting and relevant work regarding the housing crises in Beirut. I decided to still work on public spaces in the city but make that a supplement to my principal research on the housing crises and urban resistance to it. There has been a massive coalition of economic and legal actors conspiring to profit off of Lebanon’s most lucrative sector, real estate, at the expense of the current inhabitants of the city. Average monthly income in the city is around $500 while the average monthly rent is around $1500. The city is simply unlivable for most residents and the only policy working to preserve some social cohesion and heritage is about to be abolished.

The old rent control laws of the city allowed guaranteed shelter to most of the residents in the city. From 1948 on, Beirut grew exponentially and vibrant urban communities formed. The civil war disrupted that progress as citizens from different sectarian backgrounds started to move to specific neighborhoods segregating themselves from others. In 1992 rent control froze so that any housing contract signed after that year was not under the regime. Then, in 2014, the parliament passed a law that would expedite the transformation of the city into an elitist utopia. They abolished rent control altogether leading to a massive wave of evictions and protests. Rents for people under the old rent control regime would increase gradually for six years until they reached market prices. The increase in rent would most likely turn the city into an ultra-modern, luxury, and soulless city like Dubai just so those actors in power could make enormous sums of money.

My research concerned reasons why urban improvement mechanisms like developing Public Spaces are not arising in the city and how the interrelationships between the Banks, Real Estate Developers, and the government create a machine that molds the city at will, disregarding the current inhabitants. I was able to build many connections during my time in Beirut and talked to many activists and professors fighting the seemingly impossible task of taming this “growth machine” or at least slowing down its progress. My research will never stop on the topic but I have managed to compile several reports for the organization I worked for and helped them with gaining funding to continue their vital work. I helped them organize public forums to inform neighborhoods of what is occurring in the city and how to form coalitions to fight it. I wrote a final report on this project for the organization two weeks after I arrived in the States and plan to continue to work Public Works as I finish my degree.”

Anthony is a junior and a double major in Geography and Economics who received the Peter Condakes Summer Research Award to support his research in Beirut this past summer. The above photo shows Anthony in Lebanon.

Claire Bayler | IDSC & GES ‘17
Faculty Sponsor: Dianne Rocheleau

Claire Bayler conducted research in Cuba this summer. Wondering, alongside many others involved in alternative agricultures, what will happen to Cuba’s uniquely resilient food system if talks resume with the US?, she spent 2 months living and eating with Cuban families. Starting with a participatory homestay experience, she conducted interviews and surveys to understand the nature of food in Cuba, the rise of the urban agricultural movement in the ’90’s, and its future now as the food crisis eases and the US considers revoking its embargo. Her work is focused on food production, in all its forms, at the household level in urban and peri-urban spaces, with an eye towards understanding how the strengths of such a system might be preserved and shared in the face of an overwhelming influx of market forces.

Claire is a senior Global Environmental Studies major who received the Peter Condakes Summer Research Award to support her research this past summer.
Lois & Robert Green Summer Internship | Urban Development Social Change

The Urban Development and Social Change Program offers a paid summer internship for a continuing Clark undergraduate student, made possible by a generous endowed fund established by Clark alumni Lois and Robert Green. The intern assists a Worcester City Councilor or the staff of a Worcester city government agency or non-profit organization with a variety of projects and activities aimed at addressing issues of concern to residents of Worcester. Maddie and Devin, who are senior Geography majors with a concentration in Urban Development Social Change, were selected for the summer 2016 internship.

Madilyn Jacobsen

Over the summer, the Lois and Robert Green Internship award allowed Madilyn Jacobsen to serve as a Transportation Services Research Intern with the Central Massachusetts Regional Planning Commission (CMRPC). In an untraditional sense, Ms. Jacobsen was able to lead and conduct a research project aimed at addressing the agency goal of improving access to essential services, but with a spin at looking into addressing youth needs. Ms. Jacobsen performed a study, from the perspective of youth serving agencies, on the mobility of youth (approximately aged 9 to 18) in Worcester, with the goal of gaining an understanding of the current means of transportation and mobility for youth in the City. As a final portion of the project, Madilyn presented her summer research project at a public meeting that took place at the Worcester Public Library on September 19th*. The meeting began with a brief overview of the research project on the mobility of youth in Worcester; however, the main focus of the meeting was on the presentation of the research product, and a prioritization of the seven core recommendations for including youth needs in transportation planning. As a result of the meeting, it became clear that a high priority goal for improving the mobility of youth in Worcester needs to begin with working to build a working relationship between the Worcester Regional Transit Authority and Worcester’s youth development agencies. However, all of the suggested recommendations received support from the public. For more information about the research project and recommendations produced, please see the final report, available on CMRPC’s website here. Madilyn has since continued on staff, continuing her work with CMRPC and CMMPO.

Devin Clarke

“The purpose of this research on Transportation Management Associations (TMAs) is to assist in identifying the baseline criteria for the implementation of a successful system, in order to assess whether the Worcester and Central Massachusetts Regional Planning Commission’s (CMRPC) region has the employment conditions to support such a system. This project determines the key requirements needed by the Central Massachusetts region, specifically Worcester, given the city’s revitalization efforts to retain young adults and attract businesses to the area.

Worcester and this region has increasingly enjoyed a rise in the biotechnology industry, educational institutions, insurance groups, and medical organizations. While the region is expecting a rise in population due to the abundance of employment opportunities within the city by these organizations, CMRPC hopes to relieve much of the anticipated congestion of employees traveling to and from work in single occupant vehicles.

These member organizations will have the ability to alleviate city-wide congestion and urban sprawl in reducing vehicular traffic by promoting sustainable options for commuting to and from work daily. While this project hopes to determine the employer interest level for a TMA service, CMRPC remains optimistic that multiple organizations will show significant interest since many of them seem to exhibit an environmental consciousness given the continued rise of global climate change and air pollution.”

*Below photo: Maddie giving her presentation as part of a community dialogue event at the Worcester Public Library on September 19th
Over the summer, our five HERO students made great strides in their research around tree survivorship. After eight weeks of dedicated work and research, the students presented their findings at the annual HERO Stakeholder Summit. In the audience sat members of the DCR (State Department of Conservation and Recreation), Worcester Tree Initiative, US Department of Agriculture, administrators, faculty, staff, students of Clark, and other members of the community, who all gathered to listen to the students share their results.

Click here to view the video recording of the full presentation this summer at the annual Stakeholder Summit event on July 14th, 2016. The full presentation PDF can be downloaded here as well.

In the Media: “Clark students track survival rate of trees planted after beetle scourge in Worcester”

“After eight weeks checking on trees planted in the wake of the Asian longhorned beetle infestation, student researchers at Clark University have found that the city’s residents should be commended. ‘Stewardship is critical in general, much more than you would think,’ Clark student Tyler Anderson said Thursday while discussing the students’ most noteworthy finding: a 98 percent survival rate among a sample of street trees planted after the beetle infestation. … John Rogan, an associate professor at Clark who oversaw the research, agreed. ‘Full credit to homeowners, people in the neighborhood, and the Worcester Tree Initiative,’ Mr. Rogan said.” Worcester Telegram and Gazette 7/14/2016 Click here to view

HERO Summer 2017

The Human-Environment Regional Observatory (HERO) program is a unique undergraduate-graduate-faculty experience that engages in research on human-environment relationships in Massachusetts. HERO Fellows conduct hands-on research under the mentorship of Clark University faculty. The research conducted by HERO Fellows often leads to scholarly publications, presentations at academic conferences across the USA, and awards and honors. This program is led by Professors John Rogan (Director HERO, Co-PI) and Deborah Martin (Associate Director HERO, Co-PI).

HERO will soon be accepting applications for the Summer 2017 program! Application instructions and materials will be posted online at clarku.edu/departments/HERO, and information will be circulated to prospective applicants. If you would like to receive a brochure about HERO, email Rachel Levitt at RLevitt@clarku.edu
Dates to Remember

November 24-25
Thanksgiving Break

November 29
GSG Justice Faculty Candidate #1 Talk
1:20-30pm, Lurie Conference Room, UC

December 1
GSG Justice Faculty Candidate #2 Talk
1:20-30pm, Jefferson 218

December 6
GSG Justice Faculty Candidate #3 Talk
1:20-30pm, Lurie Conference Room, UC

December 8
GSG GIS Faculty Candidate #3 Talk
10:30-12pm, Lurie Conference Room, UC

December 12
Last day of classes

December 12-16
AGU Conference | San Francisco, CA

January 16
First day of classes

February 2
Colloquium: Allison Dunn
Worcester State University

March 2
Colloquium: Doug Fuller
University of Miami

March 6-10
Spring Break

March 16
ATWOOD: Arturo Escobar
(See details below)
7pm in Tilton Hall, UC

March 23
Colloquium: Carolyn Finney
University of Kentucky

April 5-9
AAG Conference
Boston, MA

April 17-23
Practicing Geography Week

April 20
Colloquium: Setha Low
City University of New York

April 21-23
Practicing Geography Week New York
City Trip

Wallace W. Atwood Lecturer:
Arturo Escobar

Join us on Thursday, March 16th
for our 2017 Wallace W. Atwood lecture, featuring
Arturo Escobar, beginning at 7pm in Tilton Hall!

Arturo Escobar is the Kenan Distinguished Teaching Professor of Anthropology at the University of North Carolina at Chapel Hill. Arturo was born and grew up in Colombia. Trained initially in science and engineering, he became concerned towards the end of his undergraduate degree in Cali with questions of hunger and development, which took him into the social sciences and, eventually, anthropology. After completing an interdisciplinary PhD in Development Philosophy, Policy and Planning at the University of California at Berkeley, he taught at various places in the US. He has also taught for short periods in Colombia, Ecuador, Argentina, Finland, Spain and England, and conducted or participated in workshops on development and ecology in Colombia, Mali, Denmark, England, and Mexico. His main academic works are: Encountering Development: The Making and Unmaking of the Third World (1995; also available in Spanish and Chinese; 2nd. Ed. 2011); Territories of Difference: Place, Movements, Life, Redes (2008), and the collections of essays in Spanish, El final del salvaje. Naturaleza, cultura y política en la antropología contemporánea (1999) and Más allá del Tercer Mundo. Globalización y diferenciación (2005). He has co-edited a number of volumes of social movements, women and place, the World Social Forum, and globalization and the decolonial option. Work with activists of the Proceso de Comunidades Negras (PCN), a network of Afro-Colombian organizations, has been since 1993 one of his most important sources of inspiration on questions of activism, environment, culture and development. It continues to be so today. Other intellectual/political projects include the World Anthropologies Network (WAN); the ‘Women and the Politics of Place’ project, co-organized with Wendy Harcourt (Society for International Development, SID); the Latin American ‘Modernity/Coloniality/Decoloniality’ group; and the ‘Social Movements Working Group’ (at UNC, Chapel Hill). In recent years, he has developed a close collaboration with Mario Blaser and Marisol de la Cadena on a fifth area of work, that of pluriversal studies and design. A closely related area of work is discourses of ecological and cultural transition, in part in collaboration with the Uruguayan ecologist Eduardo Gudynas.

More information can be found at:
http://aescobar.web.unc.edu/

AAG Boston, April 2017
Don't forget to register for the upcoming 2017 AAG Conference in Boston, MA! Visit the annual meeting website to learn more

Stay up to date on our latest events and announcements by following us on Facebook: facebook.com/clarkuniversitygeography
About Clark Geography
Clark Geography was established in 1921 as a graduate program only, and retains the name Graduate School of Geography in honor of its legacy as the longest-standing doctoral program in the U.S. The undergraduate program was established in 1923. In addition to its undergraduate and Ph.D. programs, Clark Geography offers an accelerated B.A./M.S. degree in Geographic Information Science to qualified Clark undergraduates, and, in partnership with the Department of International Development, Community and Environment (IDCE), an M.S. in Geographic Information Science for Development and Environment. The department and its facilities are located in Jefferson Academic Center and the Geography Building. Click here to learn more about Clark Geography.

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