

Diffusion - Wednesday, August 03, 2011

2011-2012 - #1

**Department of Geography
Virginia Polytechnic Institute and State University**

Meteorology edition

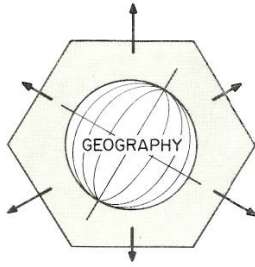
On July 19, 2011, the State Council for Higher Education in Virginia approved our proposal for a new BS in Meteorology degree. The department is most pleased to let all know that the new degree will begin in January, 2012, and, through careful planning on their parts over the past few years, will have its first graduates in May, 2012.

As this program is hosted in the Department of Geography, a significant focus on Geospatial Information Technology and its ability to unite data from both the natural and human environments will be prominent in the degree requirements. Graduates of this degree program will be proficient in spatial analysis by making use of Geographic Information Science (GIS), and Remote Sensing as well as the specialized software used in forecasting and modeling weather events.



Students will be able to predict severe weather (Meteorology) and assess its impacts on ground features (Geospatial Science) both human (e.g. building damage, road flooding, or loss of life) and natural (e.g. floodwaters, soil loss, or avalanche danger). This combination of skills will qualify graduates for employment dealing in loss prevention (e.g. the Federal Emergency Management Agency, the insurance industry, navigation and routing of ships) weather prediction (the National Weather Service, AccuWeather, meteorological consulting firms), and in geospatial analyst positions dealing with the physical environment (e.g. those responsible for Environmental Impact statements, the Environmental Protection Agency, the Virginia Department of Environmental Quality, the Virginia Department Emergency Management, and environmental non-profits or NGOs).

The Virginia Tech program is the first BS in meteorology in the Commonwealth of Virginia.



Diffusion - Friday, August 12, 2011

2011-2012 - #2

**Department of Geography
Virginia Polytechnic Institute and State University**

Congratulations to **Arvind Bhuta** (GEA PhD. candidate) on two new publications:

Bhuta, A.A.R., J.L. Hart, and R. Murray. 2011. Composition and structure of a second growth mixed pine-hardwood forest in the Eastern Highland Rim of the Interior Plateau. *Natural Areas Journal* (In Press).

Hart, J.L., **A.A.R. Bhuta**, R.L. Murray. 2011. Canopy disturbance patterns in secondary hardwood stands on the Highland Rim of Alabama. *Castanea* 76(1): 55–63.

Major congratulations to **Kirsten Elizabeth Miller of Malvern, Pa.**, a sophomore major was awarded a \$1,000 scholarship from the National Society of Collegiate Scholars (one of five nationally) for her commitment to integrity. Scholarship applicants were required to submit two essays about how they embrace integrity in their daily lives, both personally and academically. Kirsten told the committee in her essays: “I can relate to the topic of integrity. A lot of the world is about getting to the top, but to me, having integrity is about more than just that. The money from this scholarship has given me the opportunity to take a summer service-learning opportunity in Africa. Working with a nonprofit in Zambia will give me the opportunity to enhance the state of our planet while enhancing my own character.”

Candice Luebbering has recently won 1st place in the Student Illustrated Paper Awards sponsored by the Remote Sensing, Cartography and GIS specialty groups at the AAG meeting in Seattle, WA for her presentation on “Visualizing linguistic diversity through cartography”.

Korine Kolivras has just received news on a grant for the National Science Foundation, “Environmental Variability and Disease Emergence: Spatial Patterns of Lyme Disease Emergence in Virginia” (\$199,998). PI Korine Kolivras, with co-PI’s James Campbell (VT Geography), David Gaines (Virginia Department of Health), Yili Hong (VT Statistics), and Stephen Prisley (VT Forest Resources and Environmental Conservation).

Korine also has a new publication out,

Phoutrides, E., Coulibaly, M.B., George, C.M.*, Sacko, A., Traore, S., Bessof, K., Wiley, M., **Kolivras, K.N.**, Adelman, Z., Traore, M., and Hunsperger, E.A. 2011. Dengue virus seroprevalence among febrile patients in Bamako, Mali: Results of a 2006 surveillance study. *Journal of Vector-borne and Zoonotic Diseases* 11(8).

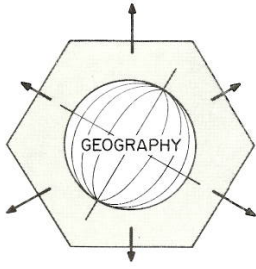
and a presentation with our new visiting assistant professor, Candice Luebbering:

Chau, C.N., **Luebbering, C.R.**, **Kolivras, K.N.**, Zoellner, J.M., and Hill, J. L. Using GIS to determine environmental factors related to obesity in a health disparate region. Presented at the International Society for Behavioral Nutrition and Physical Activity Annual Meeting. Melbourne, Australia, June 15-18, 2011.

Lisa Kennedy and graduate students **Arvind Bhuta**, **Stewart Scales**, and **Jason McVay**, and undergraduate **Chardy Staton** attended the 21st North American Dendroecology Fieldweek, which was held at Mountain Lake Biological Station, VA in August. The Fieldweek is open to students, faculty, and other professionals and teaches participants about the use of tree rings and other proxy data for dating events such as fires and droughts and reconstructing other forests changes through time. Chardy Staton, Geography major, participated in the sclerochronology group (the study of shells of mollusks and other invertebrates to reconstruct historical changes in climate and other aspects of the environment). His participation was supported by the National Science Foundation.



Left to right: Jason McVay, Chardy Staton, Lisa Kennedy, Stewart Scales, Arvind Bhuta.



Diffusion - Friday, September 02, 2011

2011-2012 - #3

**Department of Geography
Virginia Polytechnic Institute and State University**

2011 WELCOMING NEW FACULTY EDITION

The department is pleased to welcome three new faculty members to the program this fall. We welcome them in chronological order of their arrival in Blacksburg, and in their own words:



Dr. Candice Luebbering:

I am a newly minted PhD from our very own Department of Geography at Virginia Tech (specifically the relatively new college-wide Geospatial and Environmental Analysis program). I have been given a great opportunity to stay on with the Department for a little while longer as a Visiting Assistant Professor. Given how much I love Blacksburg (even after 6 years here through my MS and PhD I still haven't had my fill of the place!), VT, and our department, I am extremely excited and grateful for this position. During my time here I will be contributing to both our CRID and GEA undergrad concentrations, teaching courses in the general areas of cartography and human geography (Cartography; Environmental Problems, Population & Development; Maps and Mapping; and Intro to Human Geography). It is quite an adjustment to go so

many years behind a desk to suddenly being in front of all of them, but I'm learning something new every day and truly enjoy my interaction with our undergraduate majors and undergrads that I hope to try and steal from other majors to join our Geography family.

Concerning research, my dissertation focused on the cartographic qualities of language maps, studying the map symbology used to represent the rather intangible variable of human language. My work included a survey of the design characteristics of language maps already in use, as well as the development of a linguistic diversity surface map as a potential new map tool for educational settings. I am continuing my research with language maps as well as working on two projects with undergraduate research assistants involving map design and GIS in the area of medical geography. With a sociology/anthropology undergraduate background combined with a cartography/GIS graduate education, I love to dabble in a variety of topics which is what drew me to geography in the first place. In addition to my language map research, I have been involved in rather diverse research projects including: human-computer interaction with maps

on high-resolution screens; Lyme disease occurrence in Virginia; practices in participatory mapping; the design of a fieldwork lab for GIS courses; and calculating community walkability indices. Did I mention yet that I am interested in a diversity of topics?....

But enough about all that. I am married and actually met my husband here in the graduate program in Geography; he'll be wrapping up his PhD this fall (hopefully...!). We have a fierce, or so she thinks, 13lb Boston Terrier named Ala-Mo. No, we're not from Texas. My husband is from Alabama; I'm from Missouri (postal code MO). Can you tell we're geography nerds? In my spare time, I enjoy the beautiful SW Virginia outdoors - biking, hiking, camping, kayaking; perusing thrift stores, auctions, and yard sales for vintage wares (junkin'); and eating ice cream, or eating in general (I'm a big fan).



Dr. Andrew Ellis:

Dr. Andrew Ellis joins the Department of Geography as Associate Professor with expertise and interests in the subfields of meteorology and climatology. Drew is a native of Delaware and earned Bachelor of Arts (Geography, 1991), Master of Science (Geography, 1994), and Doctor of Philosophy (Climatology, 1997) degrees from the Geography program at the University of Delaware in Newark, Delaware. In 1997 he joined the geography faculty at Arizona State University in Tempe, Arizona where he remained until leaving for Virginia Tech in July 2011. While at Arizona State Drew served as Director of the university's Office of Climatology and, through appointment by the governor, as the State Climatologist for Arizona. He was an affiliate faculty member of the Environmental Fluid Dynamics program within the College of Engineering at Arizona State, and he was awarded the title Senior Sustainability Scientist by the university's School of Sustainability.

Trained as a hydroclimatologist, Drew's early research work was focused on snowfall variability, large scale snow cover-atmosphere interactions, and snow melt modeling. However, he spent several years working on lower atmospheric pollution problems before returning in recent years to a research agenda focused on water-related issues. Two research areas have been the focus of Drew's most recent work. One area centers on understanding the occurrence of drought and its improved representation for monitoring and study. Drew and colleagues developed the Moisture Balance Drought Index for monitoring drought conditions in the Colorado River Basin of the southwestern United States. The coverage of the index will soon be expanded to include all of the United States in cooperation with scientists at the National Climatic Data Center. The second research area focuses on assessing the sustainability of fresh water resources for populations living in arid and semi-arid climates given population growth and the uncertain hydrological impacts of climate change. The work has involved the assessment of global climate model output, river basin runoff modeling, and reservoir operation simulation. Drew has been an

investigator on projects with a total funding of nearly \$8.3 million from agencies that include National Science Foundation, National Oceanic and Atmospheric Administration, Bureau of Reclamation, and Environmental Protection Agency. The results of Drew's research have produced more than 30 peer-reviewed research papers published in journals such as the *International Journal of Climatology*, *Climate Research*, *Journal of Applied Meteorology and Climatology*, *Journal of Hydrometeorology*, *Weather and Forecasting*, *The Professional Geographer*, and the *Annals of the Association of American Geographers*.

During his career at Arizona State Drew taught meteorology and climatology courses featuring hydroclimatology, physical climatology, meteorological instrumentation and measurement, synoptic climatology, climate change, atmospheric dynamics, and computer programming. At Arizona State he received the top teaching award bestowed upon faculty by the student body, the Centennial Professorship, as well as the Outstanding Faculty Mentor award. Within Geography at Virginia Tech Drew's principal role is to teach and advise students pursuing the new Bachelor of Science degree in Meteorology, which formally launches in January 2012.

Drew resides in Blacksburg with his wife, Shelly, and son, Nathan.



Dr. Yang Shao:

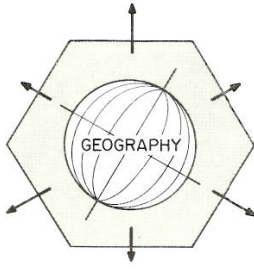
Yang Shao received the Ph.D. degree in geography from the University of North Carolina at Chapel Hill in 2007. Prior to joining Virginia Tech as an assistant professor, he was a Research Associate at the U.S. Environmental Protection Agency and National Research Council. His research focuses on geospatial techniques (GIS, remote sensing, and spatial analysis) and their applications in land use/cover change, watershed assessment, and water quality monitoring.

Yang's dissertation research focused on remote sensing, GIS, spatial analysis and modeling of urban growth in Bangkok, Thailand. In addition to his dissertation research, he participated in a series of research projects on tropical deforestation in Thailand and Ecuador. He was also involved in a Galapagos Island research project for the mapping of selected invasive plant species. He integrated

Hyperion hyper-spectral and high-spatial (sub-meter) data to develop accurate maps which provide information on spatial distributions of selected invasive plant species. During his Postdoc work with EPA, he focused on a Great Lakes Basin project to develop tools that enabled rapid and inexpensive methods to assess land use and land cover change. The tools enable conservation organizations and government agencies to better understand the consequences of environmental and energy policies in agricultural and forested landscapes. Currently, he is integrating land cover change analysis with watershed-scale environmental assessments. He is particularly interested in the impacts of land change on sediment load, nutrient balance, and water quality issues in general. Yang has published over 10 peer-reviewed research papers in

journals such as *Photogrammetric Engineering and Remote Sensing*, *Remote sensing of Environment*, *International Journal of Remote Sensing*, and *IEEE Geoscience and Remote Sensing Letters*.

Yang is originally from China. He came to U.S. in 2001 and spent almost ten years in Chapel Hill before moving to Virginia Tech. He is teaching Geospatial techniques for land modeling this semester and will teach other GIS and Remote Sensing courses starting spring 2012.



Diffusion - Monday, October 10, 2011

2011-2012 - #4

**Department of Geography
Virginia Polytechnic Institute and State University**

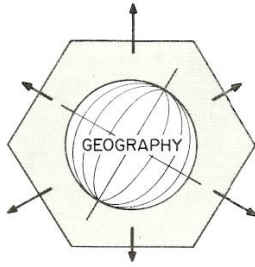
- Congratulations to Professor Emeritus, **Bon Richardson** who had a "featured review" (one of the lead reviews) of J.R. McNeill, *Mosquito Empires: Ecology and War in the Greater Caribbean, 1620-1914* (Cambridge University Press, 2010), published in the *American Historical Review* (February 2011), pp.133-135.
- Three of our faculty have a collaborative article in press:
Kolivras, K.N., Luebbering, C.R., and Resler, L.M. In press. Evaluating differences in landscape interpretation between webcam and field-based experiences. *Journal of Geography in Higher Education*.
- Jim Campbell and graduate student Baojuan Zheng were recently advised that their paper "Remote Sensing of Crop Residue Cover Using Multi-temporal Landsat Imagery," has been accepted for publication in *Remote Sensing of Environment*!
- Meteorology student Dan Goff was featured in the RVAnews – an on-line newspaper in Richmond - for his service to the Richmond community as a weather forecaster. His story is found in full at: <http://rvanews.com/features/bad-weather-leads-to-good-fortune-richmond-appreciation-for-%E2%80%98weather%E2%80%99-dan-goff/50214>. In short, Dan was honored by his followers as he volunteers a lot of his time tracking severe weather issues and reports to them in Richmond:

Dan has been 'Weather Dan' on Twitter for over three years. Being both a prodigious and knowledgeable online voice when it comes to all things weather earned him the attention of RVANews, who hired him in February 2010.

"It's a lot of work, and sometimes not a lot of sleep, but it's something I love to do, and it makes me happy to know I'm putting in a lot of energy to help keep other people safe and give them some peace of mind." In order to give people that piece of mind during Hurricane Irene, Dan constantly monitored weather and weather-related updates through various channels in Blacksburg, forecasting developments for Richmond residents. (from RVANews



Please send me your academic and relevant personal news that will be of interest to our faculty, staff, alumni, and students for inclusion in the next issue of diffusion.



Diffusion - Friday, December 02, 2011

2011-2012 - #5

**Department of Geography
Virginia Polytechnic Institute and State University**

Korine Kolivras has had a paper accepted by the Bulletin of the World Health Organization: Haque, U., Hashizume, M., **Kolivras, K.N.**, Overgaard, H. J., Das, B., Yamamoto, T. In press. Reduced death rates from cyclones in Bangladesh – What more needs to be done?. *Bulletin of the World Health Organization*.

The department has just been cleared to **hire a human geographer** to look at sustainability issues beginning in the fall of 2102. We will be looking for someone who is skilled in large classes as we believe that sustainability topics will be popular all around the campus.

Candice Luebbering's paper entitled "Visualizing linguistic diversity through cartography and GIS: A case study of linguistic diversity index mapping" has been selected for the prestigious Nystrom awards competition at the AAG meeting in New York next February. The Nystrom award is given to the best paper based on a recent dissertation, and acceptance as a finalist is extremely competitive.

Stewart Scales successfully defended his thesis "Spatial distribution of charcoal after a prescribed fire on Middle Mountain, VA" on October 27th Stewart was advised by Lisa Kennedy.

Matt Miller successfully defended his thesis "Analysis of viewshed accuracy with variable resolution LIDAR digital surface models and photogrammetrically-derived digital elevation models" on October 28. Matt was advised by Bill Carstensen.

PhD. student **Arvind Bhuta** has a new publication appearing: Eberhardt TL, Sheridan PM, & **Bhuta AAR** (2011) Revivification of a method for identifying longleaf pine timber and its application to southern pine relicts in southeastern Virginia. *Canadian Journal of Forest Research* 41, 2440-2447.

Virginia Tech Geography was well represented at the SEDAAG (Southeastern Division of the Association of American Geographers) in Savannah this November. Presentations:

Kolivras, K.N. "Geographic Dimensions of Disease Emergence: Human-Environment Interactions Across Spatial Scales".

Christie, M.E., Luebbering C., Agriesti K., Byrne M., Montgomery K., Van Houweling E., Zselezky L., and Harman M. "Gender and Participatory Mapping: Local Knowledge and Empowerment in Development Research." Poster at the annual meeting of the Southeastern Division of the Association of American Geographers, Savannah, GA (11/21/11).

Oliver, Robert. The Legacies of Losing: Rethinking the failure of Toronto's Olympic Games Bids. South Eastern Division of the Association of American Geographers. Savannah, Georgia. November 2011.

Porter, Jen and Robert Oliver. On Locating Lactation Spaces: The Lactation Support Program at Virginia Tech. South Eastern Division of the Association of American Geographers. Savannah, Georgia. November 2011.

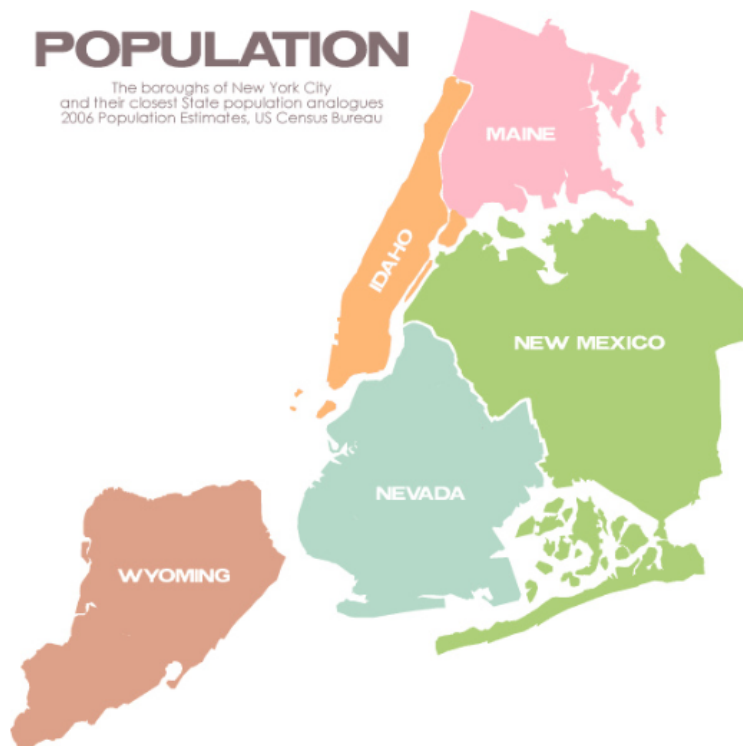
Robinson, M. Virginia Tech: The Church Telling Local Homeless to "Come to Our House". South Eastern Division of the Association of American Geographers. Savannah, Georgia. November 2011. (undergraduate presentation)

Sams, L., Kolivras, K., and J. Hill, "Examining access to recreational facilities in Danville, VA."

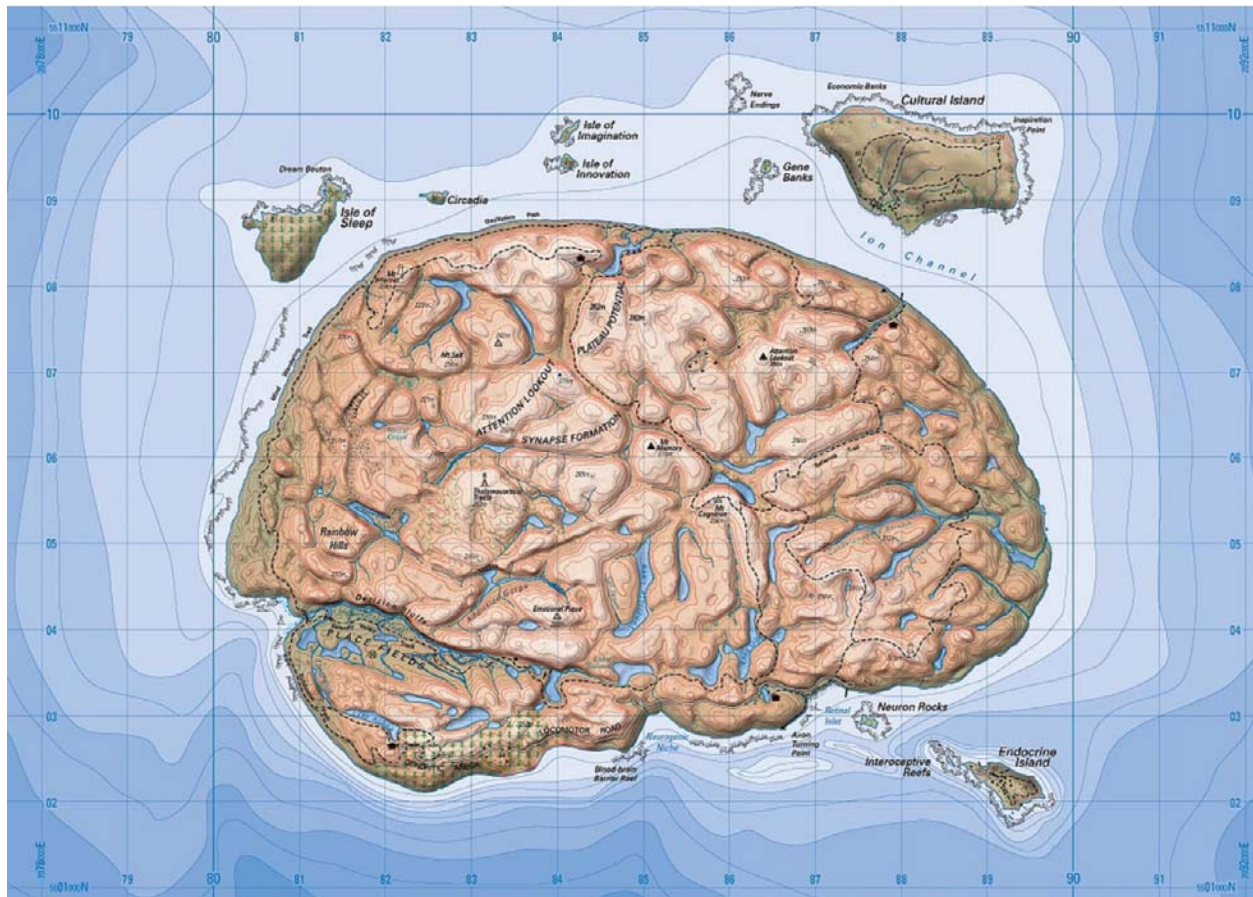
Also in attendance: **Liz Dymond, Taylor Siegler, Brent Sams, Arvind Bhuta, Justin White, Jason McVay** and faculty member **Lisa Kennedy.**

Strange Maps* of the issue: 1) NYC Burroughs as states

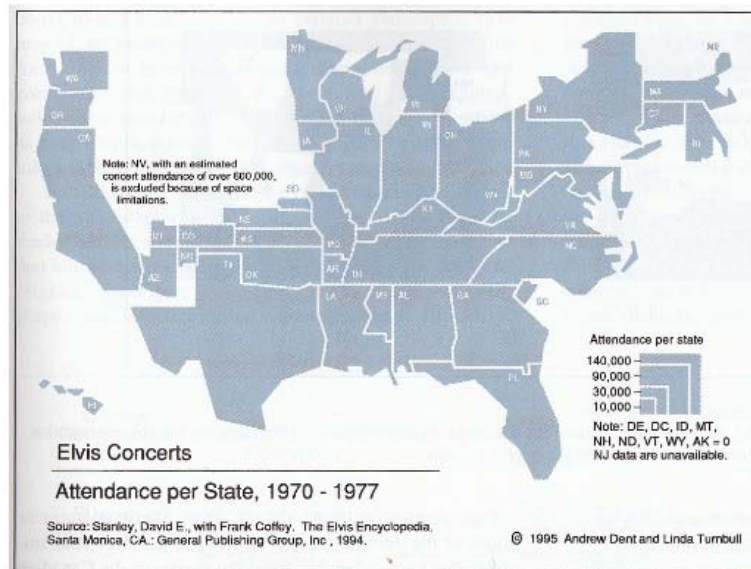
The population of New York City equals that of five entire states.



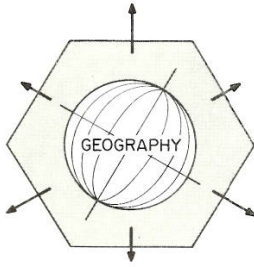
2) Your brain after too much GIS work



3) Elvis Cartogram



*<http://bigthink.com/blogs/strange-maps>



Diffusion - Wednesday, February 29, 2012

2011-2012 - #6

Department of Geography
College of Natural Resources and Environment
Virginia Polytechnic Institute and State University

- I apologize to all those below that I missed a SEDAAG presentation in Diffusion #5:

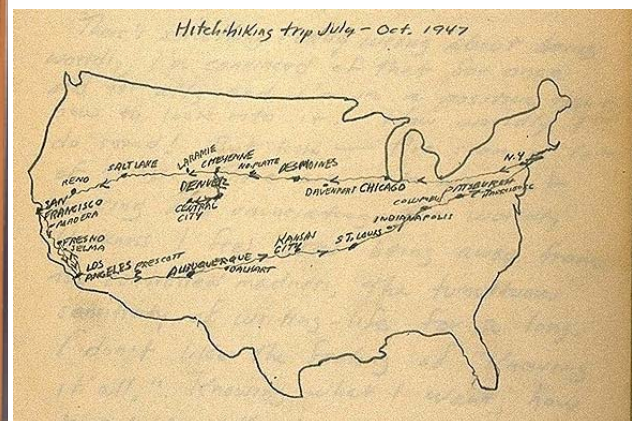
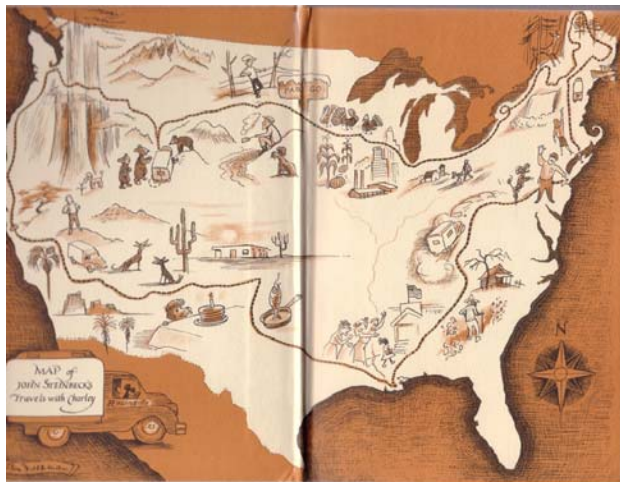
Lynn M. Resler, Lauren, N. Franklin, Emily K. Smith-McKenna, Jacob B. Slyder, Diana F. Tomback and George P. Malanson, *The Role of Whitebark Pine and Blister Rust in Treeline Community Dynamics, Western Montana.*

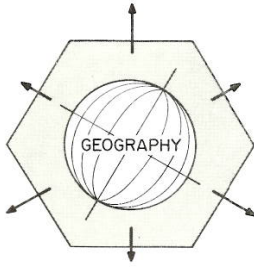
- Two of our MS students have a recent publication based on a class project with Professor Carolyn Copenheaver in the FREC department.
Jacob B. Slyder, Beth R. Stein, **Brent S. Sams,** David M. Walker, B. Jacob Beale, Jeffrey J. Feldhaus, Carolyn A. Copenheaver "Citation pattern and lifespan: a comparison of discipline, institution, and individual" in *Scientometrics* (2011) 89:955–966
- Senior **Michael Radoiu (Mickey)** has been selected for a National Geographic Society internship for the spring semester 2012. He has pushed back his graduation a little to take this prestigious opportunity in Washington, DC this spring. As he says "I accepted immediately as you might guess, so I guess I'll be going to D.C. after all, but possibly graduating late. Hopefully I'll make VT Geography proud!"
- Ms. **Baojuan Zheng**, PhD candidate, GEA, is the recipient of the 2012 **William A. Fischer Memorial Scholarship**, awarded by the American Society for Photogrammetry and Remote Sensing, "To facilitate graduate-level studies and career goals directed towards new and innovative uses of remote sensing data/techniques that relate to the natural, cultural, or agricultural resources of the Earth." As one of the society's most prestigious and competitive student awards, it forms further evidence of caliber and significance of her research. The research has developed techniques to apply remote sensing imagery to generate tillage maps by assessing the amount of crop residue (senescent vegetation) present in agricultural fields just before spring planting. Its significance can be stated briefly-- when implemented to survey landscapes over large areas, at decadal intervals, the research will support an understanding of the success of conservation measures, and improve monitoring of water quality within agricultural landscapes. Her dissertation, *Multi-temporal Remote Sensing of Tillage Status and its Application to Environmental Modeling*, is supervised by **Jim Campbell**.
- Bill Carstensen** and Stephen Schoenholtz from the CNRE water center led 22 Virginia Tech students, 3 Clemson students, and 3 San Diego State University students to the south island of New Zealand from December 26, 2011 to January 17, 2012 to study sustainability issues in a world leader in sustainability. The group visited the Earthquake ravaged areas of Christchurch, Aoraki/Mt. Cook, Milford Sound, Queenstown, Fox Glacier, Hokitika, Nelson Lakes National Park, Motueka, Abel Tasman National Park and Kaikoura. Memorable activities included a hike up to the Hooker Glacier at Mount Cook, a boat Cruise on Milford Sound, a hike on a portion of the Routeburn Track, a New Zealand great walk, , a hike atop the Fox glacier, and a swim with hundreds of Dusky Dolphins in the Kaikoura Canyon.

- **Korine Kolivras** has recently had a refereed article appear:

Haque, U., Magalhães, R.J., Mitra, D., **Kolivras, K.N.**, Schmidt, W.P., Haque, R. and Glass, G.E. 2011. The role of age, ethnicity and environmental factors in modulating malaria risk in Rajasthali, Bangladesh. *Malaria Journal* 10: 367.

- **Baojuan Zheng** was named the College of Natural Resources outstanding PhD. student for 2012 and will be recognized at the college awards ceremony on March 29. She will also be recognized at the Graduate school awards banquet. She is advised by **Jim Campbell**.
- On Saturday, February 25, 2012, the **Geographic Society** participated in Kid's Tech University (KTU). "Kid's Tech University is a program at Virginia Tech with one primary goal: creating the future workforce in science, technology, engineering, and mathematics (STEM) by sparking kids' interest in these fields" (<http://kidstechuniversity.vbi.vt.edu>). KTU has been active at Virginia Tech since 2009 and invites middle school students from across the Commonwealth to participate in a university research experience. The title of our program was *Looking Down is Looking Up: Why do we work with aerial photography?* The program introduced participants to applications of some common geospatial tools - geographic information systems (GIS), global positioning systems (GPS), and remote sensing, to provide these young minds with a new understanding of the earth. In this activity, the students used GIS to identify changes on the earth's surface. They also examined aerial photography from several different time periods. The students explored, estimated, and measured general changes in land use during these periods. The activity was led by **Jim Campbell** and **Tammy E. Parece**, Graduate President of the Geographic Society at Virginia Tech. Undergraduate students **Mac White** and **Clancy Jordan** were also instrumental in showing kids the wonders of geography.
- WEB WORLD: Literary mapping anyone? A comparison via map of Steinbeck's *Travels with Charlie; In Search of America* and Kerouac's *On the Road* (an analysis of their search trips is in <http://bigthink.com/strange-maps/553-steinbeck-vs-kerouac-gentlemen-start-your-engines>).



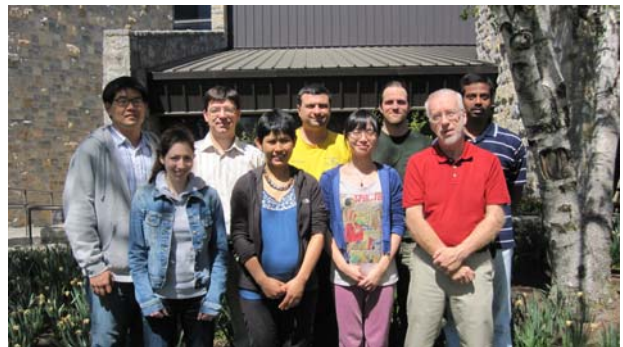


Diffusion - Monday, April 16, 2012

2011-2012 - #7

Department of Geography
College of Natural Resources and Environment
Virginia Polytechnic Institute and State University

- Professor Emeritus, **Bob Morrill** was given the *AAG Gilbert Grosvenor Honors for Geographic Education* in recognition of his extraordinary contributions to the national reform movement in geographic education at the 2012 Association of American Geographers meeting in New York City in February.
- New faculty member Yang Shao presented “*Comparison of support vector machine, neural network, and CART algorithms for the land-cover classification using limited training data points*” at the AAG meeting in New York recently:
- In what EdTech Digest called the “the best use of Skype ever,” Virginia Tech geography professor John Boyer hosted a Skype interview with Aung Sun Suu Kyi, the Burmese resistance leader who was under house arrest for 30 years. Boyer and his students created YouTube videos asking Suu Kyi for an interview, which she granted on Dec. 5. The interview was broadcast to 3,000 students in Burruss Auditorium.
(<http://mindshift.kqed.org/2012/03/five-awesome-virtual-field-trips-for-students-of-all-ages/>)
- Graduate Student Kathryn Prociv provided a two-part Blog entry for Fredericksburg.com on her tornado work in the SW Virginia region entitled “Tornadoes DO Happen in Virginia’s Mountains”.
- The Hokies for Wetlands Team recently took First Place in the 2012 ASPRS GeoLeague Challenge! The competition involved developing a cost- and time-efficient remote sensing method for updating the National Coastal Wetlands Inventory. Our team was made up of members from the FREC and GEOG departments who proposed an innovative data fusion method, which we described in a proposal and presentation. Team members included FREC students Nilam Kayastha, Kemal Gokkaya, Ranjith Gopalakrishnan, and Won Hwang, as well as GEOG students **Baojuan Zheng**, **Ioannis Kokkinidis**, and **Taylor Seigler**. The team thanks **Dr. Campbell**, Dr. Galbraith, Dr. Wynne, and Dr. Thomas for their assistance with their effort.
- Graduate student **Tammy Parece** has won second place in the 2012 Virginia Tech Graduate Student Association Poster context for her poster “Delineating drainage networks in urban

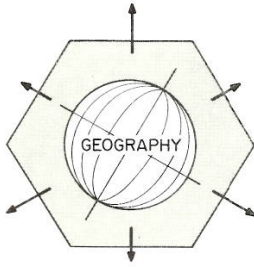


- Graduate students and their advisors from Geography won the top two prizes in the annual Office of Geographic Information Systems and Remote Sensing Research poster competition:

Second prize: **Haito Wang, L. M. Kennedy, Y. Shao, and J. B. Campbell.** 2012.
 “Assessing decadal landcover change in desertified area in northwestern China using Landsat TM data — A case study in Zhongwei City and Shapotou Natural Reserve.” Poster presentation at the Virginia Tech 2012 GIS and Remote Sensing Symposium. Blacksburg, VA. 13 April 2012.

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- BRITISH AMERICA**
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INDIANA
OHIO
PENNSYLVANIA
NEW YORK
MAINE
VERMONT
MASS.
CONN.
MARYLAND
VIRGINIA
NORTH CAROLINA
SOUTH CAROLINA
GEORGIA
FLORIDA
ALABAMA
MISSISSIPPI
LOUISIANA
TEXAS
NEW MEXICO
UTAH
CALIFORNIA
MEXICO
GULF OF MEXICO
PACIFIC OCEAN
ATLANTIC OCEAN
- CLASS 1**
1/2 per cent extra for acclimated persons.
" 5 " as per special agreement.
" 6 " per cent extra for residence, excluding the mines.
- CLASS 2**
1/2 per cent extra for acclimated persons.
" 5 " as per special agreement.
" 6 " per cent extra for residence, excluding the mines.
- CLASS 3**
1/2 per cent extra for acclimated persons.
" 5 " as per special agreement.
" 6 " per cent extra for residence, excluding the mines.
- CLASS 4**
1/2 per cent extra for acclimated persons.
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- CLASS 6**
1/2 per cent extra for acclimated persons.
" 5 " as per special agreement.
" 6 " per cent extra for residence, excluding the mines.
- The heavy lines are the boundaries of the classes.
- J. A. Antice & Co. N.Y.

- Beginning with #8 – alumni news will be included. Please send me (carstens@vt.edu) your news and pictures for diffusion so we can know what you are doing as well as your knowing what we are doing. We will get issues out as they fill up, so your news will be far more timely than in the past.



Diffusion - Monday, June 11, 2012

2011-2012 - #8 – Graduation 2012 Edition

**Department of Geography
College of Natural Resources and Environment
Virginia Polytechnic Institute and State University**

While we have had a tradition of posting a summer newsletter to all our alumni each year, it is difficult to pass along timely, up-to-date news in an annual edition. So, we are now launching the Diffusion with new “Department News” and “Alumni News” sections for news from the department, the campus, current students and alumni. We hope that this timelier newsletter will appeal to you and that you will regularly send in news (and photos) that the rest of your fellow students need to know about you – jobs – marriages – kids- even grandkids (we do go back to the 70s after all).

Diffusion goes to press whenever we “fill up” – “when it fits we print” so please send in your news so we can publish more timely issues per year.

Department News

- The Department graduated our first Meteorology majors this spring. Even though the program only officially began in January, 2012, we had three meteorology graduates complete at this year’s commencement on May 12, 2012, with three more to finish this summer.
- Meteorology major **Paul Miller** has been selected to join the VT chapter of Phi Beta Kappa, and was inducted into that esteemed organization on May 10, 2012.
- The Virginia Water Environment Association (VWEA) recently announced that Geography, and GEA doctoral student, **Tammy E. Parece** is the winner of the 2012 VWEA Sonny Roden Memorial Scholarship. The award is based upon academic performance, extracurricular activities, work and research experience, and the applicant’s essay addressing today’s most important water resources issues. Tammy, who is the first-place awardee of the three scholarships awarded, will receive a cash award to support her educational expenses. The Virginia Water Environment Association is dedicated to protection and enhance of Virginia’s water environment; it presents awards annually to applicants enrolled in a graduate programs in science or environmental engineering at Virginia universities.
- GEA PhD candidate **Baojuan Zheng** is senior author for a paper recently accepted for publication in the Journal of Soil and Water Conservation:

Zheng, Baojuan, J. B. Campbell, G. Serbin, and C. Daughtry. Multi-temporal remote sensing of crop residue cover and tillage practices: A validation of the minNDTI strategy in the United States. Forthcoming in-- Journal of Soil and Water Conservation. (Dr. Serbin is an analyst at InuTeq LLC, Washington, DC; Dr. Daughtry is a Research Agronomist at USDA-ARS

Hydrology and Remote Sensing Laboratory, Beltsville, MD).

Among reviewers' comments: "The experimental design is rigorous, the analysis techniques appropriate and the interpretations are reasonable and informative. Overall this is a high quality paper that contributes substantially to our understanding of appropriate methods for continuous and categorical estimation of crop residue cover. One the best aspects of this paper is its candid discussion of limitations."

- **Lisa Kennedy** has received funding from The Nature Conservancy, for a project entitled "Fire-Vegetation Dynamics in the Warm Springs Mt. Preserve and Area"
- On 9 May, **Glen Gibson**, Geography, and Geospatial and Environmental Analysis, successfully defended his dissertation, *War and Agriculture: Three Decades of Agricultural Land Use and Land Cover Change in Iraq*. Glen analyzed Landsat TM imagery to document expansion and contraction of agricultural lands during the past three decades, when Iraq's agricultural systems expanded into marginal landscapes, and later experienced land degradation and abandonment, disrupting local food supplies. Major Gibson, PhD, will soon assume duties as an Air Liaison Officer at Fort Hood, Texas, where he will provide close air support expertise for the 1st Cavalry Division, which is scheduled to deploy to Afghanistan in 2013.
- **Jim Campbell** has recently received a grant from CIDER (the Virginia Tech Center for Instructional Development and Educational Research for "Restructuring Introduction to Remote Sensing." He will use the award to develop new strategies for a larger class including developing on-line tutorials to support laboratory and homework exercises.
- **Lynn Resler** has been selected to participate in the 2012 *Connect Seminar* linking US and Canadian Teachers and Researchers. The event will be held in Ottawa in late July. We can expect her new Arctic class this coming year to be even more enlightening.

Alumni News

We welcome out newest undergraduate alumni to the fold. All of these students graduated on May 12. Please let us know what you are planning and importantly where you are headed geographically so we can let everyone know for future editions of diffusion.

Chase	Abe
Katherine	Barnes
Andrew	Barton
Emily	Bolt
Kathryn	Campbell
Megan	Cochran
Rodrigo	Costas
David	Cox

Jesse	Dealto
Lydia	Eggleston
Robert	Fekete
Daniel	Germroth
Sean	Golden
Matthew	Grimm
Jeffrey	Groff
Ryan	Hawes

Patrick	Hess
Stephen	Huether
Benjamin	Isaacs
John	Joeckel
Adelina	Jones
Isaac	Jones
Matthew	Kadak
Jordan	Keel

Benjamin	King
Matthew	King
Gregory	Lemieux
Alexander	Lopes
Melissa	Lyden
Kelsey	Madden
Mark	McKenzie
Nicholas	Mosman
Timothy	O'Leary
Timothy	Proctor

Michael	Radoiu
Joshua	Rhamy
Eric	Rice
Matthew	Robinson
Steven	Schambach
Travis	Simpkins
Garrett	Smedley
Kendrick	Smith
Katrina	Stanziano
Edward	Strubel

Nicholas	Tepfenhart
Patrick	Trail
Colin	Ware
James	Webb
Robert	White
Jarrold	Wilson
Sheung Yat	Yim
Jon Wayne	Yu
Chelsea	Zabowski
Alexander	Zelinka

We also applaud our first meteorology graduates:

Davis	Aaron	MTRG
Huddleston	Samantha	MTRG
Lafon	Michael	MTRG
Miller	Paul	MTRG
Sullivan	Kevin	MTRG
Vizzi	Rebecca	MTRG

And our graduate students who completed in 2011-2012:

Fall 2011- Spring 2012 - MS

Link Elmore
Kathryn Prociv
Lauren Sams
David Selnick
Jake Slyder
Matthew Miller

Spring 2012 – Ph.d

Glen Gibson
Arvind Bhuta

Summer 2012 –Ph.D

Baojuan Zheng

Terri (Fromwiller) Edwards (BA 1986) has been named Director of Marketing and Communications for the Richmond Times-Dispatch. In her expanded role, Edwards will direct all marketing campaigns for The Times-Dispatch and TimesDispatch.com, including promotions with key partners and internal and external communications plans. In addition, Edwards will lead marketing campaigns for affiliated products, such as Work it, Richmond.



Mark Dion (BA 2003) reports that “I joined Booz Allen Hamilton in Nov 2010 after about 4 years with SAIC and a year and half with Laser Scan, Inc. before that. I supported NGA's Office

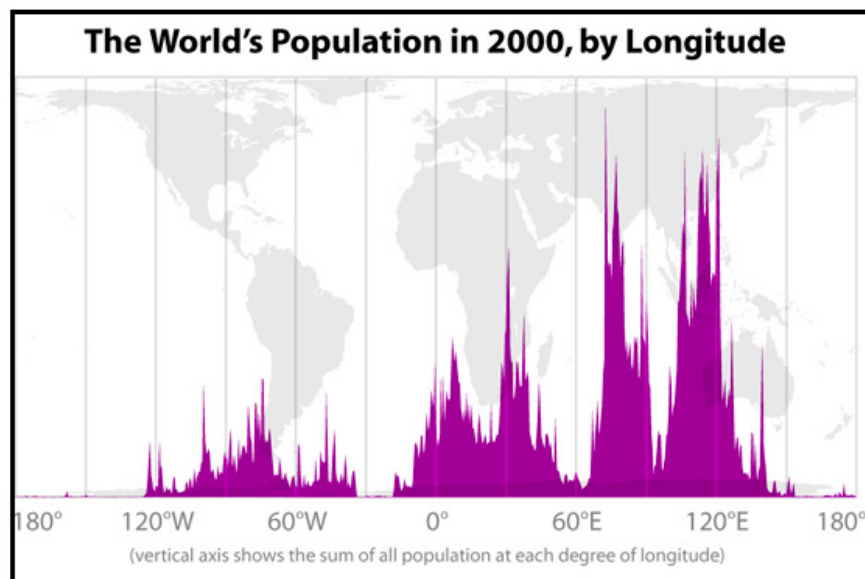
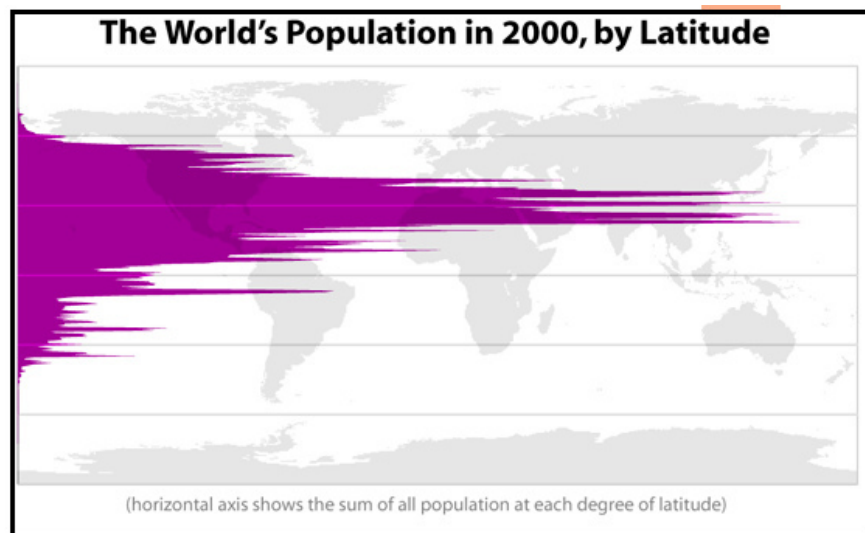
of Global Navigation most of that time, though the last 2 and half years I've been supporting the Defense Threat Reduction Agency in northern Virginia and am currently doing so.”

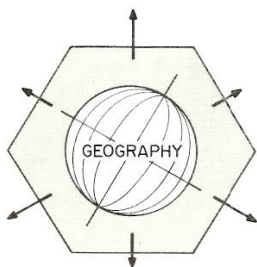
“I've been involved in geospatial analysis, data architecture, web mapping, analytical methodologies, pretty much anything they can think of since DTRA is fairly new to the geospatial game as it pertains to intelligence.”

“I am currently teamed with **Berkley Almeida (MS GEOG 2005)** as he is one of our subs from GeoEye.”

“PS - I got married to a JMU Geographer, Diana Martin, on September 17th, 2011.”

Final words: Some interesting views of world population: (thanks to strange maps #563 – has more text and explanations as well as reader comments)





Diffusion - Tuesday, July 31, 2012

2011-2012 - #9

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Departmental News

- The Whitebark Pine Ecosystem Foundation recently asked PhD. student **Emily Smith-McKenna** to submit an article about her research on treeline, blister rust, and whitebark pine, for their semi-annual publication. It has just appeared at:

Smith-McKenna, E.K. 2012. Blister Rust at treeline: Topographic Influences. In *Nutcracker Notes*, Issue 22: Spring/Summer 2012. Whitebark Pine Ecosystem Foundation, www.whitebarkfound.org

- Faculty member **Yang Shao** has had two recent publications:
Shao, Y., R. Lunetta, 2012. Comparison of support vector machine, neural network, and CART algorithms for the land-cover classification using limited training data points. *ISPRS Journal of Photogrammetry and Remote Sensing*, 70, 78-87.

Shao, Y., R. Lunetta, A. Macpherson, G. Chen, J. Luo. Assessing sediment yield for selected watersheds in the Great Lakes Basin for future agricultural land use change scenarios, *Environmental Management*, in press.

- Recent PhD. student **Glen Gibson** has had another publication from his dissertation:

Gibson, G.R., J. B. Campbell, and R. H. Wynne. Three Decades of War and Food Insecurity in Iraq. *Photogrammetric Engineering & Remote Sensing*. Vol. 78, pp. 885-895.

- In July 2012, GEA Ph.D. student, **Tammy Parece**, was co-instructor for three two-day geospatial workshops, at three different community colleges across Virginia, for precollege teachers and other educators. Each workshop introduced participants to GPS, GIS and remote sensing. The workshops included approaches to integrating geospatial technologies in the classroom and applicability to the Virginia Standards of Learning. Alison Goforth, a Montgomery County Auburn High School science teacher was her co-instructor. The workshops were attended by a wide-range of educators -- elementary, middle, and high school teachers, some community college officials and instructors, and 4-H coordinators, among others. These workshops were funded jointly by VirginiaView, NSF, and the Virginia Space Grant Consortium.

Alumni News

- **Brooke Wright** (BA, 2009) wrote us from Afghanistan where she and fellow alum **George Hogg** (BA, 2010) are currently posted.



“Greetings from Afghanistan! **George Hogg** and I wanted to give you an after graduation update! Currently, we are both serving in Afghanistan. George is a 2LT in the Army serving as an Infantry platoon leader for Task Force Blue Geronimo-Team Apache, and I'm out here serving with

Task Force NGA. We are both stationed in different locations but we were able to meet up at FOB Salerno; where I provided geospatial data to his unit.

Hope all is well in Blacksburg...and thanks for preparing me for an awesome job!

Go HOKIES!”

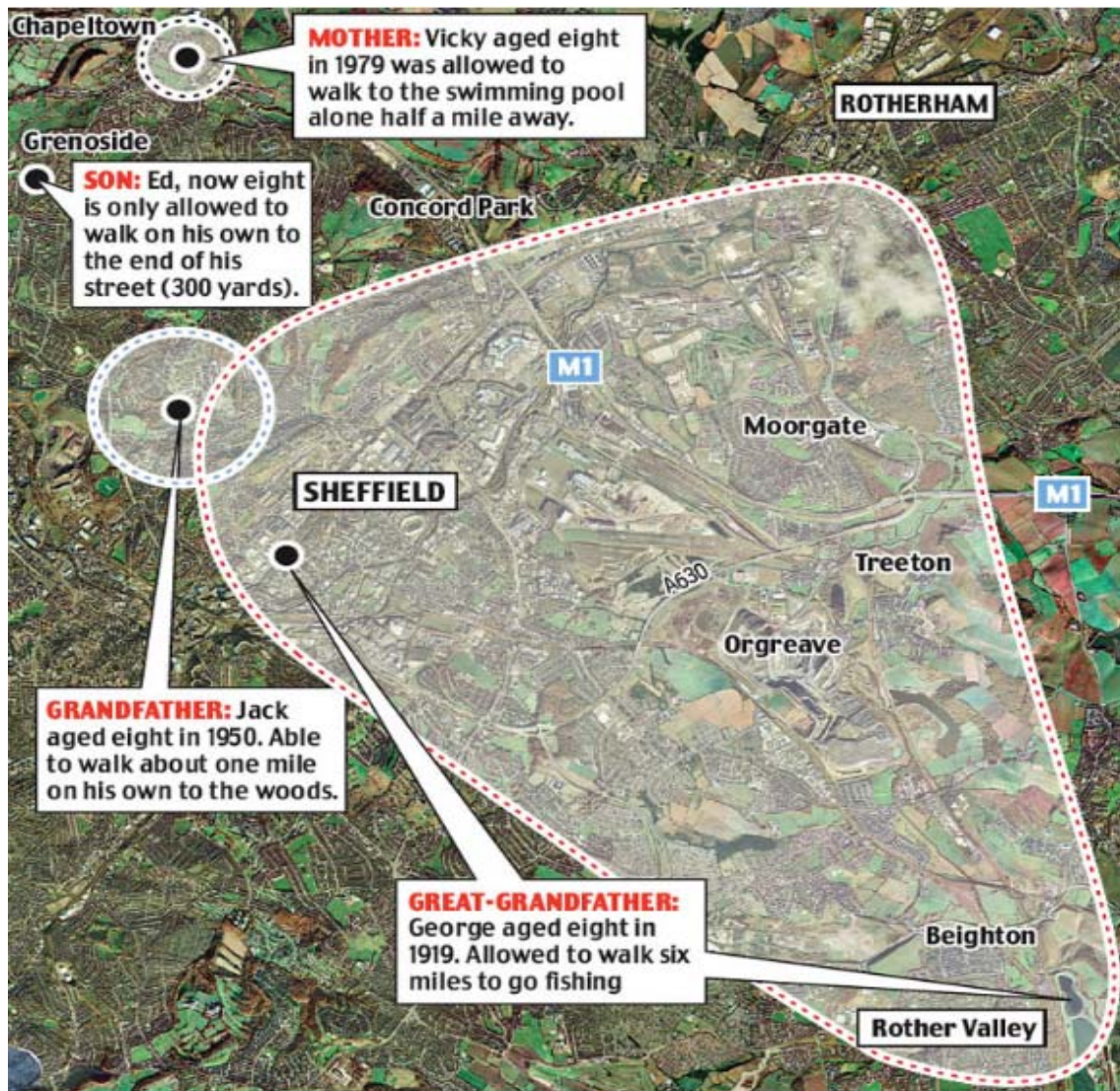
- **Sean Wohltman** (BA, 2004, MS, 2005) is working at Google on their Google Earth Engine mapping product and yells us that “real analytics are coming to things we're working on”. For some examples see:

http://www.youtube.com/watch?v=rU-FqJ_HGd4

He also tells us that he and his wife had their first child, a son and future Hokie last December.

On-line and of interest: The Great Indoors (thanks as always to the strangemaps blog for the map, the story, and the interesting comments that follow it at <http://bigthink.com/strange-maps/571-the-great-indoors-or-childhoods-end>):

A look back at the changes in childhood activities across generations of western society shows far different childhood activities and a much smaller travel zone. This interesting map illustrates such a case. Think of how your parents spent their childhood free time, how you did. How will your kids do so? How does this affect all of us?



- In 1919, George, the great-grandfather of the family, was allowed to walk six mile by himself to go fishing at Rother Valley.
- In 1950, Jack, the grandfather, was allowed to walk one mile by himself to go play in the woods nearby. Like his father, he walked to school.
- In 1979, Vicky, the mother, could walk by herself to the swimming pool, half a mile away.
- In 2007, Ed, the son, was only able to walk to the end of the street on his own - a mere 300 yards. He was driven to school, and even to a place where he could ride his bike safely.

Please send us your news and photos for the next edition of diffusion. Seen a great geography puzzle, interesting map, or a new ways of looking at anything spatially? Please send it (or a link) to me!! (carstens@vt.edu)