On September 22, 2009 we celebrated the Autumn Equinox by dropping a pumpkin from the roof of the Classroom Building. The celebration included cider, cookies, and an opportunity to sign the pumpkin with your name, good wishes, etc. With permission from the College – even the presence of a police officer to protect the people gathered from pumpkin shrapnel – Dr. Stephen Vermette carried the pumpkin to the roof of the Classroom Building and let go of it at exactly 5:18 p.m.

Thank you Jolani for bringing the pumpkin and Caitlin for planting the seed for this activity (the cookies too). Others from the Meteorology Club took part, and we attracted a good crowd.
Kim Irvine continued working on research, education, and capacity-building projects both locally and in Southeast Asia. Locally, a great deal of effort has gone into completing the sampling for Phase II of the Buffalo Sewer Authority’s Long Term Control Plan for Combined Sewer Overflow Abatement. This project had a team of students from Buffalo State and U.B. as well as faculty from the Department on call and tracking storm events 7 days a week, 24 hours a day! The sampling focused on the Black Rock Canal, Niagara River, and Scajaquada Creek. An erosion and sediment transport modeling project on Cayuga Creek, Niagara County, was completed for the U.S. Army Corps of Engineers, Buffalo District, and a hospitality sector pollution prevention project, in collaboration with Erie County Department of Environment and Planning, continued under funding from the U.S. EPA. Dr. Irvine continued his National Science Foundation project, in collaboration with Dr. Vermette and Dr. Doug Graber Neufeld of Eastern Mennonite University, that brings 6 undergraduates to Thailand and Cambodia to conduct a research project for 6 weeks in the summer. He also started a new project with Dr. Vermette and two local Non-Government Organizations in Cambodia (Resource Development International and Center for Development Oriented Research) on pesticide use.

Dr. Irvine hosted a scientific delegation from Vietnam interested in watershed restoration, August 2-9, 2009, including tours of the Buffalo wastewater treatment plant, brownfields restoration sites, habitat restoration sites, the Buffalo River Area of Concern, state-of-the-art solid waste recycling facility, and meetings with staff from the Erie County Department of Environment and Planning, New York State Department of Environmental Conservation, U.S. Army Corps of Engineers, Conestoga-Rovers & Associates, and Buffalo-Niagara Riverkeeper. Delegation members were: Ms. Trinh Thi Long, Director, Center for Environment Science and Technology, Southern Institute of Water Resources Research; Dr. Le Manh Hung, Director of Vietnam Academy for Water Resources; Dr. Nguyen Binh Thin, Deputy Chief, Department of Science, Technology and Environment, Ministry of Agriculture and Rural Development; and Mr. Le Quang Thanh, Deputy Chief, Department of Social and Natural Sciences Management, Ministry of Science and Technology. Dr. Irvine subsequently was invited to Vietnam to make a presentation on river restoration experiences in Buffalo at a workshop that focused on clean up of the Thi Vai River. As part of the workshop he was interviewed by the Dong Nai Radio and Television Station.

Dr. Irvine was an invited keynote speaker at the 3rd CALIBRE (Cambodia and Laos Initiative for Building human Resources for the Environment – EU Asialink) Workshop on Field Sampling and Analysis. National University of Laos, Vientiane, Laos, March 30, 2009 where he spoke about the Role of Phnom Penh’s wetlands in sustainably treating sewage discharges to the Mekong/Bassac River System. He also gave an invited talk on GIS applications as a decision-making tool for community health at the Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand, April 6, 2009. Finally, Dr. Irvine continued to help teach the ED78.15, Wastewater Design course in the Environmental Engineering program at Asian Institute of Technology in Bangkok.

Publications this year included:


Students and faculty training for sampling on the Black Rock Canal at the Great Lakes Center Field Station.

Students sampling on Scajaquada Creek at 4 am!
Stephen Vermette worked on a number of projects this past year. In Southeast Asia three projects are noteworthy. He worked with Vida Vanchan to pilot a project developing a ‘Geography Kit’ for use in Cambodian schools. The kit would provide up-to-date resources for teachers and students who are sorely lacking these resources. The kits were tested during a workshop at Baktouk high school in Phnom Penh. Teacher feedback was positive. According to the teachers, lack of teaching resources and knowledge is mainly responsible for the lack of interests in the classroom and general education as a whole. If funding is found, their plan is to collaborate with the National Institute of Education (NIE) to distribute these kits across Cambodia. Secondly, with Kim Irvine and Suon Seng (CENTDAR – a local NGO) and funding from the Conservation, Food, and Health Foundation, Stephen assessed the knowledge of Cambodian farmers on the use of pesticides. The assessment took the form or workshops and the administration of questionnaires. Their goal is to propose actions needed for the sustainable use of pesticides. Thirdly, The NSF International Research Experience for Students (IRES) project continued into its second year. As is the first year, Stephen helped direct six students on an undergraduate research experience focusing on sustainable sanitation and water quality in Cambodia and Thailand.

In WNY Stephen’s research focused on climatology. Working with Tom Niziol (National Weather Service) and Lindsey Higgins (Geography Major), Stephen explored hypotheses explaining the rapid drop in winter nighttime temperatures recorded at the Watertown Airport (location of NWS sensors). One hypothesis is that the sensors are located in depressions where cold air accumulates until reaching the temperature sensor – causing a rapid drop in temperatures. Efforts to correlate soil freezing depth with Freezing Degree Day (FDD) calculations continued from last year with the installation of a number of frost tubes, as did Buffalo’s Lake Breeze Project where the city and surrounding suburbs were instrumented with temperature data loggers.

Stephen again took students to the Bahamas as part of the ‘Bahamas Field Experience’ course and to caves as part of ‘Cavern Studies’.

Kelly Frothingham has been working with the Buffalo Niagara Riverkeeper organization in the Cayuga Creek watershed in Niagara County for a number of years. As a result of a minigrant awarded through the Buffalo State Office of College and Community Partnerships, she is currently working on a project with Riverkeeper to assess Cayuga Creek watershed landowners’ opinions and perceptions of environmental problems in the watershed. A questionnaire was mailed to approximately 250 landowners in the watershed. The purpose of the questionnaire is to increase community involvement in on-going planning efforts aimed at improving environmental conditions in Cayuga Creek. We hope to be able to identify how watershed residents are using the creek, what their concerns are, and what problems need to be addressed. The results of the survey will contribute to and help guide on-going watershed management activities in Cayuga Creek.

Dr. Frothingham was also involved in the Engineering for Stream Ecosystem Restoration: University at Buffalo Summer Workshop Series for the second year in a row. The three-week workshop is open to environmental practitioners (e.g., engineers, environmental scientists and regulators, ecologists, consultants, and land use planners) and it is part of the required coursework for ERIE IGERT Ph.D. students. She taught with two other colleagues during the River Processes – Fluvial Geomorphology and Channel Processes week and covered topics including the need for stream restoration, the watershed management process, stakeholder participation in watershed management, physical stream assessment, and biotechnical streambank stabilization approaches.

Tao Tang presented a paper on object oriented feature capture from remotely sensed imagery into GIS database in the International Conference of Geoinformatics, Washington, DC, with his former graduate student Xiao Wang, Dr. J. Carbonara, and Dr. Z. H. Shi.

Dr. Tang advised an undergraduate student, Mr. Lei Cai, for a National Science Foundation supported undergraduate research fellowship at Buffalo State College.

With the fellowship support, Mr. Cai traveled internationally with Dr. Tang to conduct field data collections and indoor GIS spatial analyses for his research on the relations of air particle pollution and economic development.

Dr. Tang is hosting and advising a visiting scholar, Ms. Wenhui Zhao, from the Capital Normal University in China this year. Ms. Zhao is a Ph.D. Candidate at CNU specializing in GIS and remote sensing. Dr. Tang is one of her advisors of graduate study.
Dr. Tang was appointed as an Adjunct Associate Professor at the Department of Geography, University at Buffalo. He is now serving as a dissertation committee member for a Ph.D. candidate who works at Erie County as a GIS manager.

**Wende Mix** continued to work with graduate students in biology conducting terrapin research. This year, she assisted Andrew Harrison in the development of 2D and 3D animations of terrapin swimming paths. Andrew collected data from instrumented terrapins on the horizontal and vertical tilt associated continuous movement patterns. Since GPS does not work under water, spatial location was recorded when the terrapins surfaced during observation. Dr. Mix developed the algorithm for converting measurements into \((x,y,z)\) locations where \(z\) is depth. She also assisted Andrew with designing and implementing a lab experiment in one of the biology tanks to validate the algorithm. Andrew presented his study entitled “Determining Behavioral Responses to Boat Traffic and Noise in the Northern Diamonback Terrapin (*Malaclemys terrapin terrapin*) in Barnegat Bay, New Jersey” at the Student Research and Creativity Celebration, May 1-2, 2009.

Dr. Mix presented her research on spatial analysis of house flipping and neighborhood change in several forums, including the Department of Geography Colloquium, Oct 10, 2008. University at Buffalo, and the IGERT Colloquium, April 24, 2009, University at Buffalo. She also presented “The Geography of Urban Poverty” at the 9th Annual Faculty and Staff Research and Creativity Fall Forum, Oct 30, 2008, Buffalo State College. Dr. Mix provided data and analysis for Mayor’s poverty plan, working with Deputy Mayor Donna M. Brown and Director of Urban Affairs Karen Stanley Fleming. Her work appears in, and is acknowledged in, the “Buffalo Poverty Reduction Blueprint” released by the Mayor’s office 4/29/2009.

Dr. Mix organized a teacher training workshop on building wind turbines for KidWind.org, Feb 21, 2009, Classroom Building, Buffalo State College and KidWind.org Wind Turbine Challenge for middle and high school students at the Buffalo Museum of Science, May 16, 2009.

Dr. Mix was the senior thesis advisor for Joseph Pignatora, Chris Liberti, James Frost, Dan Istas, and Bryan Hinterberger. Thesis topics focused on community-identified issues on urban sustainability.

**Vida Vanchan** attended the 2009 Industry Studies Association Annual Conference from May 28 to 29, 2009 in Chicago; and presented a poster of her recent research results, supported by a Site Visit Grant from the Alfred P. Sloan foundation, on competitive dynamics of U.S. industrial design firms. In addition, she has accepted an invitation to serve on the Early Career Development Committee (ECDC) of the Industry Studies Association for two years. ECDC is dedicated to promoting industry studies scholarship by working to develop the community of early career scholars (nationally and internationally), who pursue industry studies research and further their academic careers. ECDC members’ institutions include Penn State University, Carnegie Mellon University, University of Washington, Georgia Institute of Technology, University of Minnesota, and Scuola Superiore Sant’Anna.

With the funding support from the Research Foundation at Buffalo State College, Dr. Vida Vanchan and Dr. Stephen Vermette conducted a workshop at Baktouk High School in Phnom Penh, Cambodia in January of 2009. The purpose of the workshop was to enhance a geography curriculum and assist teachers in their teaching. The workshop was organized to provide educational and material support as well as to assess the teachers’ needs. It was very well received and a success. During their short stay in Cambodia, Drs. Vanchan and Vermette visited several classrooms at the high school and funding agencies. Inquiries have been submitted to several U.S. funding agencies in order to find support to further conduct workshops and distribute the kits to all high schools across Cambodia. The proposed project aims to offer a springboard to improve Cambodia’s human capital through enhancing part of its education system.
Mountains near the border of Slovakia. Our final night, nestled in the Zakopane teachers’ group traveled to Krakow and made our acquaintance! For our final few days in Poland, our aged evacuated ‘flood victims’ during the flooding (fortunately, not where we were!) were not as fortunate and due to severe showers to sudden short cold and threatening to gentle sun changing conditions from sunny and warm ‘a la carte weather’ since we had rapidly changed our minds. One American teacher aptly described it as benign though very much a ‘mixed bag’. Weather at camp remained generally benign though very much a ‘mixed bag’. One American teacher aptly described it as ‘a la carte weather’ since we had rapidly changing conditions from sunny and warm to cold and threatening to gentle sun showers to sudden short-lived thunderstorms. Other regions of Poland were not as fortunate and due to severe flooding (fortunately, not where we were!) our camp numbers swelled by ~100 teen-aged evacuated ‘flood victims’ during the final two weeks of the program. We were the first North Americans these evacuees had ever spoken to and they were eager to make our acquaintance!

For our final few days in Poland, our teachers’ group traveled to Krakow and Zakopane; the former a beautiful and ancient city, the latter a quaint, small city nestled in the Tatra Mountains near the border of Slovakia. Our final night, in Warsaw, was celebrated at a ‘traditional’ restaurant where we were overwhelmed with a 5-course, 4-hour meal ending after midnight!! A fitting end to a food-filled month!

Snakes’ Eyed Snakes - Poland

Drs. Vida Vanchan and Stephen Vermette officially presented the kit to the assistant principal.

In northern Baja California over the past ~30,000 years. Part of this project involved training two students in paleoecological techniques as they worked for her sorting and indentifying plant fossils from packrat middens. The initial results from this work indicate a distinct shift in vegetative communities from pinyon-juniper-oak woodlands during the last ice age to desert scrub vegetation today. Dr. Holmgren also worked on preparation of a grant to the National Geographic Society’s Committee for Research and Exploration. If funded, this grant will provide support for continued work in Baja California.

Dr. Holmgren also published two articles during the past year. She was lead author on a paper covering her recent work in Joshua Tree National Park: Holmgren, C.A., Betancourt, J.L., and K.A. Rylander. (2009). A long-term vegetation history of the Mojave/Colorado Desert ecotone at Joshua Tree National Park. Journal of Quaternary Science (Published online in advance of print). She was also a co-author on an invited article for an issue of the Annals of the Missouri Botanical Garden: Placzek, C., Quade, J., Betancourt, J.L., Patchett, P.J.,
Dr. Charlotte Roehm has spent the year discovering the potential of Buffalo State College and of New York State.

As part of her research in Buffalo, Dr. Roehm has been working on a project looking at coastal wetland degradation and the influence of nutrient dynamics on algal bloom formation. This work has been in conjunction with an URM Undergraduate student from the Chemistry Department. She has been also looking at defining indicators of success of wetland restoration based on wetland function and quality. A Master’s student is currently involved in this work. Recently, she has begun a 2 year NYSDEC funded project aimed at re-mapping a section of NY State wetlands through a combination of GIS and field based delineations. Dr. Roehm mentored a Geography and Planning majors student who undertook a study looking at the chlorine levels in household water and its potential health risks due to exposure. The student presented her results at the Student Research and Creativity Forum in May. On the international scene, Dr. Roehm has continued her collaborative research program in Northern Sweden, where she spent a month this summer studying metabolic nutrient limitation in Arctic streams as a function of vegetation and altitudinal gradients.

Dr. Roehm attended the 40th Lunar and Planetary Science Conference, March 23-28, The Woodlands, Texas, where she presented a poster discussing the hypothesis of the role of hydrology in the periglacial origin of crater-rim gully formation in Utopia Planitia, Mars. Dr. Roehm also attended the American Geophysical Union (AGU) Joint Assembly, May 22-27, Toronto, Canada, where she orally presented her work from Sweden on carbon cycling in Alpine and Arctic watersheds affected by permafrost degradation. In addition, Dr. Roehm recently presented her research at the fall Faculty Research and Creativity Forum held at Buffalo State.

Biogeochemical Cycles, a study looking at identifying and defining the driving variables for predictive models of CO2 evasion from boreal lakes. In addition, she was co-author on Prairie YT, PA del Giorgio, C.L. Roehm and A Tremblay. Insights on riverine metabolism from continuous measurements of CDOM Fluorescence in Eastmain-1 Reservoir, Quebec. in Verh. Internat. Verein. Limnol., a study looking at diel and seasonal metabolic dynamics of a river both upstream and downstream of a newly created hydroelectric reservoir.

Dr. Roehm became an adjunct Professor at University of Buffalo where she is part of the ERIE IGERT initiative. She has also been involved in numerous committees and other service based and professional development activities. Dr. Roehm taught Grad/Undergrad. courses in Wetland Hydrology and Ecology, Watershed Pollution and the Honors program course in Conservation and Resource Management.

William Wieczorek During this past year, Dr. Wieczorek, Director of the Center for Health and Social Research and Professor of Geography and Planning, was highly involved with numerous research projects, paper presentations, and publications. In addition to his reviews for the NIH Behavioral Genetics and Epidemiology Review Committee, Dr. Wieczorek was a peer reviewer for the NIH National Institute on Alcohol Abuse and Alcoholism, Clinical, Treatment and Health Services Research Review Subcommittee and NIH Research Challenge grant applications funded by the economic. He also reviewed for such journals as Prevention Science, Addictive Behaviors, and Alcoholism: Clinical and Experimental Research.

The strong funding record of Dr. Wieczorek and the Center continued this past year. Dr. Wieczorek is PI or Co-PI on six NIH funded grants, including being a Co-PI on a “Problem Gambling - A Decade of Change” which was recently awarded to John Welte (PI) at the University at Buffalo. This project includes an analysis of geographic access to casinos and


In addition, Dr. Holmgren gave a presentation at Buffalo State College as part of the Ninth Annual Faculty/Staff Research and Creativity Fall Forum and an invited talk as part of the Pegrum Lecture Series at the University at Buffalo.

Over the past year, Dr. Holmgren taught courses in Paleoclimatology, Global Change, and World Natural Environments. Both Paleoclimatology and Global Change are new courses developed by Dr. Holmgren that are now part of the Meteorology and Climatology minor. This fall she is teaching BSC 101: Foundations of Inquiry. Her section of this freshman-only course has climate change as its theme and focuses on critical thinking and research skills. Camille also worked with Dr. Stephen Vermette over

On the written front, Dr. Roehm was lead author on two publications: Roehm, C.L., R. Giesler & J. Karlsson, Bioavailability of terrestrial organic carbon to lake bacteria: the case of a degrading sub-arctic permafrost mire complex. *Journal of Geophysical Research*, looking at the impact of climate change in Arctic regions with relevance to the movement of energy and nutrients from terrestrial to aquatic environments and the consequent impact on watershed based greenhouse gas emission inventories. Roehm, C. L., Y. T. Prairie, and P. A. del Giorgio, pCO2 dynamics in lakes in the boreal region of northern Quebec, Canada in *Global
other forms of gambling as a risk factor for developing problem/pathological gambling. Other funded projects include evaluations of community-based services, data management and program development for a workplace safety project, and a project with West Side Community Services titled “Healthy Foods, Healthy Lives,” funded by the Buffalo State Office of Community Partnerships.

Dr. Wieczorek led the planning process with the Erie County Department of Mental Health and local prevention services providers to develop the “Comprehensive Prevention Plan: Erie County Department of Mental Health.” This plan is currently being used to drive mental health and substance abuse prevention activities through 2012. The process, which was data driven, utilized maps and spatial analysis of population risk factors, service locations, and gaps analysis to guide the planning group’s decisions. This also led to a presentation titled “Using GIS for Planning Behavioral Health Preventive Services” in September 2009 at the ESRI Health GIS Conference. In October 2009, an expanded presentation titled “Using GIS for Planning Mental Health Services” was presented as part of the University at Buffalo Department of Geography’s Fall 2009 Colloquium Series.

A notable publication this past year by Dr. Wieczorek and Alan Delmerico is an overview article titled “Geographic Information Systems” in *Wiley Interdisciplinary Reviews: Computational Statistics* (2009, vol. 1, 167-186). This article provides a general introduction to GIS as well as presenting case studies from the Buffalo area.

**Middle States Division, Association of American Geographers Annual Meeting**

Seven hours down the road, a contingent of 10 from Buffalo State arrived in New Paltz, NY to attend the AAG Middle States Division Annual Conference. Stephen Vermette and Tao Tang brought seven students, three from Buffalo State (Lea Cai, Lindsey Higgins, and Joseph Petre), and four exchange students from Manchester Metropolitan (Lauren Cross, Steven Eddleston, Suzanne Shapiro, and Rachael Taylor). Zhao Wenhui, a Chinese scholar from Capital Normal University, rounded out the group of ten. A total of seven papers/posters were given at the conference by the group from Buffalo State.

A first for Buffalo State, Steven Eddleston joined an ad hoc team to compete in the Geography Bowl. Thinking that questions asked during the bowl would be of a general nature, he commented at the number of geography questions and was glad that he was a Geography major. We are glad too – good job Steven. It turns out that Steven answered enough questions correctly to be recognized as an alternate for the Geography Bowl team that will represent the Middle States Division at the Annual AAG meeting in Washington D.C.

Our appreciation to Mark Severson (Dean, School of Natural and Social Sciences) and Kelly Frothingham (Chair, Geography and Planning) for finding the financial resources to support the student costs, thus continuing our long tradition of faculty/student representation at the Middle States Conference.

**FYWOW 2009**

*Current students welcome new majors during new campus-wide orientation program.*
Alumni News

Thanks to all Alumni who responded to our newsletters. Here is a sample of what you have told us about your careers and lives.

own and see education as a door to opportunity instead of a stepping stone to a career.

In 2007, I graduated from the Urban and Regional Planning and Analysis program. Since then I have had plenty of time to reflect on my educational experiences and compare them to other geographers. There is no doubt in my mind that upon graduation I was already a step above the rest. With a resume filled with working experiences provided by department connections, I found it relatively easy to gain employment with a nationally recognized engineering firm and enrollment with my top choice graduate program.

I would say the majority of my accomplishments are due to the fact that the professors in the Geography Department truly do offer each student the resources needed for success. Whether it involved research projects around the world or in our own backyard, each professor took the time to make sure I was prepared to get involved and ultimately succeed. Their guidance allowed me to spearhead my own campaigns and endeavors, as I focused my efforts towards positive career building goals.

Today I am a graduate student at Portland State University in Portland, Oregon, and an employee at Clough Harbour & Associates. With doors constantly opening I see an exciting new future for myself, and can’t help but be enthusiastic for what comes next.

- James Manzione
Buffalo State Alumni, 2007

Alumni: We want to hear from YOU. Please send us a note or email to let us know what you are doing.

Please feel free to send any comments or questions to our Newsletter Editor, Dr. Wende Mix, at mixwa@buffalostate.edu