Out with the old....

In with the new....

The Department of Geology and Geography

West Virginia University

September, 2008
September 2008

From the Chair

There have been many positive things happening in the department this past year. The department has just celebrated its first year of occupancy in Brooks Hall. After many years of visioning, planning the remodeling of Brooks Hall, the department finally took occupancy of the building on July 2 2007. Many will remember Brooks Hall as the former home of the Department of Biology. You might also remember that it was a building that had not seen significant improvements in its 55 year history – very reminiscent of White Hall. The remodeled Brooks is a very different building today and we are extremely pleased with the outcome. The building has received unanimous praise and it has been a tremendous boost to the department and its students to occupy such a wonderful building and to work in such a great environment. The department had been located in White Hall since the construction of the building in 1942 and many thought it would be a considerable wrench to leave our old haunts. However, as faculty, staff, and students moved over into Brooks and experienced living, teaching, and researching in this building there has hardly been a backward look to our old home. Indeed, it is good to see White Hall currently undergo a full renovation in preparation for the Department of Physics to move into the building. The architects of the refurbished Brooks Hall, HOK, along with the personnel of WVU Facilities and Planning, the college and department staff, and senior administration performed an outstanding job in providing the department with a building to truly proud of. If you visit the department’s new web site (www.geo.wvu.edu) you will see many images of the building including our ‘Green’ roof, new glass fronted concourse, a new upper level access bridge to the side of Woodburn Hall, a reworked inner concourse that connects the lower campus, the five computer teaching labs, the new lab rooms and much more. We held an open house during the spring and demonstrated the teaching and research activities of the department and the many elements of Brooks that makes it such a fine building. If you were unable to attend that day I encourage you to come and visit with us – you will certainly not be disappointed with the department’s new home nor the many ways we are putting the building to good use.

The former chair of the department (for some 24 years), Dr Alan Donaldson, gave me one specific piece of advice as he handed over the responsibilities for the department back in 1995 (in addition to the official necktie that is): good faculty are central to the core mission of the department and to our success in teaching, research, and service. The chair and the department, he advised, performed no greater function than to appoint the very best faculty available. Those words of advice have resonated with me as we have entered into new phases of faculty recruitment. Over the past three years we have experienced the moves of Dr Kobena Hanson to Ghana and Dr Jennifer Miller to the University of Texas at Austin. More recently Dr Ge Lin left to take a position at the University of Nebraska, and Dr Dan Weiner left to take up the position of Executive Director of the Center for International Studies at Ohio University. We continue to wish our past colleagues and friends well in their new endeavors while at the same time welcoming and embracing four new faculty members who joined the Geography program this fall. Dr Brendan McNeil (Ph.D. Syracuse) came to us from a research position at the University of Wisconsin Madison, and specializes in geospatial technologies, forest ecosystems and global environmental change. Dr Jamison Conley (Ph.D. Penn State) specializes in Geographic Information Science and focuses on spatial cluster analysis with application domains in medical geography. Dr Jeremia Njeru (Ph.D. University of Wisconsin at Milwaukee) specializes in the political ecology and political economy of urban environments and sub-Saharan Africa. Dr Karen Culcasi (Ph.D. Syracuse) is currently a visiting professor in geography and she specializes in geopolitics, critical cartography, and the Middle East. It is a pleasure to welcome our new faculty into the Department family. Other faculty changes include Dr Ken Martis opting to take phased retirement beginning this Fall. Last year Ken was awarded the prestigious Professor of the Year award by the Carnegie Foundation for the Advancement of Teaching. With this wonderful career crowning accolade in his ears Ken has decided to take phased retirement over the next few years. Fortunately we are able to continue to have Ken among us in the department for a few more years.

Finally, I’m delighted to announce that in our recent five year Board of Governors review of each of our degree programs, three have been recommended for Program of Excellence status. The Geography BA, Geology BS, and Geography MA/Ph.D. programs have been identified for recommendation as programs of excellence. While we did not get program of excellence designations across all our five degree awarding programs we are nonetheless truly pleased by this recognition of the department’s continuing good work. At the next program review we hope to make a clean sweep with program of excellence awards for all five degree programs. In our pursuit of excellence I would be remiss if I did not recognize the continued assistance given to our students in their academic endeavors in the department provided by the generosity of our alumni donations. The department has several scholarship programs that go directly to support the work of our graduates and undergraduates in their academic pursuits. On behalf of the students and faculty in the department I want to express our thanks and gratitude to you all for your kind and generous donations to these scholarships and for providing such a valuable helping hand to enrich the educational experiences of all students in the department.

Trevor M. Harris
Dr Ken Martis is beginning a phased retirement this Fall. Last year Ken was awarded the prestigious Professor of the Year award by the Carnegie Foundation for the Advancement of Teaching. Below is an article written by Dawn Miller who is a former student of Ken's and Editorial Editor of The Charleston Gazette. Reprinted with permission from the The Charleston Gazette.

November 30, 2007
By Dawn Miller

When I order Chinese food, and it comes with a pint of rice instead of wheat noodles, I absent-mindedly note that this dish descended from southern Chinese cuisine, as opposed to northern. In the mornings, I look for a barometric pressure reading in the weather report, because I know that if you have large amounts of warm air rising (low pressure), you’ll have precipitation. Falling air (high pressure) means clear skies.

And when I watch a favorite old black-and-white movie, somewhere in the back of my mind, I hazily recall that Hollywood grew up where it did because early filmmakers found that sunny California, with a mere 15 inches of rain a year, was a great place to shoot some of the earliest films. (Charleston, by contrast, averages more than 40 inches a year.) Those patterns are dictated by prevailing wind patterns and the arrangement of nearby mountains, physical attributes of the earth.

For all the plastic gleam of our built environment, it’s humble geography that set us on the road to becoming who we are today.

I have Professor Ken Martis to thank for these lessons. This month, he was named the 2007 West Virginia Professor of the Year by the Carnegie Foundation for the Advancement of Teaching and the Council for Advancement and Support of Education. He is one of 40 professors so honored.

I fell into Martis’ physical geography class almost by accident one summer at WVU, and I was never the same afterward.

Ken Martis was the first person to connect the dots for me between the physical science that governs air currents and weather systems, and the physical environment that influences nations, economies and societies.

His class changed the way I saw the world. It changed the way I looked at my own discipline - history. I knew that people who lived near water fished, and that more arid places such as steppes, plains and deserts gave rise to nomadic cultures. I even knew that how people acquire their food - or in our modern parlance, make their living - influences how they organize their society and the kind of government they establish.

But Martis made deeper connections. It was not happenstance that put the Sahara Desert where it is. Look at a map. Notice the line called the Tropic of Cancer running through it. Now follow that line west and note that it also runs by the desert areas of Mexico and the United States. Now trace the line east and note the position of deserts in Saudi Arabia and Iraq.

In class, we watched Martis draw his cartoon-style explanation, a giant convection cell of sun-heated air rising constantly from the equator. The air bumps into the top of the atmosphere the way hot furnace air collects at the ceiling. Ever pressed by more rising warm currents, the air rolls outward from the equator toward each pole. As it moves, it cools and falls back to earth. This constant flow of dry air falls at the Tropic of Cancer in the northern hemisphere and at the Tropic of Capricorn in the southern hemisphere.

I can hear Martis repeating, ‘When you have large amounts of warm air rising, you will have precipitation.’ So it is, on the equator. And where you have cooled air constantly falling to earth, you’ll find deserts or Australia’s scuzzy outback, unless large bodies of water are nearby to mitigate the dryness.

All these conditions affect soils, vegetation and animal species, which influence how human societies develop.

Southern China, which might have been a desert like North Africa, is drenched by regular monsoons, good for growing rice. Northern China is a large, uninterrupted landmass, without oceans to level out temperatures and saturate the air with moisture. That drier, grassy landscape lends itself to wheat - thus lo mein noodles.

When you begin to see patterns in how the physical geography influences human development, you can apply the lessons elsewhere.

At the northern tip of the Shenandoah Valley, where I grew up, people often identify more with their neighbors in Maryland and Virginia than with the rest of West Virginia. In the early days, the mountains separating the two regions were a physical barrier. It’s easy to cross them now, but generations of habit, of set patterns of working, shopping and going to church, ensure that they remain an intellectual barrier.

West Virginians often look across the border to Ohio or Virginia and wonder why the same degree of activity - and prosperity - isn’t found here.

Most of West Virginia was never suited to large-scale farming. It’s too hilly and the soils require too much improvement. Those farms - and the populations they supported - grew elsewhere. Other industries followed established population patterns.

The industries that did flourish here - coal, timber, oil, gas, glass, steel, for example - are also due to the attributes of the earth. Charleston’s metro area stands where it is because animals were attracted to the salt near Malden. Native Americans followed the animals. European settlers followed the Indians. A salt industry gave way to a natural gas and then a chemical industry. Had the physical geography been different, so would the rest of the story.

Some West Virginians think that the state’s lack of activity means something is wrong with them, rather than the results of a pattern set in motion millennia ago when the last glacier retreated from what is now the Ohio River, leaving these ancient mountains. While technology and new information-based industries make West Virginia’s terrain much less relevant, old habits are hard to change.

Professor Martis, who taught me to reason out these relationships, as well as how to know when to carry an umbrella, has a long list of teaching awards and publications to his credit. He has inspired graduate students and led projects to improve the human environment around Morgantown.

Martis was chosen for the Carnegie award from among 300 finalists. No wonder. His simple introductory course continues to teach me 17 years later.
WVU Students Competed in Global Petroleum Geoscience Contest

A team of graduate and undergraduate students from WVU competed in the American Association of Petroleum Geologists’ (AAPG) Imperial Barrel Award. The students received an all-expense-paid trip to the AAPG’s annual meeting April 18-19 in San Antonio, and faced teams from schools in the United States, Europe, Africa and Asia. The WVU team came in 5th place, competing against teams from almost fifty schools such as the Colorado School of Mines and University of Leoben, Austria.

The program is an annual petroleum exploration evaluation competition created for students studying geoscience. The program allows student teams to use state-of-the-art geologic and geophysical data to evaluate the petroleum potential of a sedimentary basin and to test their creative geological interpretations. This is all done within strict time limits of five-to-six weeks, with the results presented to – and judged by – an independent panel of petroleum industry experts.

The WVU team analyzed 8.8 gigabytes of data from the Cooper Basin in Australia. “We were amazed at how energized the students were by this challenge,” said Jamie Toro, an associate professor of structural geology and tectonics. “They learned an immense amount while struggling to make sense of the data and master the sophisticated software used in the analysis, such as Schlumberger’s Petrel.” “Real-world datasets of this caliber are an amazing teaching tool,” added Carr, Marshall Miller Professor of Energy in the Department of Geology and Geography at WVU. “It’s like teaching without ever opening your mouth.”

“We had a great time and with the support of the industry and the University ten graduate and undergraduate students were provided an outstanding educational experience. We will participate in this year’s competition.”

Students who contributed to the effort include John Tellers of Wheeling, Valerie Smith of Point Marion, Pa., Julia McConnell of Vinton, Va., Matthew Boyce of Corpus Christi, Texas, Christian Figueroa-Tyler of Santa Ana, Calif., Kyle Vickery Littlefield of Hummelstown, Pa., Roy Sexton of Independence and Joseph Wickline of Beckley.
Eberly College Dedicates Marshal S. Miller Energy Professorship

MORGANTOWN, W.Va. November 15, 2007: The Marshall S. Miller Energy Professorship in Geology was officially dedicated Wednesday, November 28 in the Department of Geology and Geography’s newly-renovated quarters in Brooks Hall. The endowment was established by Marshall S. Miller in 2002 to provide funds for the creation of a professorship in geology for distinguished teaching, research, and service in the Department of Geology and Geography in the Eberly College of Arts and Sciences at WVU. The professorship’s focus is energy exploration and development, particularly that dealing with fossil fuels. Among the responsibilities of the Miller Energy Professor are recruiting graduate students interested in the energy field and providing key academic leadership for those students. “This endowment from Mr. Miller represents a tremendous contribution and commitment to the geology program here at WVU,” said Dr. Trevor Harris, Eberly Professor of Geology and Chair of the Department of Geology and Geography. “We have greatly valued the visioning, wisdom, and advice that he has provided us in the past about the future of energy geology in general, and at WVU in particular.”

Helen Lang Receives NSF Grant for Research on Billion-year-old Rocks of the North American Basement

Morgantown, W.Va., August 20, 2007: Dr. Helen Lang received an $86,000 grant from the National Science Foundation to research the metamorphism and deformation of rocks that form part of the ancient basement upon which the North American continent rests. Her project, “Constraining the Timing and Nature of Proterozoic Metamorphism in the Northwest U.S. Cordillera,” will expand on preliminary studies that showed metamorphism as much older than previously thought, about 1.2 billion years ago in the Proterozoic eon.

Metamorphism is the process of recrystallization of rocks and minerals through changes in temperature, pressure or fluids. The Proterozoic eon, which lasted from 2.5 billion to 542 million years ago, predates the first abundant complex life on Earth. In collaboration with her colleagues from Washington State University and the University of Idaho, Dr. Lang will sample garnet-bearing metamorphosed shales from northern Idaho, study the microscopic relationship of the garnets to other minerals in the rock and choose garnets to date. They will use sophisticated new techniques to determine the age of individual grains of garnet and possibly different zones of the same garnet. Results of this research will allow them to understand more about the assembly of the northwestern part of the North American basement.

In 1983, she earned her Ph.D. in geology from the University of Oregon and completed her dissertation in northern Idaho, the area to which she will be returning for this research.

The WVU field camp continues to attract enthusiastic groups of students for field camp in the western US. The field camp was lead by Tom Kammer and Jaime Toro in 2007 and by Mitch Blake and Steve Kite in 2008. The students braved the elements and camp cooking, but seem to be getting caught in a lot of rain storms in South Dakota, even though we were hoping for a “drier” Field Camp after leaving Camp Wood in WV.

WVU geology students Jason Nellis (GEOL BS, 2008), John Sampson (GEOL BS, 2008) and Anne Yanni (GEOL BS, 2008) at field camp map in Whitewood Canyon near Deadwood, SD.

Jimmy Templin (GEOL BS 2008) plots a contact in the Block Mountain mapping area in Southwestern Montana. Within three weeks of the end of field camp, he got married, moved to Houston, and started a new job.

From left are Stuart Cameron (BS GEOL, 2008) and Vince Morgan (MS GEOL 2009) in Yellowstone National Park, braving snow in June during the 2008 field camp.
This past spring Richard Smosna and Kathy Bruner led a group of new graduate students, including Matt Boyce, Lewis Cook, Jessica Pierson, Julia McConnell, and Beth Rhenburg, on a 10-day field trip to the Dingle Peninsula of Ireland. The students puzzled over the Silurian and Devonian successions and enjoyed the rainy spring weather as they trudged past ancient ruins and a few pubs. The rocks include fluvial-deltaic sandstones of the famed Old Red Sandstone, and the ruins range in age from Stone Age and Celtic to Early Christian and Medieval. The cultural highlight was a serenade by an Elvis-impersonator singing "Country Roads" with an Irish accent. A good time was had by all.
Greetings! Two items of special interest to report. The first is that the Quaternary Lab is now fully operational in Brooks Hall. Students have been characterizing unconsolidated sediments they have collected and some that date back to the field work at Pendleton Creek, Tucker County and Wright Valley, Antarctica.

On the teaching front, the Capstone Trip for Environmental majors offered each Spring Break continues to prove that it is, indeed, a great day for a field trip! For the sixth consecutive year I have led the group to new and exciting places. What began as a modest trip to the Delmarva Peninsula in 2003 has expanded to rafting the Colorado River, night skiing on Mt. Hood, trips underground at Carlsbad Caverns, inside both Glen Canyon and Hoover dams, and above ground at Hanford, Washington, White Sands, NM and Los Alamos.

This year we flew in to San Francisco and visited firsthand the San Andreas Fault zone, Point Reyes Seashore, the Geothermal energy field in northern California and the vineyards in the Napa Valley as well as Lake Tahoe, Yosemite, and the site of the former Kesterson Reservoir. In 2009 you will see us in Utah at Bingham, Tooele, the shores of Lake Bonneville, and many sites along the Snake River Valley! Cheers!

Faculty Updates

Bob Behling
Professor of Geology
bob.behling@mail.wvu.edu

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Timothy R. Carr
Marshall Miller Professor of Energy
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It has been a busy year for me with a tedious move from Kansas to a new house in Morgantown. In addition, I was busy starting two new classes focused on subsurface petroleum geology and working with new graduate students at WVU (Matt Boyce, Jamie Skeen and Julia McConnell), while finishing graduate research projects in Kansas. This semester, I welcomed two new graduate students, Wang Guochang from China and Ann Steptoe from Charleston.

Most of my funded research involves carbon capture and sequestration (CCS in the vernacular). This included work on evaluating the potential of geologic sequestration at the national level and for specific projects involving enhanced oil and gas recovery. The year also involved a trip to China to work on CO2 sequestration projects for several coal-to-liquids plants under construction. China is undergoing an amazing transition and serious issues of rapid growth, traffic congestion and pollution need to be addressed. I was told that one forty-story building a day is being completed in Beijing. Looking at the skyline, I believe it. The Great Wall was an earlier construction effort, and the Starbucks below the wall says something about development and globalization. Another highlight was leading with Jaime Toro a team of graduate and undergraduate students in the AAPG Imperial Barrel completion.

View of the Great Wall in China and the Starbucks located just below the Wall.

Karen Culcasi
Visiting Assistant Professor of Geography
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After almost seven-years of graduate studies, I am very pleased to be starting my career at WVU. My research broadly includes critical geopolitical examinations of contested places and identities. My dissertation research examined the discursive role of maps in constructing, elucidating, and muddling geographic knowledge and geopolitical disputes in the Middle East. More specifically, I compared the use and manipulation of maps by the imperial powers in the early 20th century with Arab cartography, attempting to locate differences in perceptions.
of the tenuously defined “Middle East.” While the process of publishing my dissertation is underway, I have also been formulating new research projects on (1) water conflict in the Middle East, (2) the role of US media in the vilification of Middle Easterners, and (3) Jordanian and Lebanese popular press representations of neo-colonial conflict. I have also been following-up with earlier research on Kurdistan’s ambiguous boundaries. I am currently teaching World Regions and the Geography of the Middle East, and look forward to tackling Political Geography and a graduate level course on geopolitical issues (and theory) in developing areas of the world.

Joe Donovan
Professor of Geology
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This year, the Hydrogeology Research Center (HRC) celebrated its 7th year of collaboration between G/G and the WV Water Research Institute. Center research staff are currently working on mine-drainage issues in Northern West Virginia, including mining hydrogeology and its implications for reclamation of closed mines in the Upper Freeport seam; evolution of mine-water control and chemistry in the Pittsburgh seam; and surface-mine in situ treatment. PhD student Dave Light’s dissertation is on the spectacular Pittsburgh seam mine water control efforts taking shape since flooding was complete in 2004, involving pumping tens of thousands of gallons per minute mine water in 2 states. Dave was one of the late Mary Stoertz’s grad students at Ohio U. and is well qualified for this challenging task. Dorothy Vesper continues involvement with some HRC projects as well as new projects of her own as well (see her section).

Recent grad student completions were Geoff Richards, 2006 (thesis “Spring Hydrogeology and Hydrochemistry of Sweet Springs Valley, Monroe County, WV); Jane Thies, 2007 (“Mining Hydrogeology of the Upper Freeport Seam, Northern WV”), and Crissy Vinciguerra, 2008 (“Recharge rates and processes in the Cacapon Mountain aquifer, Morgan County, WV”). Two of these were incorporated into papers in review. Currently working on MS projects are Kevin Rega (carbonate aquifer hydrology of Mineral County) and Vincent Morgan (mine drainage in Upper Freeport). Also working in the HRC lab as Research Hydrologists are Annie Morris, who co-authored two papers with me including her elusive thesis (2002) manuscript; and Eb Werner, who co-authored a paper on NaOH injection experiments at the Greer surface mine site near Morgantown.

During sabbatical in Spring 2008, I focused on wrapping up some old work into manuscript form as well as writing new proposals. I spent much time with Holocene paleoclimate buddies, especially Eric Grimm at the Illinois State Museum, developing two new manuscripts on Kettle Lake, ND. This lake has a fascinating Holocene paleoclimatic and paleohydrologic record; its story will be one of the most well-dated Holocene lake records in the world, as well as the first to show a continuous record of aragonite-flux variations in groundwater recharge. For those who want to take an advance peek at some of these results and also learn what the heck the mineral struvite is, see The Holocene, 2007, no. 8.

Among grad student alumni I have seen recently are Sarah Webb (Indianapolis), Will Avery (Philly), Jesse Morgan (Charles Town WV), Jeff Frazier and Matt Daly (Boston, where we did 2005 St Paddy’s Day reunion in Back Bay, with me in shorts/Hawaiian shirt during a snowstorm!), Kurt McCoy (who moved from WV to New Mexico USGS WRD) and Jason Early (Richmond). Congratulate to Kurt, Matt, Neill Ketchum on new spouses, and to Matt, Neill, Will, and Jesse (x 2) on new (relatively….) kids! Alums, drop me a line!

Greg Elmes
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Since the last newsletter I have been chairman of the International Geographical Union’s Commission on Geographic Information Science, which has resulted in two more editions of the International Symposium on Spatial Data Handling, perhaps the longest running conference on GIS. Trevor Harris and I met up at the 2nd symposium in 1986 in Seattle and proceeded to drive right across the United States back to Morgantown; a memorable trip for which there is at least two versions of the truth. Intellectually satisfying has been a series of conference sessions, presentations and publications on ‘Digital Earth’, the result of Mike Goodchild’s and others curiosity about the origins and multifaceted development of the concept, which might or might not have been introduced in a speech by Al Gore. As a result Cristina D’Alessandro-Scarpari, a post-doc from Tours, Dan Weiner, Jennifer Miller and I had many absorbing conversations and the chance to visit places as far apart as UC Santa Barbara and Lisbon, Portugal to present our work. My connection with the University Consortium for Geographic Information Science (UCGIS) has also provided much food for thought, particularly on the social ramifications of geographical information. I am especially pleased with a contribution on GIS and Society in Research Challenges in GIS, a book published by CRC Press. For the last two years I have also worked with Dr. Ge Lin and others on a GIS and Forensic Science project.

On the personal front there is good news and bad news. The bad is that despite what the pundits say about not letting a disease define your life, it can certainly shape it. Multiple Sclerosis is a fact of life for me and my family. Many have helped bear the burden - thank you one and all. However the good is very good. In August this year, notwithstanding my misgivings and gloomy forecasts, we travelled to Cork, Ireland for the wed-
Faculty Updates

Trevor M. Harris
Eberly Professor of Geography and Chair
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A good year for the Harris family. I’m a year out now from my second year-long encounter with chemotherapy. I’m feeling strong and energetic and, hopefully without tempting fate, the prognosis looks good at present. An active research and writing program keeps me busy especially as I seek to drive concepts of an emerging field in spatial humanities and Humanities GIS. The virtual reality work continues apace and having the immersive four-walled CAVE hard-

Amy Hessl
Associate Professor of Geography
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I continue to teach courses in physical geography including: Biogeography, Environmental Field Geography (always my favorite), Global Environmental Change and graduate seminars on climate change and ecosystems. I also have two new research projects engaging undergraduate and graduate students in field research both in our backyard and in one of the most remote countries on Earth.

Reconstructing Climate from Eastern Redcedar. - I am currently working with several graduate students (Stockton Maxwell, Josh Wixom) and an undergraduate environmental geosciences major (Cari Leland) on a variety of studies of Eastern Redcedar (Juniperus virginiana) trees in West Virginia. Eastern Redcedar is long lived (500+ yrs.) on limestone outcrops of the Ridge and Valley province. In addition, sub-fossil wood is preserved for several centuries on dry sites. Preliminary data indicate that several sites in West Virginia contain subfossil eastern redcedar wood sufficient to develop a millennial-length hydroclimatic reconstruction of Potomac River flow. We are taking a multi-proxy approach to reconstruct hydroclimate variables, including earlywood:latewood ratios and C and O isotopic signatures recorded in the tree rings (Richard Thomas, WVU Biology). This long reconstruction would allow water managers to gain a long term perspective on 20th and 21st century droughts and pluvial events.

Fuel wood gathering in a Mongolian forest.

Fire History and Climate. - In 2008, Neil Pederson (Eastern Kentucky University), Peter Brown (Rocky Mountain Tree-Ring Research), Nachin Baatarbileg, (National University of Mongolia) and I were awarded an National Science Foundation grant (Ecosystem Sciences) to explore the fire history of Mongolia’s arid forests. This project is focused on exploring the relationship between fire, climate and forest history in the context of climate change. We have hypothesized that increasing temperatures and an altered hydroclimate regime during the 20th and 21st century have caused larger, more frequent and more extreme fires to

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occur in Mongolia’s forest. We are using tree-ring records of past fires to evaluate our working hypothesis.

**Randall Jackson**  
**Professor of Geography and Director Regional Research Institute**  
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During the past year, Randy Jackson, served as the director of the Regional Research Institute (www.rri.wvu.edu), and was co-author on an article focusing on the steel industry published in Economic Development Quarterly and another on the relationship between income inequality and economic growth in the Journal of Income Distribution. He also co-authored the Shift-Share Analysis entry for Elsevier’s forthcoming International Encyclopedia of Human Geography. In addition, he was co-author on four RRI Working Papers and presented or co-authored four papers at professional meetings.

Randy continues into the third year of a 5-year National Science Foundation project focusing on sustainability and economic impact of carpet and e-waste recycling and remanufacturing activities in the Seattle and Atlanta regions. He completed one DOE project assessing the economic and environmental impacts of the National Energy Technology Laboratory (NETL) on WV and PA, and launched a second DOE project estimating the regional and national economic impacts of substituting increased domestic oil and gas production for imports. A 2-year USDA sponsored project developing new performance measures for business incubators in rural America began September 1 of this year.

This year marked the end of his term as Chair of the North American Regional Science Council, and he received the David E. Boyce Award in recognition of distinguished service to the field of regional science at the annual international meetings. He also completed one term and continues another as councilor-at-large and Board of Directors member for the Southern Regional Science Association (RSA) and Western RSA, respectively. He remains active in the economic development arena, serving on the Advisory Council of the Purdue Center for Regional Development and serves on the editorial boards of the Review of Regional Studies, Letters in Spatial and Resource Sciences, the Australasian Journal of Regional Science, and Geographical Analysis, where he also serves on the Executive Committee.

**Thomas Kammer**  
**Eberly College Centennial Professor of Geology**  
thomas.kammer@mail.wvu.edu

As always, I remain interested in Mississippian paleontology and stratigraphy. In 2003 and 2004 I visited classic outcrops for crinoids and studied museum collections of crinoids in Ireland, England, Wales, Scotland, and Belgium. Research papers from this work were published in Europe in 2007 and 2008, and the data are part of a growing data base on the global distribution of Mississippian crinoids. I liked Ireland so much that Heidi and I vacationed there in June 2006. Also in 2006, I hosted a PhD student, Niall Paterson, from Dublin, Ireland, who is developing a miospore zonation of the Mississippian in the Appalachian Basin.

I remain very active with our Geology Field Camp out west. I continue to collaborate with Dave Matchen (Ph.D., 2004), who is on the faculty at Concord University in Athens, WV. In 2006 we published a paper on the Mississippian Black Hand Sandstone of Ohio, which turns out to be a previously unrecognized incised valley recording a major drop in sea level during the Early Mississippian. We have now completed a larger study on sea level history across North America associated with Gondwalan glaciation during the Early Mississippian, which was published by the Geological Society of America in 2008.

On a personal note, I am proud to report that my daughter Lucy graduated with her B.A. in Geography from WVU in 2008. She is now pursuing her M.A. in Geography at Syracuse University where she is working in remote sensing and GIS.

**Steven Kite**  
**Associate Professor of Geology**  
steve.kite@mail.wvu.edu

Steve Kite devoted most of his efforts in the 2007-2008 academic year to duties as Faculty Senate Chair and Faculty Representative to the WVU Board of Governors. It was an “interesting” time to say the least, with a new President entering the University and bringing a lot of energy to initiatives that included the largest faculty and staff pay raise in 15 years, $ 35 million dollar state funding for research (Bucks for Brains), and new programs for child care and spousal hiring. However, as you probably know,
things began to get too interesting when an irregularity in the Executive MBA program led to the resignation of several administrators, including the President and the chief academic officer. Many details of these events are too painful to recapitulate, but throughout the whole ordeal, Steve was buoyed up by the extraordinary moral support he received from faculty colleagues and alumni, even those who held diametrically opposite views.

After all the turbulence at WVU, it was great to have the opportunity to teach the second half of geology field camp in Wyoming and Montana during June, and to go back to Montana just three weeks later for a few days of vacation in Glacier National Park and a stream restoration workshop.

Life promises to stay interesting for at least another year, as Steve completes his tenure as Faculty Rep to the WVU Board while a new presidential search is under way.

Helen Lang
Associate Professor of Geology and Associate Chair for Geology
Helen.Lang@mail.wvu.edu

Helen Lang took over as Associate Chair for Geology in July of 2007 at about the time we moved into newly renovated Brooks Hall. In July, 2007, Dr. Lang received a National Science Foundation grant to work with collaborators at the University of Idaho and Washington State University to gain an improved understanding of the age and tectonic history of metamorphic rocks in northern Idaho. She did two weeks of field work in Idaho this past summer.

Over the past few years Dr. Lang has worked on collaborative projects studying ultra-high pressure eclogites from north-east Greenland with a colleague at the University of Iowa and has attended international conferences on eclogites in Norway and Austria.

Kenneth C. Martis
Professor of Geography
ken.martis@mail.wvu.edu

The academic year 2008-2009 is my 34th year in the Department of Geology and Geography. It is shocking to even say this and it has been an exciting and wonderful experience. Some of my best friends in life are those in the Department whom I share my day-to-day life with. Myra and I have two adult daughters, one in San Francisco (Kase) and one in Boston (Elizabeth) so we have been bi-coastal parents for several years. In Boston we have our grandson Samuel who happily occupies much of our free time. Kase plans to move to Thailand at the end of 2008 so we are about to become bi-hemisphere parents.

Research wise the last several years have been productive. My four author team has published one of my career-long research goals The Historical Atlas of United States Presidential Elections: 1788-2004 by Congressional Quarterly Press. I have also scanned the large maps in my congressional election atlas and now give PowerPoint presentations on the history and geography of United States congressional and presidential elections. In July 2008 I finished an eight year stint as Associate Chair of the Department for Geography. At the same time I entered into a three-year phased retirement agreement with WVU which entails research, service and teaching in the fall semester only. In the fall I will teach the United States and Canada course and continue the new “capstone” field based SENIOR THESIS course. The undergraduates and I enjoy getting out of the classroom and doing field trips each fall semester and each year they complete some sort of community service problem solving project. In 2007 I was named the West Virginia Professor of the Year by the Carnegie Foundation for the Advancement of Teaching and the Council for Advancement and Support of Education (CASE), Washington, DC. This is one of the approximately 40 U.S. Professor of the Year awards given
Faculty Updates

Dr. Brent McCusker
Associate Professor of Geography
Brent.McCusker@mail.wvu.edu

I have continued publishing and teaching on development and environment in sub-Saharan Africa, and received an NSF grant to study the connection between livelihood systems and land use change in the context of climate change in southern Malawi. Research has taken me to Africa three times this year. In June, I traveled with a group of graduate and undergraduate students. Additional NSF funding that was matched by the Eberly College of Arts and Sciences and the Department of Geology and Geography enabled undergraduate and first year graduate students to be exposed to in-field research in Africa.

Over the past year, four research articles were published dealing directly with questions of socio-economic development in Africa. I am co-authoring two books on development, one on land reform in South Africa and another on the prospects for development in general, both due out in eighteen months. I continue to teach large section courses at the introductory level in geography and at the upper divisions in development and geography, along with more theory-oriented courses at the graduate level. I am currently advising five PhD students and two Master’s students. A Doctoral Dissertation Improvement Award was awarded to support one PhD student’s field research in West Africa. That student, Franklin Graham, is now writing up his dissertation.
Brenden McNeill
Assistant Professor of Geography
brenden.mcneil@mail.wvu.edu

Hi, I arrived at WVU from a postdoc in the Forest and Wildlife Ecology Department at the University of Wisconsin-Madison. I previously was at Syracuse University where I completed a Ph.D. in Geography. Before that, I skied, rock-climbed, mountain-biked, and somehow managed to get undergraduate (Environmental Science) and masters degrees (Geographic Information Science) at the University of Denver.

Through a recent NASA Terrestrial Ecology grant my collaborators and I are collecting field and laboratory leaf chemistry data, GIS layers, and hyperspectral remote sensing images to study the effects of tree species composition, insect defoliation, and acidic deposition (acid rain) on forest productivity and water quality in ecosystems of the northern Midwest, the central Appalachians, and the Adirondack Park, NY. I’m excited to be teaching classes in physical geography, natural resources, and environmental applications of GIScience.

Jeremia N. Njeru
Assistant Professor of Geography
jeremia.njeru@mail.wvu.edu

I am Jeremia Njeru. I am new faculty and joined the Geology and Geography at program at WVU this fall. I came from the University of Wisconsin-Milwaukee where I obtained my PhD in geography in August 2008. My research interests are in the area of political ecology and political economy of urban environments in both developed and less developed world contexts. I am glad to be part of the geography program at this exciting time. I look forward to a successful career at WVU. Also, as someone who originally came from tropical Kenya, I look forward to milder winters here in Morgantown.

Ann Oberhauser
Professor of Geography
ann.oberhauser@mail.wvu.edu

Hello from Morgantown!! Most of you have heard about our big move to the new, improved, and GREEN Brooks Hall last year. Well, we are settled in and acclimated to the new building where we are fortunate to have a scenic view of the Monongahela River, multi-media classrooms, and bigger space. This is another excuse to come and visit us at WVU!

My life in the department continues to change and grow with student advising, teaching, and doing research. One of the greatest rewards of my job is seeing our students go through the program and excel as they explore their interests and develop competency in the field of geography. Most recently, the graduate students I advised have gone on to work in a non-profit development organization, the University of Memphis, the Peace Corps in Ghana, the University of Peradeniya in Sri Lanka, and a job accommodation office at WVU.

At the undergraduate level, I continue to teach a variety of courses and get great satisfaction from exposing students to the dynamic world of European geography, gender studies, and global issues. We are also proud to announce that another one of our geography majors was chosen as an intern at the National Geographic Society in Washington, D.C. this year. The Geography Undergradu-
Faculty Updates

Dottie retired 1 year ago from her professor job in Child- hood - Family Development at WVU, after 36 years of work. My daughter Denise got married in summer 2007 to John Renton - Family Development at WVU, a new proposed mountain top removal in northern West Virginia, and a new proposed longwall underground mine in southern West Virginia. I also spend much time sorting and moving my stuff from my old White Hall office to my new Brooks Hall office, and lab room.

On a personal note, this past year I had to overcome a health issue; I was diagnosed with prostate cancer in summer 2007, and had robotic prostate surgery last January, with the best (most experienced) prostate surgeon in the US. It took 2 months to fully recover, the surgery was successful, and I'm now cancer free. My wife Dottie retired 1 year ago from her professor job in Childhood - Family Development at WVU, after 36 years of work. My daughter Denise got married in summer 2007 to her long time boyfriend (at last) in Reno, Nevada, where they have both lived and worked the past 5 years. She works as an occupational therapist. Dottie and I visit them twice per year. We still live in the same house we bought in 1971, but it has needed repair work for awhile, so we just got our roof replaced and outside house painted, with much more work yet to do there. My retirement plans are uncertain presently, and depend on how well the stock market is doing (not well, recently).

Henry Rauch
Professor of Geology
henry.rauch@mail.wvu.edu

Henry Rauch has been active the past year, with teaching (five courses - involving hydrogeology, karst, and Freshman geosciences), research, and many service functions for WVU and others. My DOE-NETL funded research deals with carbon sequestration - hydrogeologic monitoring for surface leakage of geo logically sequestered carbon dioxide, by use of water well monitoring; one such project is in Montana, at the Montana State University test field site in Bozeman (where I traveled to past three summers), and the other field site is northern West Virginia. My unfunded research is being mostly conducted through my five current geology graduate students, Eric Perry (studying underground mine pool geochemistry), Josh Silvis (studying impacts of underground mine subsidence on spings), John Tudek and Kristen Ward (studying karst hydrogeology in Greenbrier County, West Virginia), and Brad Hega (studying hydrogeology aspects of carbon sequestration), and one student who graduated in May 2008, Scott Wade, who studied the impacts of underground mine subsidence on streamflow. My service work involves many committee functions, my West Virginia Surface Mine Board hearings, and other miscellaneous stuff. The biggest cases before the SMB last year involved a new proposed mountain top removal mine in southern West Virginia, and a new proposed longwall underground mine in northern West Virginia. I also spend much time sorting and moving my stuff from my old White Hall office to my new Brooks Hall office, and lab room.

On a personal note, this past year I had to overcome a health issue; I was diagnosed with prostate cancer in summer 2007, and had robotic prostate surgery last January, with the best (most experienced) prostate surgeon in the US. It took 2 months to fully recover, the surgery was successful, and I’m now cancer free. My wife Dottie retired 1 year ago from her professor job in Childhood - Family Development at WVU, after 36 years of work. My daughter Denise got married in summer 2007 to her long time boyfriend (at last) in Reno, Nevada, where they have both lived and worked the past 5 years. She works as an occupational therapist. Dottie and I visit them twice per year. We still live in the same house we bought in 1971, but it has needed repair work for awhile, so we just got our roof replaced and outside house painted, with much more work yet to do there. My retirement plans are uncertain presently, and depend on how well the stock market is doing (not well, recently).

John Renton
Professor of Geology
john.renton@mail.wvu.edu

My primary teaching responsibilities continues to be the education of mostly young minds in two sections each sememster of Geology 101. The major difference since moving into Brooks Hall has been an increase in the maximum class enrollment from 250 to 340. Most recently, I completed the text and artwork for an on-line Geology 103 historical geology course (now called “Earth Through Time”. A few years ago, I prepared the text and artwork for a Geology 101 physical geology course (now called “Planet Earth”. Bob Behling has been offering the physical geology course since 2006 and hopefully will also oversee the presentation of the historical course beginning this coming Spring semester.

Actually, this semester I am on sabbatical, my first in my 43 year tenure. What I am doing is wrapping up a number of projects I have had underway as part of an outreach program to provide basic geologic education to K12 earth-science teachers throughout the State. Approximately a decade ago, I was invited to join a team consisting of Bob Behling, Deb Hemler from Fairmont State and Tom Repine from the WVGES that offered workshops and field trips for K12 teachers in an attempt to increase their understanding of basic geology. My role has primarily been to provide content, an example being an essay I am presently completing entitled “An Illustrated Guide to the Geologic History of Appalachia and West Virginia from Rodinia to the Present”.

In terms of research, I joined forces several years ago with Ron Smart of the Dept. of Chemistry to investigate the mobility of selenium and arsenic from coal-associated rocks exposed by surface mining in the southern Appalachian coal basin. In particular, we have concentrated on the speciation of selenium and the fates of the ions once introduced into surface waters. Many of the results will be reported in a chemistry PhD dissertation being completed as we speak.

My most recent geologic adventure was a GSA field trip following the Yellowstone hot spot along the Snake River plain to Yellowstone Park. What was most informative was the fact that one of the trip leaders was the director of the Yellowstone Volcanic Observatory who was able to provide inside information of the most recent findings of what is going on below. Obviously, I had to ask him what he thought about the documentary, “Super-Volcano”. I was pleased to hear...
Robert Shumaker  
Professor Emeritus  
RCShumaker@mail.wvu.edu  

After ten years into retirement, Beverly and I are moving slower, but we are doing fine on our farm. The Shumaker Fund (old Research Fund) is still supporting students, but now mostly for attending meetings to present results of research and to find jobs as this is where most of the petroleum hiring takes place now. The Devonian shale is riding high again. Have cut down on travel, so now we go to Florida for the cold part of the winter. Still have lunch with Tom Wilson and Henry Rauch to keep up with departmental news. Stop by if you get a chance. We’re still off Dug Hill road at the top of the hill. Hope all is well, Bob and Beverly Shumaker.

Richard Smosna  
Professor of Geology  
rsmosna@mail.wvu.edu  

The Geology Program and Dominion Exploration and Production Inc. have informally developed a co-operative program centered on summer interns. Graduate students in geology are employed by Dominion as interns working on a regional exploration project under the guidance of a company mentor. Students present their results to the company’s staff at the end of the internship, and they submit the research to West Virginia University as their thesis. The interns, of course, gain a wealth of experience related to the petroleum industry, and Dominion acquires some extra hands in exploration and development. Most of these MS students now work as petroleum geologists with Dominion, attesting to the success of our program. My recent “graduates” of this co-op program include:

- Bret McDaniel, subsurface stratigraphy of the Murrysville sandstone,  
- Melissa Tharp Sager, sedimentary petrology of the Murrysville sandstone,  
- John Tellers, petroleum potential of the Weir tight gas siltstone,  
- Anthony Johnson, stratigraphy of the Bradford and Balltown zones in PA,  
- Ian Lucas, sedimentological influences on coal-bed methane,  
- Ryan O’Connell, stratigraphy of the Coal Measures as related to CBM,  
- Mike Coughlin, subsurface stratigraphy of Venango sandstone reservoirs.

Recent worldly travels have taken Kathy and me to some most interesting places. The stratigraphy course to Dingle, Ireland, continues every spring. To date we’ve run 6 WVU trips to Ireland and Spain, introducing over 40 students to the pleasures of European geology, culture, food and drink. Too, we spent a sabbatical leave of absence last fall living in Blarney, Ireland, and teaching at University College Cork. Trips this year include Uruguay and the Canary Islands (I had better brush up on my español).

Jaime Toro  
Associate Professor of Geology  
jaime.toro@mail.wvu.edu  

In Spring 2007, I spent a very productive sabbatical semester at UC-Santa Cruz learning U-Th/He thermochronology, carrying out the first major U-Pb geochronologic study of granitic batholiths of the Russian Far East, and learning to surf. The geochronologic work revealed that one of the batholiths is much younger than previously suspected and may be related to the opening of the Arctic basin. This past summer, accompanied by Ph.D. student Dan Harris and geologists of the Russian Academy of Sciences, we did a month of field work at Kular in the Russian republic of Yakutia.

Jaime Toro leading group of field geologist’s in Siberia discussing who forgot the sun-tan lotion.
and spent a lot of time swatting mosquitoes and studying the metamorphic fabrics and structures around the pluton in order to test this hypothesis. Another new line of research that I am pursuing is the use of detrital zircon U-Pb dating, as a tool for establishing links between continental fragments that were once together, but has been dispersed by plate tectonics. This has proved to be useful both in sedimentary terranes and in areas of highly deformed metamorphic rocks, such as the Seward Peninsula of Alaska. I continue to teach Structural Geology to both geologists and engineers. This year those classes have swollen to more than 80 students. I also teach Petroleum Geology, Tectonics and Basin Structures. Last semester I helped Tim Carr coach the AAPG Imperial Barrel Team, which proved to be a very exciting and satisfying endeavor. We expect to do it again next year.

Dorothy Vesper
Assistant Professor of Geology
dorothy.vesper@mail.wvu.edu

For the past few years I’ve been focused on getting my research program rolling and branching out into some new directions. My interests in metals now extend well beyond karst systems; I even published an article on selenium in coal strata (when in West Virginia…). Most recently I’ve been fascinated with 24-hr cycles in stream water chemistry. Two MS students (Mike Smilley and Dan Harris) recently finished theses on this topic. Mike looked at temperature-controlled changes in rare earth elements and Dan documented seasonal changes in the cycling of iron species. One of the things I’ve enjoyed most at WVU is the change to work with researchers in other departments and I now have active collaborations with faculty members in biology, soils and engineering. Truly we need to be integrative if we want to understand this earth system.

My adventure for the fall is the inclusion of a field trip by bike in my Geology 488 class (Environmental Geochemistry). We’ll be riding the Decker’s Creek Rail Trail from Masontown. The trip isn’t short (14 miles) but it’s all downhill. It’s a wonderful way to integrate geology, geomorphology and watershed chemistry. I hope it works.

Tim Warner
Professor of Geography and Geology
and Associate Chair for Geography
Tim.Warner@mail.wvu.edu

Brooks Hall, the new G&G building, has really transformed the department. Much of the credit for the quality of our new home belongs to Dr. Harris, who worked tirelessly to ensure every detail in the new building was just right. Even after a year in Brooks Hall, I still feel more enthusiastic about going to work every day. The new Remote Sensing Laboratory in Brooks Hall is a large, well-lit space, and is thus perfect for research and for collaboration for my entire group.

The new building has also provided new opportunities to expand our educational offerings. For example, we have five computer teaching labs, compared to just one in the old White Hall. To take advantage of these new facilities, the remote sensing curriculum has now been expanded to three courses: Introduction to Remote Sensing, Advanced Remote Sensing courses, and a new course, Remote Sensing Applications.

Current remote sensing students include Sheila Kazar, Aaron Burkholder and Jeff Dunn. Sheila is doing a PhD on remote sensing of carbon sequestration in reclaimed mine sites. Aaron is using laboratory spectral reflectance measurements and aerial imagery to identify the optimal remote sensing strategy for identifying the highly invasive tree, Ailanthus altissima, more commonly known as tree of heaven. (The photo shows Aaron acquiring imagery from a small aircraft over Morgantown.) Jeff has just started his PhD at University of Connecticut, and will return to Morgantown this fall defend his MA on remote sensing of coral reefs.

I was privileged to have a most rewarding sabbatical for the entire 2006/2007
academic year. For part of the year I worked on an edited book with Duane Nellis (now Provost at Kansas State University) and Giles Foody (University of Nottingham). The book is to be called The Sage Handbook of Remote Sensing, and should be released early in 2009. The highlight of the sabbatical was my Fulbright appointment to the University of Louis Pasteur, in Strasbourg, France, where I worked on multispectral thermal measurements for classification of urban land cover. With interesting research, wonderful food, especially delicious cheese, bread, and wine, as well as great bicycling opportunities, and generous hosts, Strasbourg was a very fulfilling experience!

Tom Wilson
Professor of Geology
tom.wilson@mail.wvu.edu

After serving two terms as associate chair for geology I was relieved that Dr. Lang volunteered to take over this effort. It was an enjoyable 6 years and I got to learn a lot about the program and department, but the additional time is needed to keep classes up to date and keep research moving forward. We continue to expand our geophysical computational resources, adding additional Landmark software and Schlumberger’s Petrel and Eclipse. One of our alums (I know many of you will remember Alan Brown, ’82, now with Schlumberger Carbon Services) was very helpful in moving these donations forward. You alums really help keep us running in high gear, and don’t forget how important your continued involvement with the department is. It means a great deal to us.

My research in recent years has focused on the characterization of carbon sequestration pilot sites through DOE’s National Energy Technology Laboratories in Morgantown and Pittsburgh. These projects bring interesting field work opportunities and a variety of geophysical data from GPR to VSP along with 3D seismic to play around with.

Since our last newsletter in 2005 I’ve had the opportunity to work with three excellent students (geophysics students always are!) including: Sandeep Pyakurel (MS 2005), Bryan Schwartz (MS 2006), and Valerie Smith (MS 2008). Sandeep’s thesis focused on a 3D seismic interpretation from the Buffalo Valley field in southeastern New Mexico. The data included a 3D converted shear volume. Sandeep is currently working on a PhD in WVU Civil and Environmental Engineering. Bryan Schwartz undertook detailed interpretations of FMI logs from several wells at Teapot Dome and currently works with ExxonMobil in Houston. Valerie Smith is completing her work on modeling natural fracture networks in the context of flow simulations for the Tensleep Formation - also at Teapot Dome. Valerie will begin work as a reservoir geophysicist with Schlumberger’s Carbon Services group this October.

The new surroundings in Brooks Hall are really great and if you haven’t been back for a visit to our new home you’ll want to put that on your list. Any of the faculty will be happy to give you the grand tour.
Alumni Updates

The Department Newsletter has been on sabbatical. We need your help in providing alumni news. Please fill out the form and tell us what is happening in your professional and personal life.

Visiting Committee

A reconstituted alumni visiting committee will have its inaugural meeting on October 9th and 10th in Brooks Hall. The visiting committee will tour the new facilities, meet faculty, staff and students and discuss the objectives and potential activities. Members of the committee represent both the geography and geology sides of the Department. The initial members are:

• Alan Brown, MS 1981
  Schlumberger Carbon Services
• Roger Cottrell, MA 1996
• Linda Culp, BA 1992
• Robert Dulli
  Friend of the Department
  Deputy to the Chairman, National Geography Society
• Craig Edmonds, MS 2004
  District Geology Supervisor, Dominion Exploration & Production, Inc.
• Marshall Miller, MS 1973
  Chairman and CEO, Marshall Miller and Associates
• Ron Mullenex, MS 1975
  Senior Vice President, Marshall Miller and Associates
• Amy Pratt, PhD 2006
  Development Director, State YMCA of Georgia
• Brian Raber, BA 1980
  Vice President Merrick & Company, Geospatial Solutions
• Heather Ramsey, BS 2001
  Geologist, Chesapeake Energy
• Joseph Sewash, MA 1995
  Program Manager, North Carolina Center for GIS
• Jennifer Sincock, MS 1998
  US Environmental Protection Agency

Other Alumni News

Marshall Miller (GEOL BS, MS) was re-elected to another 3 year term on the WVU Foundation Board. Marshall S. Miller is a WVU alumnus who earned his BS and MS in geology in 1965 and 1973, respectively. In 1976, he founded Marshall Miller and Associates, an engineering and geological consulting firm in Bluefield, Va. that has become one of the nation’s most successful. He is the author of more than 25 professional publications on geophysical, geological, and engineering topics, including a book on geological mapping and modeling in southwestern Virginia.

Spotlight on Recent Graduates

Q&A with John Tellers (GEOL BS 2006 and MS 2008)

What made you decide to major in Geology?

A love of the outdoors and exploring. As a petroleum geologist I get to spend time on the drilling rig gathering large amounts of data. I get to collect data and test my hypothesis every week.

What was your favorite class in the Department?

I enjoyed my geophysics class the most. The idea that you can generate a current on the surface of the earth and determine the different rock properties below was so very intriguing to me.

What’s your favorite rock/mineral? Why?

My favorite rock is sandstone, it is found just about everywhere but could have been deposited in a lot of different environments. It can contain fossils and just about any mineral.

What are you doing after graduation?

I currently work for Dominion Exploration and Production as a geologist for southern West Virginia.

Any advice for first-year geo students?

Take as many geology classes as you can. You initial interest may not be end up being what your real passion is.
Spotlight on Recent Graduates

Q&A with Lucy Kammer (GEOG BA 2008)

What made you decide to major in Geography?

A love of landscapes, environment and travel. I also love getting a spatial perspective on the world around me and have always been a map person. Geography just seemed like a perfect fit!

What was your favorite class in the Department?

Probably a tie between physical geography and remote sensing. Physical geography covers so many topics I am fascinated by - climate, landforms, vegetation patterns. Remote sensing was new to me, but taught in such a way that I found it fascinating and am now focusing on it in graduate school.

What's your favorite facet of Geography? Why?

The idea that everything is connected and you can study such a wide variety of subjects. Almost anything from climate to economics can be looked at from a spatial perspective and applied to the discipline. In many disciplines, you have to know a large amount of information about a specific subject, but in geography, you learn a little bit about a lot of subjects.

What are you doing after graduation?

Working towards my master's degree in geography at Syracuse University, with aspirations to eventually earn a PhD and teach at the college level.

Any advice for first-year geo students?

Take methods classes! GIS, remote sensing, and cartography are the future of our discipline; they are tools to analyze and communicate the information we gather about both the social and physical sciences.

In Memoriam

Dr. Milton Tidd Heald

February 19, 1919 to February 22, 2007

Dr. Milton Tidd Heald (Fourth from Left), age 88, died on February 22nd, 2007. Dr. Heald joined the Department in 1948 and served until his retirement in 1984. Dr. Heald was a mentor and graduate advisor to Dr. John Renton. Dr. Heald received a PhD from Harvard University with a specialization in igneous petrology. Upon arriving at WVU, he soon realized that the paucity of igneous rocks in the state made a change to sedimentary rock beneficial. Dr. Heald received the first NSF research award at WVU. His research specialties were sandstone especially the Tuscarora Sandstone and experimental investigation of cementation of sedimentary rocks (e.g., Heald and Anderegg, 1960, Differential cementation in the Tuscarora sandstone [Virginia-West Virginia]. In high pressure bombs in the basement of White Hall, he and his students made sand into sandstone and formed stylolites. He was one of the first to recognize that the formation of stylolites could provide sufficient material to cement the rocks (Significance of stylolites in permeable sandstones, 1959 Journal of Sedimentary Research). Dr. Heald received many awards and in 1991 he received the Outstanding Educator Award from the American Association of Petroleum Geologists.

Mildred Wells Ludlum

August 31, 1917 to January 13, 2008

Mildred Wells Ludlum, age 90, died on Sunday, Jan. 13, 2008, at Madison Nursing & Rehab Center. Mildred Ludlum was the wife of Dr. John C. Ludlum who preceded her in death. Dr. Ludlum was a long time member of the Department. The Ludlum's were strong supporters of the Department, the University and of the community. In the Department, the Ludlum Fund provides funds to sponsor speakers for our geology colloquium and AAPG Distinguish Lecturer series.
An endowed award fund has been established to recognize the significant contributions that Milton Tidd Heald, a WVU professor of Geology, and his supportive wife, Doris Ethier Heald, gave to the geology community in the research areas of quartz cementation and sedimentary diagenesis.

The award shall support Geology graduate students who show an aptitude and desire for advanced research in geology at the M.S. or Ph.D. level. The award will be based on an annual open competition. Graduate students wishing to participate shall submit their thesis or dissertation proposal to a faculty review committee and include a summary statement that discusses why the research is significant to the graduate researcher and to the discipline of geology in general. It shall be the responsibility of the associate chair for Geology to convene a group of three geology faculty to serve as the faculty review committee. At least one award will be made annually. Multiple awards are possible if sufficient funds have been generated by the endowment. The fund is very near to reaching the required $25,000 endowment level. For more information contact Kathy Bruner (kathy.bruner@mail.wvu.edu).
Graduates

Geology MS Graduates
2007
Thomas Cawthern
Timothy Vance
Jessica Gormont
Michael Smilley
Jane Thies
Sammy Johnson
Melissa Sager
2008
Lacoa Corder
Matthew Finkenbinder
Daniel Harris
Kory Konsoer
Jason Sturms
John Tellers
Cristine Vinciguerra
Scott Wade
D. Alex Patthoff

Geology Bachelor of Science
2007
Victor Allen
Christopher Chase
James Nutaitis
Anthony Palmieri
Jessica Powell
John Sampson
Andrew Starsick
David Amrine
Matthew Callison
Jonathan Flory
Delbert Hamilton
Luke Stull
Brent Foster
Joshua Hull
Frances Wheeler
2008
Benjamin Baugh
Stephen Lopez
Jason Nellis
Kara Walton
Anne Yanni
Mary Alice Barr
David Sebert
Jushua Bonner
Stuart Cameron

James Templin III
Amaris Zirkle

Environmental Sciences BA
2007
Margaret Walker-Milani
Brenden Allen
Byron Pitulski
Peter Potesta
David Smith
Timothy VanPelt
John Agnoli
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