Department of Geology and Geography Update
Jennifer’s position was a strategic investment made by the Dean and the Provost in a field that has demonstrated considerable potential to contribute to the mission of the institution. You can hear more from Jennifer in her biography later in the newsletter. We are also proud to announce that Dr Dorothy Vesper has been appointed to a tenure-track position as Assistant Professor of Geology. Dorothy has been with us for the past two years as a Research Professor working with Dr Joe Donovan on several exciting hydrogeology projects. Dr Vesper’s position arose as an outcome of initiatives taken by Dr Joe Donovan to the Water Research Institute here at WVU, the potential for greater external research grant funding, and the commitment of a significant portion of department overhead funding. Dr Vesper is already fully involved in almost all aspects of the department and we are very pleased at her appointment. These appointments follow the recent appointments in the past two years of Dr Brent McCusker, Dr Amy Hessl, and Dr Kobena Hanson, and within the past five years of Dr Jaime Toro and Dr Ge Lin. At a time of severe retrenchment in academia and reduced funding at WVU, these appointments represent a significant vote of confidence in the work of the department. I am confident that we will meet the expectations now placed on us.

Other good news concerning faculty is that just recently Dr Tim Warner and Dr Ann Oberhauser were promoted to Full Professor. Ann is the first female full professor in Geography at WVU. In addition, Dr Jaime Toro was promoted to Associate Professor with tenure. All three colleagues received glowing reviews from external reviewers and the department continues benefit from the commitment of excellent faculty such as Tim, Ann, and Jaime.

There is other good news with regard to the move of the department from its long time home in White Hall to Brooks Hall – also on the Downtown Campus. Brooks Hall was the former home of the Department of Biology who have now taken up residence with the Department of Psychology in the new Life Sciences Building in the old football stadium hollow. Brooks Hall will almost double the space available to the department and we have spent considerable time formulating and codifying our space needs. The lack of funding four years ago put the Brooks Hall project on hold but now the bond issue has been approved and some $27m has been allocated for the renovation of Brooks Hall. This is a very exciting time for us. We are all very fond of White Hall but there is no doubt that renovation work is desperately required for the building. In the broader sequencing of building renovation at WVU, Brooks is the next available building for renovation and we are pleased to have been selected as the next occupants of a rejuvenated Brooks. The architects and engineers have been appointed and planning is ongoing. We are scheduled to occupy Brooks Hall in August 2007 – it sounds a long way off but with all the planning and decision-making needed it will come quicker than we think.

Budget issues continue to be a daily part of academic life in the department, college and University. The significant reductions in State funding continue to reverberate through the classrooms and research labs. We continue to maintain good progress on all fronts but our ability to support our students in their academic endeavors and life experiences at WVU are so greatly aided by the generosity of our alumni donations. The department has several scholarships established 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 may I express our thanks and gratitude to you all for your kind and generous donations to these scholarships and for providing a helping hand to our students.
A special welcome to our “new” faculty

KOBENA T. HANSON
I am an Assistant Professor of Geography in my third year at WVU. Academically, my research interests had for the longest time centered on investigating the socio-economic challenges to, and micro-level responses of, low-income households in sub-Saharan Africa. More recently, however, I have been focussing on the meaning attached to, and importance of social networks among marginalized groups. The regional focus has remained the same though: sub-Saharan Africa. I cannot believe it’s been three years already… since moving to Morgantown. Of the three, the past year has been the most rewarding both professionally and personally. The year went by pretty fast and wasn’t as stressful as my first two. Once the school year was done, I took off to Boulder, CO for a conference, before jetting off to Ghana, West Africa for a month to collect field data. Needless to say, both trips went smoothly. Came back after the summer break and watched my first-ever graduate student not only graduate but also find a job. Wow!

I have always loved travelling and visiting new places. So, moving to Morgantown has been fun. Initially it was tough. Small town and no family ties here. Well… I have however gotten used to the town and am adjusting fine, or so I think. Today, among my newfound interests are walking the trails, deer watching, and recently sailing on Deep Creek.

Jennifer Miller:
I received a B.A. in Geography at the University of Miami (after going through Marine Biology, Biology, Chemistry, then? Geography!). I did my M.A. at Ohio State University (also in Geography), where I focused on GIS and spatial analysis methods. I finished my PhD at San Diego State/UC-Santa Barbara in August 2003 and moved (2 days later) to Morgantown, WV to start an Assistant Professor position in the Geography department at West Virginia University. My research interests are broadly GIS and environmental modeling, and I am specifically interested in incorporating spatial dependence in predictive vegetation models, as well as issues of spatial representation of environmental model accuracy. At WVU I’m (so far) teaching Intro. to Physical Geography, Natural Resources, a graduate seminar on GIS and environmental modeling and Digital Earth.

The first year here kind of flew by, and the summer went even faster, but I did get to combine business with pleasure during the summer with trips to Maine for a conference and to Switzerland for a workshop. I'm slowly adjusting to living in Morgantown—the regional change from California to West Virginia has not been a problem, since I grew up in rural Virginia and some things are pretty similar. The adjustment from very large city to “small city” has taken some getting used to! I certainly don’t miss the traffic and rent from San Diego though! I have been enjoying Morgantown- I live near campus with my dog Pico. It’s also great for me to be within a 3 hour drive of my family in Columbus, OH.

Dorothy Vesper
My arrival at WVU – and West Virginia in general – is a great match for me in many ways. First, a little background about who I am…. I grew up just up the road in Pennsylvania under the shadow of Nittany Mountain. One of my favorite pastimes as a child was wading around in the limestone-lined creeks and checking the water level in the spring on my parents’ property. Who knew these tasks would be so useful in my professional career? I first left the Penn State area to obtain my BS in Geology at Juniata College (1986) but was drawn back for my Masters Degree (PSU, 1988). After that I worked in consulting firms in the Boston-Cambridge area for ten years – and have had the opportunity to look at geochemistry and/or hydrogeology in lots of interesting places including about 30 states, Canada, Central America, Europe, Bermuda, and the USVI. While working in Kentucky and Tennessee I rediscovered my love of karst geology and decided to return to graduate school for a doctorate; so it was back to PSU. For my doctorate I looked at how contaminants, particularly metals associated with particulates, are transported and stored in karst aquifers. While the field of karst geology was once a fringe area, it has recently become a very active research area which just makes it more fun for folks like me. When I finished my doctorate I came to WVU (Aug 2002) as a research faculty member working primarily with Joe Donovan, but in Aug 2004 I transitioned into a tenure-track faculty member. For the past two years Joe and I have been
looking at some of the karst aquifers in West Virginia. The Great Valley karst aquifer in the eastern panhandle is our largest project. The rapid urbanization of that area has stressed the aquifer quantity and quality. We have one watershed – with more than 10 springs in about 5 miles - that we’re studying in detail. Other projects Joe and I are collaborating on include hydrogeochemical studies in Berkeley Springs and Monroe County. All of these projects have included some public interaction with watershed groups or rural water committees. When I’m not doing karst geology, I pursue other interests such as selenium chemistry in mine drainage, manganese on streambed cobbles, interactions between spring macroinvertebrates and water chemistry, history of the historic hot springs, and the mythology of holy waters. I also find some time to teach – Physical Geology (101), Intro to Environmental Geology (488), Aqueous Geochemistry (588), Contaminant Chemistry (591Y) and Applied Field Geochemistry (591H). The last of those debuted this past fall and gives grad students the chance to collect their own data for interpretation. I view this as learning geochemistry the way you learn baseball – by jumping in and playing and figuring out the rules as you go. To sum it all up, I’d just say I am interested in water. And if it flows out of a spring, all the better. As the Roman philosopher Seneca once said, “Where a spring rises or a water flows, there ought we to build altars and offer sacrifices.”

Dr. Brent McCusker
It is with great pleasure that I complete my third year as a tenure-track professor of Development Geography at WVU. It is quite appropriate that I am a professor of “development geography” as I myself was “developed” in West Virginia and have seen the unevenness of economic development within our state. That being said, I am also knowledgeable on issues in Southern Africa, my area of expertise. In the summer of 2004 I took my ninth trip to that area to develop a collaborative curriculum development grant between WVU and the University of the North (UNIN). I have worked closely with colleagues at UNIN and hope to send some graduate students there to enhance their teaching portfolios.

I find teaching at WVU G&G engaging and rewarding. In addition to the large survey course, World Regions, I also teach the Geography of Africa, the Geography of the Middle East, and two graduate seminars, Development Geography and Land Use/Land Cover Change. Needless to say, I keep busy. The Middle East course keeps getting more and more interesting and challenging. It is hard to keep students from getting overly gloomy about the region, but explaining “how things got the way they are” and why a geographical understanding of the region is important almost always keeps the students attentive and usually optimistic. I have refined my “active learning” style of instruction in the Geography of Africa course by engaging students with real world example of the challenges and opportunities faced in that most exciting of the world’s regions.

Students take a virtual ride on the back of a truck in Lilongwe, Malawi;

go game-ranching in Kruger National Park;

watch lions eat everything in sight and elephants remodel the forest in Savuti, Botswana;

and see their professor get very nervous on a pontoon boat on the Zambezi as a line of Nile crocodiles follow us up river hoping for a “bump” in the river.
Students in the large survey course *World Regions* get to hear about the development issues facing the world and I draw on my experience teaching in South Africa to constantly challenge the students to critically examine their own experiences and actions as citizens in the world community. In addition to undergraduate teaching, I advise several graduate students in the department. They also keep me busy.

I have recently undertaken research in South Africa and Mozambique that addresses issues of land use change and have poverty might be causing these changes. I explore the issues of poverty and land but don’t indict the poor for their actions as so many people are quick to do. I try to explore why people take certain actions and how they are forced into certain decisions due to poverty, unequal distribution of wealth, power, and resources. I use GIS and remote sensing to answer some basic questions about how Southern Africa’s landscape is changing and how this is related to the decisions people make, both poor people and those in positions of power. When I’m not teaching, I am usually writing a grant application or journal article. I have published several articles in geography journals and actively seek grants. I received a grant award to develop a research lab within the department that several graduate students use for advanced research.

I look forward to developing these and many other aspects of both my teaching and research portfolios in the coming years. Given the solid record of success in the department in the past few years, I feel it is a wonderful incubator for my future activities.

---

**News from our Alumni**

**Kevin Andrews (MS Geology 2003)**

See Lori Bennett, below.

**Lori Bennett (BS Geology 2002), and Kevin Andrews (MS Geology 2003)**

Lori and Kevin were married in November, 2003. Lori obtained her MS Geology degree from Radford University in 2004 and she and Kevin live in Bluefield, Virginia, where Kevin works for Marshall Miller and Associates.

**Paul Bennett (BA Environmental Geoscience 2003)**

Paul is now the Northern West Virginia Pesticide Regulatory Officer, with the West Virginia Department of Agriculture.

**Eric Bradley (BS Geology 1983)**

Eric is employed as an environmental protection specialist (hydrogeologist) with the US Army National Guard in Washington State.

**Alan Brown (MS Geology 1980)**

Alan is Director of the Gulf Coast Carbon Center of the Texas Bureau of Economic Geology within the University of Texas at Austin, Texas.

**Bill Carpenter (MS Geology 2005)**

Bill successfully completed his thesis this past May while at the same time generating prospects and drilling successful wells for Dominion in Jane Lew.

**Jefferson Chaumba (MS Geology 2004)**

Jeff is currently enrolled in the Geology PhD program at the University of Georgia.

**Thomas Cook (MS Geology 1998)**

Tom has worked since early 2004 as a geologist for Nicholas Energy Company in Summersville, West Virginia; Nicholas is a subsidiary of Massey Energy Company.

**Christopher Curran (almost complete BS Geology)**

Chris is a captain in the U.S. Marines, and is currently stationed in Iraq. He is working on completing his course work for the Geology B.S. degree.

**Randy Brent Cunningham (BS Geology 2003)**

Brent works as a geologist for Sailors Engineering Associates, Inc., in Lawrenceville, Georgia. He plans to return to academia to pursue an MS degree.

**Richard Eades (BS Geology 1982)**

Rick changed jobs in November 2003 to the Canaan Valley Institute, in Davis, West Virginia.

**Tayland Efeoglu (MS Geology 1995)**

Tayland has been working for several years as a Geophysicist/Geologist in the Exploration Group of the Turkish Petroleum Company. He currently is working on their Western Black Sea Project and lives in Ankara, Turkey.

**Virginia Elswick (MS Geology 2003)**

Virginia is working for the Mineral Management Service in New Orleans and is planned a September wedding here in Morgantown.

**Joshua Forloine (BS Geology 2003)**

Josh is currently in the US Air Force, serving a tour of duty in Afghanistan.

**John Fot (BS Geology 2002)**

John proudly works as an environmental technician for Landau Associates Inc., a geotechnical and environmental consulting firm, in Portland, Oregon. He works primarily on monitoring remediation efforts at Superfund sites where severe soil and ground water contamination exist. Prior to his current job John worked for a Japanese food manufacturer, and while still a student at WVU had worked as a Japanese chef, in Morgantown.

**Ryan Gaujot (MS Geology 2002), and Jocelyn Smith (MS Geology 2003)**

Ryan and Jocelyn were married on May 28, 2004. They are living in Tucker County, West Virginia, where Ryan is employed as a geologist and manager by the Canaan Valley Institute (since 2002), and Jocelyn is employed as a stream
restoration specialist by the West Virginia Conservation Agency.

**Guoqi He (PhD Geology 1997)**
Guoqi (also known as George to some persons) had been employed by US DOE in Hanford, Washington, and recently moved to Fairfax, Virginia where he is now employed by EOIR Technology Inc. as a computer systems analyst and spectra scientist. Guoqi is married to Yanlin and they have three children.

**Brian Henthorn (BS Geology 2001)**
Brian had worked for Schlumberger and then H.C. Nutting Company since obtaining his BS degree in Geology, and in January 2005 started in the MS Geology program at WVU.

**Gary Hilgar (MS Geology 1979)**
Gary is currently employed as a geologist by Triad Engineering Inc. at their Morgantown, West Virginia office.

**Bryan Hinkle (BS Geology 2001)**
Bryan is a third-year law student at WVU.

**Thomas Kelly (BS Geology 2004)**
Tom has worked as a geologist at Hatch Mott McDonald (an environmental consulting firm) in Pittsburgh, Pennsylvania since November 2004.

**David Klink (BS Geology 2000)**
David has a hydrogeologist job with Environmental Standards, an environmental consulting firm in Valley Forge, Pennsylvania.

**Terry Scott Lawhead (MS Geology 1996)**
Scott recently received his MBA degree from Indiana University of Pennsylvania and moved to Altoona, Pennsylvania with his wife Laura and their three young sons. Scott is now working in business as Regional Vice President of The Hite Company, an electrical equipment supply company owned by his father-in-law. Scott said that his training for his Geology MS degree served him well in the MBA program.

**Eric Lewis (BS Geology 1995)**
Eric is working as a petroleum geologist for Oldham Geoscience (Dave Oldham, 1998 Geology PhD WVU graduate), of Morgantown, West Virginia.

**Jennifer Mabie (MS Geology 2003)**
Jennifer has been working with NAEVA in Charlottesville, VA. Jennifer has been keeping a hectic schedule traveling about (Cape Cod, San Diego, South Carolina sites...), running a variety of geophysical surveys, writing reports, papers, and proposals, and making our students aware of possible job opportunities.

**Bret McDaniel (MS Geology 2004)**
See Luisa Rolon, below.

**Jeffrey Mitchell (BS Geology 1985)**
Jeff is employed by Triad Engineering Inc. at their Winchester, Virginia office, where he is a geologist and the Environmental Services manager (information courtesy of Gary Hilgar, 1979 WVU MS Geology graduate).

**Nicole Petrosky (BS Geology 2004)**
Niki started work as a geology field technician in August, 2004 for GeoSonics, a geology consulting firm in Ft. Lauderdale, Florida.

**Fred Radford (BS Geology 1954)**
Fred passed away on March 5, 2005. He was retired as a geologist from Southeastern Gas Company and Cabot Corp., both of Charleston, West Virginia, and was living in Winfield, West Virginia during retirement. Fred is survived by his wife Carolyn, and by one daughter and two sons. This news is courtesy of Ira (Sandy) Latimer, 1953 Geology B.S. graduate of WVU.

**Luisa Rolon (MS Geology 2004), and Bret McDaniel (MS Geology 2004)**
Luisa and Bret were married in November, 2004 in Morgantown, West Virginia. They both live in Houston, Texas, where Luisa works for Chevron- Texaco as a petroleum geologist/engineer, and Bret works as a petroleum geologist for Dominion Resources, Inc.

**Alejandro Sanchez (MS Geology 2004)**
Alejandro now works with Anadarko Petroleum Corporation in Houston Texas.

**Roy Sites (PhD Geology 1977)**
Roy recently moved to Arlington, Virginia, where he works as a consulting structural geologist. Roy continues to lead the best field trips in the Central Appalachians Valley and Ridge Province and recently took a group of geologists and geophysicists from BHPBilliton on a five day excursion through the area to explore possible analogs to structure in the offshore areas of Trinidad and Tobago area.

**Dale Skoff (MS Geology 1980)**
Dale is now the Senior Project Manager for CORE Environmental Services in Allison Park, Pennsylvania.

**Jocelyn Smith (MS Geology 2003)**
See Ryan Gaujot and Jocelyn Smith, above.

**Victor Smith (BS Geology 2003)**
Victor began work as a hydrogeologist at Environmental Strategies Consulting, an environmental consulting firm, in Reston, Virginia, in April, 2004.

**Michael Solt (BS Geology 2002)**
Mike is currently pursuing a masters degree in hydrology and geophysics at California State University in Sacramento. He has also been working as an intern with the US Geological Survey in California, monitoring ground water quality there.

**Patrick Sterner (MS Geology 1993)**
Pat, who also has a PhD degree in Agronomy from WVU, is now working as a Senior Consultant for Acacia Environmental Group, LLC, in Charleston, West Virginia.

**Kevin Svitana (MS Geology 1983)**
Kevin, after being employed as a geologist and hydrogeologist in various jobs since 1983, enrolled in 2002 at Ohio State University in their Geology PhD program.

**Yen Tang (BS Geology 2002)**
Yen finished her MS at Lehigh in the Geological Sciences and currently works for GZA GeoEnvironmental, and environmental consulting firm in Fort Washington, PA. Yen is now Yen Tang-Dietrich – “in the midst of all of this, I managed to get married.”

**Steve Taylor (PhD Geology 1999)**
Steve is employed as a geologist at Western Oregon University, where he set up and runs a new GIS lab program. He received tenure there in 2004.
Frank Tettenburn (BS Geology)
Frank owns his own company, Tettenburn Environmental Associates, Inc., of which the TEA Lime Company is a part, located in Cross Lanes, West Virginia. Frank specializes in coal mine reclamation.

Michael Underwood (BS Geology 1998)
Mike got married to his wife Kessie in June 1999 while he was working in North Carolina, then moved back to his hometown of Mt. Hope, West Virginia, just in time for the July 2001 flooding there. Mike then worked for New River Engineering in Shrewsbury, West Virginia, doing permitting and other mining-related consulting work mostly involving AutoCAD, HydroCAD and a lot of technical writing. Mike and his wife had their first child in July 2002, Siera Cheyenne, and a son in October 2004, Isaac Michael. Mike had served under the US Army National Guard on active duty from October 2003 to December 2004, with the last 10 months spent in Iraq. He did some prospecting while stationed in Iraq in the mountains near the Iranian border, but between the landmines and chemical mines and other unexploded ordinance from the Iran-Iraq war, he soon decided against it. Mike arrived home Dec. 29th and met his son for the first time.

Jason Walls (BS Geology 1996)
Jason is a third-year law student at WVU, and plans to work starting summer, 2005 as a federal judicial clerk in Clarksburg, under Irene Keeley, Chief Judge of the Northern District of West Virginia.
I am pleased to announce that a new GIS Center has been established at WVU in association with the Department. The National Geospatial Development Center is a partnership involving the Department and the Natural Resources Conservation Service (NRCS) in the U.S. Department of Agriculture. The co-directors of the Center are Trevor Harris and Jon Hempel from the NRCS. The Center will initially be housed on the first floor of the Clark Hall Annex though we are hopeful that it will eventually be relocated with Geology and Geography to Brooks Hall. The Clark Hall Annex space, approximating some 6000 square feet, was formerly the Physical Sciences Library and has been completely renovated and equipped to service the needs of the Center. Duane Nellis, past Dean of the Eberly College of Arts and Sciences commented to the national press, “I think this is a tremendous validation of the national recognition of WVU’s geography program, particularly our geographic information systems program”. The Center is now online and was made possible by immediate annual funding of $4.34m that U.S. Senator Robert C. Byrd added to federal legislation. Senator Byrd commented that, “I am excited about the opportunities that this project presents not only to West Virginians, but also to all Americans. For farmers, this means a better understanding of the earth in their fields. For businesses, it means better placed, more focused and improved investments. For individuals, it means a more thorough analysis of the soundness of their homes’ foundations. Utilizing the expertise and technology at the University, this effort will help to improve safety and expand economic opportunity”. The Eberly College and the Department are grateful to Senator Byrd for acquiring the first of what will be hopefully multi-year funding for a project that builds on the GIS strengths of the Department.

The Natural Resources Conservation Service has almost 70 years experience assisting the nation’s landowners to conserve their soil, water, and other natural resources. Local, state, and federal agencies and policymakers rely on NRCS expertise to support resource conservation from the Caribbean to the Pacific. In partnership with the NRCS, the department will support the agency’s natural resource business needs through the innovative use of GIS and other technology tools. As a result, NRCS will increase its technology infrastructure to support the delivery of programs in the field. In particular the Center will provide the GIS research and software development tools that NRCS will use to perform its work. Spatial and soils data will be downloaded from NRCS data farms, and computer tools developed to analyze the information and to share the tools with scientists and decision makers.

The Center builds on already existing and extensive GIS facilities and faculty expertise in the Department of Geology and Geography. The Department is home to the West Virginia State GIS Technical Center that provides valuable support to the state GIS enterprise. The department is also home to one of the nation’s largest concentrations of faculty who specialize in geographic information science. It is intended that the Center will also make the department’s GIS program an academic magnet and will create research opportunities for graduate students in areas such as virtual reality, remote sensing, and Internet GIS. Additional research opportunities will evolve through partnerships with other academic institutions, governmental agencies, and the private sector.
Faculty Highlights (2004)

Trevor M. Harris
Eberly Professor of Geography
Trevor.Harris@mail.wvu.edu

Very much a mixed year for the Harris family. The high points of the last year came from the successful acquisition of funding and support for the National Geospatial Development Center (discussed elsewhere in this newsletter) and various other research initiatives, to the lows of being diagnosed with colon cancer. The latter has involved major abdominal surgery and almost a year of chemotherapy – completed the end of November 2004. The good news is that the prognosis looks promising at the present time with all the major indicators in my favor. I am very grateful to students and colleagues, especially Ken Martis, Tom Wilson, and Duane Nellis, who stepped into the breach and did a splendid job during my enforced absence.

Amy Hess
The past year was an exciting one in research and teaching for me. I continued my work on the relationship between wildfire and climatic variability in the Pacific Northwest, made possible by a generous grant from the US Department of Agriculture and the US Department of the Interior. Working with colleagues from the University of Washington, we have been able to demonstrate a clear link between western wildfires and drought that occurs on decadal time scales. This result suggests that long term forecasting of extreme fire years may soon be possible. I have also received a new grant from the National Science Foundation to study terrestrial carbon sequestration in West Virginia. The objective of this work is to estimate changes in carbon resulting from different timber management strategies. We hope that this research will pave the way for West Virginia to participate in carbon trading programs should such opportunities come available in the coming years. I continue to teach my core undergraduate courses, Introduction to Physical Geography, Biogeography and Environmental Field Geography, but have added a new graduate course on the Geography of Fire. With all the western wildfires burning in the last few years, this course makes for lively discussion. Finally, I have watched my son Aiden grow from a baby to a toddler and have enjoyed every minute of it!

Ann Oberhauser
An eventful year in Geography as the program continues to add new faculty and expand course offerings and research opportunities for students. Consequently, my role as undergraduate coordinator has been exciting as we assist students in developing their geographic skills and knowledge. This year was particularly successful with a record number of students graduating and entering new jobs or continuing their education in graduate school. I was especially pleased to have Seela Aladuwaka graduate with a PhD in Geography and return to her home university in Sri Lanka.

On the research front, my work continues to focus on economic development in rural areas of South Africa and Appalachia. These two regions provide interesting comparisons in the broader context of economic globalization. My research has led to some interesting collaboration with graduate students and other faculty at WVU.

Finally, at the national level, I have become more involved in the Association for American Geographers through service on the National Council. This provides a great opportunity to interact with geographers from around the country. Our big event in 2004 was the Centennial meeting in Philadelphia with over 8000 national and international participants. Please keep in touch with us at WVU.

Lizbeth (Betsy) Pyle
During the past year I took on two different professional geography service roles. I chaired the AAG Nominations Committee. This group selects the slate of candidates for the offices of President, Vice President, and National Councilor for our national association. In the Southeastern Division of the AAG – or SEDAAG – I served as Chair-Elect of the Honors Committee. I’ll chair the committee this year, and my colleague Tim Warner is the new Chair-Elect. The committee selects the recipient of the SEDAAG undergraduate scholarship, evaluates graduate student papers to select award recipients, and determines faculty awards in Service, Research, and Lifetime Achievement. Another rewarding experience of the past year was the opportunity to spend a month in Guanajuato, Mexico, studying Spanish as part of a university exchange program, and then hosting a young woman from Guanajuato in my home the following month while she studied English at WVU.

Bob Behling
Greetings! Dr. Bob here reporting on the activities with K-12 teachers in 2004-2005. Of special note was another fantastic field experience by WVU bus (we always like to advertise) to New Brunswick and Nova Scotia. The short version review: the geology and seafood were FANTASTIC!! I have to schedule more trips to this area for the world class exposures and because it is a great composite of North American Plate tectonics following the building of the Appalachians and the opening of the Atlantic. The trip is long (we logged more than 3300 miles) but there is so much to see. En route we took the Cog RR up Mt. Washington in NH and we checked out the dinosaur footprints in CT. Of course we had to see Acadia National Park! Then, too, the glacial geology features were an added veneer to the rocks below!

During the spring break, I had the distinct pleasure of leading the undergraduate majors in our Capstone Field Experience. This is a new course for the BA majors in Environmental GeoScience. We flew to Las Vegas, rented a Suburban, and were off to Zion Nat. Park and then Page, AZ. We toured the Glen Canyon Dam and when we finally got down to lake...
level in Lake Powell, we were off by boat to see rocks that have not been exposed since the 1970’s. From there we were off to view the volcanics around Flagstaff, AZ and then a day long trip to the Grand Canyon. On the way back to Vegas we stopped off to see Boulder Dam. Before the red-eye flight back east, I introduced the troops to the insidious dangers of the one-armed bandits. Fortunately, they found the shops on the strip more to their liking than the actual gambling.

Remember!! It is always a Great Day for a Field Trip! Cheers!

Robert Shumaker
I’m doing very little geology these days, just enjoying retirement and awarding small amounts of money from The Shumaker Fund to faculty and grad-students for research projects. Most of my time is spent outdoors working around our farm on things I neglected when I was teaching. Right now I am trying to put our old tile silo (>100 yr. old) back together so it will survive into the next generation. Our family did get away to the Baltic countries to celebrate Beverly and my 50th wedding anniversary, and this winter we will be going to a small island in the Caribbean called Culebra for a month. I have moved into Alan’s office as Milt has moved to North Carolina to be near one of his daughters. Doris has had health problems and Milt needed to be near family. I talked to him last winter and he seemed fine. This year I will get back to my genealogy. Hunting for one’s ancestors is very different from the research I am used to doing. No original data here. Time is spent in libraries, historical societies, county court houses and on the computer. Still there is the same excitement of discovery (not oil or gas), but for example, finding that a long-lost great grandfather was really a first-class scoundrel!

Briane Turley
Briane Turley, a research assistant professor in Geography, is currently working with Trevor Harris and graduate assistant Sue Bergeron on a project sponsored by the National Guard Bureau aimed toward development of a predictive model for marijuana growth in the United States. The team is examining several approaches including utilization of expert system analyses. Turley and a colleague in the Department of History, John Super, recently completed work on a book to be published by Routledge, London in June 2005. Titled Religion in World History, the book will be included in the Themes in World History series edited by Peter N. Stearns. In May 2004, Turley received the J. William Fulbright Alumni Initiatives Award, his second Fulbright in two years. The award supports the development of an online, scholarly journal at West Virginia University titled Religion and Society in Central and Eastern Europe. In addition, Turley is working with Daniel Wiener and the Office of International Programs on the creation of a regular student exchange program between WVU and the University of Szeged in Hungary.

Daniel Weiner
I continue to wear two hats – Professor of Geography and Director of International Programs. While this is challenging, it also provides opportunities. For example, I continue to work on Participatory GIS projects that have an international component and also work with Geology and Geography faculty to increase study abroad opportunities for our majors. The most rewarding event of 2004 was the graduation of Ph.D student Francis Koti whom I advised. After years of teaching and mentoring, his joy was all of our joy. 2004 was also a year to complete old projects and start new initiatives. I was pleased to become a member of an international steering committee to organize a Participatory GIS conference in Tanzania scheduled for September, 2005. This will be an opportunity for GIS scholars and practitioners in developing countries to showcase their work and for all of us to learn about “best practices.”

Dick Smosna and Kathy Bruner: The annual field trip to Ireland
For several years Drs. Dick Smosna and Kathy Bruner have been taking geology graduate and undergraduate students on a stratigraphy field course to Europe, first to Spain and more recently to Ireland. The principal objective of this program is for the students to gain valuable field experience in geological techniques. Again in 2005 the course was conducted in Dingle, County Kerry, on the west coast of Ireland. Mountains of this region offer a wide spectrum of different sedimentary rock types; moreover, the rocks are well exposed for easy field examination. In a word, the geology is superb. Needless to say, the stark beauty of this small peninsula into the Atlantic Ocean is breath-taking. Cultural aspects of the trip include a close interaction with the people of a rural Irish community (Dingle, population 1500), a warm Gaelic people. During the week-long trip the group visits historical churches and other Medieval buildings, early Christian monastic remains, and archeological sites featuring structures from the Bronze and Iron Ages. And of course, we taste the unique food and drink of the country. Exposure to a different culture is as important a part of an international geological field trip as exposure to different rocks, no?

Gregory Elmes 2This has been an outstanding year in every respect. On a personal level, I have seen members of my family triumph in their individual goals – notably Jeanne, my wife, in passing her doctoral comprehensive exam in music; my son Arthur in starting his higher education at the University California at Santa Barbara after graduating from MHS; daughter Alex was in the All State Choir and made MHS M&M’s; Carol is on walk-about in Australia for the year; and James achieved his dream of receiving his pilot’s wings at a ceremony at the Kingsville NAS on the last day of September. Needless to say, this has all been a source of pride and joy.

On the professional front, I take great pride in having served as a member on a number of successful graduate committees at doctoral and master’s level. Congratulations are due to Koti and Abdullah. I have had the honor of being invited to present talks at Montana State University and Leicester University. Several book chapters have appeared in...
print in 2004, two of them after delays so long as to despair of the work ever seeing the light of day. In August, I was elected chair of the International Geographical Union’s Commission on Geographic Information Science for the next four years, with the enviable task of arranging meetings and workshops in Brisbane, Rome and Tunis. It’s tough work being a Geographer! In current research, Dan Weiner, Jennifer Miller and I have been joined by a postdoctoral student, Cristina D'Alessandro-Scarpari, to investigate GIS and society perspectives on Digital Earth. We have assembled quite a team and look forward to some productive debates and contributions.

**Helen Lang**
The most exciting thing I did in the last year and a half was to travel to Norway for an international Eclogite Field Symposium. For the last few years, I have been working on eclogites from northeast Greenland with a colleague at the University of Iowa. Eclogites are beautiful coarse-grained red and green metamorphic rocks that are exposed in few places in the world (hardly any in North America). They are formed very deep in continent-continent collision zones and have generated a lot of interest among an active international group of geologists. This group meets every two years at some location where eclogites can be seen in the field. Last year the meeting was in Norway, and I got to attend. I visited a Norwegian geologist friend, went on a pre-meeting field trip, met a lot of interesting and clever people at the meeting, learned a tremendous amount about eclogites, and even went on a post-meeting field trip. The rocks were beautiful, Norway was beautiful (we even had pretty good weather), and I thoroughly enjoyed myself.

**Henry Rauch**
This past year I've been busy. I taught six courses this year, including Freshmen Environmental Geol/Geog, Senior Hydrogeology, Graduate Environmental Hydro-geology, and Karst. I enjoy teaching, and each class is unique. For service work I continue to serve on the West Virginia Surface Mine Board and Quarry Board, and we heard probably our biggest case since I started on the SMB in 1977; this case involved a challenge by an environmental group to mining at a particular mountain top/valley fill surface coal mine site, that had implications for all future surface coal mining in West Virginia. The case decision was in favor of the WVDEP and the coal company, but probably will be appealed. I've changed some service jobs this year, and am now heading up our Alumni Relations Committee. I had two research Geology graduate students, Kayse Fisher and Laura Burnette, complete their research with me. I now have four current research advisees – Eric Perry (Ph.D. student), Jeff Bray, Josh Silvis, and Scott Wade (M.S. students). My primary research focus remains the environmental impacts of underground coal mine subsidence on streams and ground water supplies. I'm still involved in some karst research through Jeff Bray, and have continued work on environmental monitoring of geological sequestration of carbon dioxide; the latter topic involves USDOE and the Texas Bureau of Economic Geology.

On a personal note, my daughter Denise, who is 26, now lives and works in Reno, Nevada as an occupational therapist. Unfortunately she couldn't find a decent job closer to my wife Dottie and me in West Virginia. However, we enjoy visiting her, when I get to play poker in nearby casinos. I would love hearing from all of my former students; please send me an E-message when you can.

**Jaime Toro**
This was another productive and exciting year for me. During the summer of 2003, accompanied by students Francis Rengers (now in the M.S. program at Colorado State University) and Laura Burnette (now in the Ph.D. program at University of New Mexico), I traveled to the remote York Mountains of western Alaska to carry out fieldwork funded by the USGS. In spite of the usual bad weather, mosquitoes, and bears, we managed to map a large portion of the Mint River Detachment fault. This past year I, and my student Alejandro Sanchez, also collaborated with Dr. Tom Wilson and Dr. Shahab Moghadhe (Petroleum & Natural Gas Engineering) on a DOE-funded project to determine reservoir properties from seismic data using Artificial Neural Networks. During the summer of 2004 I spent a month in the Arctic tundra of Russia north of the town of Bilibino studying the structures of the Chukotka fold belt. We think that this virtually unknown orogen is related to the Brooks Range of Alaska. If the NSF smiles on us this project will keep me busy for the next couple of years. This year I was also honored with the Outstanding Teacher Award of the Eberly College of Arts and Sciences for which I am very grateful.

**Joe Donovan**
In the last three years, I have divided my time between teaching in the Department and research in the WV Hydrology Research Center. The HRC is the water research arm of the WV Water Research Institute. The center is currently undertaking projects in mine drainage research within the Pittsburgh coal basin and in karst hydrology of the eastern counties of WV and western Virginia. Co-investigators on Center projects include Dr. Dorothy Vesper, our newest hire in G/G, and Dr. Jim Stiles, of WVWRI. The kinds of work we are producing includes mapping of groundwater conditions in underground mines of the region, looking in particular at the potential for future discharge; monitoring of water levels in regional aquifers using a network of 36 datalogger-coupled pressure transducers; and construing the water budget for the Pittsburgh mine aquifer. HRC projects can be visited on our web site www.hrc.wvu.edu. In addition to Dorothy, full time staff at HRC include Eb Werner and Brenden Duffy (MS Geography, 2003).

In terms of student work, we have had two grad students (Jason Early and Sarah Webb) produce groundwater flow simulations of the areas around community water systems in the Ohio River alluvial aquifers and in the Eastern Panhandle, principally karst aquifers. Kurt McCoy finished a thesis on barrier-flow and recharge rate parameters for the Pittsburgh mine aquifer. Sarah and Jason
are now working for consulting firms in Indianapolis and Fredericksburg; Kurt is working for the USGS WRD in Charleston. I am currently advising three students: Geoff Richards, who is doing a karst spring inventory in Monroe County WV; Sri Chaudhury, who is doing a follow-up study examining the effects of in situ reclamation activities at the Greer site, a mine fill near Morgantown studied by three WVU Master’s students in the mid 90s (Beth Barker, Jen Sincock, and Andy Ritter); and Dave Light, a new PhD student coming to us via ERM in Albuquerque. Dave also is a WVU Swiger Fellow, one of the first we have had in that category within the department in a number of years.

While my teaching responsibilities have diminished somewhat as a result of HRC involvement, they are being very ably filled by Dorothy Vesper, also a research collaborator on several new projects. Dorothy’s addition to the faculty is a welcome one and we feel makes the hydrogeology program one of the strongest in the region. We look to great things as Dorothy adds her stamp to the program. Her input will be especially welcome as she adds her mark to the move into Brooks Hall, where we will be building new teaching and research facilities for geochemistry.

I have also increased my holdings of Hawaiian shirts to 24, and have been trapped into doing service for GSA Hydrogeology Division, to be Tech Program Chair for the 2005 meeting in Salt Lake City. Former students, expect the clarion call to come to Salt Lake!

Kenneth C. Martis
The academic year 2004-2005 is my 30th 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 are bi-coastal parents. Elizabeth had a son since the last newsletter and he happily occupies much of our free time when we can see him.

Research wise the last two years have been productive. The year 2002 saw the publication of The Atlas of American Politics: 1960-2000 by Congressional Quarterly Press. This book has been well-received and, hence, CQ Press and my four author team have been contracted for one of my career-long research goals The Historical Atlas of United States Presidential Elections: 1789-2004. Work on this atlas will take another year with a 2006 publication date. 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 elections. I am also in my second three-year term as Associate Chair of the Department for Geography. Recent expansion of the full-time geography faculty to 12 gives us high profile in national meetings in areas of GIS, biogeography and economic development. I still have a full range of courses, including a new course SENIOR THESIS that is a “capstone” experience and primarily field based. The undergraduates and I enjoy getting out of the classroom and doing field trips each fall semester. My final thought is that those of you who have not seen Morgantown in the last three years are in for a major surprise. The rail-trail and accompanying development have changed the face of the city along with much other construction around the town.

Randy Jackson
Randy Jackson continues as Director of the Regional Research Institute. New RRI initiatives this year include the RRI/College Special Research Assignment, providing support for external funding proposal preparation, the RRI Book and Travel Award, complementing funding for departments for recruiting exceptional graduate students, and an international Consortium of Regional Research Institutes and Centers (CORRIC), founded this year to promote, coordinate and facilitate regional research and instruction. Randy conducted research this year on several topics, with funding from external sources including the National Science Foundation, the Alfred P. Sloan Foundation, and Dominion Energy. Two of his Papers were published in 2004, one on matrix updating formulations in Economic Systems Research, and one on the contributions of Walter Isard in the Journal of Geographical Systems. He also took part in a half dozen paper presentations. For more details on the RRI, visit the Regional Research Institute web site.

Robert Hanham
Dr Hanham is pleased to report that doctoral students Eric Spears and Scott Spiker both graduated this summer. Joel Halverson and Rique Hoch are not far behind them. New doctoral students Jacquelyn Core, Janice Hardin and Chris Schaney have all made excellent early progress toward their degrees, as has Bobbie Alt in the masters program. Undergraduates continued to get a lot of opportunity to express and shape their views of the world in my classes, much to my pleasure. Thanks comrades.

J. Steven Kite
Steve Kite has spent much of the last two years developing a series of stream restoration workshops. The classes were dominated by civil engineers, but WVU Geology alumni Jim Colby, Jason Smithson, and Kevin Andrews were very welcome participants. Total enrollment reached about 600 students; six or seven times the number of students who have completed Advanced Fluvial Geomorphology in over 20 years.

Kite has finished a decade of service to the Quaternary Geology and Geomorphology Division of the Geological Society of America. This effort included stints as Secretary, Treasurer, and various stages of Chairmanship that culminated in 2003 as head of the second largest (1400 member) GSA division.

Every year seems to have floods, and 2004 was no exception. The precipitous geomorphology buzz around Morgantown is a 5000 ton boulder called Haystack Rock, which lies about 200 yards from the Coopers Rock overlook.
The rock has moved about 4 feet since April and Kite has been monitoring its motion with a laser-ranger finder in anticipation of a 900 foot plummet to Cheat Lake below. It’s going to come down with great energy, but who knows if it will be next month or the next millennium.

**Tim Warner:**
Abdullah Almutairi graduated with a PhD in August of 2004. His dissertation is potentially a major contribution to the field of change detection in remote sensing, because he provides the first comprehensive analysis of how the accuracy of the different change detection methods varies as a function of image properties. Abdullah also did his MA at WVU, and so I was very sad to see a good friend leave. Abdullah returns to his home as an Assistant Professor at Imam Mohammad bin Saud University, Riyadh, Saudi Arabia.

This last summer I traveled with students Jon Michael Bosley and Matt Smolnik to Xanthi, Greece, for a remote sensing course. After the course, I bicycled for a week on spectacular Kephalonia Island. Later that summer, I participated in a digital forestry workshop in Beijing, China, with a fascinating field trip to Manchuria. My travels ended with a wonderful visit to WVU remote sensing alumnus, Dr. Jong Yeol Lee, in Seoul, South Korea, to work on high spatial resolution imagery. Dr. Lee is now a Fellow at the Korea Research Institute for Human Settlements.

**Tom Kammer**
2004 was another busy year of teaching including Geol 103, Earth Through Time; Geol 200, Geology for Environmental Scientists; Geol 331, Paleontology; and Geol 632, Paleoecology. I was out of the rotation for Geol 404, Geology Field Camp, which was taught by Steve Kite and Dave Oldham this year at our new camp in the West. In 2005 Jaime Toro and I teach Field Camp again as we did in 2003, but this time Jaime will take the Black Hills part and I will do the Montana part.

Research on fossil crinoids is moving along. I currently have a three-year NSF grant entitled: Evolutionary Success in Marine Invertebrates: Testing the Relationships between Eurytopy, Longevity, and Geographic Range in Carboniferous Crinoids. The project involves a comparative study of crinoids between North America and Europe to investigate patterns of taxonomic longevity and how these relate to both facies and geographic distribution. During the summer of 2003 I spent three weeks in the field in Ireland, England, Wales, and Belgium collecting facies data at classic crinoid localities. In summer 2004 I returned for three weeks of museum and field work in Ireland, Scotland, and England. This work is being done in collaboration with Dr. Bill Ausich of Ohio State University. So far we have collected data on over 370 species of European crinoids and more than 1200 species of North American crinoids. The data are still being analyzed. We are presenting a paper at this year’s GSA Annual Meeting in Denver entitled: The “Age of Crinoids”: a Mississippian biodiversity spike coincident with widespread carbonate ramps. We think we have evidence that the extremely diverse and abundant crinoids of the Mississippian resulted from the widespread extinction of reef facies at the end of the Devonian, which led to widespread carbonate ramps in the Mississippian.

In 2004 my Ph.D. student Dave Matchen graduated. Dave is now on the faculty at Concord University in Athens, WV. Dave and I are currently working on publications from his dissertation on the Lower Mississippian Black Hand Sandstone of Ohio, which turns out to be a major paleovalley fill associated with a previously unrecognized drop in sea level at the Kinderhookian-Osagean boundary. I hope you are finding success as a geologist. Keep in touch with the geology faculty and let us know what you are up to.

**Tom Wilson**
Dr. Wilson currently serves as Associate Chair for Geology. He advises three grad students: Sandeep Pyakurel, Jamie Tallman and Bryan Schwartz. Bill Carpenter successfully defended his thesis “Regional Characterization of a Carbon Sequestration Pilot Site with Implications for Enhanced Oil Recovery” this past May while holding down a job with Dominion E &P in Jane Lew. Sandeep is working on a study titled “3D seismic characteristics of the Morrow Production Trend in the Buffalo Valley Field, New Mexico.” Sandeep is planning on an August defense and graduation, and will go on for the PhD in Civil and Environmental engineering. Jamie Tallman is just getting started in the program. He will be undertaking a subsurface characterization effort of the Granny’s Creek field to assess the carbon sequestration potential of stacked reservoirs in that area. Bryan is just beginning a fracture characterization study at Teapot Dome using FMI logs from that field. Bill, Sandeep and Bryan are funded through DOE NETL contracts. This past year Dr. Wilson introduced a new course titled Computer Aided Subsurface Interpretation based largely on the Landmark software, GeoGraphix. We are grateful to companies like Landmark, Seismic MicroTechnology, and dGB USA for their continued software grants. Students receive training with these software in various geophysics classes. Dr. Wilson was on sabbatical this spring during which he concentrated on carbon sequestration research efforts with NETL, the new NRCCe Center for Zero Emission Research and Technology, and also studies in earthquake seismology along the Northern Anatolian Fault Zone in northern Turkey.