From the Chair
Soaring Times in Geology & Geography

The last few years have witnessed a blur of change in WVU Geology & Geography. Our last newsletter chronicled our move from 65 year-old White Hall into newly renovated Brooks Hall. Thanks largely to the efforts of Chairman Trevor Harris, Brooks is a showcase example of an attractive, functional, and sustainable academic building. If you haven’t visited the Department since the summer of 2007, you are in for a special Mountaineer experience, especially the views of our green roof, downtown Morgantown, and the Mon River Valley.

Ten new faculty members have arrived since we moved into Brooks. The last newsletter introduced Tim Carr, Jamison Conley, Karen Culcasi, Brenden McNeill and Jeremia Njeru.

We added geophysicist Dengliang Gao, geologist Joe Lebold, and geographer Bradley Wilson in 2009. Some alumni may recognize Deng from his days in the Geology M.S. Program; others may remember Joe as a Geology B.S. graduate or as a Field Geology teaching assistant while working on his Ph.D.

Shikha Sharma and Amy Weislogel arrived this summer, doubling the number of women faculty in the Geology Program. This semester we have a record 28 faculty members regularly in the Department, while Geography is in the process of hiring an additional colleague with interests in climatology.

New faculty additions are not the only transitions within the Department. Robert Hanham retired in May, our first full retirement since 1996. Robert’s contributions are already missed, particularly in the Geography Graduate Program. Ken Martis and Dick Smosna have entered phased retirement plans that will keep them actively teaching in our Department until 2012.

Graduate-student recruiting appears to have been boosted by the greatly elevated quality of our academic environment that came with the move into Brooks Hall. This semester we have 40 graduate teaching assistants (another record), at least 20 graduate research assistants, and three graduate fellows.

The Geology, Geography and Environmental Geosciences undergraduate programs are rolling along, totaling 173 undergraduate majors. Thirteen incoming freshman majors arrived in August, a remarkable number since historically over 90% of our majors declare after they are “hooked” in our 100-level courses. We have now added freshmen retention efforts on top of our ongoing recruiting.

We taught over 13,500 student credit hours in the Fall semester, and - as has been the case for over a century - the vast majority of freshmen lecture classes are still taught by fulltime faculty. All of our pre-majors and majors are advised by full-time faculty in the Department.

Despite our heavy teaching commitment, the faculty authored 36 refereed publications in 2009. Current research spans a great range of research areas, and funding for over 60 different research projects totals well over $5 million.

In keeping with the theme of a new WVU President, a new Provost (Chief Academic Officer), and a new Dean, I became the new Chair of the Department in June 2010, tenth in a lineage that traces back to I.C. White in 1877. I must admit it is intimidating to follow in the wake of great past chairmanships, including 15 years of extraordinary leadership by Trevor Harris, whose efforts in the renovation of Brooks Hall are more than worthy of special recognition.

I am very excited by the prospects of serving as Chair because of the wonderful staff, faculty, students, and alumni of the WVU Department of Geology & Geography, and I am truly honored by all the support I have received while stepping up to this role.

Steve Kite
Chairman Department of Geology and Geography
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All of us in the Department believe the facility at Brooks Hall is top notch, especially the views of our green roof, downtown Morgantown, and the Mon River Valley.

However, we are keeping an eye on the construction at our former home, White Hall (above). The image on the right depicts the building as it will look when Physics moves in, including roof-top observatory.

Views from Brooks Hall of the Life Sciences Building and of the constantly changing color of the green roof.
Grant Money Allows for Crime Mapping Collaboration

Reprinted from the Eberly Magazine, Summer 2010
By Ashley Wells

Every day, people in Morgantown leave their homes for work or school with thoughts of the day ahead, and most of them are not worrying about crime. Luckily, there are people at West Virginia University and in the city and campus police departments ready to make sure they do not have to. Researchers in the Department of Geology and Geography are partnering with city and campus police in a unique collaboration to identify and stop crime.

Greg Elmes, professor of geography, received a $150,000 grant from the National Institute of Justice to develop a crime mapping system using GIS technology. Data from both police departments will be used to provide valuable information.

This new multi-agency collaboration will help law enforcement visualize crime trends and take note of areas where a significant number of crimes or similar crimes are occurring.

In the past, crime trends may have gone unnoticed until statistics were compiled for yearly reports. As for Morgantown, City Police Chief Phil Scott hopes that this collaboration will allow for a more bottom-up approach in which officers can take the initiative in community policing without having to wait for annual data to make a move.

“We are excited to be working on this project. It’s refreshing to have a tool that allows our officers to deal with problems proactively,” said Scott.

His University counterpart, Chief Bob Roberts added, “I’d rather prevent a crime and not have a victim than solve a crime. If you’re out at 3:00 a.m., in an altered state, alone, or with strangers, then you’re putting yourself at risk, and that’s our biggest challenge.”

The idea for this partnership arose from a class that has been taught at WVU since 2006. Crime Mapping and Geographic Profiling is an upper-division course taught to both undergraduate and graduate students. According to Elmes, the class teaches the fundamentals of computer mapping and crime analysis. In order to give the techniques context and meaning, they used real data from on campus and around Morgantown. From that grew the idea that the data they were using could be applied to benefit the community.

“The project is oriented toward bringing this technology into the police world and to transfer some of the crime mapping expertise from the University into a work environment,” said Elmes.

So far, several students who have taken this course have been placed in police departments. Elmes hopes that students can become more aware of the opportunities that geography can offer and that knowledge of GIS mapping techniques can be a marketable skill in a number of fields.

Elmes’ inspiration for the course came to him while he was working with data and maps in epidemiology.

“GIS has practical applications in fields such as forensics and criminology, as well as others,” said Elmes.

For example, Seth Cox is a former WVU student who took the class. He is now in training to work with the United States Park Police and has recently finished his training at the Federal Law Enforcement Training Center in Glynco, Georgia. He will complete the Uniformed Police Training Program under Homeland Security before finishing five more weeks of training.

The crime mapping initiative is only in its first stages, but it represents the type of academic service initiative that is the mission of WVU and the Eberly College.

George Roedl, a doctoral student studying land use cover changes is working on the project.

“I liked the idea of working on something that was cutting edge,” said Roedl. “It’s a way for me to give back to the University, the city, and the state and to show the country that West Virginia is forward-thinking in its approach to crime prevention.”

The biggest challenge facing both police departments every day is protect-
ing people from themselves. A large campus such as the one at WVU poses unique safety risks, and parents have high expectations. These expectations are met with determination, and in 2008, Reader’s Digest named WVU as one of the safest campuses in America. The University was ranked #18 out of the 135 participating schools and received an A for its readiness to handle on-campus threats. However, while Morgantown is a relatively safe city, the best protection against all forms of violence is being aware of surroundings and taking necessary precautions.

Law enforcement officials believe that the visual aid of a map will provide more context and carry more weight than simple statistics. For the public, the new way of visualizing information will give them a better idea of what to expect and how to respond in certain environments. “I hope it will put to rest some preconceived notions that the community and students may have about some neighborhoods being more prone to crime than they really are,” said Chief Scott. “And conversely that people will notice areas that may be dangerous and respond accordingly.”

The chiefs were quick to point out that most of the things you need to know in life, you have learned by kindergarten: strength in numbers, don’t talk to strangers. Crimes of opportunity, like unlocked cars being burgled, represent a large number of the crimes investigated, and they are ultimately the most preventable.

The other big part of the new crime maps will be resource allocation. The law enforcement departments will be better equipped to efficiently allocate resources to areas that need it most. Right now, the people involved with the project are working on deciding what information to put in to the new system. They need enough information to be effective, but too much could bog them down in useless details and prevent people from seeing a larger picture.

Other universities that have similar programs include Eastern Kentucky University, the University of San Bernadino, and Temple University’s Department of Criminology. Since the first steps in crime mapping in the late 1990s, the technique has been growing rapidly and becoming more widely used.

“It is very interesting to see how different disciplines have recognized the value of spatial data,” said Elmes.

When it comes right down to it, nothing will ever be able to replace the “nuts and bolts” of police work, but this technology can help to more efficiently manage resources and make cities safer places.

**Faculty Spotlight**

Richard Smosna

Dr Richard Smosna began a phased retirement in 2009, but it would be difficult to tell between class instruction and fieldwork and field courses in places near and far such the Appalachians and Ireland. Last year Dick was recognized by the American Association of Petroleum geologists with Distinguished Educator Award. Below is the citation written by alumnus Craig Edmonds, a former student of Dick’s and a manager of geology with CONSOL Gas Company.

“In recognition of commitment to higher education and for decades of dedicated service and inspiration to petroleum geology student”

Dr. Richard Allan Smosna, 2009 recipient of the AAPG Eastern Section Distinguished Educator Award, has served the petroleum industry well for over three decades. His inspirational efforts and tireless dedication have influenced hundreds of students to pursue careers in Geology. Richard, commonly known as “Dick”, was born November 3, 1945 in Chicago, Illinois. His geological interests were sparked during recreational caving and after taking an introductory course from James Fisher, petroleum geologist and outstanding professor. Dick obtained a BS degree from Michigan State University in 1967. Later, he enrolled at the University of Illinois, where in 1970 he achieved an MS and in 1973 a PhD. His thesis research addressed the stratigraphy and carbonate petrology of Pennsylvanian limestones in arrow Canyon, Nevada. From 1972-1978 Dick was employed as a petroleum geologist at the West Virginia Geological Survey working under Doug Patchen. Since 1978, he has served as a Professor of Geology at the West Virginia University teaching courses in stratigraphy sedimentology, sedimentary petrology, and petroleum geology.

Over the years, Dr. Smosna has supervised nearly 50 MS and PhD graduate students and has mentored hundreds in advanced level courses. Most of these students have gone on to successful careers in the petroleum industry. He was honored three times with the AAPG’s Levorsen Award and was twice named Outstanding Teacher at West Virginia University. Since 1980, Dr. Smosna has partnered with his loving wife and geologist Dr. Kathy Bruner as consulting geologists to petroleum companies of the Appalachian basin. In the near future, Dick and Kathy are eagerly waiting retirement to a Preston County, WV horse farm.
Senator John D. Rockefeller
Mollie Petit With West Virginia
Spotlight Recent Graduates
Mollie Pettit

Mollie Pettit graduated from the Eberly College with degrees in geology and mathematics. She has completed several internships, including her most recent internship with the American Geological Society.

Tell us about your internship at the American Geological Institute. My internship at the American Geological Institute (AGI) was an amazing opportunity. While at AGI, I attended geoscience-related congressional hearings and briefings, for which I wrote summaries for AGI’s website and articles for AGI’s monthly review. I also helped organize events, explain geoscience concepts to policy makers, and helped other geoscientists communicate with policy makers. I had the opportunity to meet Senator Rockefeller and Representative Mollahan, as well as a staffer in Senator Byrd’s office. The American Association of Petroleum Geologists (AAPG), which funded the internship, gave me the opportunity to write an article on geothermal energy for the December 2009 issue of the AAPG Explorer. I had a wonderful time at AGI and I learned a lot about government and policy, especially as it relates to the geosciences.

How did your degree prepare you for your position? I would give the most credit to my geology professors. They were always encouraging me, as well as other students, to seek out opportunities. Teachers in the department would often send out emails to the students about different internships and opportunities that would come up. It was one of these emails that inspired me to apply to my first internship, which I participated in during the summer of 2007. Since then, I have had a second summer internship along with the AGI internship. Without the encouragement of my professors, I may have never sought out these opportunities.

Where do you plan to attend graduate school? What will you be studying? I will be starting graduate school this fall at Stanford University where I will be working towards my masters (and later my PhD) in geology. My focus will be on hydrogeomorphology.

What advice would you give a prospective student considering WVU? I would tell them to follow their interests and study something that gets them excited, even if this means studying something unexpected. My first degree was mathematics. When I was a sophomore I took Geology 101 in order to fulfill my science requirements, and I absolutely loved the class. At first, I tried to ignore the excitement about geology the class had incited in me, because I did not want to change my major again. I wanted to stick with what I already knew. When my enthusiasm for the subject had not lessened by the following year, I realized I needed to consider adding a second major. I spoke to the woman that would later become my geology advisor and was signed up to add geology as my second major that same day.

I am now applying to grad school to study geology and will be pursuing a career in the geological sciences. I could have ignored my feelings toward the subject in order to finish college quickly and make life “easier,” but I would have greatly missed out. Also, if one cannot decide between a couple subjects, double majoring is always an option and it does not need to take that much (or any) extra time. I do not regret taking the time to finish both degrees as my mathematics background will come in very useful throughout my time as a graduate student and my career.

I would also tell them that it is okay if they are unsure about what they want to major in when they first get to college. I changed majors a few times my freshman and sophomore years, and I didn’t add my second major until I was a junior. Because I allowed myself to make those changes, I was able to find a combination that has made me very happy.

Where did you hang out on campus/in Morgantown? As a geology major, I spent a lot of time in Brooks Hall during the school days (and sometimes school nights) in order to work on projects and assignments. In my free time, I enjoyed going to movies, hanging out at friends’ houses, and going to an occasional show at 123 Pleasant Street.

(Reprinted from the Eberly College Alumni Spotlight, http://eberly.wvu.edu/alumni/spotlight)

Department Awarded Grant of Software

Landmark Graphics Corporation awarded $11.8 million worth of software to the West Virginia University Department of Geology and Geography to aid in energy research. The software will help prepare students for careers in the industry, said Steve Kite, chair of the WVU Department of Geology and Geography. More information is available at http://www.thedaonline.com/news/geology-dept-awarded-11-8m-grant-1.1770294
Spotlight Visiting Committee Begins Its Mission To Support Department’s Key Initiatives

Since last fall, the Department’s Visiting Committee has been working to support the Department’s key initiatives of teaching and research and the continuing development of outstanding graduates. Co-chaired by Dr. Alan Brown (MS-1981, Geology) and Linda Culp (BA-1986, MA-1989, Geography), members include distinguished alumni who bring a variety of experience and interest to assist the Department.

Specifically, the Committee’s mission is to develop ways to share life and business skill knowledge gained from experience at WVU and after as it relates to individual career development to students and faculty. The Committee supports the department’s goals and objectives and their service to the College of Arts and Sciences and West Virginia University. I thought this was quite a long sentence.

The Committee is currently working on these key initiatives:

1. Service to Faculty and Students
   - Establish connections between department and employers
   - Secure financial and technical resources to support the department’s key initiatives

2. Alumni Outreach
   - Facilitate connections between department and alumni through a robust alumni database
   - Identify opportunities for alumni participation in departmental programs and courses
   - Establish communication network such as Email for Life / LinkedIn
   - Develop regular features on alumni for Department newsletter

3. Professional Development and Internship Opportunities
   - Conduct colloquiums on job-related topics such as Employment Survival Guide
   - Enhance internship announcements and publications (written and online)
   - Organize career fairs for major employers

4. Departmental Web Presence
   - A Visiting Committee webpage is available at www.geo.wvu.edu
   - Maintain current listing of Internship opportunities
   - Provide alumni webpage for current research, FAQs, company links

Members serve 2-, 3-, and 4-year terms. The Committee meets regularly, including semi-annually in Morgantown. Look for updates from the Committee on the Department’s website and future editions of the newsletter.

Submitted By Linda Culp (Committee Co-Chair)

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2009 marked the reinstatement of the Upsilon chapter of Sigma Gamma Epsilon (SGE) in the Geology Department at WVU. SGE is the national geology honor society from which WVU is a charter member. With the help of Dr. Bruner, Dr. Harris, and other faculty the WVU chapter has returned with full force. Activities that SGE introduced to the department included a chili and desert competition, wine and cheese party with students and faculty, a brew competition, and end of the year banquet, and a golf tournament fundraiser. The interaction and participation of students and faculty was tremendous and the activities from the previous year are in the planning stages for the coming year.

Winners from the first annual “Hot and Sweet Competition.” The competition were for chili and deserts, and awards were given out for Best Chili, Best Desert, and Hottest Chili (Volcano Award). The competition was fierce but in the end Anne Yanni (Center) won the Best Chili Award and Josh Wixon (Right) won the Best Desert Award. Dr. Joe Donovan (Left) won the Volcano Award. The competition will occur again this year on December 4th and the competition is already heating up. Everyone is welcome to attend, participate, and judge.

2009 marked the initiation of the annual West Virginia Geology Spring Golf Classic. This tournament was started as a fundraiser for undergraduate students attending field camp and the associated departmental geology clubs. The AAPG Student Geology Club and the Sigma Gamma Epsilon Chapters at WVU directed the event which was sponsored by a variety of sponsors, including industry, alumni and other business. We would like to express our thanks to the participation of everyone in the golf tournament and our sponsors. The donations and participation of everyone resulted in a total of $2000 being donated to the Dr. Alan C. Donaldson Scholarship Fund. Dr. Donaldson’s fund is used to support undergraduates in financial need at field camp. Even though the majority of the students involved with this project were not under Dr. Donaldson’s tutelage at the university, we still hear great things about his contributions and concerns for the education of students. As a group we wanted to say thank you and we hope that our contribution helps student’s just as Dr. Donaldson did throughout his career. We hope to see you this year at the upcoming Annual West Virginia Geology Spring Golf Classic.
The WVU field camp continues to attract enthusiastic groups of students for field camp in the western US. The 2009 field camp was lead by Tom Kammer and Joe Lebold. In 2010, Joe Lebold and Jamie Toro had the honors of leading the camp. In 2009, 23 students braved the elements and camp cooking. In summer of 2010, we had the largest Field Camp in recent memory with 26 students, a testament to the healthy undergraduate enrollment in our program. It was a diverse and engaging group of students who kept Drs. Toro and Lebold on their toes throughout South Dakota, Wyoming, and Montana.
New Geology Grad Students, Fall 2009

1. Chris Howard  
2. Blake Bergerud  
3. Jim Adams  
4. Steve Roberts  
5. Katie Olcott  
6. Ben Dotson  
7. Steve Sesack  
8. Jon Moore  
9. Roy Sexton  
10. Kacey Largent  
11. Tim Denicola  
12. Tom Donahoe  
13. Tiffany Neumann

New Geology Grad Students, Fall 2010

1. Andrew Welshhans  
2. Chris Kramer  
3. Keith Coffindaffer  
4. Joel Follmeyer  
5. Albert Barbarsky  
6. Annie Berlinghieri  
7. Amanda Laskoskie  
8. Andrea Sack  
9. Jessica Hayward  
10. Michon Mulder
Greetings! Dr. Bob here with a quick review of the last year and the BA Program.

I have great hopes that our freshmen students this year are hearing the murmur amidst all the noise, that we must take seriously our mandate of stewardship of this spaceship Earth! Actions and words from the EPA suggest that they might once again be truly focused on the environment and the reason for the passage of NEPA nearly forty years ago! If the students do listen, we are here to provide a degree with real potential.

What has become an annual tradition of the Capstone field trip for seniors in the program during spring break resulted in a trip to Galveston, TX six months after the unwelcomed visit of Hurricane Ike. Dr. Joe Lebold, an addition to the Geology side of the faculty, joined us on our visits to Bolivar Peninsula, Matagorda Peninsula, Port Aransas, and Padre Island. We examined the use [and misuse] of our great barrier islands of the Gulf and the crazy-quilt way in which we use and protect this great resource. From the coast, we headed inland to San Antonio and the Edwards Aquifer system to discover how difficult it is to manage a limited resource when it is an absolute necessity for the health and wellbeing of a substantial population!

With additions to both the Geology and Geography faculty in the Department, our offerings and opportunities are more diverse than ever. We do not require an internship, but substantial numbers of the majors are adding one to their programs or they are off to another university for a semester. For several years, quite a number of majors spent a semester on the Big Island of Hawaii; others are now off to New Zealand, Australia, and other schools on the mainland. The old adage of the “best trained geologist is the one who has seen the most” still has merit! If you are in a position in need of a summer intern, or if you have a story to tell during our capstone field trip, please write! As always...“it is a great day for a field trip!” And we may swing by to see what you are up to! Cheers!

**Timothy R. Carr**

**Marshall Miller Professor of Energy**
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It has been a busy year with a number of students finishing, continuing and starting their research. In the finishing column, Ben Ramaker (MS [Kansas], 2009) is with Encana in Denver. In the Houston column, Matt Boyce (Ph.D., 2010) and Mike Coughlin (MS, 2009) are working for ExxonMobil and Julia McConnel is working for El Paso. While Anne Yanni (MS, 2010) is splitting time between Copenhagen and Houston for Maersk. Jamie Skeen (MS 2009) managed to escape to Oklahoma City, where she is working for HighMount. In addition, I was busy starting teaching classes focused on subsurface geology and working with ongoing graduate students at WVU (Guochang Wang, Qing He, Anne Steptoe, Roy Sexton, Steve Sesack, Blake Begurud, Eric Lewis, Chris Kramer and Jessica Hayward). I expect to send a number of these students out the door this summer.

Most of my funded research involves carbon capture and sequestration (CCS in the vernacular) and unconventional resources (oil and gas shale). This included working with the GIS tech center to build the national maps for the 3rd Edition of the Carbon Sequestration Atlas for the United States and Canada. The year also involved three trips to China to work on CO2 sequestration projects for several coal-to-liquids plants under construction. I managed to make it to various cities (Beijing, Shanghai, Hangzhou, and Taiyuan) and to Inner Mongolia. China is undergoing an amazing energy transition and serious issues need to be addressed. Another highlight was leading with Jaime Toro a team of graduate and undergraduate students in the AAPG Imperial Barrel competition in New Orleans, Louisiana. On the personal side, I celebrated my 59th birthday rafting with Margaret on the New River (Picture below). Next year it is on to the Gauley River for my 60th birthday.

**Jamison Conley**

**Assistant Professor of Geography**
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In June, Jeremia Njeru and Jamison Conley traveled to the University of Colorado at Boulder to attend the Geography Faculty Development Alliance’s workshop for early career geography faculty. The workshop focused on how to design effective courses and improve our teaching. It also provided opportunities for networking with new geography faculty at other universities. We also managed to fit in a couple days of hiking in Rocky Mountain National Park after the workshop.

Tim is on the back left and Margaret is on the back right.
Faculty Updates

Karen Culcasi
Assistant Professor of Geography
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The fall 2010 semester marked the beginning of my second year as a tenure-track Assistant Professor. I learned a lot during my first year on the tenure clock and now feel quite comfortable in both Morgantown and the University. During this academic year some of my research was published. These publications include a book chapter on Kurdistan’s ambiguous boundaries and a journal article on the construction and imagining of the Middle East. I also have a journal article about media representations of terrorism coming out early next calendar year. I presented in three different conferences this academic year, including one in Tel Aviv, Israel. This time abroad also allowed me to conduct some preliminary research for a new project. I am very pleased to report that I have created a new three-credit introductory geography course on the Arab East. This course includes a 10-day Spring Break trip to the UAE and Jordan.

My daughter Ayla Lillian McCasi celebrated her first birthday on July 31. She has been a wonderful bundle of love and spontaneity. Balancing work and baby has been difficult at times, but an amazingly rewarding endeavor.

Joe Donovan
Professor of Geology
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T2009-10 has been a hectic but fun year. On the research front, the Kettle Lake ND saga continues with the submission of the long awaited long-core Holocene history paper (54 count em 54 14C dates....) with colleague Eric Grimm of the Illinois State Museum. We think it provides the most vivid hi-resolution picture to date of major climatic breaks in the North American Holocene – watch for it in Quaternary Science Reviews. More to come from this lake and one of its neighbors, Brush Lake. Closer to home, we had grad students completing work in Silurian karst of the Valley and Ridge (Crissy Vinciguerra, 2008; Kevin Rega, expected 2011) and local AMD issues in Dunkard Creek (Vincent Morgan). Dave Light continues his PhD work on the “de-flooding” of the Pittsburgh Coal basin of PA-WV, and Tiffany Neumann is revisiting the DLM surface mine site in Upshur County where several WVU alums did thesis work in the 1990s. The current work focuses on artificial recharge using lime slurry to finally convert this site to a non-acid producer, and is a visit to the land of pH>9.5 and miniscule CO2 pressures. This was one of the first acid-producing bond forfeitures in WV and is emblematic of the state’s long-term efforts to remediate environmental liabilities.

The Hydrogeology Research Center in 2010 saw the retirement of Eb Werner, I think for the third time. We’ll all miss Eb but he is still in Morgantown and enjoying the fruits of grandfatherhood, so we’ll see him from time to time and he is still serving on student committees and shows up to all the defenses as always. In other news, the hydro group is now larger by one with Shikha Sharma’s arrival (see below).

Have seen alumni drift by but not frequently enough. Crissy Vinciguerra (’08) tied the knot with Matt Finkenbinder ’08 in June, and both are in Pittsburgh now that Matt is a PhD candidate at Pitt. Jen Sincock (’97) served a 2 year stint on the Visiting Committee, settling into a fun career at EPA in Philly.

GSA in Portland in 2009 was great fun though we missed connecting with Val Panek, still working for CH2M Hill there. Our fun travel for the year was a trip with Ann (showing off her new revitalized stainless knee to all the TSA employees in Pittsburgh) to AMQUA at Laramie, with side trips to the Big Snowy Range, Laramie Mtns., and Front Range.

Y’all old hydro students drop me a line.

We are thinking of a wild party in 2011 to see all the kids in your entourage.

Greg Elmes
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Life goes on; even after the global economic crash of 2008. I shall be able to tell my grandchildren about how the 21st Century robber barons stole their inheritance. So here I am at WVU Department of Geography, still beavering away hoping to reclaim my TIAA-CREF retirement funds, and Joe Paterno is STILL the coach at Penn State (see last edition of Geo-Mountaineer).

I have been working with graduate students George Roedl on the application of computer mapping and geospatial technology in forensic science, and with Xiannian Chen on a web-based geoinformation approach to assist in the management of the ingress of evacuees from disasters into rural areas such as West Virginia. George and I are pursuing further research in crime mapping with the WVU and Morgantown police departments. Also during 2008-09, I was fortunate to be able to host Olivier Lompo (now Dr. Lompo) from the University of Bergamo in Italy. Dr. Lompo has since returned to his native Burkina Faso to take up a position in the University of Ouagadougou, an excellent contact for fieldwork opportunities in West Africa.

Jeanne and I tested the wheelchair-friendliness of SW Airlines and Las Vegas as we attended the Association of American Geographers annual meetings in March. The airline scored very highly, as did Vegas, except for the first night spent in a closet and the distance between the conference venues. Arthur and Alex continue to work on their studies at the master’s and bachelor’s levels. James is flying F18s again after his ground tour in Iraq and is currently deployed at the Marine Corps Air Station Iwakuni, Japan. As you read this Carol may be variously in New Zealand, Argentina, Thailand or...
Faculty Updates

Ireland (it depends on the time of day). In line with our geographical influences, our family tries to cover the globe.

Dengliang Gao
Associate Professor of Geology
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A good year for the Harris family. I'm aHello! I am Deng(liang) Gao. I joined the faculty in the department in July 2009 from Houston Texas. First of all, I would like to take this opportunity to thank the department and university for the great opportunity to work as a faculty at West Virginia University. Life has been a big change for me. Before relocating to Morgantown, I have been living in Houston (Texas) for 12 years, working in the energy industry since 1997 with Exxon Production Research, Marathon Oil Corporation, and Chevron Energy Technology. It is now my great pleasure to be able to contribute to the departmental teaching and research programs with particular reference to the university Advanced Energy Initiative (AEI). I am currently teaching a graduate course “3D seismic visualization and interpretation” and in the spring semester I am planning on teaching an undergraduate course “Planet Earth” and a graduate course “Subsurface Characterization from Seismic Attributes”. My research focus will be on seismic structure, facies, and reservoir characterization in CO2 sequestration and hydrocarbon exploration. My areas of interest range from exploration geophysics and subsurface geology to field geology. In particular, I spend a lot of time with 3D seismic visualization, interpretation, and seismic attribute analysis for subsurface geologic characterization. My hobby includes reading, hiking, biking, playing ping-pong and soccer.

Amy Hessl
Associate Professor of Geography
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I just can’t get enough of Mongolia! In August 2010, I made my third trip to Mongolia to work on a project to explore the fire history of Mongolia’s arid forests. Our research is now funded by both the National Science Foundation and the National Geographic Society. I was joined by a Ph.D. student (Tom Saladyga) who spent three months in Mongolia. We now have lots of wood in my lab and are excitedly awaiting results!

Randall Jackson
Professor of Geography and Director Regional Research Institute
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Randy Jackson and the Regional Research Institute have had a terrific year! RRI has two new research professors, both of whom have spatial analysis expertise. They are spreading the word that geography matters, and with a newly announced $5 million, five year USDA project will be applying spatial analysis methods to the study of nutrition and childhood obesity. Other major ongoing RRI research projects center on fairly assessing the performance of rural business incubators, the impacts on urban industrial systems of recycling and remanufacturing, and forecasting the impacts of the introduction of new energy technologies, funded by the USDA, the NSF, and the National Energy Technology Laboratory. Randy is this years President of the Southern Regional Science Association, and is really looking forward to this year’s New Orleans meeting and the Presidential Address! You can find more in formation on RRI activities at www.rri.wvu.edu.
I remain very active with our Geology Field Camp out west. In 2009 I taught the second half in Wyoming and Montana for the first time. I very much enjoyed the change of scenery after having taught only the first half three times in a row. South Dakota geology is great, but I wanted to experience our total Field Camp in the west. There were 23 students in Field Camp in 2009, and we had a great time. In the Tetons we hiked up to a glacial valley where the students played in the mid-June snow. As always, we spent a lot of time riding in the vans, stopping along the way to take geology notes. At Block Mountain, Montana we had more rain than usual, and in fact it was so wet this year that we had mosquitoes over the entire map area and not just along the Big Hole River. At Craters of the Moon National Monument, we were nearly blown off an old cinder cone by the wind. Finally, the spectacular scenery at Kelley Reservoir brought down the curtain on Field Camp before our 3-day drive back to Morgantown.

In September 2009, I gave an invited talk to the Pittsburgh Geological Society on “Origin of the Lower Mississippian Black Hand, Big Injun, and Burgoon sandstones of the central Appalachian basin: forced regression during Gondwana glaciation.” It was a great chance to share my work on the Mississippian in the Appalachians with geologists in the region. At the Annual GSA Meeting in Portland, Oregon in October, I presented my latest project on the Early Mississippian crinoids in Ohio.

Steven Kite
Associate Professor of Geology
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Steve Kite took a research sabbatical in the fall of 2009 fall after a turbulent year as Faculty Senate Chair and two years as Faculty Representative to the WVU Board of Governors. Through a complex sequence of taxing events that will not be related here, the University had four different presidents during his two years on the Board. “It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness…” (Dickens, 1859). In June 2010, Steve stepped into the important role of Department Chair, a task made rewarding by the wonderful faculty, staff, and students who work in our programs.

The sabbatical was a welcomed opportunity to rev up research on several aspects of climate change in the Appalachians. Kite’s work on algalic talus slopes has expanded from Ice Mountain to two new West Virginia sites (Beartown State Park and the Meadow River Gorge), several sites in Pennsylvania, and numerous sites in the Driftless Area of Iowa and Wisconsin. Two New River Gorge research projects have been funded by National Park Service, largely as an outgrowth of M.S. research in the last decade by Jon Remo, Dawn Moore Newell, Patrick Kish and Brian Kwak. Amy Hessl is a co-investigator on one project focused on the impact of rock climbing on cliff-face ecology; the WV Geological Survey is partnering in the second project, which will yield surficial geology maps for the New River Gorge National River, the Gauley River National Recreation Area, and the Bluestone National Scenic River. Kite is also on the trail of ventifacts in the Plateau of West Virginia, but look for more on that topic in the next newsletter.

Helen Lang
Associate Professor of Geology and Associate Chair for Geology
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2009 was a very busy year for me. As Associate Chair for Geology, I was involved in two faculty searches. The first, in the fall, resulted in the hiring of Joe Lebold, who will help to continue our reputation for excellent teaching in introductory geology, as a Teaching Assistant Professor. In the Spring, the Geology program hired an Energy Geophysicist, Dengliang Gao, as part of the University’s Advanced Energy Initiative (AEI). In 2010 the geology program hired Dr. Amy Weislogel, sedimentary geologists as Dick Smosna’s successor and Dr. Shikha Sharma, isotope geochemist, in a new faculty position. So after many years of stability, we are happy to welcome several new, young colleagues into the program.

I began research on my NSF-funded collaborative research project in northern Idaho with a frustrating, cold and rainy field trip in June of 2008. My colleagues at University of Iowa and Washington State University were able to wait for better weather and collect additional samples later in the summer. I returned to Idaho with WVU MS student Kacey Largent for an additional week of in summer 2009, and we have continued to analyze samples and interpret data. With colleagues, I have presented preliminary results at GSA Annual meetings in 2009 and 2010.

In addition to the research in Idaho, I have been involved in research on eclogites (high pressure metamorphic rocks) from NE Greenland in collaboration with Jane Gilotti and Bill McClelland at the
Faculty Updates

University of Iowa. To learn more about eclogites, I participated in International Eclogite Conferences (IEC) in Norway in 2003 and in Austria in 2005. When IEC-8 in western China was announced, it seemed like an opportunity too good to pass up. I made arrangements to go to the meeting and associated field trips (August 22-Sept. 6). The trip to western China was very interesting and eye-opening. Quite an adventure and worth the challenges!

Joe Lebold
Teaching Asst. Professor of Geology
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Joining the Geology and Geography Department in 2009 opened another exciting chapter in my long-standing relationship with the Department. My first exposure to this group was as an undergraduate student and later as a doctoral candidate. After graduating in 2005, I lived in every time zone in the lower 48 states before finally landing a job as Field Camp Director in the Department of Geology and Geophysics at Louisiana State University. When the opportunity arose for me to return to WVU, I jumped at the chance. I was honored to be selected as the Department’s first Teaching Assistant Professor.

I spend much of my time teaching large introductory sections of Planet Earth and Earth Through Time, but I have also taught a section of Planet Earth Laboratory, Geology for Environmental Science Majors, and Sedimentology and Stratigraphy. I have co-taught capstone courses for both environmental science and geology majors, and I have added an exciting new course to the department: The Geology of West Virginia. This course is modeled after a course that I always wanted to take as a student. In Spring 2011, I will teach another new course called Geology of the National Parks, which will expose our students to the spectacular geology across the country.

Many changes have come to me personally as well as professionally. My wife, Jessica McDonald, and I have become first-time homeowners in Morgantown and on June 22, 2010, Jessica and I had our first child, a boy named Coban. Although many things have changed in a short period of time, the Department has continued to be a source of friendship and support for all of the new challenges that my family and I have faced.

Helen Lang in western China examining an eclogite outcrop
Kenneth C. Martis
Professor of Geography
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The academic year 2010-2011 is my 36th 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 (Kase) has finished her three-year backpacking around the world trip and now lives in Maui and one (Elizabeth) in the Beverly, Massachusetts (that makes us MORE than bicoastal parents). In Beverly we have our grandson Samuel who happily occupies much of our free time.


I am in my third year of a four-year phased retirement agreement with WVU which entails teaching in the fall semester only, with research and service duties year around. In the fall I 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 and each year they complete some sort of community service problem solving project. In the last three years we have aided the City of Morgantown in their Downtown Revitalization Project, conducted a study of the reuse and redevelopment of the old Mountaineer Mall, and analyzed urban open space for the Morgantown Planning Department. In my last year of full-time employment 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. Previously I was awarded both the College of Arts and Sciences and WVU Teacher of the Year awards. Many former students wrote support letters and reading these has been a wonderful capstone of my own career.

The 2010-2011 geography senior capstone class (with Albert Gallatin).
Faculty Updates

Brenden McNeill  
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Of the many exciting and newsworthy things to report from my first years at WVU, none compare to the birth of my beautiful daughter, Ayla Lillian McCasi, on July 31st, 2009 (see picture next to the news from Ayla’s mom, Karen Culcasi). After getting settled in new jobs here in Morgantown, Karen and I are adjusting to our new very full time job of parenting. Ayla’s smiles, laughter, and hugs have made the sleepless nights (and now temper-tantrums) most worthwhile. Apart from parenting, I have been busy teaching, setting up a new lab, and preparing a great cohort of undergraduate and graduate students (see picture) for full summers of field and lab work.

I’m enjoying teaching my courses. They offer challenges like teaching the apparently “political” issues of climate change and evolution to 350 non-majors in my introductory Physical Geography class, as well as rewarding experiences with more advanced students in my Environmental GIS Modeling course. Research in the Spatial Ecosystem Ecology (SEE) Laboratory is off to a great start. So far, we have received generous funding from two NASA grants, as well as two internal WVU grants. We are using field and laboratory measurements, GIS, as well as multi- and hyperspectral remote sensing to measure forest functional types, disturbances and their role in affecting ecosystem services like forest carbon sequestration and nutrient retention.

The three masters students, one PhD student, and two undergraduate students in the SEE lab thriving. Lindsay Deel won a NASA WV Space Grant fellowship and recently defended her MA thesis examining the cumulative forest impacts of 30 years of logging and gypsy moth defoliations in Western Maryland. We have submitted a manuscript from her thesis for publication, and she is now continuing on for her PhD. My second student, Brad Breslow is in his second year working with Amy Hessl and I on his MA thesis, examining if tree rings show increased forest productivity along spatial gradients (in NY and WV) of nitrogen in “acid rain”. Another 2nd year MA student, Travis Cowles, is developing methods to use satellite measurements of forest species composition and disturbance to refine predictions of nutrient loading to the Chesapeake Bay. Finally, I have a new MA student, Ben Baker who is exploring thesis ideas on the landscape-scale ecological impacts of surface mining or natural gas wells. I’m also thrilled to be working with two excellent undergraduate researchers, Aaron Ross and Carly Parana, who are the respective presidents of the Geography and Geology clubs. Both of these undergrads recently received the Chesapeake Energy scholarship and will be presenting their research at the capitol in Charleston in the spring. Carly is also our lab webmaster, and has put lots more research details, pictures, and publications on our new lab webpage (www.geo.wvu.edu/see). You can even follow the SEE lab on twitter!

Jeremia N. Njeru  
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It feels great to have completed my first year at WVU. My teaching responsibilities last year involved teaching urban regional geography, urban geography and human geography courses. It was a great experiencing teaching all those new courses. Besides teaching, among other highlights of last year include my participation in the early career geography faculty development workshop held at the University of Colorado, Boulder and summer research visit to Nairobi, Kenya. The workshop provided a great opportunity to learn more about how to be a successful geography faculty. My summer visit to Kenya was fantastic, thanks to a Senate Faculty Development Award that partly supported the trip. During my 5 weeks summer visit I was able to do some preliminary work for a project to understand current political economic- ecological dynamics of Nairobi massive development. I also got involved in a new project to understand privatization of public toilets in the city. On more non-
academic front, I got to visit my family during the summer trip. I was excited at helping bring electricity to my parent’s house in my rural home. I am happy to start a new one this Fall and hope it will be more fruitful than the first.

Ann Oberhauser

Professor of Geography

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The Geography Program at WVU continues to change and grow in many ways. This newsletter provides a good opportunity to share our activities and musings. For me, this year has been one of career changes and personal growth.

I would like to share a few success stories of our recent graduates. Last April I was pleased to see Aaron Cumashot (2005 Geography BA) at the Association of American Geographers conference in Nevada. He is fully engaged in his career as a GIS specialist and travels around the world working with land use and environmental issues. In addition, Muriel Yeboah (2008 Geography PhD) started as a faculty member at Virginia Union University this fall and is busy establishing herself and her family in Richmond. We are still collaborating on some Ghana research which keeps us in communication about publishing and other professional work.

I also made a career change last year when I accepted the position of Director of the Center for Women’s Studies at WVU. This position is a good fit for me as I have taught and done research in the area of gender and women’s studies for many years. I am excited about taking on this leadership role, especially at a time when WVU is in a state of transition and growth.

Finally, this year brought change on a personal level as my youngest daughter started college. With two kids in college, I find myself with more time (and less money)! The term ‘empty nest’ is especially fitting since I also downsized and relocated to a place in Morgantown this summer. This new phase has been an adjustment, but I enjoy having more time to do those things on my ‘bucket list.’

Please stay in touch with us in Brooks Hall. You will always find someone familiar and lots of new people with whom you can share stories about geography and geology.

Henry Rauch

Professor of Geology

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Henry Rauch has been active the past two years, with teaching (five courses per year - 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 geologically sequestered carbon dioxide, by use of water well monitoring. One such project is in cooperation with the USGS in Montana, at the Montana State University test field site in Bozeman (where I traveled to the past five summers), and where we regularly inject CO2 gas and turn the local aquifer into a giant fizzy mineral water bath; the other field research site involves CO2 gas injection into an unmined coal bed is in northern West Virginia, in cooperation with CONSOL Energy Inc. and a team of WVU and DOE-NETL researchers. My unfunded research is being mostly conducted through my current geology graduate students. Graduating in 2009 were Eric Perry (studying underground mine pool geochemistry for his Ph.D. dissertation), and Josh Silvis (studying the impacts
of underground mine subsidence on spring flow for his M.S. thesis). In 2010 John Tudek (M.S.) and Kristen Ward (M.S.) graduated, studying karst hydrogeology and water geochemistry in Greenbrier County, West Virginia. My service work involves many committee functions, including my West Virginia Surface Mine Board and Quarry Board hearings. The biggest case before the Surface Mine Board this year involved a major challenge to mountain top removal and valley fill coal mining policy of the WV-DEP for southern West Virginia; the mountain top mining issue continues to be hotly contested with the US-EPA recently issuing a more restrictive policy for federal review of such mining permits.

**John Renton**

Professor of Geology  
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During the past year I:

1) have been working on a major revision of my textbook, “Planet Earth”,

2) with Tom Repine (WVGS), have been preparing a text entitled “How We Teach It” for K-12 earth science teachers, many of whom possess little if any academic background in geology,

3) with Ron Smart (Chemistry), have continued to investigate the concentration and mobility of Se and As in organic-rich shales exposed to weathering; most recently, the Marcellus Shale,

4) took time off to visit Aix-en-Provence with my wife - great wines, mostly roses and whites - great food, definitely influenced by Italy just down the road - saw more limestones in one locale than I have ever seen before - visited Ocher, the place where the iron oxide-rich material got its name, - saw how the rich and famous live and play in St. Tropez where I saw a private yacht about the size of a small aircraft carrier, - revisited Cassis where I experienced my first nudist beach many years ago, AND

5) continued to expose about 600 young undergraduate minds each semester to the wonders of Planet Earth.

**Robert Shumaker**

Professor Emeritus  
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The year has passed by quickly, but Beverly and I often think of times past with students. The Shumaker Fund, although diminished in size by the economic downturn, is still supporting student research and travel to present papers at professional meetings. Beverly and I were able to flee the snows and cold of Morgantown last year and spent three months watching boats pass thru the Hillsboro Inlet in Pompano Beach, Florida. (Beverly has chosen a few that would be perfect for us, our entire family and the complete department!) Our National Parks, America’s Greatest Idea is a wonderful Ken Burns series showing on PBS this fall. Hope you didn’t miss it. Our daughter Susan did much of the basic research for the series. She took several geology courses before graduating from WVU in 1987. Perhaps you remember her. Each show is interesting, enlightening, and the images shown are inspiring; views of our country’s natural wonders that attracted many of us to careers in geology. I couldn’t help think while watching the shows how far we have come in my lifetime in our understanding earth processes that formed many of the beautiful features. When I was an undergraduate back in the early 1950’s budding geologists had to memorize multiple working hypotheses that supposedly explained our earth’s formation and development. There was no unifying theory. Now, as we visit or watch the geysers of Yosemite and impressive landscapes of Rocky Mountain Park, we have a basic understanding of the earth’s dynamics that formed these features, and yet with all of our understanding there still is much to be learned.

**Richard Smosna**

Professor of Geology  
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Three major events marked my life this year: I received a major award from
AAPG, I opted for phased-retirement, and my wife and I moved to nearby Preston County.

The American Association of Petroleum Geologists named me their Outstanding Educator for 2009. Over the years at WVU, I supervised the thesis research of almost 50 graduate students, both MS and PhD students. In addition, literally hundreds of grad students have passed through my advanced courses on sedimentology, stratigraphy, and petrology. And most of them went on to successful careers in the petroleum industry. My proudest achievement is to have helped these students to become better geologists. My second proudest achievement is to be recognized by AAPG as having done a good job. The award was presented at the Eastern Section meeting in Evansville, IN, on September 20. It reads “In recognition of your lifelong commitment to higher education and for decades of dedicated service and inspiration to petroleum geology students.”

This year I have signed a three-year contract with WVU for phased retirement, reducing my official departmental activities to half-time. I will teach just three courses—historical geology, oceanography, and a graduate-level seminar. Research and service commitments have been reduced substantially, but I still supervise graduate students. Currently I am working with 2 PhD and 5 MS students. Their research topics include Cretaceous stratigraphy of the North Carolina Coastal Plain, sedimentary petrology of Mississippian limestones from Missouri, analysis of a tight gas sandstone from West Virginia, petrography of the Bakken Shale in North Dakota, and coalbed-methane potential of the War Eagle coal in West Virginia.

Lastly, Kathy and I have bought a 10-acre piece of land in Preston County. We just built a house there; the barn, pasture, and riding arena are next. A mini horse ranch at Bruceton Mills for my retirement years.

Jaime Toro
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I continue to work on the tectonics of Northern Alaska and the Arctic region. This year, together with graduate students Dan Harris and Kalin McDannell, we produced a new geological map of the Eastern Bendeleben Mountains of the Seward Peninsula and collected a rich geochronologic dataset that documents events ranging from the mid-Cretaceous magmatism to Tertiary normal faulting. New lines of work include trying to understand the uplift and denudation history of the Appalachian Plateau using U-Th/He thermochronology (with rather discouraging results!) and studying the deformation of the Appalachian foreland in West Virginia.

Dorothy Vesper
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The big event in my career last year was being granted tenure and promoted to Associate Professor. Although that alleviated some stress, my research program is as busy as ever and we’re doing a lot of fun things. One of the most enjoyable and interesting projects this year has been to look at naturally-high CO2 systems as analogues for understanding the movement of CO2 sequestered underground. We are working on two types of sites – alkaline mine waters from the Pittsburgh coal and thermal mineral springs in southeastern WV. This work is being done as part of a collaboration between me, Drs. Harry Edenborn at DOE-NETL, Rosemary Capo at Univ. Pittsburgh, and our own new faculty member Shikha Sharma. MS students Johnathan Moore and Jim Adams are working on this with me. An overlapping project last year had us visiting many of the same locations but considering how the water chemistry and variability impacted microbes, ostracods and macroinvertebrates. Jason Tarbert finished his MS on this last summer and is now working for a consulting firm in New Mexico. I hope to get back to that work before too long.

I have also formed some new collaborations as part of a large NIH-Superfund partnership.
Faculty Updates

Project: PROTECT (http://www.northeastern.edu/protect/). PROTECT is a joint medical-science project focused on pre-term births in Puerto Rico and their potential association with contamination in the karst aquifer. I’m only a small part of the whole project, but look forward to working on both the remediation team (led by Dr. Akram Alshawabkeh at Northeastern University) and contaminant transport team (led by Dr. Ingrid Padilla at the University of Puerto Rico). I attended our first meeting in Boston in September and am looking forward to the January meeting in Puerto Rico!

Last spring we began a small project working with the National Park Service in eastern WV. The initial project is to consolidate some GIS files for Harpers Ferry NHP, Antietam National Battlefield, and the Chesapeake and Ohio Canal NHP. John Tudek, my doctoral student with a focus in karst, is working on that. We also have two additional projects pending with the C&O Canal Park that will have us doing a risk assessment to help protect the karst features in the park. The WVU Eberly College Magazine Fall 2010 edition included profile of these karst projects – a picture of John in a cave showed up on the glossy cover.

This coming spring semester I’ll be on sabbatical in Evansdale. I will spend my time working in Louis McDonald’s analytical lab in soil chemistry. It will be a good chance to work with some different instrumentation and get caught up with data and publications.

Tim Warner
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The accomplishment that I am most proud of over the last couple of years is publishing two books, the culmination of about 6 years of work. Together with Duane Nellis (now President at the University of Idaho) and Giles Foody (Professor of Geographical Information Science at the University of Nottingham), I edited the SAGE Handbook of Remote Sensing. With 34 chapters, the book aims to provide a comprehensive overview of the state of the art of remote sensing. At the very least, we captured the gamut of acronyms used in remote sensing – the appendix lists over 1,000 of them! The second book is a self-paced tutorial for the remote sensing and GIS package, IDRSI, and was written together with David Campagna (who is an adjunct professor in our department). The book has 280 color figures, and so if nothing else makes a great coffee-table book!

After serving on the editorial board of the International Journal of Remote Sensing (IJRS) for a couple of years, I was asked to be one of the editors of a new allied journal in 2010, Remote Sensing Letters. Letters are brief articles, with rapid peer-review and publication. Although I have made some bad mistakes (for example, requesting the author of a paper to review his own paper!), I enjoy the work very much. I try hard to be very active in the review and revision process, and I feel I make a contribution to the papers that are eventually published. I was also recently appointed to the editorial board of Progress in Physical Geography. Overall, I find editorial work very rewarding.

An exciting new project for me has been working with Rick Landenberger (Research Assistant Professor in our department) and Jim Rye (Professor of Science Education at WVU) on an NSF-funded project to educate K-12 teachers about how they can use GIS and remote sensing in their classrooms, especially in the context of studying watersheds. I have greatly appreciated the opportunity to learn more about teaching methods. During the summer of 2009 Rick taught the teachers here on campus (see the photograph below), and during the following school year, Jim and Rick taught the same group via distance education.

Current students in remote sensing include Jessica Randall, a PhD student who has interests in geomorphometry, and Arthur Elmes, who will graduate in December after completing his Masters research on the use of agent-based models to investigate the invasive potential of Ailanthus altissima (tree of heaven), a non-native tree from China. Aaron Burkholder, a Masters student who graduated in August, studied the spectral reflectance characteristics of Dorothy Vesper taking water samples at the Homestead Resort Hotel, Warm Springs VA
Faculty Updates

Rick Landenberger instructing K-12 teachers about how they can use GIS and remote sensing in their classrooms

tree of heaven. Sheila Kazar is finishing her dissertation on carbon sequestration on reclaimed coal mines, and in 2009 took a position as assistant professor at Slippery Rock University in Pennsylvania. She is the second WVU remote sensing student hired by Slippery Rock; Xianfeng Chen has been there since 2005 and was recently promoted to Associate Professor.

Bradley Wilson
Assistant Professor of Geography
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I am one of the newer members of the Geography program having joined the faculty in Fall 2009. I received my doctoral training in human geography at Rutgers University with a focus on international development, global trade, and transnational social movements. Recent research focuses on the rise of the Fair Trade coffee movement in the United States and Central America. For my dissertation I conducted two years of multi-sited ethnographic research, first on the motivations and actions of Fair Trade advocacy groups in the United States and then on the perspectives of Fair Trade coffee farmers in the Central Highlands of Nicaragua. I am currently teaching one section of the large introductory geography course World Regions and in Spring 2010 will offer two new courses in Geography at WVU: Food and Globalization and Natural Resource Conflict. Food and Globalization is an award winning upper-level undergraduate course that was designed while I was at Rutgers University. Building on the explosion of scholarly and popular interest in food safety, fast food, organic food, slow food, and food politics in the United States, the course introduces undergraduates to geographic concepts through a study of changes in agricultural production, global trade and food consumption around the world. I am also offering a graduate seminar entitled Natural Resource Conflict which introduces students to the geographic sub-fields of political ecology and environmental justice through the exploration of specific conflicts over access, control and management of natural resources. Drawing on expertise in the study of corporate social responsibility and product certification, students will explore recurring theme in the course: What are the profits and pitfalls of market-based schemes for “ethical trade” in resolving conflicts over the use and abuse of natural resources.

Since arriving at WVU, I have begun the first stages in developing a new research program on the science, technology and political economy of coffee quality. The new study builds on his existing research on product certification and coffee marketing in the United States to explore the ever increasing industry- and consumer-led demand for coffees with distinctive character. These quality demands in the global North are placing greater and greater pressure on farmers and other market-actors to tighten production standards and quality control while also redefining the coffee trade on increasingly precise geographic terms such as terroir. We no longer simply drink coffee.
Faculty Updates

We drink Costa Rican coffee. Or we drink Costa Rican Tarrazu. Or coffee from the specific Estate La Minita. As Starbucks Coffee Company promotes in its newest marketing campaign: “Geography is a Flavor”. I will will be turning the Brooks laboratory into a “Coffee Lab,” so feel free to stop by to see what’s brewing or for an analysis of your own daily brew.

I am enthusiastic about joining a dynamic and growing Geography program at WVU. My wife, daughter and I are all settling in to the rhythms of life in Morgantown, enjoying access to the beautiful mountains of WV and to all the kind and friendly folks we’ve met since August.

Tom Wilson
Professor of Geology
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Characterization of carbon sequestration pilot sites continues to be an active research area. We collected a 3D swath over the CONSOL pilot in Marshall County, WV in the fall of 2008. We got some surprisingly good 3D coverage using this approach. CONSOL is in the early stages of CO2 injection and we hope to acquire a post injection swath for time lapse comparison sometime next fall.

We acquired post injection VSPs on the San Juan Basin pilot and completed time lapse processing this fall (2010). Through collaboration with Schlumberger we also have a nice 3D data set over the Michigan reef trend in northern Michigan and continue our work with NETL related to site characterization and interpretation of NETL tracer data obtained from site monitoring activities.

New proposals have received funding in the risk assessment area and we continue to develop additional proposals in this area. Also of note since our last newsletter I published a book titled Geologic Travels in Japan along with colleagues Hirokazu Kato (Advanced Industrial Science and Technology Agency) and Koji Wakita (Geological Survey of Japan). The book is written in both English and Japanese and provides geological background on several popular travel destinations in Japan. The effort was initiated during stints as a Geological Survey of Japan Research Fellow. Japan is certainly a treasure trove of geological wonders.

Valerie Smith, completed her M. S. thesis on modeling natural fracture networks and developing reservoir models for flow simulations in the fall (2008) semester. Valerie signed on as a reservoir geophysicist with Schlumberger’s Carbon Services group in October, 2008 and has been very busy in her new job. She moved into their Columbus Ohio office and is now settled into a new house out in the country with hilltop view. Lierong Zhu joined the program. He finished his MS in electrical engineering (2009) and brings excellent signal processing and programming skills to the table that will be of help in developing new seismic data analysis tools. Lierong was formally admitted to the department’s PhD program this fall (2010). Matt Weber began his MS studies early in 2010. The focus of his research is 3D seismic characterization of the Fruitland coal section at the Southwest Regional Partnership on Carbon Sequestration San Juan Basin pilot site. Brian Toelle, Manager of Geology and Geophysics with Schlumberger DCS in Pittsburgh, is nearing the completion of his PhD studies. Brian has been investigating spectral decomposition of variable azimuth 3D seismic volumes from an EOR operation in the northern Michigan basin. The students are fortunate to have 3D seismic data sets from New Mexico, Wyoming, Michigan and West Virginia to help them develop...
subsurface characterization and 3D seismic interpretation skills along with state-of-art subsurface characterization and 3D seismic visualization software to facilitate their investigations.

Linda Culp (BA, MA Geography, 1989) was presented with the Department of Geology & Geography 2010 Alumni Award

Beau Downing (MS Geology, 2008) his wife Melissa, and their 2 sons Have moved to Helena, MT. Beau took a position of Stream Protection Act Coordinator with the Montana Fish Wildlife and Parks Department

Mark Van Dyke (BS Geology, 2009) is working at the West Virginia Geologic and Economic Survey

Dr. Todd Grote (PhD Geology, 2006) recently accepted a tenure track position in the Department of Geography & Geology at Eastern Michigan University. Todd was a Visiting Assistant Professor at Allegheny College in Meadville, PA.

Peter Fahringer (MS Geology, 1999) is working for Golder Associates in Redmond, Washington. He and his wife Nicole and elder daughter Ella had an addition to their family. Julianne Leigh Fahringer was born February 19.

Joe Hannett (BS Geology, 2001) one of the fastest geology majors and a hurdler on the now-defunct WVU men’s track team is teaching Earth Science at Battlefield HS in Haymarket Virginia and working on a master’s degree in secondary education.

Dan Harris (MS Geology, 2008, PhD candidate) and his wife Pam had a baby boy, Rocco Harris on October 13, 2009.

Greta Hawkins (BS Geology, 1999) is an environmental scientist with Tetra Tech in Charleston, West Virginia.

Kory Konsoer (MS, Geology, 2008), who went to work as a Geologic Technician with Dominion Exploration and Production, Inc, upon graduation, is in the PhD program at the University of Illinois.

Lisa Kudrtyk (BS Geology, 2003) is a GIS Analyst for Sanborn Map Company in Colorado Springs, Colorado.

Former faculty Patricia Miller is working at the Virginia Department of Environmental Quality in Richmond, Virginia.

Kayse (Fisher) Martin (MS Geology 2004) and her husband James welcomed baby Paxton on 4/5/10. Kayse is currently teaching high school earth-space science in Hagerstown, MD.

Former WVU visiting geography professor Dr. Mika Roinila (1998-2000) continues to research and publish his works. He is currently working on book projects, one of which is entitled “Finland-Swedes in Michigan” as part of the Discovering the Peoples of Michigan Series published by Michigan State University Press. Another includes “Finnish North Americans Today” with collaboration from the Institute of Migration in Turku, Finland. As Fulbright Senior Scholar, Mika is scheduled to teach a two-week summer session course at the University of Turku in August, 2010. Mika and family currently live in Mishiwaka, Indiana, where he is Assistant Professor of Geography at Bethel College.

Joshua Rutkowski (MS Geography, 2006) is working at the International Atomic Energy Agency (IAEA) in Vienna, Austria. He is working to launch a new geospatial exploitation system that will manage and serve remote sensing data to IAEA analysts.

Molly Simis a dual major in Geology and Biology, acted as editor-in-chief for the University’s first, multidisciplinary, undergraduate research journal, The Mountaineer Undergraduate Research Review. The journal is sponsored by West Virginia Experimental Program to Stimulate Competitive Research (WV EPSCoR) and published by the Honors College.

Valerie Smith (MS Geology, 2008) is working with Schlumberger Carbon Services in Columbus Ohio as a Reservoir Geophysicist reporting to Dr. Alan Brown, an alumnus of WVU. Since graduating in December 2008, I had an exhausting house search. I now have an apartment near work in Columbus, and my home is an hour east in Norwich, OH. Working with Schlumberger has provided ample opportunity for further training and travel to Houston, Austin, Denver, and Boston. Given the busy schedule, Valerie is fortunate to have Kathy who is turning my house into a home. She’s been pretty active with amateur radio and has erected a significant tower.

Francis Rengers (BS Geology BS 2003) has returned to graduate school in the Department of Geological Sciences at the University of Colorado, Boulder. He is working toward a PhD in Geomorphology.

Alex Rutledge (BS Geology, 2002) is employed by Schnabel Engineering in Greensboro NC, working on primarily dams related projects. After receiving his BS at WVU, Alex earned a MS in geophysics at the University of Kentucky, and a MS in geotechnical engineering at Virginia Tech.

Susan Tevel (BS and MS Geology 1973, 1977) and her husband Tim Tevel (1973) of Charles Town, WV were inducted into the Irwin Stewart Society at WVU.


Joe Wickline (BS Geology, 2009) is working with CONSOL Energy in Canonsburg, PA.

Amaris Zirkle (Geology BS 2008) is working for the Department of Environmental Protection in Philippi, WV.
In Memoriam

Dr. Roy S. Sites
November 23, 2008

Dr. Roy S. Sites, Ph.D., age 60, passed away November 23, 2008, at his home in Petersburg, WV. Roy was Mountaineer through and through. He received his BS degree at WVU in 1970 followed by the MS in 1971. He served in the U.S. Army from 1971 to 1974, after which he returned to WVU to pursue his doctoral studies. He received his Ph.D. in 1977. He worked for Amoco in New Orleans, Sterling Drilling Gas Company and Morris Exploration Gas Company in Charleston, WV, Tiara Exploration in Parkersburg, WV, and retired from the Division of Mineral Resources in Charleston, VA. Memorials may be made to the Petersburg High School Scholarship Fund, to a student pursuing a career in geology, c/o Mrs. George Moomau, 18 N. Main Street, Petersburg, WV 26847.

Those of us who knew Roy remember him for his boundless enthusiasm and dedication to all things geologic. Roy’s enthusiasm was contagious. During his career he became familiar with many, varied geologic terrains, but few would argue that West Virginia geology, particularly that of the Valley and Ridge, held a lifelong fascination for him. He never tired of finding new outcrops and gaining new insights into the structural development of the region and its geologic history. One of Roy’s lifelong interests was piecing together the complex geology of the Smoke Holes area of Grant and Pendleton counties. His understanding of Appalachian regional geology had considerable practical application to subsurface exploration. His detailed understanding of the surface geology provided insights into complex subsurface structures inferred from seismic and exploratory drilling. He was always ready to share what he knew and would spend endless hours hiking from exposure to exposure explaining the complex structural interrelationships they revealed. Honoring his longtime wishes, Roy was laid to rest in the family plot in the Sites Chapel cemetery, which has a spectacular view of the west flank of the Elkhorn Mountain Anticline. He will be sorely missed by his many friends and colleagues.

Dr. Sites’ thesis and dissertation are available electronically at http://www.geo.wvu.edu/dissertations/sites/ Some of his work can also be found in a brief feature article about the Smoke Hole region posted on the West Virginia Geological and Economic Survey’s site at http://www.wvgs.wvnet.edu/www/geology/geofa01.htm#geologicmap

We lost one of our best - Roy Sites. Roy passed away after a long bout with cancer. There will be a short piece in the newsletter about Roy. He was a real character and fell into that traditional mold of the classic field geologist. He will be missed.

Stu Dean donated $1000 to the Department General Fund in memory of Roy. Stu asked that the funds be applied to a scholarship in memory of Roy. Stu also notes that “the manner in which the scholarship(s) is awarded is up to the Department of Geology and Geography. In my opinion it should be given to any qualified student(s) whose scholarship and/or research is deemed worthy.”

From A Virginia Rockhounder’s Web Site
http://www.varockhound.com/rem/rs/index.shtml

John Marr & Roy Sites
August 1999
Graduates

Geology

Doctor of Philosophy

2009
Bascombe Blake
Eric Perry

2010
Lewis Cook

Geology MS Graduates

2009
Susan Anderson
Michael Coughlin
James Moore
Vincent Morgan
Joshua Silvis

2010
Michael Kloczko
Aaron Maxwell
Jamie Skeen
Jason Tarbert
John Tudek
Kristen Ward

Geology Bachelor of Science

2009
Peter Anderson
Ross Bishop
Michael Burris
Rebecca Collins
Shannon Haynes
Kacey Largent
Johnathan Moore
Mollie Pettit
Issac Preston
Steve Sesack
Roy Sexton
Randy Shuman
Danielle Simon
Mark VanDyke
Jared VanMeter
Zackary Wall
Matthew Weber
Joseph Wickline
Gregory Yost

2010
Season Jones
Luke Spencer
Gayle Suppa

Environmental Sciences BA

2009
Caroline Leland
Yuko Shinozaki

2010
Mary Becker
Gregory Gerber

Geography

Doctor of Philosophy

2009
James Kernan
Chris Schaney

2010
Michael Ferber
Jacquelyn Jordon
Richard Stockton Maxwell
Jennifer Osha

Geography Master of Arts

2009
Sandra Lange
Joshua Wixom

2010
Aaron Burkholder
Lindsay Deel
Patrick Ehland
Cary Lynch
Jennifer Titanski

Geography Bachelor of Arts

2009
Laura Bernsohn
Kevin Blank
Tyler Carpenter
John Chahl
Alex Cochran
David Creegan
Philip Csati

2010
John Gray
Maxim Lopatnikov
Eric Lovell
Brittany Marks
Nicholas Martin
Lisa Martinelli
Samantha McCreery
Michael McMahon
Oliver Napier
Keith O'Neil
Max Reine
Joshua Smith-Shimer
Sam St. Lifer
Robert Stevens
Zachary Thoma
Toby Vernon
Robert Wetzel

2008
Brian Anderson
Chad Eberly
Andrea Fedonni
Patricia Fuentes
Christopher Gavin
David Grubesky
Aaron High
Paul Jones
Kevin Kuhn
Gabriel Lama
Tyrone Lettelleir
Kevin McDermott
Andrew Ochs
Jonathan Phoenix
Michael Savage
Derek Stemple
Present Resident Graduate Students

Geology
James Adams
Albert Babarsky
Blake Bergerud
Annie Berlinghieri
Stacy Berry
Matthew Boyce
Keith Coffindaffer
Timothy Denicola
Thomas Donahoe
Benjamin Dotson
Christian Figueroa-Tyler
Joel Follmeyer
Magdalena Gill
Daniel Harris
Jessica Hayward
Brad Hega
Chris Howard
Chris Kramer
Kasey Largent
Amanda Laskoskie
Jack Lewis
David Light
Kyle Littlefield
Lisa Lohr
Julia McConnell
Kalin McDannell
Jessica Moore
Johnathan Moore
Michon Mulder
Jason Nellis
Tiffany Neumann
Katelyn Olcott
Kevin Rega
Elizabeth Rhenberg
Stephen Roberts
Jennifer Ryan
Andrea Sack
Steve Sesack
Roy Sexton
Chris Smith
Anne Steptoe
Elise Swan
John Tudek
Jared VanMeter
Meg Walker-Milani
Guochang Wang
Travis Warner
Matthew Weber
Andrew Welshhans
Anne Yanni
Jonathan Zerbe
Lierong Zhu

Geography
Benjamin Baker
Susan Bergeron
Danny Bonenberger
Brad Breslow
Jessica Brewer
Xiannian Chen
Peter Clark
Travis Cowles
Lindsay Deel
Arthur Elmes
Lindsey Felton
Philip Gardone
Franklin Graham
Janice Hardin
Cathleen Johnson
Sheila Kazar
Amanda Krugh
Frank Lafone
Caroline Leland
Autumn Long
Erin Murphy
Christopher Napier
Paul O’Keefe
T. Scott Pruett
Jessica Randall
Cassidy Rhea
George Roedl
Jesse Rouse
Tom Saladyga
Naomi Shanguhyia
Jennifer Smith
Joshua Wixom
Denyse Wyskup
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.
Alumni Support

The Department of Geology and Geography is dependent on alumni giving, and we are fortunate in having a supportive group of graduates. Alumni donations have traditionally sponsored speakers for our colloquium and AAPG Distinguished Lecturer series; helped with expenses of field trips and student travel to professional meetings; and provided much needed grants for student summer research and field work. Many student research projects are supported by your donations. Donations in support of undergraduate and graduate students greatly enhance the Department’s ability to attract high-quality students.

Department Scholarships and Funds

Please designate my gifts to the areas in the amount shown below

- Unrestricted
- Geology and Geography Libraries Funds - Funds to support for additional purchase of library materials
- Frank J. and JoAnn Calzonetti Library Endowment
- Theodor Schuchat Library Endowment Fund
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- Alan C. Donaldson Scholarship Fund - Scholarship to an outstanding pre-major Geology
- John C. Ludlum Geology Fund - Support of the Geology Program distinguished speaker series
- Marshall S. Miller Geology Fund - Support for students undertaking Geology Field Camp
- Geology Graduate Fieldwork Fund
- Wilcox Geology Scholarship Fund - Support for geology undergraduates attending Geology Field Camp
- Trevor and Sylvia Harris GISci Student Scholarship - Scholarship for students in Geographical Information Science
- Geography Undergraduate Scholarship Fund - Award to Geography pre-major or major undergraduate students
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- Milton and Doris Heald Promising Researcher Endowment Award

Please consider the WVU Department of Geology and Geography and our students in your giving plans.

Name_________________________________________________________
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City_________________________ State___________ Zip-Code________
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Signature_______________________________________ Date_____________________

My support in the amount of ___________________

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Please send donation and form to:

Alumni Relations
West Virginia University
Department of Geology and Geography
330 Brooks Hall
PO Box 6300
Morgantown, WV 26506
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Please update your contact information!

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(Please check one of the boxes below to indicate which address you prefer as your mailing address)

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Company:___________________________________

Department: ________________________________

Job Title:  ___________________________________

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Please send us your news (and a photo) for the next newsletter.

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Send your information by US Mail, Email (geo_alumni@mail.wvu.edu)

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Reconstruction of Brooks Hall in 2006

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