Greetings from the Chair

We again have many changes to write about in this Alumni Newsletter. We are all saddened at the passing of our long-time faculty member and friend Dr. Ernie Carlson. I appreciate the many personal notes I have received which reflect so fondly on Ernie’s significant contributions to your education. And thanks so much for the generous contributions which will enable us to give a number of Ernie Carlson Memorial Scholarships at the upcoming Geology spring banquet.

After 35.5 years of service to Kent State University, Dr. Peter Dahl retired last June 30th. The current students showed their admiration of Dr. Dahl by selecting him as the 2010 Teacher of the Year. We thank Pete for his many years of service to the Department and wish him well.

We welcome several new faces to the department this year: Dr. Ted Dasgupta (Syracuse University Ph.D., 2010) joined the Kent Campus faculty last fall; Dr. Jeremy Green (NC State University Ph.D., 2009) joined the faculty at the Tuscarawas Campus; and Dr. Yonathan Admassu (KSU Ph.D. 2010) joined the faculty at the Ashtabula Campus. We are also pleased that Dr. Joseph Andrew (U. Kansas Ph.D., 2002) joined us in January as a Senior Research Scholar. You can read about their activities and interests in this Newsletter. It is great to have such high-quality, active individuals sharing their knowledge, expertise, and enthusiasm with us here at KSU!

At the annual Geology Banquet in April, 2010, the Department gave $19,450 in tuition scholarships and awards in support of student research to juniors, seniors, and graduate students. The Department Scholarship recipients and recipients of scholarships and awards given out by our student-run organizations (KSGS, KSAEG, and SGE) are listed in this Newsletter. We want to thank those who have supported us through generous contributions, many of which directly benefit our students via endowed scholarships. We are delighted that Geology alumni and friends contributed over $19,000 in donations to the Department in 2010. Thank you so much!

In our last Newsletter (Feb. 2010), I mentioned the GSA Regional meeting to be held at the historic Omni Hotel in downtown Pittsburgh, March 20-23, 2011. Our department is heavily involved in this meeting with many faculty serving as conveners of sessions and many of our current students presenting their research results. You can learn about the meeting at www.geosociety.org/Sections/ne/2011mtg/. Many of us will be attending the opening welcome reception on Saturday, March 19 from 6:30-8:30 pm on the 17th floor of the Omni. We hope to see some of our Pittsburgh area alumni at the reception!
M.S. Theses
Completed (August, 2009 through Dec, 2010)

Cordelia Dennison-Budak: Ostracodes as Indicators of the Paleoenvironment in the Pliocene Glenns Ferry Formation, Glenns Ferry Lake, Idaho (Smith)

Jenna Hojnowski: Tying Together Textures, Temperatures and Timing in the Western Tatra Mountains, Slovakia (Holm)

Ph.D. Dissertations
Completed (Fall, 2009 through Fall, 2010)

Yonathan Admassu: Developing Design Methodology for Cut Slopes in Ohio (Shakoor)


2010 Geology Scholarship Awardees

Amoco Alumni Scholarship:
Madan Maharjan, Hansanthi Widanagame, Adiel Klompmaker

Katherine L. Moulton Research Scholarship: Tej Gautam, Katie Thomas

Geology Field Camp Scholarships:
Renee Crane, Ashley Tizzano, Sara Newton

School of Hard Rocks Research Award: Natalie Cope

Emerald Environmental Field Camp Scholarship: Carrie Frisky

KSGS Field Camp Scholarships:
Kristen Mulholland, Sara Newton, Ashley Tizzano, Carrie Frisky, Renee Crane.

Richard A. Heimlich Field Camp Scholarship: Daniel Pratt

SGE Field Camp Scholarships: Dan Pratt, Carrie Frisky

John Allan Clark Scholarship:
Matt Wayman, Kristen Mulholland

SGE Research Scholarships:
Natalie Cope, Hansanthi Widanagame, Adiel Klompmaker, Tej Gautam, Matt Wayman

Donald C. Gifford Geology Scholarship: Linda Frank

SGE W.A. Tarr Award: Tara Jonell

Glenn Frank Scholarships:
Nick Resar, Erica Strohmeyer
KSU Geology Alumni Survey Results

Dick Heimlich carried out a comprehensive survey of our alumni during the last academic year (09-10). Table 1 includes data for his first alumni survey conducted in 1982. We now have a total of 1080 alumni (including those who graduated August 2010 after completing Summer Field Camp). This number includes 705 B.S. recipients and 375 M.S./Ph.D. recipients. Alumni who received more than one KSU degree (some obtained all 3 degrees here!) were counted only once in the survey. In his summary report of the survey Dick writes the following.

Regarding employment categories for our alumni, Table 1 speaks for itself. Comparing the numbers for 1982 and 2010, there are no surprises. For example, non-geological employment of our B.S. - degree recipients (although some received M.S. degrees elsewhere) almost doubled since 1982. (Those with a B.S. - only degree have more limited job opportunities and are more vulnerable during economic downturns compared with those holding advanced degrees). For our M.S./Ph.D. - degree recipients, the non-geological employment figures are almost unchanged. The percentage of our total alumni currently with geological employment is a strong 80%. With introduction of the geology Ph.D. program, the percentage of alumni in college teaching increased for our graduate-degree recipients. The substantial increase of alumni employment in the environmental geology area for all degree recipients is understandable in terms of the growth in that sector and its reduced travel requirement compared with that in the metals/energy exploration areas. From 1982 to 2010, alumni (B.S., M.S., Ph.D.) employment in petroleum exploration diminished significantly, tied to industry layoffs in the 1980’s and alumni disaffection with travel demands of that industry. Earlier lowering of metal prices and travel demands also reduced alumni employment in mineral exploration. During the same period, the number of alumni working in engineering geology increased (threefold for M.S./Ph.D. recipients). Hydrogeology employment decreased slightly for B.S. alumni but increased for M.S./Ph.D. alumni.

Table 1. KSU Geology Alumni Employment Surveys, 1982 and 2010.

B.S. – DEGREE RECIPIENTS

<table>
<thead>
<tr>
<th></th>
<th>1982 Survey</th>
<th>2010 Survey</th>
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<tbody>
<tr>
<td></td>
<td>(Based on data for 83% of alumni)</td>
<td>(Based on data for 94% of alumni)</td>
</tr>
<tr>
<td>College Teaching</td>
<td>6.5%</td>
<td>3.0%</td>
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<tr>
<td>Primary/Secondary School Teaching</td>
<td>3.0%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Environmental Geology</td>
<td>11.0%</td>
<td>27.5%</td>
</tr>
<tr>
<td>Petroleum Exploration</td>
<td>31.8%</td>
<td>12.8%</td>
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<tr>
<td>Mineral Exploration</td>
<td>8.3%</td>
<td>3.0%</td>
</tr>
<tr>
<td>Coal Exploration</td>
<td>3.6%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Engineering Geology</td>
<td>4.5%</td>
<td>6.0%</td>
</tr>
<tr>
<td>Hydrogeology</td>
<td>4.5%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Geophysical Exploration</td>
<td>3.3%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Other Geological Employment (1)</td>
<td>5.4%</td>
<td>6.4%</td>
</tr>
<tr>
<td>Non-Geological Employment (2)</td>
<td>18.1%</td>
<td>30.4%</td>
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M.S./Ph.D. – DEGREE RECIPIENTS

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<tr>
<th></th>
<th>1982 Survey</th>
<th>2010 Survey</th>
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<tr>
<td></td>
<td>(Based on data for 100% of alumni)</td>
<td>(Based on data for 98% of alumni)</td>
</tr>
<tr>
<td>College Teaching</td>
<td>4.5%</td>
<td>7.8%</td>
</tr>
<tr>
<td>Primary/Secondary School Teaching</td>
<td>0.9%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Environmental Geology.</td>
<td>13.5%</td>
<td>30.7%</td>
</tr>
<tr>
<td>Petroleum Exploration</td>
<td>46.9%</td>
<td>16.6%</td>
</tr>
<tr>
<td>Mineral Exploration</td>
<td>4.5%</td>
<td>2.6%</td>
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<tr>
<td>Coal Exploration</td>
<td>2.7%</td>
<td>0.5%</td>
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<tr>
<td>Engineering Geology</td>
<td>4.5%</td>
<td>13.3%</td>
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<tr>
<td>Hydrogeology</td>
<td>10.8%</td>
<td>13.1%</td>
</tr>
<tr>
<td>Geophysical Exploration</td>
<td>0.0%</td>
<td>1.6%</td>
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<td>6.3%</td>
<td>4.7%</td>
</tr>
<tr>
<td>Non-Geological Employment (2)</td>
<td>5.4%</td>
<td>6.5%</td>
</tr>
</tbody>
</table>

(1) Geothermal energy, GIS, museum curating, regional planning, surveying, etc.
(2) Military, construction, computing, IT, sales, law, nursing, dentistry, music etc.
Ernest Howard Carlson
(1933-2010)

Dr. Ernie Carlson died November 13, 2010, at Select Specialty Hospital. He was born December 23, 1933 in Seattle, WA. After serving as an officer in the Air Force he studied at the University of Washington (BS 1956), the University of Colorado (MS 1960), and McGill University in Montreal, Quebec (Ph.D. 1966). While working on his advanced degrees he worked as a government surveyor for the U.S. and Canada. He was employed as an instructor of Geology at Villanova University (Philadelphia) from 1965-66 and then joined the faculty at Kent State University in 1966. In addition to teaching the Mineralogy course, he taught X-ray Crystallography, Clay Mineralogy, Geochemical Exploration, Geology of Ohio, and Environmental Geology. He guided more than a dozen graduate students to completion of their research and receipt of the M.S. degree. He retired from KSU in 2009. Dr. Carlson was a member and executive officer of Friends of Mineralogy Midwest Chapter. He was a member of the Society of Economic Geologists, the Association of Applied Geochemists, the Geological Society of America, and the Mineralogical Society of America. He authored the book Minerals of Ohio in 1991 and published over 30 articles in various scientific journals. Here are remarks from Tom Kammer and Larry Wickstrom, two KSU Geology alumni, about Ernie and his impact.

“I have fond memories of Crystallography in Fall Quarter of 1972 (I did an extra credit project with a goniometer to salvage a B in the course) and Mineralogy in Winter Quarter 1973 when we had to memorize over 100 minerals. They say we shouldn't teach students to memorize so much these days, but I can still identify most igneous and metamorphic minerals I run across while teaching our Field Camp. That surprises students who think the paleontologist would only know about fossils.”

- Thomas W. Kammer (Eberly College Centennial Professor of Geology), Department of Geology and Geography, West Virginia University.

“Ernie was a sweet, meek guy and a dedicated scientist. He always had a great passion about geology and especially his minerals. His book, Minerals of Ohio, is a classic and one of our best sellers. Ernie took it upon himself to produce this great book, and the upcoming 2nd edition. He also served as the OhioSeis volunteer for KSU. He took the initiative to establish the seismic station at Kent State (KSUO) and secured funds to purchase all of the equipment. My wife had Ernie for Introductory Geology way back when and he left a big impression on her too. She remembers that he was able to explain strike and dip so that everyone could really understand it (no small feat!).”

- Larry Wickstrom, Division Chief and State Geologist, Ohio Division of Geological Survey.
The fun I had during 2010

In summer 2009 it was off to see the Siberian wetlands, and in early fall 2010 I re-visited another place out of my past, the sites (or were these sights?) of the place where I was born and grew up. There was a good excuse for going there, because the 38th Congress of the International Association of Hydrogeologists (IAH) was held September 12-17, 2010 in Cracow, Poland. There were, in addition, a couple more good excuses: first, the IAH asked me to convene and chair a session on Thermal Waters and Geothermal Resources, and second, I have extended and deepened my interest in the ground waters of the Himalayas and expanded on the subject beyond our recent publications on that subject in Hydrogeology Journal (v. 16/7, pp.1395-1409) and in Environmental Earth Sciences (v. 59/5, pp. 1079-1098) by presenting there a paper titled: “The Western Extension of the Himalayan Geothermal Belt.” But, it was not all conference talks and meeting other hydro-geothermists of the world. Cracow is one of the most beautiful cities of the world. Am I biased being born and bred there? I will challenge any denier to a duel – his/her choice of weapon and venue… During the last 10 years the city became tourist-friendly with plenty of accommodations, great food, superb beer – and all that at more than reasonable price (one of the few places where the buck still carries you an extra mile). But, I went for my favorite. Two hours drive south of the city brought me to the Pieniny Klippen Belt. The Pieniny Belt is a quintessential Klippen Belt, a nearly vertical remnant portion of a nappe after erosion has removed connecting portions of the nappe. The nappe originated during the Late Cretaceous, when the ancestral West Carpathians (Triassic to Lower Coniacian geosynclines) collided along an oblique convergent boundary with the oceanic lithosphere attached to the North European platform. The ensuing subduction resulted in the Palaeogene flysch accretionary prism, bordering the Belt from the north… and the river runs through it! The antecedent Dunajec River cuts through the Belt forming spectacular canyon with hairpin meanders embedded in vertically standing carbonate formations.

Then, it was back to the “salt mines” in McGilvrey Hall. I have two MS students working on the hydraulic properties of fractured and unfractured shale and one constructing a numerical model quantifying the fluid exchange between bedrock and buried valley fill formations. Among my extracurricular activities – since the last September I serve as an Associate Editor of Water International and I am a member of the International Association of Hydrogeologists Committee of Thermal Waters and Geothermal Energy. So – if you have results, sit down, write it up and send me an article for publication (at either of the venues – WI or IAH).
This has been another busy year. As coordinator of the Earth History labs, Rod has been working with the TAs to produce a laboratory course pack which all the students must purchase. It includes all the exercises and instructions for the labs. We are now in the fifth edition of the pack and it has really improved instruction in the labs. That, coupled with renovation of the lab, has improved the course, and the students seem to like it very much. Now, he is working with Ovidiu Franțescu to develop a distance learning lab for Earth History – that will be ready for the summer session. As co-chair of the program committee for the NC/NE GSA meeting in Pittsburgh, he has been arranging some 750 abstracts into a coherent (?) program.

Meanwhile, at the Stark Campus, Carrie ran field trips to the Smithsonian and the National Zoo and the Falls of the Ohio Fossil Festival in Indiana as well as to the Ohio Caverns and the Cedar Bog in western Ohio for members of the Geology Club and hosted several speakers. The club continues to be very active and plans are now being hatched for the coming year. Earth Day was celebrated again by several activities sponsored by the Geology Club. They included a mock fossil dig and making plaster of Paris fossil casts (it seemed like thousands of them!) Undergraduate student Lerin Baltzly has been working with us in the Paleo Lab, learning techniques and fossil decapods identification. Many Stark undergraduates are now with us at the Kent Campus, and Carrie continues to teach large classes at the Stark campus. Stark Campus now offers 6 lab sections each semester.

Work with graduate students continues. There are currently five paleo grad students and all are working on Ph.D. projects related somehow to fossil crabs and lobsters. At one time or another, we have had some pretty terrific experiences. Last summer Ovidiu and Adina Franțescu accompanied us to Texas and South Carolina to work on their respective theses. All of the graduate students, including Adina, Ovidiu, Cristina Robins, Adiel Klompmaker, and David Waugh, along with us attended the 4th Symposium on Fossil Decapod Crustaceans in Eichstätt, Germany. Then we all did some field work with colleagues from the Netherlands, which was very successful! We proceeded on to Paris, where we spent a very productive two weeks working in the National Museum. Over the Christmas break, we travelled to General Roca, Argentina, collecting fossil mud shrimp, and visiting some national parks on Christmas and New Years. Interspersed with the travel, we have published several articles and made great progress on our revision of the Decapoda volume of the Treatise on Invertebrate Paleontology. Coming up soon, we will be helping out with the North-Central/Northeast GSA meeting. We hope to see many of you there!

Rod and Carrie with the “kids” at Pikes Peak, GSA Denver 2010

Standing: Siri, Nalaka (Ph. D, 2010), Nate Saraceno, Zelalem Shiferaw

Sitting: Nivanthi, Adina Franțescu, Carrie Schweitzer (Ph.D, 2000), Rod Feldmann, Cristina Robins, Adiel Klompmaker, Ovidiu Franțescu
This past year has been filled with lots of excitement! Classes went well with enrollments of 15 or so in my graduate Carbonate Rocks and Paleoceanography classes. I enjoyed teaching Oceanography once more to about 100 undergrads as well. I presented the first of my Arctic research results at two international meetings, an invited talk at the AGU Ocean Sciences meeting in Portland, Oregon and the 40th Arctic Workshop in Colorado, where two of the undergrad researchers in my lab (Renee Crane and Jamael Sadallah) also presented posters. They teamed up with another of my undergrad lab researchers (Mike Farinacci) to present a poster at a regional GSA meeting a few weeks later. The summer was filled with field work, starting with a series of day-cruises on Lake Erie to continue our study of water quality with Dr. Witter (Geology) and our students. I want to thank our graduate students and undergrads who put up with the bad weather and crazy boaters out on the Lake. Khalid Ali (Adem, a Ph.D. student in the department) did a great job coordinating the logistics and collecting samples. Later in the summer, I headed off to the Pacific NW to work on several projects: one week in coastal Oregon hunting for tsunami deposits; two-weeks in British Columbia and Alberta for my NSF collaborative with the University of Pittsburgh, and then a week in Corvallis for work at the NORCOR Marine Core Repository at my alma mater, Oregon State for work on a second NSF grant. Recent graduate Dan Peacock (B.S., Kent Geology ‘10) was an amazing help as my field assistant in Canada. He gained lots of practical experience, which helped him land a job as a mud logger three days after we got back! Chucks Nwaodua, one of my doctoral students, measured a tremendous number of coretops and grab samples for his dissertation work while we were in Corvallis.

Come fall, another of my doctoral students, Nalaka Ranasinghe, defended his doctoral degree and started a post-doctoral position at the Woods Hole Oceanographic Institution. Three of my Masters students (Julie Gouin, Chandawimal Siriwardena, and Nivedita Mehrotra) defended their thesis proposals. They are working on carbon sequestration, Arctic marine sediment provenance, and variations in bottom water oxygen off Baja California, respectively. They plan to complete their degrees shortly. The highlight of the year was the publication of a paper in Science on which I was a co-author. We reported on the role of solar variability as a driver for Holocene El Niño-Southern Oscillation-like temperature changes on millennial time scales using data from Soledad Basin off Baja California. The work received good coverage on the web, including a link to our press release off the image banner on the National Science Foundation home page. In terms of service, I helped to place eight of our students in internships with government agencies, in academic labs, and private firms. We have lots of talented students looking for summer employment, so if you need assistance at your firm or know of someone in the field who does, please contact me to help a fellow black squirrel get their start in geology.
Donna Witter

My research has focused increasingly on water quality issues, namely using satellite observations to detect and measure in-water constituents in Lake Erie and Ohio’s inland lakes. In May, in collaboration with Ph.D. student Khalid Ali (Adem) and Dr. Ortiz, I presented results from our analysis of MODIS and MERIS data at a meeting of the International Association for Great Lakes Research in Toronto. This work uses satellite observations to detect materials, such as algae and suspended sediments, which affect water quality in Lake Erie. Last spring, Dr. Ortiz, Adem and I obtained funding from Ohio Sea Grant to conduct five research cruises in the western basin of the lake. Adem is comparing measurements from water samples collected during these cruises with the satellite data as part of his dissertation, which he expects to defend this summer.

On the teaching front, we had a particularly large group in Scientific Methods in Geology this fall. This is the department’s course in quantitative methods for our majors and new graduate students. On more than one occasion, I had quite a few students cursing at their computers in lab. Fortunately, this was usually followed by those “ah-ha!” moments, where things started to click. This semester, I’m teaching Advanced Geologic Data Analysis as a Special Topics crse for graduate students in the departments of Geology and Geography. Oceanography continues to be popular, with almost 200 students in my sections this year.

After years of discussing scientific research primarily with other Ph.D.s (and with aspiring Ph.D.s), I’ve decided to take a step in a new direction at the end of this school year. In May, I’m planning to start my own software company that will bring scientific information to non-scientists in user-friendly and compelling ways. Initially, I plan to focus on water quality and sustainable use of natural resources, and how these issues dovetail with everyday life and everyday economic decisions. Eventually, I’d like to target other topics, such as helping people make sense of emerging energy technologies. I’m really looking forward to this exciting new challenge. (And, as much as I’ve enjoyed sharing the wonders of math and statistics with our geology students, I don’t think I’ll miss grading spreadsheets!).

Karen Smith

As most of you learned last semester, I planned to retire as of December 31, 2010, but I just couldn’t do it! However, I’m going to try again. This time the date is June 30, 2011. That will make an even 28 years – in the same job. From what I hear, that’s rather unusual for a clerical employee at Kent State. People ask me “What are you going to do with yourself when you retire?” and my answer is “Anything I darn well please!” I hope some travel is included but I know I will do some gardening and house maintenance, spend time with family and friends, read many books, keep up with 4-H, and I have a long list of other things. There’s a saying: “Do what you love and love what you do.” I don’t know that I actually “love what I do,” but I can honestly say that I have loved doing it. I am immensely grateful to Dr. Heimlich for choosing me to fill in for Kathy who was going off to have her first child. She planned to come back but never did and I just sort of stuck here. I couldn’t have been happier, though, through all these years. Thank you – my faculty – for putting up with my bossy ways; thank you, Dr. Heimlich (Dick), Dr. Palmer (Don), and Dr. Holm (Daniel) for being excellent bosses, supervisors, each in your own way, and thank you – all the wonderful, interesting, student-people from all over the world! – for making my daily tasks into a labor of love. (I can hardly believe I know actual people from ALL OVER THE WORLD!!!) Mind-boggling, I tell you!!

It’s been an honor, a privilege, and a blessing, working with all of you. If I make it this time, I will miss you all – but not too much!
Alison Smith

I continue to work on projects using ostracodes as paleoclimatic and hydrologic tools in reconstructing Late Pliocene through Holocene aquatic environmental records. Fieldwork this past year has been focused on streams and springs in the Appalachian region, as Don Palmer and I continue to collaborate with a research group studying karst groundwater-surface water interactions (we had a session at GSA NE/SE 2010), and also work on a Geauga County grant in Ohio focused on springs and seeps. The National Science Foundation has funded the next phase of the NANODe database, as it expands and links to the international NEOTOMA database (paleoclimate proxy data from Pliocene-recent continental records).

This year Cordy Dennison-Budak graduated with her M.S. degree upon completion of her thesis on the Plio-Pleistocene paleolimnologic record at Hagerman National Monument, Idaho. Current graduate students include Kay Amey, in the finishing stages of her dissertation (Ph.D. candidate) in Hydrology and Environment, focusing on groundwater-surface water interactions in brook trout-bearing streams of northeast Ohio), Katie Thomas Wells (M.S. student working on early Holocene non-marine records from Beringia) and Frank Mathias (M.S. student working on a million year record of a Pleistocene paleolake in Butte Valley, California). Katie has already presented preliminary results at the International Biogeographical Society in Crete-very exciting!

This past summer I helped run a teacher’s workshop at the AMQUA conference in Laramie, Wyoming, and attended international workshops in Madison, WI (where I climbed the Baraboo Quartzite) and at Penn State University. I continue to teach the writing intensive Paleo course, and this year offered a new graduate seminar on the Holocene, which was well received and lots of fun to put together. I am currently developing a distance learning course for Earth History, which is scheduled for release this summer! I would love to hear from you, and remember, if you have any fossil collections taking up space needed for other things-please donate them to the teaching collection!

Abdul Shakoor

In September-October, 2011, I attended the 11th Congress of the International Association for Engineering Geology and the Environment (IAEG) in Auckland, New Zealand, the AEG annual meeting in Charleston, SC, and the GSA annual meeting in Denver, CO. My graduate students and I presented a number of papers at these meetings. In 2010, I completed my six-year commitment as an officer of the Management Board of the Engineering Geology Division of GSA. In January, 2011, I participated in the Transportation Research Board (TRB) annual meeting in Washington, D.C. where I served as member of the Engineering Geology and Soil and Rock Exploration committees of TRB. I continue to serve as co-editor of the Environmental & Engineering Geoscience journal. Last year, Yonathan Admassu, Martin Woodard, and I finished the Rock Slope Design Criteria project for the Ohio Department of Transportation (ODOT). The study resulted in developing a design manual that is currently being used by ODOT and its consultants. My current graduate students are busy conducting research on topics dealing with the effect of water content on deformation behavior of fine-grained soils, natural water content as an indicator of the engineering properties of clays, disintegration behavior of clay-bearing rocks, landslide susceptibility of the Kope Formation (Cincinnati), and optimum sample size for discontinuity data collection.
David Hacker

It has been another busy and productive year of teaching and research. Over the past year I have enjoyed teaching Earth Dynamics, Earth History, Earth Dynamics Lab, Earth History Lab, Oceanography, Introductory Hydrogeology, and Summer Field Camp. In the fall I added a field trip component to the Hydrogeology course where we traveled to Mammoth Cave National Park to study karst aquifer systems. We spent time exploring karst landforms and springs and then went underground for a six hour private tour of the different cave levels, including the Echo River with its blind fish. At field camp, we had another enjoyable field season of mapping exercises, rock studies, and eating at Sanford’s. Besides seeing “world class geology” on the trip, we also saw plenty of wildlife, including a grizzly bear with her cubs in Yellowstone. We also had our usual elk visitors at the Grant Village campsite, but this time they were a little bolder and destroyed several tents belonging to a Boy Scout troop camping next to us.

In research, I continue to work on projects involving magma emplacement in laccoliths and calderas and the geologic hazards associated with their eruptions. This fall I presented my research at an international conference on the physical geology of subvolcanic systems (LASI IV - Physical Geology of Subvolcanic Systems: Laccoliths, Sills and Dykes) in Moab, Utah. As part of the conference, we spent two days hiking the Henry Mountains, which are the type locality for the term laccolith. I also led a one-day field trip for the conference in the nearby Pine Valley Mountains where I have been conducting research on erupting laccoliths. It was a great opportunity to compare and contrast the histories of the two laccolith groups with some of the leading geologists in the field of magma processes. During the summer, two undergraduate students (Ashley Tizzano and Greg Logan) accompanied me on a grant to Utah to conduct magnetic susceptibility field studies on laccoliths and will be presenting their results at GSA this year. Here in Ohio, I have started a cooperative project with the Ohio Geological Survey to characterize and interpret the geology of the 74 state parks in Ohio. Geology students will conduct geologic research to better understand the processes and geologic controls that created the landscapes of the parks and produce educational materials to communicate these concepts to the public. The final product of the Ohio State Parks Geology Project will be a publication series of brochures published by the Ohio Geological Survey and made available at State Park visitor centers. Jill Vinecourt has completed a pilot study of Nelson-Kennedy Ledges State Park and we will present the results at GSA this year. I have also co-written a text book with David Best from Northern Arizona University titled: “Earth’s Natural Hazards: Understanding Natural Disasters and Catastrophes” which was published this past spring. The book is designed to help students understand Earth’s geologic processes that result in life-changing geologic disasters.

Dr. Hacker at Devil’s Tower, Wyoming (2010)
Neil Wells

My news is that as usual things have been hectic. I spent the summer working on classes and revising some manuscripts, but didn’t actually get to finish and send the papers out until Christmas break. I’ve been continuing to look at the Cuyahoga River, and have become fascinated by the complexities in its development as the system reoriented itself back to northward drainage, initially draining away from the Defiance moraine, but then later turning and crossing back over the same moraine to flow to Lake Erie. There seems to be a long succession of episodes of stream capture, even more complicated than what has previously been proposed, but hypothesizing is a long way from proving.

Liz Griffith

I just finished my first year at Kent this December; and it has been a busy year adjusting to the life of a professor! I am enjoying getting to know my colleagues and our students and exploring Northeast Ohio (see picture of my family hiking at the CVNP Virginia Kendall Ledges). My first M.S. student, Greg Aaron (B.S. in Chemistry from the Univ. of Pittsburgh) started in the fall and we are developing a project investigating two sites affected by acid mine drainage in Columbiana and Jefferson Counties. My honors student, Matt Wayman, will be completing his project on paleoproductivity and seawater chemistry changes over the Middle Miocene and presenting results at the regional GSA meeting this Spring. I also enjoyed having a high school student in the lab doing an independent research project and an 8th grader doing her Science Fair project on water quality over the winter break. My records of paleoproductivity over the Eocene-Oligocene Transition were published this past summer in the journal, Paleoceanography.

I look forward to starting a new graduate student to work on a proposal recommended for funding by NSF Geobiology & Low temperature geochemistry ($142k; Feb. 15, 2011-Feb. 14, 2013) to look at abiotic and microbially mediated barite precipitated in springs in Oklahoma, Utah, and Colorado with such names as ‘Stinking Springs’ and ‘Stinking Creek’. That will take me away from Ohio this summer and down to the University of South Carolina where we will be analyzing the stable (88/86) strontium isotopic composition of these barites to investigate its potential to serve as a biosignature in ancient (or extraterrestrial) barite. It should be interesting, whatever we learn! I taught a new course ‘Environmental Isotopes’ in the fall and am currently teaching and developing a new course ‘Environmental Geochemistry’. Our field trips have included visiting the isotope geochemistry labs at the University of Pittsburgh in the fall, and we will tour the Kent Water Treatment Facility this spring. 
Yonathan Admassu

2010 brought so much to my life. I finally graduated with my Ph.D. on the 19th of August. That was one of my joyous moments to say the least. In May, I was offered an NTT assistant professor position at Kent State – Ashtabula and I accepted it with no second thoughts. I will be part of Kent longer that I ever thought. In the fall, I taught Earth Dynamics lecture and lab, Environmental Geology and Geology of Ohio. Everybody at the Ashtabula campus has been very supportive. There is even a plan to build a new geology lab. I can’t wait to see that happen.

Spring semester came with the fierce cold weather Ashtabula is known for. The good thing is that I have a 10 minute drive to and from work. I am teaching three sections of Earth History lecture, three earth History labs and Oceanography. It sounds like much but I have managed to keep working with Dr. Shakoor on publications. In the summer, I have plans to do field work in Northern and Western Ethiopia if I am successful in securing funds from mining companies and the US embassy in Ethiopia. Wish me luck on that.

Dr. Admassu in the field.

Donald Palmer

In the last year I assumed the responsibility for Mineralogy after Ernie Carlson’s retirement and have worked with others to help restructure the mineralogy/petrology sequence into Earth Materials I and II. I have been pleased to have the chance to redevelop courses in Economic Geology, taught this spring, and Engineering and Environmental Geophysics, to be taught next fall. I continue to serve as graduate coordinator and on the Ohio State commission for articulation of course requirements in geology.

Last summer I spent time in northeastern Scotland and in the western isles looking at geology. One of the best sites was with a colleague from the University of Cardiff, Wales at the outcrops of the Old Red Sandstone around Cromarty, north of Inverness and the home of geological pioneer and author Hugh Miller. In the last year I worked with Alison Smith and Dorothy Vesper at the UWV on a series of cold and warm water springs in Pennsylvania and West Virginia and on lakes and springs in Geauga County, Ohio under a grant from the park district there.

The KSGS T-shirts, Polos and Hoodies are officially on sale! And all proceeds go to undergraduate scholarships! Visit the Alumni section of our website.
Since joining the faculty at KSU at Geauga in 2009 as a full-time faculty member I've been focusing much of my effort on teaching of our Kent Core classes. These are the first courses taken by geology majors and non-science majors alike. I'm excited to say that I will be joining other members of the Geology Department faculty who are developing online courses as I prepare to convert the Geology of Ohio course for online delivery this summer. At KSU Geauga, we are actively engaged in development of a variety of distance learning format courses from 100% online course delivery using WebCT Vista (now Blackboard) to using a new tool called Wimba for synchronous delivery of online courses. I, along with a number of my KSU Geauga colleagues are now certified as peer reviewers using the Quality Matters (QM) rubric for online course assessment. My focus is also on Geoscience Education, exploring how to improve student attitudes toward learning science. One way is to promote student involvement. This past Fall I organized a new student association at my campus called the Gaia Society. I chose the name Gaia Society after Dr. James Lovelock's Gaia Hypothesis, the notion that the Earth can be thought of as a living system. The Gaia Society, along with student volunteers from Twinsburg Academic Center, participated in a creek side cleanup last November. The site located just south of Bob Evans on Hadden Road was identified during a field trip with students from my Earth Dynamics and Earth History courses. It was selected because it contained a number of abandoned tires and metal debris that lay in the upper reaches of a unnamed tributary to Tinkers Creek. In all, the Gaia Society members and student volunteers collected 20 tires, approximately 455 pounds of scrap metal and 6 bags of garbage. All materials were moved off-site and are to be taken to waste recycling facilities. Lastly, I'm planning to develop lab exercises and a monitoring program using the surface water detention pond recently constructed on our campus. New parking lots were constructed that required detention of the increased runoff generated by the parking lot surfaces.

The Department of Geology was well-represented at the decadal Boy Scout Jamborall, in honor of the 100th anniversary of scouting, on May 22, 2010, at Camp Manatoc in Hudson, Ohio. Despite intermittent thunderstorms, 2500 scouts of all ages, 1000 leaders, and innumerable parents waded through 4 inches of mud, all day long, participating in acres of events, including Orienteering, Adventure Skills, and Outdoor Fun to name just a few. Two Big Top tents held nearly 100 exhibits from the area, including the Departments of Physics and Geology from Kent State University. Members of KSGS and SGE, displayed and answered questions about rock samples from their collections, distributed geological activity sheets, displayed and answered questions about the department’s Psittacosaurus fossil cast, and helped more than 300 scouts make plaster casts of various fossils to take home. Thanks to Karen Smith and to all the student and faculty participants who helped to make this event a success.
Ted Dasgupta

I joined the Department of Geology at Kent State University last fall as an Assistant Professor (NTT). The members of the KSU Geology family have shown exceptional warmth in welcoming me and making sure that I feel at home right away and I am enjoying my stay at Kent. Here at Kent, my teaching duties include teaching introductory level geology courses for non-majors as well as the mineralogy-petrology series to students majoring in geology. Starting from Fall 2011, I plan on offering an advanced geochemistry course for the senior geology undergraduates. This semester, other than my regular teaching duties, I am also involved in developing online versions of the introductory physical geology lecture as well as laboratory courses. This opportunity has allowed me to collaborate with web-designers, multimedia experts to design truly state of the art online teaching techniques and I look forward to start teaching them from Fall 2011.

In the research front I plan on continuing with my research on geochemistry of granitic rocks from the Southern Appalachians which was the main focus of my doctoral study at Syracuse University. At Syracuse, I used Sr, Sm-Nd and U-Pb isotopic analysis of apatite, zircon, and whole rock samples as well as numerical models to construct tectonic models that explain the petrogenesis of Alleghanian granites, a group of granites that are closely linked to the formation of the super continent Pangea. The study gave rise to interesting avenues for me to follow for future research endeavors and I plan on availing everyone of them. This March, in the upcoming NE-NC GSA meeting in Pittsburgh, together with my PhD supervisor Dr. Scott Samson (Syracuse University), I will be leading a session on evolution of granitic magma. There I hope to meet old friends as well as potential new collaborators.

Jeremy L. Green

I am thrilled to be a part of the Geology department at Kent State University! I moved here in August from Raleigh, North Carolina, where I spent the last six years working on my doctorate at North Carolina State University and also teaching geology at Wake Technical Community College. My research interests involve reconstructing paleoecology (specifically diet and feeding behavior) in extinct Pleistocene mammals and Permo-Triassic mammal-like reptiles.

My first semester at Kent State was wonderfully filled with teaching CORE geology courses at the Tuscarawas campus in New Philadelphia and interacting with faculty and students in the Geology department at the Kent campus. My teaching schedule leaves Fridays open, and I use that time to hold office hours in McGilvrey Hall and to frequent the coffee table run by the Geology club (their coffee is fantastic by the way, come grab a cup if you have not had a chance yet)! This semester I am delighted to have the opportunity to teach not only CORE geology courses, but also the upper-division “All About Dinosaurs” class, which has never been offered at the Tuscarawas campus. Having been born and bred in Florida, I must say I am quite fascinated by the regular snowfalls we experience here in Ohio...although I hear this enthusiasm will taper off with time.

When not educating students about the natural wonders of our planet, I continue to work on collaborative research projects with colleagues at various institutions across the country. I recently received a 2011 Summer Research Activity Appointment through the Research Council of Kent State University and am currently pursuing external funding for my research. This summer I plan to work extensively on several projects, including analyzing growth patterns recorded in the tusks of extinct Triassic dicynodonts and expanding my previous research into dental microwear patterns in sloths and armadillos. I look forward to a very productive and fruitful year in both teaching and research in 2011 and am very excited to be involved in the Geology department here at Kent State University. Please feel free to stop by my office and visit anytime!
Merida Keatts and her husband John Hamilton welcomed Nicholas A. Hamilton into the world on Jan 24, 2011.

Joe Andrew (2011 Senior Research Scholar)

I am currently spending much of the spring doing fieldwork to study Miocene to Holocene crustal deformation in eastern California. My research focuses on understanding orogenic events via detailed field geologic mapping, kinematic data and U-Pb geochronology. My mapping in support of this research is done via an all digital method using a field-hardened laptop computer running geographic information systems (GIS) software. I am specifically investigating the slip history of the Garlock fault which is a left-lateral strike slip fault that is oriented transverse to most of the structures in this region. The results, after one year working on this project with my colleagues at the University of Kansas, show that the Garlock fault has had two distinct slip episodes with a hiatus of movement. Our goal is to derive slip rates for different time intervals and to test these relationships by reconstructing partial slip and matching structures, rocks and sediment sources across the fault.

I am also working on a model for extension and transtension across Death Valley, California with >100 km of displacement. I am using chemical abrasion thermal ionization mass spectrometry U-Pb zircon geochronology to get precise crystallization ages of intrusive rocks in the hanging wall and footwall of the Death Valley detachment system. My hypothesis is that these intrusive rocks can be used to piece together and thus geometrically restore the fault slip in the Death Valley area since ~12 Ma. These two studies will also hopefully elucidate the relationships between the structures of Death Valley and the eastern end of the Garlock fault. No previous research has defined exactly how the Death Valley and Garlock fault systems interact. I have previously worked on projects understanding the deformation history of Quaternary to Proterozoic, complex, multiply deformed (brittle and ductile) rocks in eastern California, Alaska and Mexico.
Dick Heimlich (Emeritus)

Since retiring (6/30/09), I have worked on several projects, the first of which was completion of an alumni employment survey and its comparison with the similar survey I made in 1982. The second project involved updating our alumni records. As most of you know, this effort included obtaining permission to place your email address in our online Alumni Directory and encouraging you to send me photos and a paragraph describing your career activity since graduation, also for posting online. In that connection I had some terrific telephone conversations with hundreds of you, including all alumni who preceded me at KSU (1961). I truly appreciate your overwhelmingly positive response to this effort. Dave Waugh (nearing completion of the Ph.D. at KSU) has now added your information to the departmental alumni database which he constructed and has continued to maintain. He has also posted your photos and career paragraphs on the appropriate webpages. The third project required me to organize a series of PowerPoint lectures (Geology of Selected National Parks) for presentation at the Baldwin-Wallace Institute for Learning in Retirement (I should be a student in this program!! In fact I have been taking several of the courses offered.) I gave my first lecture (Yosemite National Park) last week. It was an exhilarating experience, and I had a lot of fun with the material and with my 37 students (mean age about 75!).

Pete Dahl (Emeritus)

Since my retirement from KSU in June 2010, Susie and I have been doing a fair amount of domestic traveling, which has been great fun. Our itineraries have included Boston, coastal Maine, central and coastal Alaska, coastal British Columbia, Chicago, the Indiana Dunes, and northern Florida. Our daughter, Elena, is currently a first-year graduate student at University of Florida, so we have a ready excuse to visit Gainesville from time to time. When home, which is most of the time, I've been working on a couple of collaborative geology papers, one of which will appear in a commemorative volume in February or March. Also, I've been engaged in extensive background reading for a potential writing project involving ancient Greece, a setting with which I first became fascinated during my Navy years.

If you haven’t visited the Alumni Webpage lately, you’re missing a lot! There are lots of new photos and news items from recent grads and those with a bit more experience to share. Please contact Daniel Holm (dholm@kent.edu) or David Waugh (dwaugh@kent.edu) if you’d like to see something added to our Alumni Webpage.

Beautiful Blue and Gold Geology Bumper Stickers Available - $2.00, ksmith6@kent.edu