

CONTACT

THE ALUMNI NEWSLETTER OF WHEATON COLLEGE'S DEPARTMENT OF GEOLOGY

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*When I consider
Your heavens,
the work of Your
fingers,*

*The moon
and the stars,
which You have
ordained;*

*What is man
that You take
thought of him,*

*And the son
of man that You
care for him?*

~ Psalm 8:3-4

REPORT TO STAKEHOLDERS

This is our annual report to the stakeholders in the Geology and Environmental Science Department at Wheaton College. That means you all have some intimate connection to what happened here in the past, what is going on now, and what may happen in the future (Lord willing). You are alumni, students, faculty (past and present) and friends. You bless us.

We hope that you will enjoy reading about the immediate past in this issue of CONTACT. Last year felt different, as Jim Clark took a sabbatical leave for both semesters. He will tell you about his adventures. In Jim's absence we were given the opportunity to bring on Christopher Williams (Geology '93) as a visiting instructor to teach a combination of major and general education geology courses during the Spring semester. Christopher organized a wonderful student field trip to the Florida Keys for spring break. Look for his report here, too. Jeff Greenberg continued to develop our geological specimen collection and mentor some bright students in the area of third-world community development, as he will report. I will tell you about my continuing geoarchaeology research last year and other projects, culminating in one more trip to the Sinai during the summer. I also tagged along on Christopher's Florida Keys trip (I thought he needed help....). We will also (re)introduce you to our new Department Associate Jamie Selander. Our students were busy here on campus and around the world. God is blessing us. Read on.



*Earth History and Stratigraphy
spring field trip to Baraboo, WI*

GEOLOGY SCHOLARSHIP UPDATE

In the 2006 CONTACT we told you about our two scholarship funds that benefit geology majors. The **Dr. Donald Boardman Black Hills Scholarship** assists students with costs related to attending our summer courses in the Black Hills. We expect to award one or more students with stipends for the course offered next summer (2008)! The **Wheaton College Geology Scholarship** is awarded to a Geology major with an outstanding academic record. Last year we received several very generous contributions for this scholarship that significantly increased its value. The recipient of the Wheaton College Geology Scholarship last year was Junior **Kevin Befus**, from Elgin IL. Kevin is a student leader in the department and on campus. His contributions include: research assistant for Dr. Clark, student teaching assistant in the department, and President of Honduras Project (the student organization that makes trips to Honduras each spring break to install community water systems).

We thank all who have helped these funds to grow so that we can support our students. Please note that if donations are given to the College for the Geology Department, they must be clearly designated for a specific scholarship or other particular purpose.

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*Digging a trench along the Mississippi
river during the Petrology field trip*

*The LORD is my rock and my fortress and my
deliverer, My God, my rock, in whom I take
refuge; My shield and the horn of my salva-
tion, my stronghold. ~ Psalm 18:2*

JEFF'S JOURNALS

Just sitting here waiting for the hammer to fall; that is, watching "fall" turn into winter. The last year has been a blur with many surprises and episodes portending an exciting future.

My wife Diane and youngest daughter moved into a rented house last November, in order to care for my 89 year-old father in failing health. This was a very difficult but important change for us all. Dad lived on through bouts of Alzheimer's hallucinations and the loss of all that gives the living dignity. We learned, though without full volition, to be full-time servants. One week before his 90th birthday, my dad died peacefully. He left us in the house, newly bought, only two blocks from Wheaton's campus and more wonderful an abode than we ever expected to possess. In his memory, we have christened the place, "Geohouse". It is a haven and gathering place for friends and colleagues, as well as family. If you visit the college and need a place to stay for a couple of days, please be welcome in the name of the Lord's grace as our guest.

I became the coordinator for Wheaton's 2006-2007 CACE (Center for Applied Christian Ethics) focus of seminars, workshops and other events. The theme was *Environment, Economics and Equity*. A challenge was given to college faculty to bring in guest experts and engage the community with issues related to the theme. The greatest coup for us was the acceptance of Sir John Houghton to come from the UK and guide us in consideration of global climate change as challenge for science, policy and Christian moral response. Additional personalities that came and contributed included Jim Ball, the Director of the Evangelical Environmental Network, Attorney Ann Alexander, former Chair of the Christian Environmental Council, Dean Ohlman, Ed Brown and Matthew Sleeth, authors and Creation Care ministers. We tried to attract author Wendell Barry and economist Herman Daly but they could only send us their gracious regrets. Our Environmental Science student prodigy, Ben Lowe, organized a fantastic conference

"I hope to plan and organize more of these combo academics plus service opportunities for our majors. The magnitude of global needs for service is so great that training for sending this new type of missionary ought to be our priority."

for students at Christian colleges that proceeded here to coincide with Houghton's visit. Media coverage was good but should have been better. The series of CACE events represent a very nice complement to the 2005 Science Symposium, *Geoscience in Global Ministry* that the Geology Department organized and successfully staged. As a direct consequence of the CACE effort this year, a book will be published on the broader theme.

All spring semester I worked with three talented Geology majors, Brandon Lewis, Nathan Williams and Lars Anderas in preparation for a research-service placement in northern Tanzania. We met two hours a week to discuss potential project work, cultural distinctives, spiritual expectations (dealing with ambiguity and frustration), the geology of gemstone deposits, and environmental-economic problems of the region. The fellows were supported by the Student Missionary Project to go and serve for two months with the Kilimanjaro base of Youth With A Mission (YWAM). I was enabled to go and visit/supervise there for ten days with travel funding from the college's Faculty Missionary Project and a Faculty Development grant. The experience is certainly valuable for helping to mature young scholar-servants. There is also the down side as two months is barely enough time to accomplish significant outreach efforts or to establish relationships with the wonderful local people. In the developing-world context, two months is mostly just long enough to be frustrated in trying to conduct project work and to be thwarted by waiting. The students now recognize that valuable sustainable projects take time and patience, not to mention focused prayer.

I hope to plan and organize more of these combo academics plus service opportunities for our majors. The magnitude of global needs for service is so great that training for sending this new type of missionary ought to be our priority. There is no doubt, if we were blessed with two hundred Geology majors (like some of the popular majors), then we could likely place all of them with areas of need.

As evidence for the scholarly nature of the student projects, the work should be communicated to the academic and Church realms. The first such team project, completed in 2005 for outreach to the poor in South Africa, was presented at the annual meeting of the GSA and is now in print through the *Waterlines* journal in the UK (e-mail me and I'll send you a copy). The 2007 Tanzanian team has some time to finish digesting all the details of their industry. We hope to present initial results at the Northcentral GSA section meeting next April. If all goes as planned, there should also be some fruitful investigation of a very odd calcrete paleosol encountered in the gemstone country last summer. Finally, we expect to provide some valuable input including a GIS base map for the YWAM leader in his quest to realize plans for ministry development.

The remainder of summer 2007 was spent ten days teaching earth science for missionaries at YWAM's University of the Nations in Kona, Hawaii (someone's got to do it) and a month teaching gen. ed. geology at the Science Station. The WCSS is truly a haven of beauty and peace for those of us blessed with its operation. Don't forget that all of you are invited guests to come out any



Lars Anderas, Leonard NKuye (YWAM), Nathan

Continued

summer and spend some time with us in that piece of God's country.

Our beloved WCSS will be the venue for a three-year National Science Foundation program, if I receive funding. Please pray that the reviewers find favor in my proposal. The proposal, *Applied Geoscience Research as Training for International Community Development*, is under the category of an REU, Research Experience for Undergraduates. We would be looking for sixteen motivated and talented geology or related science students to come for ten weeks and learn by experimenting, how to find and collect groundwater, how to use natural filtration and agriculture in sanitation projects, how to find and utilize geological materials as building materials, and to design small-scale alternative energy systems for use in poor villages. Peripheral skills taught would include GIS/GPS mapping, project management, cross-cultural communication, and coordination with NGOs (None Government Organizations), local governments and financial entities. At ten week's end, the participants receive a certificate for successful (hopefully) completion of the research and training. They should then be ready to pass along their new expertise as trainers of trainers, either here or across the globe. Amazingly, the NSF provides a nice juicy stipend in addition to room and board for those accepted. The provision of this grant's program at the Science Station fulfills many excellent purposes:

- Meeting huge global needs for appropriate technology based on geological science;
- Capturing the hearts and minds of good students for service;
- Attracting students into geology instead of other disciplines;
- Cultivating leadership qualities of real substance;
- Enhancing the overall Science Station environment and finding valuable ways to better use the venue;
- Helping Wheaton College renew and revitalize its place as prime sender of laborers into the great harvest (the program models some of the potential for holistic ministry in Christ's name).

If you would like more detailed information on the REU, please let me know. Your prayers are coveted.

This October I gave three lectures at Azusa Pacific University (where my splendid son matriculates). One talk was indeed promotional, designed to gather scientist comrades to the cause of applying our disciplines in global ministry. I also lobbied some of the junior administrators to consider adding geology as a degree program. It is certainly ridiculous, though sadly understandable that only three of us "evangelical" four-year schools offer a geology major (all three schools are within shouting distance). The west coast and Rockies have nothing! Meanwhile, we at WC continue the frustration of recruiting from among the clueless multitudes. If you would like to help the department recruit majors, please put a good word in with any good Christian high schoolers you know. Perhaps our plans to field trip the outer realms will payoff some day. We three profs have talked about a neat excursion to the Alps, perhaps at the end of the summer. At least we would have a blast.

GEOLOGIC (DEPARTMENT) CHANGE

This fall our department welcomes a new Lab Associate, **Jamie Selander**. Jamie will tell you about herself elsewhere in this issue of CONTACT. Jamie replaces **Nicole Havens**, who served in the position of Lab and Department Associate for two years. Nicole and her husband Neile were planning to move to another state during the summer, so she resigned her position in May and Jamie was hired to replace her in June. Nicole and Neile were available to serve as cooks at the Science Station during the summer. All agreed that food service was never better than under their leadership! By the end of the summer, their plans changed and Neile accepted a position back on campus as a computer support specialist (serving the Science Division!). Nicole is now employed as a Member Services Coordinator at the Wheaton Sports Complex in Wheaton.

One new initiative of which you should be aware is the B.A. degree in Geology option. This Geo-light alternative makes it relatively easy for interested students to double major in something else with the core of Geology classes and without the supporting calculus, year of Physics, year of Chemistry. We geo-purists might complain about watering down the scientific rigor, but if an individual gets "hooked" on Geo, then they can get the rest later on. One foot has to get in the door before full entry (I changed the metaphor).



Lars Anderas, Leonard Nkuye (WYAM), WYAM worker, Nathan Williams, Brandon Lewis inspecting a well in Tanzania.

REMEMBERING CHRISTIAN SKOGLUND

Christian P. Skoglund (1976-2007) died in the service of his country on November 8, 2007. Army Captain Skoglund was on a training mission in northern Italy when the UH-60 Black Hawk helicopter he was piloting went down. Five other servicemen died in the accident. Christian graduated with an BS in Environmental Science in 2000. We knew Christian as a fun-loving student and athlete who took seriously his relationships with those around him. He kept in touch with professors in geology and biology by email, wherever he was stationed. Lt. Col. Troy Krings, commander of the 1-214th Aviation Regiment said in the press release (from armytimes.com) that Skoglund, "was a positive influence on all of the soldiers in his company and in the 1st Battalion, 214th Aviation Regiment....Captain Skoglund was an inspiring leader and a cherished friend. His soldiers truly respected him and were dedicated to the goals he set." We were blessed to count Christian as a student and friend.

CLARK'S CAPERS

Jim took a one year sabbatical leave during the 2006-2007 academic year. His research involved two different emphases, both related to water. The more "academic" portion of the sabbatical leave dealt with investigating the paleo-hydrology of the Great Lakes region while the "applied" portion involved the design of inexpensive geophysical tools and methods to find water in developing nations. Both the "academic" and the "applied" work involved computer and field work, and resulted in manuscripts submitted to peer-reviewed journals.

Great Lakes Paleo-Hydrology

The paleo-hydrology research resulted in two manuscripts with Wheaton College student co-authors that have been accepted by journals. One of those (see "Numerical Simulation" below) detailed the methods we developed to recreate the hydrological conditions existing in the Great Lakes watershed during and after the retreat of the last great ice sheet that covered the northern half of the North American continent. The method can determine a) the changing levels of the Great Lakes including tilting of shorelines from glacial isostasy, b) the outlets that would have controlled lake levels and their relative elevations through time, c) the surface drainage changes through time as the earth deformed, and d) the magnitude and duration of catastrophic flooding resulting from rapid drainage of lakes as ice sheet retreat uncovered progressively lower outlets.

"Eight missionaries attended his workshop and they each built their own instruments, used them to gather on-site field data and interpreted the data with software we had developed... Since the completion of the workshop Jim has heard that the instruments have been used in Paraguay, Nepal and Mozambique, Kenya and Tanzania."

The other paper (See "Effects of Lake Water" below) describes a method for incorporating water loads resulting from filling of the Great Lakes as the ice sheet retreated into the deformation calculation of the region. Because ice loads were replaced by water loads over the lakes, and because those water loads remained until present, any study of earth deformation from glacial isostasy should include these effects, but we are the first to do so. Both of these papers have Wheaton undergraduate co-authors.

In May we were involved in helping to lead a two-day "Friends of the Pleistocene" field trip in eastern Wisconsin. Our work from previous years was highlighted in this professional field conference with approximately 100 geologists participating. Our results were published in the conference guidebook (See "Late-Glacial History" below) and we were responsible for describing both sites on the field trip. This field trip provided an excellent opportunity for students (Kevin Befus, Chris Gregory, Glenn Sharman and Dan Parker) to interact professionally and casually with well-known field geologists from the upper Midwest.

Research while in Cambridge, UK

we continued to research Great Lakes paleo-hydrology by analyzing the effects of changing ice and water thicknesses and earth deformation upon groundwater fluctuations during the past 20,000 years. Profound changes were expected and predicted with groundwater velocities and directions changing dramatically as the lakes filled and drained and as subglacial ice sheet hydraulic pressures fluctuated. Continued studies of surface drainage patterns revealed several areas where earth deformation has caused a river to change course subsequent to deglaciation. We have used the HEC-RAS numerical model to determine the average daily discharge magnitude of the Great Lakes outlets during glacial times, finding that the outflow far exceeds present amounts.

A numerical method was developed and implemented to invert relative sea level data, tide gauge data, and lake level data with the goal of predicting the best fitting ice sheet thickness history. The method is functional but the predictions of the ice sheet require continued work to properly interpret the results.

While in Cambridge we visited the Scott Polar Research Institute, an organization dedicated to understanding polar glacial processes.

Geophysics Instrumentation Supporting Water Development

Jim continued to develop inexpensive geophysical equipment for use in water prospecting in developing countries. Both the earth resistivity and seismic refraction devices were improved with the help of Rick Page. He also began experimenting with a time-domain electromagnetic (TDEM) technique but much work is still needed before a TDEM is functional. Each of these instruments can be manufactured for less than \$250, a substantial savings over commercial models that sell for \$10,000 to \$25,000 (a commercial TDEM costs \$60,000).



Dan Parker, Chris Gregory, Kevin Befus, and Glenn Sharman

Continued

Jim prepared a manuscript describing the results from this research and my field experiences with the instruments in Chad and Tanzania. This paper, "Appropriate Technology Geophysics in Support of Water Exploration in Developing Countries" by James A. Clark and Rick Page, was submitted to the peer-reviewed engineering journal, *Journal of Engineering for Sustainable Development*.

He also wrote a first draft of a monograph about these geophysical methods for use by missionaries, indigenous well drillers and aid workers. For each geophysical method, the monograph explains in detail the theory, field methods, instrument construction and interpretation. Five chapters and several appendices comprising 122 pages are now completed in the first draft.

Jim used the monograph draft as a text when he taught a five-day geophysics workshop at EQUIP in Marion North Carolina in April, 2007. Eight missionaries attended his workshop and they each built their own instruments, used them to gather on-site field data and interpreted the data with software we had developed. During that workshop he learned that the software for geophysical interpretation had to be more user friendly so several weeks of my sabbatical research involved writing Visual Basic 6 code simplifying the data input and making the geophysical interpretation more intuitive. Since the completion of the workshop Jim has heard that the instruments have been used in Paraguay, Nepal and Mozambique, Kenya and Tanzania.

British Water Institutes

While in Cambridge Jim and his four students visited three institutes dedicated to the improvement of water services in developing countries. The institutes were: Cambridge Centre for Sustainable Development, Water Engineering Development Centre at the University of Loughborough, and the Institute of Water and Environment at Cranfield University. We enjoyed spending a day at each of these institutes and were hosted very cordially.

Field Work in Russia

Jim travelled with his wife to Russia for one month to assist in a Christian camp near the Black sea in southern Russia in the foothills of the Caucasus Mountains (Apsharonsk, Russia). The camp serves almost 1000 children and young people during the summer, but the water supply is unreliable. The city controls the supply and at times there is no water for two or three days. The camp directors wanted to drill a well but they did not know where to drill so Jim used my resistivity device to help them. Unfortunately the camp appears to be on shale which is not an aquifer. We pushed the instrument to the limit, extending the electrodes 200 meters in each direction, twice as far as he had ever done previously. There is a hint of higher resistivity values at a depth of about 80 meters and this might suggest that a sandstone or limestone aquifer is present at that depth.

Alps Field Trip

After our Russian trip Jim rented a car for one week and traveled through the Alps of Switzerland, Austria, and Italy. This provided many good ideas for a possible future field trip with our geology majors. We viewed magnificent examples of geologic structure, sedimentary rocks and glacial and geomorphic features. All of these are very accessible by car on excellent roads.

The sabbatical leave provided a time of reflection, rest and reinvigoration. It was special in that Jim could spend the last 6 months of the life of his 91-year old father with him and could minister to the special end-of-life needs. God's timing is always perfect.



The England research crew

Abstracts and Publications

Hooyer, Thomas S., and Clark, James A. 2007. Eureka moraine and wave-washed till surface of glacial Lake Oshkosh, Buchholtz farm, Waushara County. in T.S. Hooyer, ed. *Late-Glacial History of East-Central Wisconsin*, Wisconsin Geological and Natural History Survey Open File Report 2007-01, pgs. 17-20.

Clark, James A., Hooyer, Thomas S., and Lee Clayton. 2007. Neshota outlet and drainage spillway associated with glacial Lake Oshkosh, Denmark Quarry, Brown County. in T.S. Hooyer, ed. *Late-Glacial History of East-Central Wisconsin*, Wisconsin Geological and Natural History Survey Open File Report 2007-01, pgs. 45-48.

Clark, James A., Zylstra, Deborah J., and Befus, Kevin M. 2007. Effects of Great Lakes Water Loading upon Glacial Isostatic Adjustments and Lake History, *Journal Great Lakes Research*, 33: 627-641.

Clark, James A., Befus, Kevin M., Hooyer, Thomas S., Stewart, Peter W., Shipman, Taylor D., Gregory, Chris T., Zylstra, Deborah J. In Press. Numerical Simulation of the Paleohydrology of Glacial Lake Oshkosh, eastern Wisconsin, U.S.A. *Quarterly Research*.

WILLIAMS' WHIMSY

Spring 2007 as a Visiting Assistant Professor brought many exciting challenges: commuting by train from southern Illinois, teaching at the college level, planning and organizing field trips, et alia. It was a joy, a privilege and an incredible journey back to the department where I finished a B.S. in 1993; to be granted the opportunity to work alongside professors who have been admired mentors throughout my career and education.

The courses included Coastal Geology/Regional Geology of South Florida (had to take a class to the Florida Keys in March), Biogeology and Earth Resources and Environment. Steve and Jeff trusted me to successfully accomplish the task of teaching the students. There were some moments along the way, but overall I believe the benefits to me and to the students were mostly favorable!

The Biogeology course focused on the more classical side of paleontology, but also introduced students to applications of paleontology in ecology and biogeography; the latter being more of my focus and interest in paleontology. I thank my hosts, Dr. and Mrs. Haddock, who not only let me stay with them between weekend travels to Carbondale, but Dr. Haddock was instrumental in the idea for a laboratory exercise dealing with the subject of classification.

The Coastal Geology course during A Quad covered the basics of coastal geomorphology and water to land interactions. Additionally, there was field trip planning for how to get several students and 2 faculty to South Florida, how to transport and house them once there, and see all the sites of geologic and ecological interest in an orderly, efficient manner! From the Atlantic Coast Littoral Province to the Pleistocene reef and ooid shoals of the Keys and the mucks of the Everglades, students had opportunity to experience 3 of the 6 major coastal environments in South Florida. We all learned about the vast diversity of the subtropical environments and experienced the hard work in the trenches (well, to look at the sedimentary beach structures at Dania Beach and Bahia Honda, of course). Several of us had opportunity to feed the fish on the modern reef due to the weather in the Keys. The air temperature was in the low 80s, but the strong winds and waves only allowed 1 trip out to the reef the entire week and scrubbed plans in Florida Bay due to low visibility and heavy chop. Nonetheless, we explored some new areas together and even saw one of the elusive Key Deer.

The Earth Resources and Environment course was a particular challenge, but fed into my passion to communicate science and environmental concepts to non-scientists. I had 22 eager non-geology majors exploring issues related to land use and development in coastal zones, floodplains and areas prone to volcanic hazards. We also looked at water resources and water rights. During the latter, I decided to teach one class period in character as a 5th generation resident of the Owens Valley in California... a lot of fun, but I realized how much work it is to really know the course material from the inside out!

Presently, I am completing the final figures for my dissertation on Recent changes to the marine environments of Biscayne Bay, Florida. I will then pursue employment in the Tallahassee area where my wife, Heidi, is currently employed in the Piano Department of the College of Music at Florida State University. Steve and Jeff and students—THANK YOU. I look forward to seeing you among the Eocene and younger rocks and marine environments of North Florida.



Spring break field trip to the Florida Keys

2007 GRADUATES

Two geology majors graduated at Commencement Services in May 2007. They were both outstanding students. In fact, we decided to honor both of them with the Gerald Haddock Outstanding Student Award. **Debbie Zylstra** was a dependable Teaching Assistant for our Lab Instructors and a productive researcher with Dr. Clark. After graduation she decided to move to the head of the alphabet and married University of Alaska geology major **Josh Brewer** (who joined us for "field camp" in summer '06). Soon after moving to Fairbanks, Debbie was hired by ASRC Energy Services, a company providing services to numerous oil companies on the North Slope. Josh is in the Meteorology graduate program at U Alaska. **Chris Gregory** switched to the Geology major after his sophomore year, after about 2 days into the four-week summer course with Greenberg in the Black Hills (a conversion experience). He had a lot of catching up to do in two years, including a return to South Dakota for "field camp." He also joined Dr. Clark's crew of intrepid modelers of eustasy and isostasy for two tours of summer research. Chris started graduate studies at Oregon State in water resource engineering. We will mention another graduate of last year. **Ben Lowe** who completed his degree in Environmental Science, took enough geology courses, and hung around 3rd floor Breyer sufficiently to be claimed by us. You may have seen Ben on the cover of the most recent Wheaton alumni magazine (Autumn 2007). Ben became an advocate for student involvement in environmental issues as a matter of Christian conviction and stewardship. He organized the Climate Change Summit for students that ran concurrently with last year's CACE Symposium on Global Warming. This work took him to congressional offices in DC and aroused the interest of ABC network news. A photo of Ben with Illinois senator Barack Obama is featured in the September 2007 issue (page 26) of *GEOTIMES!* He is now in a leadership position with the Christian environmental organization A Rocha and is completing a book on youth activism for environmental issues.

DOC MO MEMOIRS

The past year was filled with travel and finishing up some writing projects that have been in progress for a while. Conferences included the American Research Center in Egypt annual meeting in Toledo (in April) and the International Commission on the History of Geological Sciences (INHIGEO) in Eichstätt, Germany (in late July). My talk at the ARCE conference was on the identification of stones at Tell el-Borg, the New Kingdom Egyptian excavation sponsored by Trinity International University. You may have seen the article in the winter issue of the Wheaton alumni magazine on the Wheaton connection to this project. The INHIGEO conference was devoted to the historical relationship between geology and religion. I presented an updated version of the paper previously given at the 2004 GSA on the history of geology education at Wheaton. A manuscript of this presentation (co-authored by Historian David Maas and Jeff Greenberg) was submitted to a special publication of the Geological Society of London. A highlight of the meeting included a field trip to the famous Solnhofen Limestone quarries, where *Archaeopteryx* and other magnificent Jurassic fossils have been preserved. I did not discover another famous dino-bird, but the slab I recovered contained a nice coprolite (go ahead and laugh).

The stop in Germany followed two weeks of field work and touring in Egypt. Because my luggage, with survey equipment, arrived five days late, I did the tour first. I visited the Valley of the Kings and several New Kingdom temples around Luxor. A highlight in Aswan was the Quarry of the Unfinished Obelisk. The ancients used fist-size diorite pounders to break those magnificent monoliths out of hard, red granite. Large blocks of the Aswan granite made it all the way to the Sinai and Tell el-Borg, as recovered by our excavation there. My fieldwork in the Sinai involved drilling sediments beneath the ancient Ballah Lake, now a soggy sabkha that is bisected by the Suez Canal. My colleague James Hoffmeier at Trinity International University thinks that the ancient lake may have been the Re(e)d Sea of the Exodus. The sediment we recovered includes coarse sands that look like river deposits and shelly mud that looks like brackish pond and marsh deposits. Historical records suggest that the ponds may have coalesced into lakes or a single "sea," perhaps during wetter climatic spells. Water filling the depression could have been as much as 5 m deep.

Between graduation in early May and the overseas trip in July, I spent five weeks at the Science Station. I was blessed with a great bunch of students for the 4-week Introductory Geology in the Field course. I acquired the nickname Sheriff Steve, after the students presented me with a badge purchased at the Badlands gift shop.

In late March I was invited to give the opening lecture for the Illinois Christian Faculty & Graduate Student Symposium sponsored by InterVarsity Christian Fellowship at U Illinois-Urbana. My talk, "From Pangea to the Red Sea: Science, Faith, and Imagination in the Search for the Past," was about how paleogeography contributes to our understanding of geological and biblical history.

Only a few weeks ago, my son Zachary and I made a road trip from Chicago to Blacksburg Va, for the 100th anniversary of geology at Virginia Tech. Along with the reunion of some classmates, it was especially wonderful to see many of my professors (all but one retired) including Paul Ribbe (Wheaton Geology '56).

Abstracts and Publications

Moshier, Stephen O. "That Was A Close One," review of *Extinction: How Life on Earth Nearly Ended 250 Million Years Ago*, by Douglas H. Erwin, *Books & Culture*, May/June 2007, 38

Moshier, Stephen O., Survey of Geological Artifacts Encountered at Tell el-Borg, NW Sinai, Egypt, American Research Center in Egypt 58th Annual Meeting, April 20-22, 2007, Toledo, Ohio.



Pounder used 3500 years ago to excavate obelisks in Aswan.

MIKE GUEBERT WINS A MAJOR AWARD

Dr. Mike Guebert served on the Wheaton Geology faculty for six years during the 90's. He moved to his current post at Taylor University in 2000 but he continues to contribute his teaching talents to the Wheaton College Science Station. Mike was awarded the Taylor University Faculty Teaching and Service Award at a faculty-convocation chapel service in September. Steve Moshier attended the chapel, along with Mike's family (including his parents, brothers and cousin). It was a surprise announcement, so the invited guests traveled to Upland under the cover of darkness and camouflage of cornhusks. It was a treat to see Mike speechless as he stood in front of the entire campus community. A Dean at the college told Moshier that Mike is the "poster child" at TU for service learning. Mike has led students on missions to Central America to drill water wells in association with Lifewater International. Jim Clark is also involved with Lifewater. Jim and Mike are collaborating on student training at Wheaton and Taylor in water resource development and well drilling methods.





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For Christ and His Kingdom

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ALUMNI UPDATES

Torrey Olsen '77 - Returned to the US with his family two years ago after serving for fifteen years as World Vision's national directors in Mali, Senegal and Mauritania. Torrey oversees the International Program team in the Seattle head quarters office.

Dave Curtiss '92 - Recently began work as director of the DC office for Geology and Energy for the AAPG.

Kyle Arney '93 - Welcomes the birth of his first child.

Andy Gascho '93 - Working with a Denver geophysics company locating unexploded ordinance.

Chad Smith '93 - Welcomes the birth of his second child.

Dwight Schuster '94 - Professor in Science Education at Indiana University-Purdue University Indianapolis.

David Osielski '95 - Employed as an Archivist at Wheaton College Archives & Special Collections. He received his Masters of Library and Information Science from Dominican University in 2006. He and Anne (Howard '97) live in Warrenville with children Peter (6), Jane (4) and Michael (1).

Matthew Snell '97 - Returned from deployment in Iraq. He is thankful for all the prayers for him and his family.

Andreia Balla '98 - Moved to Los Angeles to start her own business, Studio AB. She is restoring historic homes and designing with an environmentally safe approach - "Sustainable or Green Design."

Lauren Powell Heerschap '01 - Geology instructor for Fort Lewis University in Durango, Colorado.

Elizabeth Wieland '02 - Joined the Peace Corps in Bulgaria.

Lindsey Christiansen Henry '04 - Finished her MS in May 07 on Late Paleozoic Glacial Deposits in Argentina. She is continuing with a PhD at University of Wisconsin Milwaukee.

Katie Lethe '04 - Private environmental consultant for her own company. She is on to Oxford next fall for graduate studies.

Peter Weston '04 - Stationed in Iraq as a LCpl in the marines.

Ginny Hargrave Bracht '05 - Married Stephen Bracht last spring.

Peter Stewart '05 - Is working for a tree company called The Care of Trees, where they care for trees mostly by cutting them down and chipping them into oblivion. Aside from removals of diseased trees, the company also does a lot of pruning and organic soil enhancements.

Andrew Luhmann '06 - Spent his summer working on a springshed mapping project in the carbonate country of southeastern Minnesota. Andrew will doing dye tracing over the next two summers to delineate springsheds that serve as recharge for the springs feeding trout streams.

Matt Soerens '06 - Works for World Relief organization in Wheaton.

Bethany Thornton '06 - Welcomes the birth of her first child.

A HELLO FROM JAMIE

Beginning in August this year, I have taken over the lab and office coordinator position in the geology department here at Wheaton. I graduated from Wheaton College with a BS in geology in 2004 and went straight to a master program at Northern Illinois University. It is refreshing to be working and serving students and faculty that believe and exhibit Christian virtues after spending three years at a public university. I look forward to time spent with the students, and I hope to serve the geology community well.