

CONTACT

WHEATON COLLEGE
GEOLOGY DEPARTMENT

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Greetings geo-friends! We have much to report to you since our last *CONTACT*. The third floor of Breyer Lab is bursting with activity. The Physical Geology class has an enrollment of 123 with 5 lab sections! Mineralogy has an enrollment of 12 and two lab sections. A new upper division lab course, Near Surface Processes and Landforms, has an enrollment of 14.

Space - The Next Frontier

Last spring we had to literally teach in the hallway! That's right. Core boxes holding 100+ ft. of 2 1/2 in. core were all laid out in the hall so the students in Strat/Sed could get some experience in logging core. There was no other place to do it. This fall we have two lab courses jammed into our tiny Advanced Lab. People are climbing over one another in the intro lab. It is absolutely essential that we improve this situation.

The most exciting news we can report is that plans are underway for the renovation of the third floor. The idea is to knock out a wall between two small rooms to create a seminar/reading room and convert the 40-seat lecture room into a new advanced lab. Double doors would connect that room to the present advanced lab, which will serve as a student project area. We would also convert the introductory labs into a second advanced lab.

The intro lab would have to be relocated to a new space. There are some options being considered, including renovating the old WETN space in the basement of Breyer, or even building Breyer Hall out on its south end to create an additional 1500 sq ft. per floor. Decisions could be made very soon.

In addition, we are requesting space for a large project area for rock and thin section preparation, a sedimentation flume/stream table, and core layout. Such a room is being proposed for half of the large storage room in the basement of Armerding Hall.

Ten Year Review This November

Right now, Jeff Greenberg is putting the finishing touches on the departmental ten-year review. We have been putting together a document that includes summaries of facilities, curricula, teaching evalua-

tions, etc., to be considered by a review panel. "Inside" members of the panel are Dr. Dorothy Chappell (Biology) and Dr. Mark Noll (History). Invited "outside" members of the panel are two distinguished geologists, Dr. John Rogers (University of North Carolina) and Dr. Paul Ribbie (VPI & SU). Paul, of course, is an alumnus of our department ('56). Pray for the effectiveness of this review.

FACULTY NEWS

Jeff Greenberg

It has been a long time since you heard from us. There is much to tell. I am now tenured and promoted to Professor. Other than a few more hairs missing, I really haven't noticed any resulting changes in life. However, there are some other notable activities. New responsibilities include being President - elect of the Affiliation of Christian Geologists and co-directing the Science Station again for summer '93.

I doubly invite you to get involved with the growing A.C.G. (see below) and to come visit us in the Black Hills this summer. This past summer we made it through some challenging conditions and a rejuvenated geology majors' field course. An oddly cool and wet summer along with a mini epidemic of intestinal flu couldn't ruin the experience of our eight talented students. I can truly attest that these four juniors and four seniors did an outstanding job in their project work. Jerry Haddock spent two weeks teaching basic field methods, and I followed with six weeks of project work. I also continued some mapping research of the Hisega area with the assistance of a research student from Augustana College. Steve Moshier and I hope to supervise more students on research projects this next summer. All of this work is conducted through a PEW Science Program grant.

This Fall Semester I have a relatively light teaching load to compensate for a mess of administrative duties. Geology's ten-year review in November involves much documentation and culminates in an evaluation team's visit and report. I ask that you pray for us and a successful review. We hope that the justification for improved facilities (see comments on renovation elsewhere in this issue) and especially for increased faculty will be compelling. In addition to preparing the review data, I would like to apply for a sabbatical leave for Spring 1994. It is disheartening to consider how my family with five children could ever move off for a semester. My wife and I thought that we could stay with my father in Miami, but Hurricane Andrew closed that door with the destruction of my old neighborhood. The desire to get time for research, writing and re-creation may just not be realistic right now.

My other expectations for the near future are fairly routine. I will attend the annual meeting of the Geological Society of America and

bring along one or more of our advanced majors. The A.C.G. will again host a public presentation there (in Cincinnati this time). We hope to demonstrate that a Christian geologist is not an oxymoron. Next Spring I intend to travel to Rolla, Missouri, for the North Central section of the G.S.A., to give a paper on the Hisega mapping project. My Spring teaching load consists of Igneous-Metamorphic Petrology, Physical Geology, and Appropriate Technology/Environmental Issues. This might keep me out of trouble.

Steve Moshier

I promise to keep it short this time. I had a great first year with the department. One could not ask for a better group of students to teach and befriend. The absolute teaching highlight was two months of Geol. 101 at the Science Station in the Black Hills. To introduce me to the best field stops, Jerry Haddock drove me around one Sunday afternoon for several hours. At the end of the trip my head was spinning and I had forgotten the first three stops (But I took good notes)! In all, I trapped 17 mice in Picea Cabin over the course of the summer. Carol is not impressed with that statistic. Neither of us slept very well the first two weeks, until our tiny friends visited less frequently. Joshua (6) had a great time joining our classes and collecting rocks. Zachary (2) had a great time screaming around in the dining hall and collecting sticks.

August I spent completing a research project with funding from the PEW Science Program on limestone microporosity associated with cavern development. Before leaving Kentucky, I spent several days collecting specimens from a pilot tunnel for a highway project through Cumberland Mtn. at the Cumberland Gap. This summer I evaluated porosity data and examined thin sections and specimens with petrographic scope and SEM. In October I will present preliminary results to the Illinois Groundwater Association. In September, senior Christopher Williams and I attended the eastern section of the AAPG in Champaign, IL. It was Christopher's first meeting and he had a great time as a participant and student helper (projection duty).

I have initiated some changes in our 2 cr. hr. general education offerings. In an effort to teach introductory environmental geology in a contemporary fashion, I have reorganized the contents of Environmental Geology and World Resources into Natural Disasters and Earth Resources and Environment. In order to meet the need for an advanced environmental geology course for our majors, we are offering Near Surface Processes and Landforms. NSP&L covers applied geomorphology and surface and groundwater hydrology.

Jerry Haddock

Retirement is a rewarding time of life. I thought it would give me a chance to catch up with more than 30 years of unfinished projects. Instead I find, as one wag has put it, that I'm so busy I wonder how I ever found time to go to work.

My parents bequeathed me the remaining copies of the family genealogy book, so I find myself by default the family genealogist. There are a number of Haddocks involved in the venture with more than 17,000 people cataloged to date. The data are computer based which makes it manageable.

During Spring break 1992 the department reinstated the spring field trip. As I went along there were many memories of other trips with many of you. Rain and snow and wet sleeping bags and meals around a campfire, and tours in Mammoth Cave; redbud, daffodils, and dogwood in Appalachian springtime.

Then I've had a chance to keep active in department affairs. They let me keep an office. I got to teach 8 majors the first two weeks of Field Geology 411 in the Black Hills this summer. This fall I have 12 majors in Mineralogy 341. Our microscope collection is up to 7 of good quality so it will be possible to pull off the optical mineralogy by running two lab sections.

Obituaries of Geology grads: **Milton Hale** '35 in Florida, and **Jon Stoen** '65 in France. Milt led a rich life with a full span of years spent with Railway Express. He was the first Wheaton student to graduate with a degree in Geology. Jon's life was cut short by a heart attack. Just weeks before he had been on campus reminiscing about his part in collecting the Perry Mastodon. He left a wife and two children.

Come see us anytime. The Haddocks have moved closer to campus, 2 houses NW of Edman parking lot, 339 E. Jefferson. My mother-in-law, **Ada Rury Winsor**, is now 88 and blind, and Alice Winsor, also 88, were living alone, so Faith and I moved in with them. It saves having to send them to a nursing home.

Janna McConnell

I'm the new Geology secretary. The last nine months have brought a lot of new experiences. I came to Wheaton with my family in December '91 from Australia. We left the U.S. in 1974 to teach in Queensland, on an Aboriginal settlement and then on the Sunshine

Coast. We left for Papua New Guinea in 1976 to work with M.K's. and finally ended up in church planting in the capitol city, Port Moresby. Five years ago, my husband took up the general director's position in Melbourne. While there, I taught English to S. E. Asian refugees. We have three daughters who are adjusting to Wheaton life very well. My husband (Doug) is on the faculty of the graduate program in Missions/ Intercultural Studies here at Wheaton College.

Kathy Schmisser

In April, we were forced to give Kathy permission to move with her husband and children to southern Missouri. Ron has a new job with a lab that does testing for the railroad industry. Kathy reports that they are enjoying life in the country, complete with livestock and early morning chores. It seems that the girls are fast becoming vegetarians, rather than eat their pet cows, chickens, pigs and rabbits.

STUDENT NEWS

We miss our graduated seniors: **Judith Berglund, Dave Caldwell, Dave Curtiss, Matt DeCoursey, Andy Fulton, and Megan Mundt.** All (but Andy) graduated after summer field geology. Judith is working as an environmental geologist in Dallas. Dave Caldwell had a busy summer: geology field camp, then was married to Valerie, then the two moved to his first Army post in Anchorage. Dave Curtiss is staying the year in Wheaton to work in Public Safety, before heading to graduate school at the the University of South Carolina, Earth Science Resources Institute next year. Matt is working on a geophysics Masters degree at Purdue University. Andy graduated with honors and is now in graduate school at U. Mass-Amherst. Megan has moved to St. Paul with her husband Dave, and is in the graduate geology program at U. Minn.

Bret Swigle is on the final leg of his HNGR internship in Ethiopia. He is working as a hydrogeologist with a well-drilling team sponsored by two missions groups from Europe and the US. From his frequent reports, it seems that the work and cultural experiences are making a great impact upon him.

Students gave talks at the ACCA (Associated Colleges of the Chicago Area) Student Symposium, held at Wheaton College in April. **Judith Berglund** and **Chad Smith** presented a bouguer gravity analysis of Wisconsin's Wolf River Batholith. **Andy Fulton** and **Christopher Williams** presented a talk on their mapping at Boston University's summer course in Maine. Christopher participated in the USGS-NAGT Summer Field Training Program this past summer with the Oregon Dept. of Geology and Mineral Industries. He was involved

with reconnaissance mapping of the Boise Sheet in Malheur Co., eastern Oregon.

Some of our students spent their summer in missions work. **Nancy Palm** was in Tunisia and London with Student Missionary Project. **Andy Gascho** was in the Los Angeles Watts community working with youth for Student Impact, Inc., not long after the recent riots. He experienced a severe earthquake and claims to have seen surface waves move down the pavement.

GEOLOGY CLUB by **Kyle Arney**

Dear Geo-Alumni: Here's what is happening in 1992-93 with the Geology Club! The officers for this year are: President **Kyle Arney** (Sr.), Vice President **Chad Smith** (Sr.), Secretary **Wendy Teskey** (Sr.), Treasurer **Christopher Williams** (Sr). Our first event of the year is a cookout this weekend at Dr. Haddock's house. We are expecting about 15 to 20 people to come, yet after the recent all-campus club day we have over 40 people signed up for the Geology Club! As far as other up-and-coming-events we hope to visit the Museum of Science and Industry, the Field Museum of Natural History, the Thornton Quarry, and possibly a trip to Indiana Dunes State Park, or a journey tracing the history of the development of the Chicago River/Calumet-Sag Channel. It looks like a promising year ahead, as long as the weather is nice and the class work is bearable (editors note: *get real, Kyle!*). Please feel free to contact us via the Geology Department if you have any input for us or just want an update on current events in the club.

DEPARTMENT VISITORS AND FRIENDS

This past year we were visited by some friends. Alumni **Dave Heidlauf** ('82) of Mittelhauser Corp. made a presentation to students on work and careers in Environmental Geology. **Lawrence Kulp** ('42) returned to Wheaton for his 50th class reunion in May and gave a presentation to the science faculty on future energy demands, resources and economics. He is now a consultant in Washington state. We also had visits from **Ralph and Meredith Stone** ('68) and **Jack Leedy** ('77), both in the oil biz in Houston.

You have continued to demonstrate your support by sending us educational materials or supplies. **Stephen Rowley** ('68) sent us a very useful gravity map of the Black Hills region. **Wayne Aldt** ('50) sent us mineral specimens. We owe **Richard Arndt** ('59) special thanks for his encouragement.

During our spring break field trip to the Great Smokies, we were

welcomed into the home of **Robert Lake Wilson** ('48) and his wife **Norma** in Chattanooga. The 6 of us camped out in various rooms of their house. the students gave them a concert of sacred music around Norma's piano and he gave us a tour of the local geology.

JOIN THE AFFILIATION OF CHRISTIAN GEOLOGISTS (ACG)

There have been inquiries to the department on how one can join the Affiliation of Christian Geologists. Simply write to Mr. Kenneth Van Dellen, 1018 Nottingham Road, Grosse Pte Pk, MI 48230 for information and application form. Annual dues are \$10, mostly to cover newsletter expenses. For the past two years the ACG has sponsored seminars at the Annual National GSA Meeting.

FIELD NOTES

We are making an effort to get our students in the field as often as our busy schedules and unfortunate geographic location will allow. Here are some reports...

Spring Break Field Excursion

by **Judith Berglund**.....During the week of spring break of the 1991-1992 school year, March 7-14, 1992, the Geology Club took a field trip to the Great Smoky Mountains. Participants included Dr. Gerald Haddock, Dr. Stephen Moshier, Christopher Williams, Chad Smith, Wendy Teskey, and Judith Berglund. The trip consisted of road travel, camping, and frequent stops at outcrops and other geological features along the way.

Our first stop was the Falls of the Ohio River at Louisville, KY, where we observed a very fossil-rich limestone and identified many different fossils in biostromes. Our next stop was Mammoth Cave. Here we observed gypsum deposits, scallops, crossbedding, flowstone, stalagmites, stalactites and other cave formations. We also learned the difficulty of recognizing a shadow from a hole! After our visit to the cave we stopped along Cumberland Parkway and enjoyed collecting geodes, a new experience for the students.

Frequent stops were made to study the regional carboniferous stratigraphy. We stopped for lunch at a beautiful area underneath an overhang with a waterfall that dropped over a hundred feet. Calico sandstone and liesegang banding or boxwork were evident. Our next stop was the Laurel River Dam Spillway where the ripplemarks and the forsets of the beds or the fronts of large sandwaves are so well defined and

preserved that one can almost see the water flowing over them. We also stopped at Cumberland Falls and the Cumberland Gap Tunnel.

After a day in the Great Smoky Mountains National Park studying structural features and admiring the beauty of the mountains, we wound our way around US 129 which boasts 318 turns greater than 90 degrees (although we only counted about 115 by our strict definition). We were on our way to the Master's Mission in North Carolina where we would stay the night. Upon arrival we joined other Wheaton students stationed there on a spring break mission trip. We spent half a day hiking around the Master's Mission property, looking at their quarry, their newly constructed earthen dam, and the geology of the area (staurolites, saprolite, etc.).

After leaving the Master's Mission we drove by Ducktown, Tennessee and saw the devastation caused by poor mineral processing methods of the past. We also saw the slag piles and smelter of the present. Then we drove to the home of Norma and Robert "Rock" Wilson where we stayed the night. The following day Dr. Wilson gave us a tour of Chattanooga and a lesson on the local geology. Before dropping him off at his office at the University of Tennessee, we also drove by the well-advertised Rock City in Georgia.

Then we began our journey home. We observed the Pine Mountain thrust block. We also stopped by the University of Kentucky, Dr. Moshier's former stomping round. Our last stop was along Indiana State Hwy 101 near Brookville for some fossil collecting. Everyone collected a very impressive slab of fossils or gathered many good specimens of brachiopods, crinoid stems, horn corals, etc.

Our trip was educational and fun. We travelled in 8 different states; Illinois, Indiana, Kentucky, Virginia, Tennessee, North Carolina, Georgia, and Ohio. At times the weather was gorgeous and at other times it made camping along the way a challenge; waking up to pouring rain, a leaky tent and a few soaked sleeping bags and clothes, cooking spaghetti and setting up camp in sleet and waking up to snow 1-2 inches thick on the tent. We also met many wonderful people. We greatly appreciate the hospitality of those at the Master's Mission and the generosity and graciousness of the Wilsons. Many wonderful memories were made; fellowship around the campfire, Dr. Haddock's wake-up song/techniques, hymn-singing with the Wilsons, and countless others. Basically, we learned much about geology, but also about each other. It was a wonderful experience. I know I speak for all the students when I say we look back on it with the fondest of memories and would do it again in a second.

Baraboo Trip

This spring we combined the Historical Geology and Strat/Sed classes and went on the traditional trip to the Baraboo area. This was also an opportunity to break in Steve Moshier, who had been sheltered from the pleasures of Devil's Lake and all-you-can-eat white-fish buffet at the Viking Two Tavern. Jeff Greenberg led the geology, but Steve demonstrated his superior experience in logistics by obtaining two 15-passenger vans for the 30 people, plus gear and box lunches for the overnight excursion.

Black Hills Field Course

by **Chad Smith** (senior).....This past summer I took the Field Geology courses in the Black Hills. It was really exciting, especially being able to take it with all three Wheaton Geology profs. in a Christian atmosphere.

The first two weeks we had Field Geology methods with Dr. Haddock, where we learned different mapping techniques. We mapped the science station using the pace and compass method, and also practiced hand-leveling, plane table and alidade. Also during this time we toured around the Rapid City area to learn Black Hills stratigraphy.

The next six weeks were under the direction of Dr. Greenberg, in which we made geologic maps of such places as the Whitewood, Bear Butte, Nemo and Hisega areas. We also had the chance to tour many places of geologic interest in the Black Hills such as the Etta mine, Iron Mountain Road, Pactola Dam, Lead, Hot Springs and the Badlands. The last week we went on a western trip to the Bighorn Mtns., Yellowstone Park, the Tetons, and the Beartooth Mtns. This was an incredible trip as everyone grew really close to one another (living in tents for a week will do that).

Overall it was a great time of learning and growing close to many people outside of the geology circles. It was great to grow close to the professors and their families as well.

Echos from the Past

Geology field trips have a long tradition at Wheaton College. Proof of this is a recently discovered gem from the 1893 Wheaton College *Echos*.

GEOLOGY CLASS EXCURSION.

GAN it be that an event of such importance should be omitted in the publication of our Annual? Should we fail to immortalize that day in October, '92 when in scarcely less than a score of hearts was born that love for Nature and her secrets, that thirst for a knowledge of Earth-history, which will sometime place the names of said geology class upon the shining pinnacle of fame? Let all the rocks in the quarries about Batavia send back the answer "No!"

It was in the early morning light that a hurried consultation took place among the ladies of the class. An account of stock taken, a calculation drawn from past-experiences of the capacity of sixteen individuals, a scurrying to and from town with significant bundles,—with a result over which hopes and fears by turn prevailed. Hopes that there would be enough, fears that they would be "laughed at" for having provided so much.

Small time for hopes or fears. Scarcely had the reverberations of the "next bell" trembled out of hearing, when the seniors stowed promiscuously into two vehicles were borne out of the city. Oh, the orchards they passed, the turnip fields by which they hesitated! At every turn, on all sides, nature smiled, and only a few dogs barked.

The difficulties met in stabling the horses would be tiresome to relate, though they were of much interest to the gentlemen involved. Nothing but a lunch waiting for their return could have furnished a proper incentive to push their efforts to success.

The lunch, too, was of more importance to the participants, than it can be made to the readers of this article. Suffice it to say—

"We fell to work, and feasted like the gods,
Like labourers, or like eager work house folk
At Yuletide dinner; or, to say the whole
At once, like tired, hungry, healthy youth."

Each one engraved his name upon his neighbors' napkins, and the party dispersed with the formal announcement from one young lady that "The load that had been deprived of Professor Crook's company coming should have it going back." Delicacy for the feelings of this young lady forbids more than mention of how upon going back, lots were cast, and Professor secured by the load already honored by his presence in the morning.

Armed with hammers and chisels, baskets and acid, across the pastures in search of boulders, the industrious students set forth. It were long to tell the discoveries made, the questions asked and answered, and the adventures encountered on the way to the quarry.

Here were reaped the fruits of the untiring search. Gold! bright, yellow, shining nuggets of gold did the exploring chisels disclose! FeS our teacher told us was the formula. And fossils of some of the very oldest animals! So old, indeed, that their identity has never been established, even by the most learned. But modesty prevents what may sound like boasting.

Dusk found a tired, dusty, happy crowd on their way toward home and supper. It was while crossing the long bridge at Geneva, and enjoying the reflections painted by the setting sun, that the members of the second wagon were disturbed by a sound very much like a case knife scraping a bread board. Investigation showed the cause to be a "dry wheel that had got hot."

In the distance the first load disappeared over the brow of the hill, as the unfortunates clambered down, to take off and cool the affected wheel. It was not until the company had again mounted and left the town in the background, not until after dark, not until a certain burnt finger was becoming less painful, that the wheel again uttered its disconsolate complaint. With slower pace, and accompanied by an unending and forcible argument, did they approach a dark object rightly conjectured to be a farm house.

Again the melodious wheel had to be doctored. Then a walk to Turner, there to exchange the disabled vehicle for a band wagon into which thirty people might easily be stowed. On to the high seat piled the driver and his companion, and into the regions of space behind this seat wandered the five remaining.

The way was not very long, the night not dark, Wheaton was reached, and the gold and fossils saved.

Did we think this to have been an advantage which others may not enjoy we should indeed be sad. We do not expect wisdom to die with us. Other classes shall thus be induced to examine the structure and the cleavage of the rocks, shall handle the clinometer, shall find the "dip and strike," and be inspired to continue their study after leaving college walls. Not for ourselves, but for all do we covet this opportunity. *Non Sibi sed omnibus.*