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ILLINOIS STATE UNIVERSITY

GEOLOGY NEWSLETTER

Issue No. 15 December 2000

GREETINGS!

There have been numerous substantial changes in the Department since the last newsletter, not the least of which is the retirement of Dr. Jim Kirchner who edited and made sure that all preceding issues of the newsletter were published in a timely fashion. This is my first year as editor of the ISU Geology Newsletter, and for those of you that came through the B.S. and M.S. programs in the late 1980s and 1990s know me as the resident paleontologist. I'll work to maintain Jim's tradition of producing a quality newsletter and look forward to you posting about happenings in the program. Please be sure to keep me in the loop about your activities and whereabouts.

Sincerely, Jed Day

DEPARTMENT NEWS

Major changes have occurred in the Department since the last newsletter. These changes include the retirement of Jim Kirchner following Field Camp. As many of you may know, a retirement party for Jim Kirchner was held in El Paso, IL in May. The party was attended by nearly 200 former and current ISU geology students and their friends. This was by all accounts an enjoyable experience for everyone in attendance. After eleven years at the helm, Bob Corbett stepped down as chair, and Dr. Day was appointed acting chair in July. Bill Anderson resigned in May and joined Radford College in Virginia. I wish Bill the best of luck with his new appointment. We welcomed Dr. Steve Van der Hoven as a visiting Assistant Professor of Geology for the 2000-2001 academic year to teach courses in Groundwater Modeling, Aquifer Systems, Contaminant Transport and Principles of Geology.

Our seven-year Geology and hydrogeology program reviews were completed. Major challenges and goals for both programs were identified and a five-year plan was formulated to achieve the objectives identified by these reviews. Some of the challenges that we face are: increasing the numbers of majors in Geology and Hydrogeology, successfully navigating our ongoing faculty turnover related to retirements and resignations, increasing faculty scholarship, improving the image of the department on campus, and garnering external funding to support undergraduate and graduate research.

In January, Tom and Jeanie Searight moved to Lawrence, Kansas after many years in Bloomington-Normal. Their friendship and company are certainly r

After a hiatus of more than 10 years, the Department now has our first-class collection set up and on display in Felmley Hall 203. Be sure to stop by the that you pass through town.

PROGRAM NEWS

Enrollment and Curriculum

The number of undergraduate majors has slipped to about 30 following the loss of a large number of students this past year. There have been some substantial changes to the Geology curriculum recently. The most significant are the addition of Stratigraphy, Calculus I & II, and an applied quantitative course (Groundwater Geophysics, or Engineering Geology). A non-thesis option for the hydrogeology Program was approved and made its way through the University Curriculum Committee and shall be in place by July 2001.

Next year, the sedimentary geology sequence (GEO 295/296) will be modified and improved as well. Dave Malone will teach GEO 295 (Sedimentary Geology) and the course will cover siliciclastic rocks, sedimentology, and environments; it will also include the fundamental concepts of lithostratigraphy. The GEO 296 course will be offered by Jed Day and focus on carbonate sedimentology-stratigraphy, other sedimentary deposits, sequence and genetic stratigraphy, biostratigraphy, and magnetostratigraphy.

Major Resources Arrive for the hydrogeology Program

Efforts by Bob Corbett during the last College budget cycle resulted in the delivery of earmarked funds (circa \$50,000) to support the hydrogeology program. Equipment we have obtained or will obtain in the near future includes down-hole instrument pumps, computers, and installation of a well field for instruction and research. Undergraduates, graduate students, and faculty in the hydrogeology program are currently working on the installation and finishing of the wells for the well field should be completed by the end of 2001.

On August 17th, Ed Bruening presented a workshop on a groundwater monitoring device that was designed by John Foster. This instrument allows for the detection of groundwater movement using an optical technique. We are now the only University that has such an instrument available for instruction and research.

Degrees Granted

Two graduate students, **Jason Thomason** (May) and **Brian Hacker** (December) completed their degree requirements this year.

We had a big group finish up their B.S. degrees this last year. They are: **Chris Bedell, Kim Burns, Heidi Dowd, Charles Ince, Landon Kelly, K. Shepard, Bill Shields, Brian Smith, Susie Taha, Ed Washburn, Steve V. Wright.**

Many of these students are now pursuing Graduate Degrees. These include Heidi Dowd (Univ. Iowa), Landon Kelly (Univ. Alaska-Fairbanks), Kara Hart-Shepard (Univ. Kansas), Bill Shields (ISU), Susie Taha (Univ. Kentucky), Ed Washburn (Univ. Kansas), and Steve V. Wright (ISU).

Big-Time Accomplishments

Dave Malone was granted tenure and promoted to Associate Professor. He was selected as the 1999/2000 College of Arts and Sciences outstanding Scientist. Jed Day was elected as Chairman of the Midcontinent Section of the Paleontological Society and serves on the National PS Council for 2000-2001.

Bill Shields received an USGS/NAGT Internship. Erik Wright received the Lathrop Weeks Grant for \$500 from AAPG to support his study of heavy mineral assemblages in Pennsylvanian sandstones with Dave Malone. Ed Washburn and Heidi Dorn received the 1999/2000 Lathrop Award (given annually to outstanding senior Geologists).

ISU Geology Club News

The Geology Club has officially become a student Chapter of the American Association of Petroleum Geologists (AAPG). As such AAPG provides up to \$1500 yearly research awards and club travel. Monies will be used to help defray travel charges for club field trips and student participation in professional society conferences.

The 2000 Spring Field trip to Southern Illinois/Indiana was cancelled because of a season blizzard. Planning is underway now for the 2001 Spring Break trip to the Bend area of Texas.

Faculty Searches

We are currently engaged in two faculty searches to hire a Mineralogist/Petrologist to replace Jim Kirchner, and a Hydrogeologist to replace Bill Anderson. Several candidates were screened at the GSA meeting in Reno, NV. It looks as though there are a large number of capable and enthusiastic candidates for each position. New faculty members will begin their careers at ISU this fall.

Powell Fund Update

The University is about to initiate a Capital Campaign that aims to substantially increase the size of the University Endowment. Our Department will join in the Campaign. We urge alumni to consider contributing to this Campaign, and possible earmark contributions to support our programs.

The Powell Fund is in great shape and continues to assist undergraduates with awards to support undergraduate field research, funds to pay registration costs for students to attend field conferences (Tri-State) and professional society conferences, and underwrites some student fees for Field Camp. Dave Malone is now finishing up the Fund and contributors should forward contributions and communicate with him.

We all wish to thank and gratefully acknowledge contributors to the Powell Fund. We had a number of contributions to the Powell Fund from the following alumni: Corporate Contributors: Gary Carnaghi, Dave Elbow, John Grabs with material from Tetra Tech, Gregory and Susan Hair, James and Susan Kipp, James Tim and Kelly Maley, Mark and Stepheny McMahon, Johns and Constance Harold and Cheryl Orndorf, Michael Phelps, Robert Sloan, Nancy and John Charles and Lynette Wiles, and Susan and Randall Young.

Field Camp News (by D. Malone)

Field Camp this year was very similar to previous years. Jim Kirchner and I Stoddard taught the first three weeks, and Dave Malone and Mark Fischer taught the last three weeks. Twelve students from ISU and eight from NIU participated.

Hall, the poorest and most rodent-infested dormitory at the school of mines home this year. In Wyoming, we stayed at Sheridan College (in college do than at the Buffalo motel. This plan resulted in a 30-minute drive to the maj each day, but the College provided much more appropriate accommodatio Field Camp than did the motel. Sadly, the Busy Bee Café in Buffalo no lonq was in the process of being torn down while we were in town. Apparently, I and sold the business. It is unknown what will be built there next.

Next year, Field Camp will be modified substantially. Skip Nelson and Dave share the teaching responsibilities for the next several years. We will spend in both Wyoming and South Dakota. Field Camp will begin in Sheridan, W eastern flank of the Bighorn Range. The trip across the planes will include stops at the Badlands and Devils Tower. We will stay at the dorms of Sheri College for the first 10 days of Field Camp. During this time, we will observ and describe the local stratigraphy and interpret the local structure. Our lor will include mapping a homocline near Dayton, WY and the Clear Creek Tr the past). The next ten days will be spent based at Powell, Wyoming at No Wyoming Junior College. While in Powell, we will work out the structure an stratigraphy of the Bighorn Basin, Eastern Absaroka Range, and Heart Mo Detachment (good news for me, bad news for the students!). Our longer pr will include mapping at Alkali Anticline and Dead Indian Hill. Our final days will be spent touring the Yellowstone area.

The Black Hills segment of Field Camp will be much as it has been in the p shorter. As usual, we will stay at South Dakota School of Mines. We will sp week becoming acquainted with the local geology. The final two weeks will our usual Rochford and Whitewood Peak mapping projects.

North-Central GSA 2001

The Department of Geography-Geology, Illinois State University and the Ill Geological Survey will host the North-Central Section meeting of the Geolc Society of America, on April 21-24, 2001

This meeting will be held at the Bone Student Center. In addition to regular sessions, poster sessions and 10 symposia there will be workshops on: Ge Models for Groundwater Flow Modeling; Touch Another World (hands on n Roy J. Schlemmon Mentor Program in Applied Geology, MSHA Part 46 Safe Hazard Recognition, RockWare©, Sequence Stratigraphy for Graduate Stu Advocacy. Four fieldtrips are planned. They are: The St. Francois Mountair Missouri: Window into the Mesoproterozoic; Quaternary and Environmenta the Lower Illinois River Valley and Metro East St. Louis Area; Sequence St Pennsylvanian Cyclothemic Strata in central Peoria County, Illinois; and a through the Pennsylvanian strata along the Vermillion River Gorge near Oq Illinois. The January issue of Geology Today contains meeting information registration form.

FACULTY NEWS

Sam Boateng.-I still am actively involved with the Illinois EPA Wellhead Pr program. I hope to complete the projects by the end of summer of 2001. I f submitted manuscripts to the Hydrogeology Journal and Advances in Envir Research. Hopefully, they will be published soon. I am supervising Mr. Jeff Mr. Jason Lowery in their thesis work. Another graduate student, Mr. Brad successfully presented a thesis proposal on the comparative study of the fl dynamics in bedrock valley and alluvial aquifers.

I have been teaching a new course, Natural Disasters, since the Spring of . course originally was proposed by Dr. James Kirchner who could not teach of his retirement. Natural Disasters gradually is becoming a popular Outer General Education course and it is offered throughout the year (including tl I am thankful to Dr. Kirchner for encouraging me to teach this course.

James Carter.-Last fall it was a sabbatical so that I could develop a new c Dynamic Weather. This fall it was show time, with 315 students. I am using the instructional tool, in conjunction with a standard text. I have written abo pages which are presented in WebCT. Students must use a password to a material. Attached to each page are self-test questions. And, I use WebCT grades. A student can see only his or her grade. Because I do not give the to the class, I post a corrected test within an hour after the class takes the

Developing the content on WebCT and managing a class of this size has b biggest commitment of time. I had a hypothesis that teaching the class in tl would greatly enhance the effectiveness of the course. I am now revising n hypothesis as well as some of the content. Building on my interest in map t trying to develop more effective ways to use this interactive technology in t maps relative to the study of weather.

In the past year I have made two presentations about my work with this toc teaching of weather. I also participated in a workshop on campus about We spring I will do it again with a class of more than 200.

Principles of Geology is one of the new courses in General Education. And in G.E. is FOI-Foundations of Inquiry. Every first semester freshman is req FOI. This course is designed to have no more than 30 students in a class t by an experienced faculty member. To meet that demand this fall there we 100 sections of this course. I got pressed into service in mid-summer.

By golly, it has been a good experience. I have a great group of students n time. Our big project at the end is to examine some of the problem areas o and to develop web pages to display the research. I think this is the only fr class making web pages. Hopefully, we can get

I am still responsible for the Department web pages. I cannot brag about w done. The pages are up but they are not as attractive as they should be. In need photos and images that reflect the best of the programs. I invite you t any photos showing the good parts of the Department or one of the progra about photos from field camp?

A quarter of my time is spent as Director of LILT. In this role I am intimately the use and application of computing technology in the College of Arts and Part of my commitment to WebCT derives from my desire to stay on top of in pedagogy. The Internet is changing the ways we do many things, but I d see a digital rock hammer in the near future.

This year the University is focusing on Global Connections. Relative to that have organized a program for spring semester 2001 entitled "Health of the Environment." This multi-disciplinary program consists of weekly noon pres and four evening programs. The Geography and Geology Clubs are co-spc series.

Early in November I moved from President to Past-President of ILGISA, th Association. This past year we published the last issue of Illinois GIS and M and came out with the first issue of Illinois GIS Notes. A fellow Director of IL

Ken Lovett, a graduate of the ISU Geology Program. It is a pleasure to see Department graduates at the ILGISA meetings.

Bob Corbett. I ended my time as Department Chair this past summer, having since 1989. This has allowed me my first opportunity in several years to teach an introductory course. After the experience I concluded that *Principles of Geology* is a much more appealing course for most students than our earlier *Introduction to Geology*. I have been working closely with two graduate students, **Brian H. Selena Stubbs Hacker**. Brian just defended his thesis entitled *Groundwater and Geologic Controls Along the Buried Teays Valley, West Central Ohio*. This is related to my long term Teays Valley research project involving water quality in the fill and in adjacent aquifers, and is located across the Indiana-Ohio border. Brian's earlier thesis was of **Tom Williams**. Selena's project involves determining characteristics and sources for the springs at Chickasaw National Recreation Area (Oklahoma). Brian and Bob spent part of last summer in the field collecting data and Selena's thesis should be completed this spring.

I published two articles in *The Professional Geologist*, a third with Skip Nelson in *Journal of Geoscience Education*, and presented papers at the national GSA meetings in Reno and at the national meetings of the American Institute of Professional Geologists in Milwaukee.

I continue as Associate Editor for the Journal of Geoscience Education, and as a member of the Academic Education Committee of the American Institute of Professional Geologists. In January, I will begin a term as Vice President of the American Institute of Professional Geologists. I also look forward to the additional freedoms that "Professor Emeritus" will offer.

Jed Day. Our new daughter Molly had her first birthday on September 27th. Jamie (age 7) and Patrick (age 4), have adjusted to the fact of having a new sister around the house, with both of the later doing quite well in 2nd grade preschool, respectively. With the addition of the third kid Kathy and I are about to move into a different home with larger bedrooms.

During the Spring of 2000 I taught GEO-385 Invertebrate Paleontology and Principles of Geology. I gave a poster presentation on revision of the Late Devonian brachiopod genus *Tenticospirifer* found in North America, Eurasia, and Australia. I authored with my Chinese coworker Dr. Xueping Ma (Peking University) a paper on the Late Devonian spiriferid genera *Cyrtospirifer* and *Regelia* at the National Geological Conference in Nevada.

I spent most of the summer caring for my mother who lived at the house in under hospice care. My mother passed away in September. I also spent the summer completing parts of four major manuscripts that have been submitted for publication. The first two are scheduled for publication in November 2000 that should hit the presses in 2001, including the third one on Late Devonian spiriferid brachiopods in collaboration with my Chinese coworker. The paper mentioned above was published by the Journal of Paleontology in 2000.

During the Fall semester I taught Sedimentology (GEO-295) and Evolution of the Earth (GEO-202). Late in the fall our Devonian Oceans working group prepared the results of the stable carbon-oxygen isotopic investigation of the Devonian oceans in collaboration with the German gang of isotope geochemists is due out in spring 2001 with the initial offering of "The oxygen isotopic composition of Palaeozoic seawater-the apatite $\delta^{18}O$ record" at the European Union of Geology meeting.

I continue to serve: as a Technical Editor for the Journal of Paleontology; F the Midcontinent Section of the Paleontological Society, sit on the National Paleontology Society Council for 2000-2001: 2000 President of the Geolog of Iowa; and as Corresponding Member of the Subcomission on Devonian Stratigraphy-Comission on Stratigraphy-International Union of Geological S

James G. Kirchner.-As planned, I retired on June 1. Instead of the usual I with faculty and spouses, we had a picnic at South Point Park in El Paso, I and their families, students, alumni and my family came. We had a great tir thanks to all who attended and to those who took the time to write a letter f of Letters. Although I am back at ISU on a part-time basis, teaching Minera semester and Petrology in the spring semester, I must say that I am really being retired. Mostly, the lack of significant responsibility and the lack of co work and the need to be competing continuously for departmental recognit research productivity is a major relief. My contact with students in Mineralo providing a nice transition, as that is the part of my job I valued the most. I' the class T-W & Th, so I end up with four-day weekends.

I have also been working on the mineral display that is now housed on Felr The mineral part is completed, with nine display cabinets of mineral specirr labeled and organized as a learning resource. The display includes sample old Funk collection, samples donated by John and Pat Carlon (local attorne miscellaneous donations and some from the department's collection. It also case recognizing John Wesley Powell. At this writing, I have yet to organizi on fossils.

Personally, Kathe and I spent the summer at Lake Huron, as usual for the I years. We bought a pair of kayaks, then took them on a camping trip along shore of Lake Superior in Canada for a week of exploring. Had a great time of the summer I sold my go-fast boat and in October I bought another sailb currently in Florida. I will launch it in the spring. My heart has always been when it comes to being around water. Since being home for the semester, weekends have been spent largely doing rehab work on our house, sorely many years of neglect. Kathe will retire from her teaching job in June. We I decided yet if we will stay in Illinois or move to Michigan

David Malone.-This year has brought with it many changes to my professi During the Spring Semester I earned tenure and was promoted to Associat Shortly thereafter, I was asked by Dean Paul Schollaert to serve a one-yea Acting Department Chair. This duty began on July 1. I am now a candidate permanent Chair position. Thus far, I am enjoying my new role in the Depa well as most of my new responsibilities. I do not enjoy the diminished time and time spent teaching and mentoring students, but I look forward to the c to serve the Department in a leadership capacity in the future.

During the Spring Semester, I taught two courses: Historical Geology and I I taught the second half of Field Camp during the summer, and am currentl Structural Geology. We did not stay at the Blue and White Motel on the Ba this past fall. Charlene declined to reserve us rooms when I called a few w beforehand; no reason was given. We stayed at the Highlander Motel inste was plenty of hot water for everyone. I couldn't resist a trip past the old Blu while we were in town, and all that I found was a dark, empty motel. I hope were merely closed for the season and not closed for good.

Access to the quarries in the Baraboo area is becoming much more difficul The Kramer Company (LaRue and Highway 33) now requires on- site safe and a company geologist chaperone present during visits. We already havi to the Denzer Quarry and to the fold nose at the east closure. The landowr

became tired of the never-ending stampede of Geology students during the spring, and no longer permit access on any of their properties. On a lighter large van enjoyed a blow out of a Firestone tire as I navigated the switchback southwest side of Devils Lake. Some students who were sitting in back of the van disagree, and contend that the driver hit a large, sharp, block of quartzite at the turns. I, as driver, disagree with that interpretation, and blame Firestone.

Several students advisees completed research projects this past year. **Cra Washburn, Erik Wright** and **Steve Williamson** all finished their provenance independent study projects. **Landon Kelly** completed a fracture analysis of Pennsylvanian Excello Shale in LaSalle County. **Jason Thomason** completed Thesis of the Starved Rock Quadrangle.

My research activity has slowed a bit this year. I traveled to Indianapolis to poster with **Jason Thomason** at the NCGSA meeting. In June, my paper "Twining Strain Constraints on the Mechanics and Kinematic Pattern of the Mountain Detachment" was published in the Journal of Structural Geology. September, I led the Wyoming Geological Association Annual Field Conference at Heart Mountain Detachment. A related paper entitled "Structure and Stratigraphy of Eocene Volcanic Rocks in the Proximal Areas of the Heart Mountain Detachment" published in this year's WGA Guidebook. Skip accompanied me on this trip; we were fortunate to observe two bears in one day. A young boar grizzly bear was seen in the Basin, and a black bear cub near Buffalo Bill Reservoir. This was my first grizzly encounter in more than 400 days in the field. In November I traveled, by car, to the National GSA meeting in Reno, Nevada. Most of my time was spent screening candidates for our two vacant Geology positions. The round trip from Norman is 4287 miles. A fresh snow had fallen throughout much of the Cordillera and Plains just before our departure. The Utah Plateaus and Nevada Basin and were just beautiful. My airline-avoidance streak is now at ~8.5 years.

The rest of my professional time this past year was spent performing a number of administrative tasks. During the Spring the Department formulated a five-year Plan for each of our programs. I also served on a committee to review the plan of our College Dean, and I served as Chair of the College Curriculum Committee. During the summer, I prepared the seven-year BS and MS program review (to understand why Jim K. retired when he did!). This was an extremely time consuming but rewarding task.

The trout count this year was about 150, all on flies that I had tied myself. I managed to squeeze in a Steelhead trip to Wisconsin in March, but fly fishing conditions in places the rest of the year were much poorer than usual. Heavy rains this year prevented me from taking my usual trip to Spring Creeks of the Driftless Area. I did enjoy a short trip in May to the Sand Creeks of central Wisconsin. High water dominated this trip as well. The lowlight of this trip was losing a wheel on the middle of the night, the Saturday before Memorial Day in Montello, Wisconsin. A long, but entertaining story; please contact me if you are interested in hearing it. Fishing conditions in the Black Hills and Bighorn Range were dominated by high water that I have never seen. I did manage a one-day trip to southwest Wisconsin on Labor Day, and when nobody was looking, I managed to make six or seven catches leading the WGA trip in September.

The kids at home continue to grow. Hayley is now nearly 8, and is a big fan of the Spears and N Sync. I still maintain some influence in her life as evidenced by her second place in the Chenoa fishing derby in August. Jack, now 4, has become enamored by some toy soldiers of mine (when I was a kid) that he discovered in the attic. He can now easily distinguish soldiers from units such as the WWII German Wehrmacht, Panzer Grenadiers, and Afrikakorps. Josh, now 2, and much to my chagrin, is easily able to destroy all of the battles and formations that Jack

family did manage a week vacation to Door County, WI again last summer. accompanied me as far as Grandma's house in Denver as I made the long Reno.

Skip Nelson.-The year 2000 has flown by with lots of activities and no major glitches. I was involved in several activities. In March, I presented a morning on Kitchen Geology as part of the University's yearlong "Consider The Chill" program. Thirteen family groups (43 individuals) participated. The highlight workshop was making toothpaste from geologic materials (Calcium Carbide Bicarbonate, water) and flavorings. Each family named and wrote a 15 second commercial for their product. Each family unit took a geologic collecting trip to a field lab to build a family mineral and rock collection. One of these appeared as a project at the county fair. In June I worked with 55 teachers in the GeoExplor workshop. This is a year-long project with the Illinois State Museum in Springfield to develop curricular materials on geology for schools in Illinois. In July, I worked with teachers in the Illinois Association of Aggregate Producers Workshop in Rockford on the field trip that included the quarry where a scene from the movie Groundhog Day was filmed and where the balloon was launched in the attempt to circumnavigate the globe. Another stop was the park in Cherry Valley that won a national mine award for reclamation of a gravel pit. The Fall Semester was really busy with me taking some new majors on the Illinois State Geological Survey Educational field trip to Illinois Beach State Park. I accompanied Dave Malone to Wyoming in September to scout out new field camp projects and to conduct a Wyoming Association Field Trip on the Hart Mountain Detachment. The weather was spectacular, the scenery great and the bears were out (a grizzly and black bear the same day). The grizzly was not far from where Dave and I camped. In October I took the Structural Geology field trip to Wisconsin and the Tri-State Geological Conference to the East St. Louis Area. Students got to collect 135,000-year-old Black Spruce from a slackwater deposit, examine a karst terrain, and collect Mississippian fossils. In November I presented a paper at the GSA meeting and attended a workshop on GIS as well as a meeting with numerous potential candidates to fill Jim Kirchner's position.

I am still active in the volunteer fire department and helped with live fire training for firefighters from the county at the burn buildings at the Fire Service Institute and was trained as a safety officer for the new smoke building in the county.

We will host the North-Central Section G.S.A. meeting April 21-24. Getting the meeting is exciting and challenging. The field trips and workshops are very interesting and I hope to see some of you there.

Steve Van der Hoven.-I am the newest member of the Geology faculty, hired in August, 2000. I currently hold the position of Visiting Professor, with a contract that runs through the 2000-2001 school year. The position that I am in is being considered as tenure track this fall, and I will be submitting my application. I am excited about the future of the department and would like to be a part of it.

I am a freshly-minted Ph.D., having officially received a degree from the University of Utah on August 4, 2000. Nothing like the feeling of handing in the 3 official copies of my dissertation several hours before the deadline for summer graduation. There was not much time to celebrate as I had many loose ends to wrap up before putting everything I could fit into my truck and driving from Salt Lake City to Bloomington a week later. I returned to Salt Lake a few weeks later to do it all over again with my wife, Mary, our two cats, and the rest of our belongings. We are comfortably settled in our new house in Bloomington and enjoy living in a moderate size city which can offer all the things we have grown accustomed to in a larger city without the having traffic congestions and other hassles of a large city. Occasional trips to Chicago to visit our big city needs.

In case you're wondering what it is that I do, I consider myself to be a hydrogeologist/aqueous geochemist. In other words, I use geochemical techniques to solve hydrogeologic problems. Geochemical techniques that I have used include isotopes, dissolved gases, and the major dissolved ions. I incorporated all of these interests in my dissertation research where I was looking at flow and transport in fractured sedimentary rocks and the saprolite that develops on them in the climate of my field area at Oak Ridge National Laboratory in Tennessee. The objective of my research at Oak Ridge was to gain a better understanding of the shallow groundwater system at Oak Ridge in order to better manage and preserve the legacy of nuclear research at this national lab. I have presented various aspects of my research at several GSA and AGU meetings over the past four years. I am currently working on the revision of several chapters of my dissertation for submission as articles.

Over the past year, I have also been involved in a project to evaluate the transport of bacteria in groundwater and the groundwater resources of an alluvial basin in southwestern Utah. Historically, groundwater has been pumped for irrigative and domestic uses and the water table has been declining over time. A few years ago a large scale hog production facility was built in the valley, prompting concerns about groundwater quality and quantity. These concerns were heightened after the injection of untreated hog sewage into a groundwater production well. One of the investigations involved the evaluation of bacterial transport rates by injecting a species of bacteria and a dye tracer into the groundwater while monitoring its downgradient movement. Our conclusions from this test were that the rate of bacterial transport is low and does not pose a significant threat to groundwater quality. The annual recharge in several parts of the basin was estimated using a combination of dating techniques (CFC and tritium/helium) and chloride mass balance. The conclusions from this part of the investigation were that recharge was highly variable and these patterns should be considered when permitting areas for groundwater withdrawal. I presented these results "hot of the presses" at the department's GGGeo seminar in October.

I am currently bringing myself up to speed on the groundwater issues here and am working with graduate student **Chris Delany-Barmann** on his design thesis which will quantify groundwater/surface water interaction in the headwaters of the Mackinaw River. I am also involved with the upgrade of field and laboratory equipment for hydrogeologic studies. One of the most exciting aspects of the development of a well field, with drilling scheduled to begin in early 2001. The well field, along with a wide variety of new field instruments, will provide our students with field experiences that will be highly valued by their future employers.

I am also thoroughly enjoying being an educator rather than the educatee. It is a great satisfaction to be able to pass along my knowledge and experience. I am currently teaching the general education course Principles of Geology and a seminar called Aquifer Systems. In the Spring semester, I will once again be teaching Principles of Geology and two graduate courses, Introduction to Groundwater and Contaminant Transport.

ALUMNI NEWS

1970's

Ken Hall (75) wrote to remind us that he still has nightmares of 30 green minutes for the mineralogy final given by Dr. K. **Bruce Ijirigho** (75) mailed to say he would like to check in with the ISU geologists before Dr. Kirchner blows out of town after he retires at the end of the Spring 01 semester. **Dave Jedlicka** (75) stopped by for a family weekend to visit his daughter Liz who graduated from ISU (00) with a BS in chemistry and was given a campus and new geology facilities tour by Bruce

Chris Wood (76) is still working oil and gas and is hoping to find more fossil vertebrates in Montana, with two kids Eric (17) and Erin (15) doing well in life. We were all shocked and saddened to hear of the death of **Dan Towns** (76) who suffered a heart attack while participating in the Chicago Marathon this year.

Dan was working for with Louis Dreyfus Oil and Gas Exploration on Oklahoma. Our sincere condolences to his wife Debbie and children. **Rob Christman** is currently senior staff geologist for Union Pacific Resources and is doing his part to stay in the exploration and development and keep drilling wells. He also recently finally recovered from his experience in Optical Mineralogy class offered by the early 1970's. **Jean (Chruscicki) Harmon** (78) is doing surface and ground modeling in proposed mine sites and is enjoying her young daughter and now she was getting her little lady a baby kitchen for Christmas.

1980's

Rick Scott (83) is working at Lewis, Yockey & Brown in Bloomington, reporting the addition of a 5th child (congratulations) and is active in the Boy Scouts with kids in Leroy, IL. **Steve Laffey** (86) finished a M.S. in Geography from NIU and is doing transportation GIS work for the Chicago Area Transportation Study working since 1994. **Ron Baker** (88) emailed to indicate that he is working environmental consulting with Booz Allen & Hamilton in the Washington D.C. area. Ron also says **Ke Schnoes** (88) and his wife have had a baby girl late December. **Dennis Harmon** attended the Tri-State Field Camp and contributed numerous resources to the club. **Alex Vincent** (88) is now working as an Environmental Technical Advisor at Mayer, Brown, and Platt Law Firm in Washington D.C.

1990's

Chris McGary (93) finished his M.S. in Geology at University of Illinois and is now working for the Illinois Geological Survey, and gave an excellent presentation at our departmental Seminar Series (GEOOO) on modeling of fluid flow in fractured bedrock systems in northern Illinois. **Ray DeCastro** (94) is working for GIS at Springfield and is striving to finish up his M.S. in hydrogeology at ISU. **Steve** (92, 95) switched jobs and is now working as a staff hydrologist for Environmental Management and Technologies in Normal working on soil and groundwater contamination sites and pipeline work for Amoco-BP and Shell. Steve married his fiancé Kim in March of 2000. **Marshall Metcalf** (97) continues to work for the Illinois Department of Transportation and is pursuing an engineering license. **Paula (Barret) Stine** (97) is working for the Illinois EPA in Springfield and has a new baby daughter (congratulations) named Tessa Leigh. **Candice Harmon** called to let us know she is working for Geosyntec Environmental Consultants on site characterization and litigation support work.

The following alumni stopped into our new digs in Felmley Hall for visits this year: **Taha** (96), **Tony D'Angelo** (98), **Pat McLaughlin** (99), **Susie Taha** (00), **Linda** (95) and **Bill Shields** (99).

2000's

Heidi Dowd (00) emailed us in September indicating she is having a ball in the Graduate program at University of Iowa.

Please forgive me if you were missed.

PRESENTATIONS (Abstracts)

CARTER, J., 2000, "War, Welfare and Weather: Maps in Society. Present: Seminar on Past Matters: Re-thinking the History of Science, Technology, ISU, in March.

CARTER, J., 2000, Teaching Geography With A Web-Based Testing Tool. Council for Geographic Education, Chicago, in August.

CARTER, J., 2000, Web Course Tools: Working in a New Map Use Enviro North American Cartographic Information Society XX Conference, Knoxville October.

CORBETT, R.G., 2000, Classification and Zonation of Rain Water in the U Based upon variations in Chemical Composition. North-Central GSA meeti Indianapolis in April.

CORBETT, R.G., 2000, Current Status of Curricula, in the panel discussion Education the next Ten Years. Presented October 12, 2000 at AIPG Nation in Milwaukee.

DAY, J. & X. Ma, 2000, Revision of North American and selected Eurasian Devonian (Frasnian) species of *Cyrtospirifer* and *Regelia* (Brachiopoda). N GSA meeting in Indianapolis in April.

DAY, J. & X. Ma, 2000, *Tenticospirifer* Tien, 1938, and similar spiriferid bra genera from the Late Devonian (Frasnian) of Eurasia, North America, Nortl and Australia. National GSA meeting in Reno, NV in November.

Whalen, M.T., and **DAY, J.**, 2000, Initial Devonian Onlap of the West Alber Canadian Rocky Mountains: Implications for paleogeography and sea leve western Alberta. Annual American Association of Petroleum Geologists (A Meeting in New Orleans in April.

MALONE, D.H., and Sundell, K.A, 2000. Exceptionally Large Landslide/De Avalanche Deposits of Wyoming's Eastern Absaroka Range. Abstract pres National GSA meeting in Reno, NV, in November.

NELSON, R.S., 2000, Workmate® and Tinker Toy® Earthquakes: using cc materials for simple middle and high school demonstrations. Annual Meetir Geological Society of America, Reno, NV in November.

Thomason, J.F., and **MALONE, D.H.**, 2000, Geology of the Starved Rock, Minute Quadrangle: Geological Society of America Abstracts with Program 5, p. 19. Abstract presented at the 2000 NCGSA meeting in Indianapolis in

VAN DER HOVEN, S.J., and Solomon, D. K., 2000: The Impact of Prefere Paths on the Use of Mass Balance Calculations for Chemical Hydrograph : Abstract presented at the National GSA meeting in Reno, NV, in Novembe

PUBLICATIONS

ANDERSON, W.P., Evans, D.G., and Snyder, H.J., 2000, The effects of H Barrier Island Evolution on Water Table Elevations, Hatteras Island, North USA: Hydrogeology Journal, vol. 8, p. 390-404

Barrows, L. and **NELSON, R.S.**, 2000, Magnetic Delineation of Buried Water Table in Normal, Illinois. *Journal of Geoscience Education*, Vol. 48, p. 137-140.

CORBETT, R.G., 2000, Academic Departments' Views of Accreditation. *Professional Geologist*, v. 37, n. 4., p. 126-7.

CORBETT, R.G., 2000, Strengthening the Profession Each of us can help. *Professional Geologist*, v. 37, n. 6., p. 14.

Ma, X. and **J. DAY**, 2000, Revision of *Tenticospirifer* Tien, 1938 and similar brachiopods from the Middle-Late Devonian (Givetian-Frasnian) of North America, Eurasia, and Australia. *Journal of Paleontology* v. 74: 444-463.

MALONE, D.H., 2000, Structure and Stratigraphy of Eocene Volcanic Rock Proximal Areas of the Heart Mountain Detachment: Wyoming Geological Association Annual Field Conference Guidebook, vol. 51, p. 109-131.

Craddock, J.P., Neilsen, K.J., and **MALONE, D.H.**, 2000, Calcite Twinning Constraints on the Heart Mountain Detachment Emplacement Rates and Timing. *Journal of Structural Geology*, v. 22 p. 983-991.

NELSON, R. S. and **CORBETT, R.G.**, 2000, Rock Density Exercises for Introductory Level College Courses: *Journal of Geoscience Education*, v. 47, p.432-34.

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Updated: 01-02-06