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Indiana University College of Arts & Sciences Alumni Association

HOOSIER GEOLOGIC RECORD

Alumni Newsmagazine of the Department of Geological Sciences



John Day

Winter 2002-03

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Editor's note: We urge alumni and friends to send us prints, photos, or slides that would interest our readers. Please be sure to provide a complete caption and label the material with your name and address so that it can be returned. We can't promise to include all submissions, but we can promise to return them.

HOOSIER GEOLOGIC RECORD

This newsmagazine is published annually by the Indiana University Alumni Association, in cooperation with the Department of Geological Sciences and the College of Arts and Sciences Alumni Association, to encourage alumni interest in and support for Indiana University. For activities and membership information, call (800) 824-3044 or send e-mail to italumni@indiana.edu.

Department of Geological Sciences

Chair
Chris Maples
Director of Development
Lee Suttner
Editor
J. Robert Dodd
Co-editor
Sara Marcus

Indiana Geological Survey

Photography
Barbara Hill and John Day

College of Arts & Sciences

Dean
Kumble R. Subbaswamy
Executive Director of Development & Alumni Programs
Tom Herbert

IU Alumni Association

President/CEO
Ken Beckley
Assistant Alumni Director
Nicki Bland
Editor for Constituent Periodicals
Julie Dales
Editorial Assistant
Brook Northcutt

THE COLLEGE

How has the endowment campaign helped?

April 2000 seems like such a short time ago! That's when the department's historic endowment campaign officially ended. And yet it also seems like the distant past as well because so many things have happened since then — things that are direct results of the campaign effort. Although everyone here can see these dramatic changes, many of them may not be evident to our alumni and friends outside the department. So this year's chair's statement is a discussion of some (but certainly not all) of the major areas in which you and your generosity have been directly beneficial to us. The list of support is a long one and your help already is evident — but don't just take our word for it; see for yourselves below!

Direct student support. — Direct support of student learning and research has been our top priority for as long as I can remember. However, our support for students has not been particularly well advertised. Thanks to the success of the endowment campaign, we are now able to provide even more support to students and, of equal importance, that support is more widely known and appreciated.

We continue to support field trips that are offered with classes taught in the department. Last year alone we were able to use nearly \$35,000 to support field trips associated with our classes!

We continue to support the research experiences of graduate students in the department, and we promote knowledge of that support to help us recruit high-quality students. Each of our graduate students in the past two years has received \$1,000 in

support of research as part of the offer that brought them to IU. Many of these students have used the money to purchase a computer, but funds have been used in support of research in a variety of other ways as well, including attending professional meetings, field work, and analytical services. We have supported 36 students (for a total of \$36,000) over the past two years with these funds.

DOGS Daze is a student-run, student-only research fair that is conducted each year in the spring. This year will mark the third annual DOGS Daze, which will be held on March 7. DOGS Daze, which originated with SAC, provides a forum to highlight student research through oral and poster presentations. The presentations are judged and cash awards are given to winners. Last year, a total of \$2,000 was awarded to winners in various categories.

The endowment campaign also has resulted in direct student support in the form of fellowships and other positions. Two students are supported with funds generated by the Malcolm and Sylvia Boyce Chair. Another student is supported with funds from the Daniel S. Tudor Fellowship. In addition, we have been able to increase our support for students to attend field camp, take courses offered off-campus, and travel to meetings to attend short courses. Combined, this support totals well over \$50,000.

Direct faculty support. — Probably the best and most widely known support for the mission of the Department of Geological Sciences comes from the professorships and chairs that were direct results of the endowment campaign. These faculty positions represent a tremendous commitment to the department by you — our alumni and friends, by IU (thanks to the negotiated matching program from then-President Myles Brand), and by the College of Arts and Sciences. The general structure of this support deserves some explanation. A named professorship requires a minimum of \$500,000, and a named chair requires a minimum of \$1 million to go into effect. Each of these two named positions generates an average of 5 percent income that can be spent in pursuit of the research and teaching goals of the person who holds the position. That means that a named professorship generates approximately \$25,000 per year and a named chair generates approximately \$50,000 per year (market conditions have not had too much effect on these values thus far, but that likely will not last). The commitment from

the university and the College of Arts and Sciences is for start-up funds (which have been well into the hundreds of thousands of dollars for each of our recent hires), salary (most of which cannot be offset by the 5 percent income generated by the professorships and chairs), and other support (such as secretarial and technical staff and student support for the professor or chair).

Needless to say, your support has leveraged an enormous amount of support from the university and the College that, over the years, will be at least five times the support that comes directly from these funds (the multiplier in the short term is even larger when one takes start-up funds into account).

Mark Person holds the Malcolm and Sylvia Boyce Chair in Geological Sciences. Mark, who came to IU from the University of Minnesota, brought with him a programmer (David Dahlstrom), who is supported directly by funds from the Malcolm and Sylvia Boyce Chair. In addition, Mark has used these funds to support a graduate student, field trips, visiting scientists and speakers, and numerous other enhancements to the overall educational experience of our students and faculty.

David Bish has accepted our offer to begin as the Haydn Murray Chair in Applied Clay Mineralogy beginning in August 2003. Renovations to his lab and office in the Geology Building currently are under way.

Lee Suttner holds the Robert R. Shrock Professorship in Sedimentary Geology. By awarding the Shrock Professorship internally, we were able to negotiate another position in sedimentary geology. That position allowed us to recruit Juergen Schieber to IU from the University of Texas, Arlington. Schieber, who joined the department in August 2002, already has had a noticeable effect on students and faculty alike. In addition, he brought two students with him from his previous institution. We would not have been able to recruit Schieber to IU without the Shrock Professorship.

The Judson Mead Professorship in Applied Geophysics currently is unfilled. We made an offer to a top-notch candidate this past year, but that person's home institution made a counter-offer that, quite honestly, was beyond anything that Indiana University was capable of matching. Although disappointing, it is an indication that we continue to identify and recruit

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Chris Maples, chair, Department of Geological Sciences

How does the *Hoosier Geologic Record* compare?

I hope you will excuse me if I pat former editor **Dave Towell** on the back for a job well done over the last several years. All College of Arts and Sciences chairs recently received a memo from the dean of the College, Kumble R. Subbaswamy, pointing out the value of departmental newsletters in maintaining good relations with alumni. The memo includes a table showing the 22 departments that prepared newsletters during the last academic year. Although we are far from the largest department, our newsletter (or newsmagazine, as we prefer to call it), is the largest in the College. The next largest is published by the Chemistry Department, which Dave Towell says has openly modeled its newsmagazine after ours. Our publication budget is third largest in the College, the two larger budgets being Chemistry and English, which have much larger press runs than we do for their greater number of alumni. We print 2,000 copies of the *HGR* compared to 8,120 for the English Department newsletter and 7,500 for the Chemistry Department newsmagazine. Under Dave Towell's editorship, the *HGR* grew from a few pages of photocopied news to what we think is the best alumni newsmagazine on campus.

One of the most frustrating aspects of editing the *HGR* is trying to squeeze news out of a reticent faculty and alumni. Some faculty always respond quickly to the editors' request for news, others take a bit more persuasion. This year we did fairly well after a great deal of persistence. Only two to three faculty never did respond. We have also been a bit more successful this year in getting alumni news. **Sara Marcus** had the great idea of distributing forms at our alumni receptions at national meetings.

The method succeeded in producing several responses from alumni who attended the Denver GSA meetings. Please send us news about yourself. You may think it is nothing of significance, but your former classmates enjoy hearing about even the little things you are doing.

This year's *HGR* contains several special articles that we hope will be of historic interest. This year we have included a separate article about the activities of our emeritus faculty since retirement. We searched through old issues of the *HGR* and its predecessor newsletters and prepared an article about happenings in the department 10, 26, and 50 years ago. **Gary Lane** has again prepared a note on "News from Yesteryear" that gives us insight into what the department was like 50 years or so ago. **Don Hattin** has compiled a history of G420, Regional Geology Field Trip. Don has long been committed to a strong program of field trips and probably has led more of these one- and two-week trips than anyone else in the department's history. Don and others he quotes in the article recount several humorous adventures on these trips. There is one story that Don did not tell on himself that I think should be in the record. On one of his first field trips, shortly after he joined the faculty with a brand-new PhD in hand, Don entered a bar in Kansas with a group

of older graduate students, some of whom were veterans on the GI bill. The bartender served the graduate students but asked Don to show some ID. As the students struggled to suppress their laughter, one of them said "Oh, go ahead, give the kid a drink!" at which time the peals of laughter reverberated.

The editor wishes to thank the many people who make *HGR* possible. **Sara Marcus**, my co-editor, has been a tremendous help, especially in pulling everything together at the end of the editorial process.

Last year I left town on one of our many trips during those latter editorial stages and Sara and Alumni Association editor **Julie Dales** came through brilliantly in my absence. Thank you, **Gary Lane** and **Don Hattin**, for providing two articles and other help in preparing this year's edition. Thank you, **Chris Maples**, for your encouragement and support if not your promptness in supplying the Chair's Greeting! **Jim Brophy** and **Deborah DeChurch** were great help in supplying articles on the field station and geological survey. **Barbara Hill** and **John Day** did their usual great job with the photographic part of *HGR*. **Kim Schulte** and **Mary Iverson** provided information for several entries. **Dick Gibson** shared material from the departmental Web site as well as provided photos and other information. Finally I would like to thank my wife, **Joann**, for her expert proofreading. Joann thought her husband had retired but is not so sure when he is still pounding on the computer keyboard at midnight.

— Robert Dodd



Chair's greeting

(continued from page 1)

candidates for our professorships and chairs that are among the very best in the profession.

In addition to the named professorships and chairs, the success of the endowment campaign has benefited our current faculty in numerous ways as well. For instance, each faculty member who is not in a named professorship or chair has \$2,000 per year in research funds to help support their students, the acquisition of preliminary data for grants, travel to meetings to present research results, the purchase of equipment and supplies, and numerous other uses.

Direct and indirect department support. — Finally, I should note the tremendous benefits that have resulted to the department as a whole, thanks to your support and the success of the endowment campaign. As of this writing, we are planning to replace our department pickup truck with a new vehicle that will be far safer and more cost-effective. We absolutely could not do that without the success of the endowment campaign. We also have been able to attract tremendous interest in our department and IU at meetings where endowment monies have been used to showcase our research and generally wave the IU flag. Again, many of these high-profile meeting activities would not occur

without endowment funds to support them.

More important, right here on our own campus, the department's reputation within and support from the College of Arts and Sciences have been enhanced dramatically because of the strength of our alumni support. We all owe a great deal of thanks to all of you for the start that we need to compete on a national level with the best of the best. We will continue to build upon that solid foundation. We will strive for excellence in all phases of what we do. And with your continued support, those goals can be achieved!

— Chris Maples

Around the Department

John Bubb wins 2002 Richard Owen Award

John Bubb, PhD'63, was named by the geology faculty as 2002 recipient of the Richard Owen Award, the department's highest award for an alumnus. Each year the award is given to an outstanding alumnus of the department for contributions to the understanding and advancement of geological sciences in the pursuit of their careers. This award is named in honor of Richard Owen, who taught courses in geology, natural history, botany, and geography at IU from 1864 to 1879. He was the first IU professor to publish papers concerning geology. The Owen Award was established in 1985 in celebration of the 100-year anniversary of the founding of the department. Bubb is the 24th recipient of the award.

Bubb is a native of Weiser, Idaho, and was raised in Huntington, Ore. He received BS and MS degrees in geology from Oregon State University before coming to Indiana, where he earned a PhD degree in geology in 1963. Bubb joined the Humble Oil Exploration Research Laboratory in Houston in 1963. Humble merged with Standard Oil of New Jersey in 1966, and the lab became part of the Exxon Production Research Co. From 1963 to 1968, Bubb conducted research on carbonate petrography and sedimentology and led

Exxon's Modern Carbonate School in the Bahamas and Florida Keys. From 1968 to 1972, he worked in the Geophysical Division as seismic stratigrapher and was later project leader in Peter Vail's pioneering seismic stratigraphy group. In 1972, he went to P.T. Stanvac Indonesia in Jakarta as a geophysical interpreter and later geologic manager. In 1974, he moved to Singapore and then to Kuala Lumpur, Malaysia, as geophysical manager and exploration manager for Esso Production Malaysia Inc., where he participated in Esso's very successful exploration programs in the Malaysian concessions.

In 1983, Bubb was named geophysical manager for Esso Exploration's Europe-Africa Group in Walton-on-Thames, England. Next he became geological manager for that group in Houston, following closing of the Walton-on-Thames office. From 1984 until 1990, he was a petroleum scientist for the Exploration Technical Assessment Group, a small group that reported directly to Exxon Corp.'s board of directors, providing independent recommendations on all of Exxon's significant exploration programs and acquisitions. From 1990 until his retirement in 1996, Bubb was manager of the Frontier Exploration Group in Exxon

Exploration Co.'s Far-East Division.

Since his retirement, Bubb has done some consulting, but mostly has spent time with his family, played golf, traveled, and fished. He has also found time to serve the department as a member and upcoming president of the Advisory Council. Bubb will come to Bloomington sometime during the spring semester to receive his award and to give his acceptance talk.



John Bubb, PhD'63, is the 2002 Richard Owen Award winner.

News of yesteryear ... Our department, circa 1957-60

(Taken from the minutes of faculty meetings from 1957 to 1960.)

The salary schedule for assistantships and fellowships for the first semester 1958-59 was approved in the September 1958 meeting. Full-year assistantships were either \$1,400 or \$1,600. One-semester salaries were \$700 or \$800. Research assistantships were the same. The Shell fellowship was \$1,800 and the Arketex fellowship was \$1,600.

Oct. 2, 1958: The chair, Charles Deiss, announced that because of the state budget crisis [so what else is new?] the State Budget Committee is scrutinizing carefully all budget requests. In view of enrollments in geology and the size of the faculty, the state cannot invest \$3.6 million in a new geology building. The university has been informed that the cost must be reduced by 30 percent. The original plans were based on estimated space needs in the year 1970.

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These solemn gentlemen are the Geology Department faculty of 1949. Old-timers: Can you name them before you read on? Seated, from left, are William Thornbury, Ralph Esarey, Charles Deiss, and J.J. Galloway; standing, from left, are Charles Vitaliano, Brian Mason, Judson Mead, Roger Dean, and John Patton.

Mystery holes at Griffy Research Preserve make headlines

Last year we reported the establishment of a new Indiana University Research and Teaching Preserve with 185 acres in the Griffy Lake area and 261 acres along Moore's Creek near Lake Monroe. The purpose of the preserve is to "provide natural field settings for research and teaching that complement existing facilities at Indiana University."



Mike Hamburger tries to hide behind branches as he investigates soil in the bottom of one of the mystery holes in the Griffy Research and Teaching Preserve.

Several of our faculty, especially Mike Hamburger and Bruce Douglas, were active in establishing the preserve, and both currently serve on the preserve's executive committee. The preserve is now up and running with Keith Clay of the Biology Department as its director. Trails and a parking area have recently been developed at the Griffy portion of the preserve. Last spring, students in the BS in environmental sciences program provided the labor for Douglas led a cleanup day led by Douglas. Douglas and Lisa Pratt hosted a chili supper for the workers at day's end. To

introduce the area to the public, last April Douglas and others interested in the preserve led a number of public hikes emphasizing various topics such as geology, wildflowers, and trees. Douglas led the geology trip. Students working with Keith Clay and Greg Olyphant have research projects under way at the Griffy preserve. Olyphant has constructed weirs to monitor water flow of intermittent streams on the preserve. Adam Davis, a geology graduate student working under Olyphant's direction, is working on a project titled "Soil, Water, and Terrain Influences on Plant Distribution in an Old Field." A number of geological science classes, including Gary Pavlis's Methods in Applied Geophysics and Greg Olyphant's Geospatial Data Analysis, have made extensive use of the preserve for undergraduate and graduate teaching.

The preserve has been in the news recently with a feature article in the local newspaper, the *Herald-Times*, describing a group of mysterious holes of uncertain origin on the ridge tops. The holes are circular and from about 4 to 10 feet across and 2 to 4 feet deep, many surrounded by a berm. The article featured a lively discussion that ensued after Gary Lane, Bob Dodd, Michael Hamburger, and Bruce Douglas, accompanied by Indiana Geological Survey geologists Sam Frushour and Nelson Shaffer, visited the preserve early last fall. Gary Lane noted the holes some

years ago on hikes in the area and speculated on their origin. As the ridge tops are underlain by limestone (the lower Ramp Creek Formation) he speculated that they might be small sinkholes. However, their shapes are not typical of most sinkholes and suggest a possible human origin. Could they be the holes left when trees were dug up for landscaping purposes on the IU campus? Or could they be foxholes left from ROTC training exercises many years ago? If the features are of human origin, no one had found any records to indicate how they formed. Neither had convincing proof of a natural origin been found. Some weeks after the article appeared in the newspaper, Gary Lane learned of a man named Al Lemmons who said he worked with a group of IU employees who dug up trees to be planted around campus. He said that except in the area that later became the IU golf course, the holes were never filled. So the mystery is solved!

Another recent find at the Lake Monroe site was the discovery of the rare flowering plant, the Trailing Arbutus. Arbutus is near and dear to the heart of IU alumni as the namesake for the campus yearbook. It was once more common in the area. Gary Lane has found old records indicating that it was common on Arbutus Hill east of Bloomington, the site of spring picnics by students.

For more information about the preserve, check the Web site at www.iub.edu/~preserve/.

Yesteryear

(continued from page 3)

Now space must be estimated based on the year 1962, the estimated year the building will be completed. The departmental planning committee now estimates space needs at 51,880 square feet, approximately three times the current space. One suggestion was to delete the faculty lounge and the student Coke room, but Professor Thornbury objected strongly to that and these rooms were left in. It was proposed that the auditorium be deleted and some space left out in the west wing. It was also proposed that the seventh floor be removed and that the upper two floors (five and six) be left unfinished. These changes would come close to meeting the new demands. With removal of the auditorium, the lecture room was increased to 125 seats. A second elevator was eliminated, part of the library floor would be unfinished, and the interior would be unfinished except for the lobby and classrooms. All of the professors agreed to reduce their own space needs by varying

amounts.

January 1960: Professor Mead brought up the subject of student morale. He pointed out that SGE goes to considerable trouble to provide coffee and doughnuts for the Wednesday coffee hour but that very few people attend. The chair felt that room 105 did not give the faculty and students an opportunity to mix and that the coffee hour would be moved to room 125 (in Owen Hall).

In 1959, Charles Deiss died and John Patton became first acting chair and then chair. The faculty minutes do not contain a word about Deiss's death. The last faculty meeting that Charles Deiss chaired was for May 25, 1959. At the first faculty meeting after the summer recess, on Aug. 13, 1959, Charles Deiss's name is still on the notice of meeting, but the notice was prepared by John Patton. The notice was sent by Patton to professors Beck, Droste, Esarey, Hattin, Lowell, Mead, Perry, Thornbury, Vitaliano, and Hendrix.

— Gary Lane

job hunting?

Announcing the new IU alumni online career center.

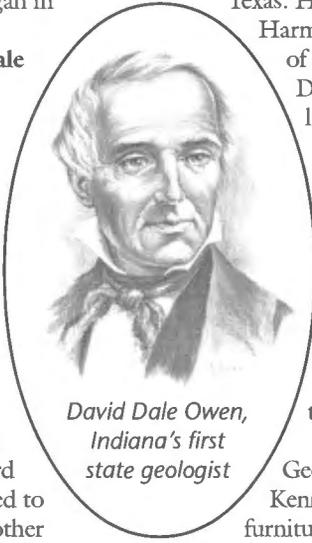
For information about the career center and membership in the Alumni Association, please call (800) 824-3044 or visit www.alumni.indiana.edu.



INDIANA UNIVERSITY
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IU Geology, New Harmony maintain close relationship

There has been a long-standing close relationship between the geological sciences at Indiana University and New Harmony, Ind. This began in 1864 when **Richard Owen**, younger brother of **David Dale Owen**, the first Indiana state geologist, was appointed professor of natural philosophy [i.e. physics] and chemistry. He also taught geology, botany, zoology, and modern languages. He was responsible for David Dale's large private geological collections coming to IU in 1870. The collection was mostly destroyed by a disastrous fire in Science Hall in 1883. By that time, Richard Owen had retired and returned to New Harmony. When his brother died, Richard became the second state geologist.



David Dale Owen,
Indiana's first
state geologist

Richard Owen's great-grandson, **Kenneth Owen**, was a geologist and formed an independent oil company in Texas. He repeatedly returned to New Harmony and purchased large tracts of land in the area, as well as David Dale Owen's fourth laboratory, which he converted into his residence. He owned the William Maclure house and the large Rappite granary that David Dale Owen had used as a laboratory and lecture room. (Note: The Rappites were a religious sect that founded the town of New Harmony in the early 19th century.) When IU built the present Geology Building in 1962, Kenneth Owen donated antique furniture and poplar flooring for the faculty lounge, which was named after his ancestor. The furniture was of the

correct period to have been part of Richard Owen's household.

Kenneth Owen eventually formed two private foundations, one to renovate and own the Maclure house and one to restore and use the granary. The latter project was massive. The Evansville PBS station produced an hourlong documentary on the renovation, and several IU geologists took part in the dedication, including **Tom Straw**, BS'58, MA'60, PhD'68 (and a New Harmony resident), **Norm Hester**, **John Steinmetz**, and **Gary Lane**. Kenneth Owen died in April 2002 at age 98.

New Harmony and the Owen family played a pivotal role in the development of pioneer geology in the Midwest. If you have never visited New Harmony, the village is certainly worth a visit. Features include a fine inn, outstanding restaurant, and guided tours through several Rappite homes and dormitories.

— Gary Lane

Hoosier Geologic Record: Voices from the past

We are copying *GeoTimes* as well as *Time* magazine and various other glossy-page publications in passing along quotes from issues stored in the archives. What was going on in the department 10, 26, and 50 years ago?

10 Years Ago — 1993

- "A short course in paleosols was given at the department on Jan. 16 by **Greg Mack**, MA'75, PhD'77, of New Mexico State University and **Cal James**, PhD'77, of Ohio State University."

- "Professor **Michael Savarese** represented the department at the annual Physics and Astronomy Open House for high school science students and their teachers, held on Oct. 10. Mike presented a talk titled 'Asteroid Impact and Dinosaur Extinction — Do We Have a Smoking Gun?'"

- "The Alumni College was held in late August [at the Geological Field Station] with a single session attended by 15 people. Professors **Gary Lane** of IU and **Tom Straw**, BS'58, MS'60, PhD'68, of Western Michigan again did a great job for the enthusiastic participants."

- Included in the issue was a tribute to **John Droste** on his retirement from the Geology Department faculty. Also included were obituaries for **Robert Ruhe** (former Geology Department faculty member) and distinguished alumnus **Robert R. Shrock**, AB'25, AM'26, PhD'28.

26 Years Ago — 1977

(Note: Apparently no newsletter was published 25 years ago, in 1978)

- "This year we have passed the 1,000 mark in the number of geology alumni from the department."

- "**Nelson Shaffer** is now working on a project that may surprise those of you away from Indiana — a study of sulfide mineralization in the state."

- "The Geology Alumni Council recently approved the establishment of a 5 to 50 Club Fund, to which alumni and their friends will be invited to make annual contributions from \$5 to \$50 (or

more if they wish), thereby getting their names included on an annual membership list."

- The 1977 issue included a *History of the Geology Department* by **John Patton**, AM'40, PhD'54, which contained a list of all degrees awarded in geology to that time. Also included was an announcement that **Noel Krothe**, **Enrique Merino**, and **Ed Ripley** had joined the faculty. The issue included a memorial for **Ralph Esarey**, AB'22, AM'23, who died on Oct. 21, 1975. Esarey was a member of the Geology Department faculty from 1925 to 1966 and was state geologist from 1936 to 1945.

50 Years Ago — 1953

- "[**Haydn Murray**] attended and participated in the first National Clay Conference held at the University of California at Berkeley."

- "Professors **Esarey**, AB'22, AM'23, and **Thornbury**, AB'25, PhD'36, spent a part of the summer at the Geological Field Station in Montana. They managed to stay within shouting distance of most of their students and particularly enjoyed the social activities at Whitehall."

- "An innovation in this year's Journal Club programs [the predecessor of the Colloquium Series] was the inclusion of a review by a student of an article or book on some topic of general interest, except on those days when guest speakers were on the program."

- The 1953 issue contains a list of the 30 employees of the Indiana Geological Survey, three of whom were also Geology Department faculty members. Also mentioned is the inauguration of the Faculty Award (a Brunton compass) for the outstanding senior geology major. The award is paid for by the faculty from their "never-too-great salary."

- "If the [alumni] news item section appears brief to you, it is because we have not heard from *you*."

(Editor's note: Some things never change! Please let us know what is happening to *you* in 2003. Your former classmates will be interested even if you don't think it is particularly exciting.)

A brief history of G420, Regional Geology Field Trip

While they were students at IU, a large number of our alumni participated in the course G420, Regional Geology Field Trip, which, following a 1940s incarnation under Charles Vitaliano's leadership, was resurrected on a more permanent basis in 1955 and became a for-credit course in 1962. G420 has embraced spring-break and summer field excursions extending east-west from Cape Hatteras and Massachusetts to the Grand Canyon, and north-south from the Upper Peninsula of Michigan and eastern Ontario to the Gulf Coastal Plain and Florida. Faculty members who have organized and led these field trips include, in approximate order of first participation, **Don Hattin**, **Tom Hendrix**, **Charles Vitaliano**, **Bob Dodd**, BA'56, MA'57, **Bob Wintsch**, and **Bob Shaver**. For students who registered for these courses, G420 trips evoke memories of travel through unfamiliar terrain and the excitement of unraveling geologic history through field study of rocks, minerals, structure, geomorphology, fossils, and sediments, all in a regional context.

The scope of G420 has been vast, and its history long, beginning with spring break 1955, when Don Hattin led an intrepid group of undergraduate and graduate students on a nine-and-a-half-day trip through Illinois, Missouri, Kansas, and Oklahoma. Tom "Fenders" Straw, BS'58, MA'60, PhD'68, and Robert "Hoss" Kirby, BS'59, were among the freshmen who attended. **Buddie Rey**, BA'55, MA'56, and **Charlie Lindenschmitt**, BS'55, were among the upperclassmen. **Mal Boyce**, MA'56, and **Paul Raymond**, MA'55, were two of the master's candidates, and **Al Horowitz**, PhD'59, and **Phyllis Renzetti**, PhD'61, comprised the doctoral element. In all, 14 students participated, traveling in dark green carryalls — a Chevy and two International Harvesters. Mishaps were many — nine flat tires, two blowouts, a rear door bashed in, and a ripped-off rear fender (that is how Tom Straw got his nickname!). Except for the Silurian, Triassic, and Jurassic, the group examined rocks ranging in age from Precambrian to Plio-Pleistocene and collected a sufficient variety of rocks, minerals, and fossils to completely fill a tall Owen Hall lobby display case. Amazingly, nine of these students opted to cut a week of class just two weeks before finals that spring to attend a meeting of the New York Geological Association. Don Hattin had planned a vertebrate-fossil collecting trip to the Badlands of South Dakota, but Mal Boyce suggested the switch to Hamilton, N.Y. Thirty years later, Boyce confessed that his motivation was to see his girl friend,

Sylvia, who later became his wife! These two trips were so successful that they became an annual event, recommencing in 1958 (following Hattin's two years of active duty in the U.S. Air Force).

Realizing the serious commitment of time and the intellectual benefit to students, Hattin proposed to offer these trips for credit, a proposal that at first was rejected by most of our faculty, who immediately changed their minds when Hattin announced cessation of the trips if credit was not offered. Thus was course G420 formalized and originally titled Regional Stratigraphy Field Trip. Prior to the name change, most of the spring trips involved geologic study of the Ozarks, Ouachitas, Gulf Coastal Plain, and Mid-continent areas of Missouri, Arkansas, Oklahoma, and Kansas, with the 1960 trip adding Kentucky, Tennessee, and Colorado. In 1961, the route was southwestward through Oklahoma and Texas, thence northward through New Mexico and Colorado, with visits to the Permian Basin, Sacramento Mountains, and Capulin Mountain National Monument. In 1962, with the advent of the formal G420, the field trip party traveled southeastward through Kentucky and Tennessee through the folded Appalachians, Blue Ridge, Piedmont, and Triassic basins to the Coastal Plain and Cape Hatteras National Seashore. In the last area, a park ranger spent an entire day guiding us along the shore, where a

devastating northeast storm had cut away an average 240 feet of shoreline along a 40-mile stretch of coastline.

Beginning in 1965, these spring trips changed focus when Hattin conducted a weeklong spring-break trip to the Florida Keys to study production of carbonate sediments and formation of limestone. This change resulted directly from a research project involving ecology of living corals that was carried out (and published) by doctoral candidate **Don L. Kissling**, PhD'67. In April, 1965, Hattin, Kissling, **Bob Nicol**, BS'64, MA'67, **Jim Howard**, PhD'66, and **Larry Balthaser**, MA'63, PhD'69, rented a decrepit 16-foot wooden boat for about \$50 and spent a week mapping a large patch reef and exploring the carbonate platform surrounding Big Pine Key. In 1966, a larger group undertook similar activities, this time accompanied by **John Droste**. In spring 1967, Hattin was joined by Bob Dodd for the final G420 trip to the Keys, after which Dodd and Hattin decided to offer a new, five-week Florida Keys summer course, G575, originally titled Geology of Shallow Marine Environments.

When the focus of G420 shifted to Florida, the faculty approved a change of name to Regional Geology Field Trip, and the course has been taught many times since the late 1960s. Beginning in 1968, former IU faculty member Tom Hendrix led a series of G420 field trips during



Students pose during a break in the work in G575, Geology of Shallow Marine Environments, taught in the Florida Keys. This photo was taken in 1969. Mary Iverson helped to identify these people, but 1969 was a long time ago and we may have some of them wrong. Please correct us if we got it wrong. Row one: Lester Smith(?), Bob Dodd, Wallace Drexler. Row two: Andrew Raring(?), Mike Hamilton, Charles Siemers, Dan Gill. Row three: Bob Boyce, Lee Atkinson, Mike Fowler, Steve Benham, Fredrick Kerr(?).



Students (and faculty) on G420 trip led by Tom Hendrix to the Ozarks in 1973. How many of the participants can you identify? We thank Mike Hamilton for providing the photo, which also appears on the departmental Web site.

spring break or during summer sessions, including travel to the central and southern Appalachians (1968), a trip that completely circled Lake Superior (1970), an excursion to the Ozark and Ouachita Mountains (1973) that was attended also by his wife, **Nina**, and a fourth trip, to the northern Appalachians and New England (1975). Private vehicles were used on the first trip, and on his van **Mike Hamilton**, BS'69, MA'75, placed a large sign that read "Hendrix Guerillas." When the caravan arrived on the campus of Franklin and Marshall College, an F&M student approached and asked, "Are you playing here tonight?" — apparently assuming, in one sense correctly, that the IU group was a rock band! On the same trip, Hendrix and his class visited a northeastern Tennessee mine for an underground tour. In those days, women were not permitted below ground, so, in retaliation, **Jane Curl**, BS'70, appropriated all the "girlie" calendars in the miners' washroom! Charles Vitaliano reentered the extended field-trip arena during the second summer session, 1972, but unfortunately details of this course are unavailable.

In spring 1971, Bob Dodd organized the first of two rafting trips down the Colorado River in Grand Canyon National Park, with assistance from **Dick Powell**, BA'59, MA'61. Concerned that enrollment for the course would not meet the minimum required by the outfitters, Dodd advertised the course off campus, including IUPUI and Indiana State University. More than 125 enthusiastic rafters, including several faculty members and spouses, participated in this highly successful trip, although most were not officially enrolled in G420 at IU. The trip embarked from Lee's Ferry and gradually descended into the canyon to its

deepest point at Phantom Ranch. The hike out of the canyon from shirt-sleeve weather at the bottom to near-freezing temperatures at the top was arduous but exciting. Dodd, aided by faculty member **Ives Pelletier**, led a G420 trip that returned to Grand Canyon during spring break 1973. This time Dodd's wife, **Joann**, and his courageous 63-year-old mother, **Elizabeth**, also braved the hike down the Bright Angel Trail to Phantom Ranch to join the rafts for a trip to Diamond Rapids, upstream from Lake Mead.

Next in the sequence of faculty members to become involved in G420 field trips was Bob Wintsch, who led a 1977 spring-break trip to northern Wisconsin and the Upper Peninsula of Michigan, where emphasis was on interpreting Precambrian geology of the iron and copper districts. Bob Shaver offered G420 during the first summer session 1985. His group traveled to northern Indiana to conduct field research on Silurian reefs.

In 1986, Bob Dodd led a trip to west Texas and New Mexico to study the stratigraphy and sedimentology of strata exposed in the Franklin, San Andreas, Sacramento, and Guadeloupe Mountains, especially Mississippian mounds and Permian reefs as well as Carlsbad Caverns. **Cal James**, PhD'77, and **Greg Mack**, MS'75, PhD'77, were "local leaders" of that trip. An astronomical bonus of the trip was observing Haley's Comet in the clear skies of west Texas.

In 1987, Don Hattin toured **Manfred Storr**, visiting professor from the then German Democratic Republic, on a bentonite-collecting trip in Kansas, Colorado, and New Mexico that became the prototype of three 15-day G420 trips led by Hattin in 1988, 1990, and 1993.

Emphasis on these trips was on sedimentary and structural history of the Ancestral Rockies, Laramide Orogeny, Rio Grand rift system, and Cretaceous Western Interior Sedimentary Basin. In 1988 and 1990, Hattin's wife, **Marge**, accompanied the trip and acted as timekeeper and driver of the lead vehicle.

The year 1990 witnessed Bob Wintsch in action on a G420 spring-break trip that featured a traverse of the Appalachians in Alabama and Georgia. Wintsch's group arrived at an Alabama state park too late to register for a two-night stay and set up their five tents on one campsite. When Wintsch's group returned to the park on the following evening, a ranger pointed out that because only two tents were allowed per campsite, he'd have to charge for three campsites, a total of \$66. Wintsch's protests drew in the head ranger, who confirmed the charge, but onlooking neighboring campers who had only one camper on each of their respective sites, invited the students to move three of

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History Quiz

Can you answer these questions about the history of the IU Department of Geological Sciences? The answers can be found in the articles in this issue of the *Hoosier Geological Record*. They also appear on page 23.

1. In March 2003, SGE will conduct the annual DOGS Daze Research Extravaganza. How many previous DOGS Daze events have been held in the department?
2. When was the IU chapter of SGE originally formed?
3. In what year did Don Hattin lead his first regional geology field trip (later to become G-420)?
4. What was the likely origin of the mysterious "holes" on the ridge tops in the Griffy Research and Teaching Preserve?
5. What was the original projected cost in 1958 of the "new" Geology Building?
6. In what year did former chair and state geologist Charles Deiss die?
7. Who donated funds to decorate and furnish the Owen Room in the Geology Building?
8. What former IU geology professor attended the first National Clay Conference held in Berkeley, Calif., 50 years ago?
9. Who were the "Hendrix Guerillas"?

Department welcomes new members to faculty

Juergen Schieber

This past summer we welcomed a new member to our Department of Geological Sciences faculty. **Juergen Schieber** joined the department as associate professor of geology. His research and teaching will be in the area of sedimentary geology with a research interest in fine-grained sedimentary rocks. Schieber comes to us from the University of Texas at Arlington, where he had been a faculty member since 1986.

Schieber is a native of southwest Germany, from the Stuttgart area. His undergraduate training was at the University of Tuebingen. He came to the United States in 1980 as a participant with an exchange program at the University of Oregon. While there he took a summer job with the Anaconda Minerals Corp. in Montana. That summer job expanded into a longer-term relationship that led to his PhD research project on sulfide mineralization in Precambrian shales in Montana. Similar mineralization occurs elsewhere in the world, including the Mount Isa area



Juergen Schieber

of Australia, where he also did research for Anaconda. After a brief postdoctoral stay at Oregon following completion of his PhD work, Schieber went to the University of Texas at Arlington in 1986, where he progressed through the faculty ranks from assistant professor to professor.

Schieber has continued his work on shales and fine-grained sediments since his PhD research. He is particularly interested in microbial effects on sediments and the changes they make in the physical and chemical properties of sediment. He has also done consulting work with Texaco on the sealing properties of shales as cap rocks for petroleum reservoirs. His interest in fine-grained rocks has led him to use electron microscopy. He has conducted research in areas around the world including Germany, Italy, Australia, Taiwan, and Canada. In the United States he has worked in Idaho, Montana, the Great Basin, and various places in the eastern United States. He will be applying for funding to secure a state-of-the-art scanning electron microscope for the department. He hopes to cooperate with researchers in other departments on campus to secure a more powerful transmission electron microscope.

Schieber plans to take advantage of his new position at IU to utilize the Indiana Geological Survey's core repository collection from the New Albany Shale. He plans to work with graduate students to study details of the sequence stratigraphy of the unit and evaluate models for the origin of the widespread and important unit.

Last fall, Schieber taught a graduate course on terrigenous clastic deposition. In the future he will be helping with the department's introductory courses as well as teaching specialized courses on topics such as basin analysis and the geology of shales.

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Field trips

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the tents to those sites. The rangers vigorously protested such a dodge, but when confronted by the now-indignant neighbors — who demanded “why not?” — the rangers backed down, and for the two nights Wintsch was ultimately assessed a mere \$16.

In 2001, Wintsch conducted another such traverse, this time crossing the Appalachians and the New England uplands from Pennsylvania through New York and New Jersey to Connecticut, Rhode Island, and Massachusetts. In the first summer session 2002, he conducted the third in the series of traverses, this time including Precambrian geology of the Superior and Grenville provinces of

Ontario. Where next will he take students on these exciting field excursions?

Over the years, several hundred of our students from the freshman to doctoral level have benefited academically and professionally from the hands-on approach to regional geological studies under the broad mantle of G420, and one can only hope that this valuable kind of experience will continue to be offered far into the future of our department. To all of our alumni who made the commitment to participate in G420, we extend profound thanks for helping to make teaching in the field such a rewarding enterprise.

— Don Hattin



Students (and faculty) take a fun break at White Sands, N.M., during G420 field trip in March 1986. How many people can you identify?

(Editor's note: As is apparent from this article, Don Hattin has long been committed to the field aspect of geologic teaching and learning. At his retirement, a special endowment was created, called the Don Hattin Field Course Fund, earnings from which are used exclusively to defray expenses of student participation by our majors in G420 or other non-core field courses offered by IU or other institutions of higher learning. Our alumni who are interested in supporting this endowment are encouraged to contribute.)

John Barratt Patton Conference Room dedicated

The large second-floor conference room in the Indiana Geological Survey wing of the Geology Building has been named the John Barratt Patton Conference Room. This room has long been known informally as the "Elephant Room" because of the Bob Judah mural of woolly mammoths on one of the walls. The room honors John Patton, member of the faculty of the Department of Geological Sciences from 1949 to 1986 and chair from 1959 to 1971. Patton was director of the Indiana Geological Survey and state geologist from 1959 to 1986. He died in 1988.

The official dedication ceremony, attended by more than 100 people, was held in the Patton Room on Nov. 6. **John Steinmetz**, the current state geologist, served as master of ceremonies and made brief comments about Patton's career and contributions to the survey and department. **Haydn Murray** described the influence of Patton on his decision to come to Indiana in 1951 and gave his impressions on the importance of Patton's contributions to the department and survey. Murray also announced the establishment of a new endowment, the **Patton**

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Members of the Patton family who attended the dedication of the John Barratt Patton Conference Room are, from left, Barratt, Kim, John, Ashley, Beth, and Ian, with Jean (John's widow) seated in front.

New faculty

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When not engrossed in geology, Schieber and his family enjoy outdoor activities such as nature study and camping. We welcome Juergen, his wife, **Anna**, and daughter **Sylvia** to Bloomington and the department. We are pleased to have them as part of our geological family.

David Bish

Chris Maples announced that **David L. Bish**, currently of the Los Alamos Laboratories, will be joining our faculty as the Murray Professor of Applied Clay Mineralogy in August 2003. Bish received his BS degree (with honors) in geology from Furman University in 1974 and his PhD in mineralogy and petrology from Penn State in 1977. He served as a research fellow at Woods Hole Oceanographic Institution and at Harvard University before going to Los Alamos National Laboratory in 1980. At Los Alamos he has been in the Geosciences, Earth and Space Sciences, and Earth and Environmental Sciences divisions and has been principal investigator for mineral stability studies, principal investigator for mineralogy of transport pathways studies, investigator for mineralogy of transport pathways studies, and technical coordinator for Yucca Mountain mineralogy-petrology studies. He has been especially active in the American Mineralogical Society and the Clay Mineral Society, of which he is the vice president-elect.

Stay connected with IU geology Web sites

Between the times when you get your annual issue of the *Hoosier Geologic Record*, would you like to keep up to date on what is happening in geology at Indiana University? It is easy to do by logging onto the Department of Geological Sciences Web site at www.indiana.edu/~geosci/. Our webmaster, **Dick Gibson**, BS'71, is constantly adding new material and updating information. The site contains a section covering departmental news and events. If you live in or near Bloomington and might be interested in attending some of the colloquium talks, you can check the schedule on the Web. Be sure to check the alumni news section to find out what is happening to your former classmates.

It may seem a bit unusual for the webmaster, who is resident manager of the Judson Mead Geological Field Station, to be almost 2,000 miles from Bloomington. But Gibson says that does not cause too many difficulties. He says that the only real physical limitation to working in Montana is the low bandwidth on the phone line, which makes it difficult to download or upload really big files. He says that it may be more difficult for him to "badger" people into providing information about their work and updating their files. The editor is not sure that job is any easier even when you are right on campus!

Gibson says that he enjoys the elements of design and creativity involved in producing the Web site. It is also a good way to learn what people are doing and what they are interested in. From his Web work, Gibson recently learned that **Claudia Johnson** had done work in geoarcheology, which he has recently become interested in because there is an early Native American site at the field station. Gibson urges our readers and viewers of the Web site to let him know what they are interested in so he will not just be guessing what you might want to see. If you have anything special you would like to see on the site, let Gibson know. His e-mail address is rigibson@earthlink.net.

The departmental Web site is not the only site that Gibson maintains. He also updates the Judson Mead Field Station site (www.indiana.edu/~iugfs/). If you are an alumnus of the field station you will find this a great place to learn about the latest developments at the station as well as find a wonderful archive of the history of the station. For a more informal view of what is happening at the field station, Gibson maintains a site called "This Week at the Field Station" (<http://home.earthlink.net/~iugfs/thisweek.htm>). You can learn something about the day-to-day happenings at the station and see many beautiful pictures of the Montana scenery on this site.

While you are looking at IU geology Web sites, you may want to check out the site maintained by the Indiana Geological Survey (<http://igs.indiana.edu>). In addition to receiving the latest news about what is happening in the survey, this is your portal to all sorts of geologic information about the state.

Department editorial home of *Palaios*, GSA books

The Department of Geological Sciences at IU now is the editorial home of one of the major geological journals, *Palaios*, as well as the three book series published by the Geological Society of America. Since 1996, **Abhijit Basu** has been editor of books for GSA, including Memoirs, Special Papers, and Reviews in Engineering Geology. Last summer, **Chris Maples** became editor of *Palaios*, a geobiological journal published by SEPM. **Sara Marcus** is serving as editorial assistant to Chris, handling much of the detailed daily activities of the editorial office. *Palaios* is one of the top five journals in the field of geobiology in terms of number of citations of papers.

Maples is taking over the *Palaios* editorship from Robert Gastaldo at Colby College and Charles Savrda at Auburn University, who have served as co-editors for the last six years. Prior to that, another IU graduate, **David Bottjer**, PhD'78, was editor of *Palaios*. The editor oversees reviewing, revision, and final editing of manuscripts and puts them together to produce six issues of the journal each year. Under ideal conditions, if reviews are prompt and revisions are minor, the process from submission to publication takes about 10 months. One of the most important functions of the editor is to select reviewers for the manuscripts. Maples has selected a board of 24 associate editors to help him with the review process. Each paper is sent to two reviewers, usually one an associate editor and one an outside reviewer, who are asked to return their reviews within one month. Maples also reads all manuscripts and, on the basis of the reviews and his own reading, either accepts the manuscript for publication with minor revisions, returns the manuscripts with suggestions for major revisions, or declines the manuscript. Approximately 30 percent of the submitted manuscripts are published. Some manuscripts are returned with the suggestion that they be published elsewhere in a more appropriate journal. Others are returned for major revision and are never resubmitted. One of the hazards of the editor's job is dealing diplomatically with authors who take offense at recommendations by reviewers and the editor.

When the manuscript has been accepted and revisions made, Maples and Marcus do the final editing before sending the completed manuscripts to Allen Press in Lawrence, Kan., where the journal is printed. Allen Press returns page proofs to Marcus for final checking. Each issue of *Palaios* has about 100 pages.

Basu has a considerably different task in editing the GSA book series. The author or



Abhijit Basu is surrounded by the many GSA publications he has shepherded to final form.

volume editor submits a proposal for a book to Basu. He makes an initial judgment as to whether the proposed book is appropriate for one of the GSA series. Many of the books are symposium volumes consisting of papers by several authors. The volume editor is responsible for obtaining reviews for each of the papers and seeing that appropriate changes are made. Sometimes Basu judges that particular papers are not appropriate and asks that they be revised or removed. One of the most common problems, especially in

symposium volumes, is repetition of material in papers that have already been published by the authors elsewhere. When working with an individual author, Basu and the reviewers he selects do the editing. The job involves much negotiating with authors and volume editors.

When the reviewed manuscript has been revised and edited, Basu sends it to GSA for final editing and printing. Volumes in the Special Paper series are considered to have relevance for at least five years, the Memoir series for at least 10 years.

Conference Room

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Visiting Professor for Industrial Minerals, which will be used to support visiting professors in the field of industrial minerals in the Department of Geological Sciences. **Dan Sullivan**, longtime member of the survey staff who is now retired, gave insight into Patton's character and personality in his description of how he could communicate freely both with those in high society and with the common laborer.

Attending were Patton's widow, **Jean**, two of his sons, **Ian** and **Barratt**, and two grandchildren, **Kim** and **John**. Also in attendance were three former department chairs, **Haydn Murray**, **Bob Dodd**, and **Lee Suttner**, plus the current chair, **Chris Maples**. Former state geologist **Norman Hester** was also present, as was Patton's secretary for many years, **Marybeth Fox**. Representing the departmental advisory board were **Jud Mead**, **Ken Vance**, **Frank Pruett**, and **Dan Sullivan**. Also attending were many of Patton's former colleagues and friends, plus current faculty and staff of the department and survey. At the conclusion of the ceremony, department chair **Chris Maples** unveiled a plaque that is installed on the wall in the room honoring Patton.



John Barratt Patton (1915-88)

A retirement tribute: Erle Kauffman

Erle Kauffman spent his early years in Chevy Chase, Md., one mile outside of Washington, D.C., where he lived in a grand old stucco house that adjoined acreage of a 150-year-old farm. Kauffman developed a strong sense of adventure while roaming the countryside of that farm and fishing for sunfish and trout in the accompanying creek. Kauffman's appreciation of the natural world was piqued by lessons taught to him by his father, a forester for the American Forestry Association. From his mother Kauffman acquired a deep appreciation of the arts, for she was a classical concert pianist who filled their home with music.

When Kauffman was 14, he accompanied his father on horseback on a pack trip through the Colorado Rockies. This event signified a turning point in Kauffman's life that would influence the directions and goals he would pursue. For the next 11 years, Kauffman returned to those mountains as part of the Trail Riders of the Wilderness, working his way through the ranks from fisherman to full wrangler. At night, Kauffman strummed the banjo for guests as the horses grazed the mountain passes. Twenty years later, Kauffman would return to make his home in those Rocky Mountains as he took on the chairship of the Department of Geological Sciences at the University of Colorado, Boulder.

Kauffman entered the forestry depart-



Robin Kauffman, left, Erle Kauffman, Jim Steidtman, and Claudia Johnson celebrate.

ment at the University of Michigan, Ann Arbor, and anticipated graduating with a specialization in fisheries. His earlier experience in the Rockies continued to haunt him, however, and after two years Kauffman changed his major to geological sciences and completed an MS on the Ordovician of Michigan, just one year after he received his BS degree. For his PhD, Kauffman returned to the Colorado Rockies for fieldwork and blended the Cretaceous stratigraphy and invertebrate paleontology of Huerfano Park, Colo., into a two-volume dissertation. During his last year at Michigan, Kauffman received a call

from G. Arthur Cooper inquiring of his interest in an apprenticeship at the Smithsonian Institution. Kauffman snapped up the offer, and the apprenticeship was converted to a full-time appointment after completion of his PhD degree in 1961.

Kauffman spent the next 20 years as a Mesozoic-Paleogene expert at the Smithsonian, and promotions from assistant to associate to full curator of paleontology followed in rapid succession. As part of his curatorial and research responsibilities, Kauffman was given the opportunity to travel the world in search of data to test hypotheses on evolution and extinction. These travels enabled him to interact with colleagues on many continents and attend international meetings. He received invitations to speak at universities in western Europe, the Soviet Union, Canada, the United States, Mexico, and South America. Kauffman has many colleagues through-

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Erle Kauffman celebrates retirement

Erle Kauffman celebrated his retirement from the department in the Georgian Room of the Indiana Memorial Union on May 18 with a reception, dinner, and 96-glass toast given by his family, members and spouses of the department and Indiana Geological Survey, and off-campus colleagues. His wife, **Claudia Johnson**, daughters **Robin** and **Erica** and their families, sister **Christina**, former wife **Carolyn**, and several in-laws joined in the festivities. Erle received a special phone call from son **Don** and family from Sydney, Australia, as part of the celebration. **Tony Coates**, assistant director for science at the Smithsonian Institution, served as master of ceremonies for the evening.

Many of Kauffman's former students and colleagues also joined in the celebration. These included **Al Fagerstrom** from Ann Arbor, **Jim Steidtman** from the University of Wyoming, **Enriqueta Barrera** from NSE, **Chris Khourey** from Ohio, **Denny** and **Karla Hubbard** from Oberlin College, **Carl** and **Joyce Koch** from Old Dominion University, **Peter Harries** from the University of South Florida, **Kristin Wood** from New Orleans, **Steve Good** and **Cindy Fisher** from West Chester University, **Dana Geary** and family from the University of Wisconsin, and Kauffman's first graduate student, **Bob Beauchamp**, from the University of Maryland. **Mike Arthur** from Penn State and **Brad Sagemen** of Northwestern composed a song, "Of Perilous Seas in Faery Lands Forlorn (Ode to Erle)," which they sang to Kauffman, accompanied by guitars, commemorating the "old days" when they played music together.

Erle and Claudia held a reception at their home prior to the banquet and a breakfast the following morning for their out-of-town guests. Congratulations, Erle, for your years of service to the department and IU and for your long and illustrious career as one of the world's foremost paleobiologists and stratigraphers. We are sure you will enjoy your retirement.



Erle Kauffman and Claudia Johnson share a special moment

Kauffman retirement

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out the world and is received warmly wherever he travels. He returns that warmth with smiles and a generous sharing of ideas, thoughts, and speculations about the evolution of life and the Earth's ever-changing environments.

While at the Smithsonian, Kauffman accepted an adjunct professorship at George Washington University and taught night courses in stratigraphy and paleontology in the geology department. In 1980, he was recruited as an external chair by the University of Colorado, Boulder, and accepted the offer. As his farewell gift, the secretary of the Smithsonian, J. Dillon Ripley, sent Kauffman on a scientific expedition to explore Tibet with an international group of scientists and medical doctors, an adventure that few have had the privilege to experience.

Kauffman spent his initial years at the University of Colorado as chair, negotiating 10 new positions and reassignments. It is fair to say that the department reached new heights in soft-rock geology and paleobiology at that time and that Kauffman played an integral role in the department's evolution into an acknowledged center of geologic research. In 1996, Kauffman joined the ranks of Indiana University as full professor of geological sciences.

The scientific community has honored Kauffman with numerous accolades for his research contributions in the fields of paleontology and sedimentary geology. A prestigious *Doctor honoris causa* from Georg-



Erika Lancaster, from left, Erle Kauffman, Tony Coates, and Jim Lancaster honor Erle.

August-Universität was presented to Kauffman in a special ceremony in Göttingen, Germany. The R.C. Moore Medal for "excellence in paleontology" and the Twenhofel Medal for "outstanding contributions and sustained excellence in sedimentary geology" were presented by the Society for Sedimentary Geology. The Gilbert Harris Award "in recognition of excellence in systematic paleontology" was presented by the Paleontological Research Institution. The "Scientist of the Year" award was given to Kauffman by the Rocky Mountain Association of Geologists, and an Outstanding Paper Award for work co-authored with James R. Steidtmann (titled

"Are These the Oldest Metazoan Trace Fossils?") was presented by the *Journal of Paleontology*. The American Association of Petroleum Geologists invited Kauffman to be distinguished lecturer for two separate speaking tours, and the American Geological Institute extended an invitation to tour as a distinguished lecturer. Kauffman was a Fulbright visiting scholar in Australia during the fall of 1986.

Throughout his career, Kauffman gave generously of his time to his students and professional societies. His former PhD students are placed in prestigious universities and are developing a generation of their own scholars. Kauffman has always considered society membership a privilege and an honor. He served as vice president of the International Paleontological Union, as vice president and president of the Paleontological Society, a society in which he held five committee chairships, and as president, secretary, and treasurer of the Paleontological Society of Washington.

Kauffman remains a source of pride to Indiana University through his research publications and his volunteer activities both on and off campus. He is engaged in fishing, photography, hiking, and writing poetry in his retirement, and plans to visit Antarctica and the Arctic. He attends the opera and theater regularly and enjoys the rich artistic environment the university community has to offer. In the tradition of his mother, he continues to fill his own house with the music of the masters.

Kauffman has traveled extensively in his life, and for this unique opportunity and for his beautiful children and grandchildren, he is eternally grateful.

— Claudia Johnson

Department of Geological Sciences faculty & staff

Professors: Abhijit Basu, Simon Brassell, James Brophy, Michael Hamburger, Claudia Johnson, Noel Krothe, Christopher Maples (chair), Enrique Merino, Greg Olyphant, Gary Pavlis, Mark Person, Lisa Pratt, Edward Ripley, Juergen Schieber, Lee Suttner, and Robert Wintsch

Part-Time Professors: Henk Haitjema (SPEA), Brian Keith (Survey), Peter Ortoleva (Chemistry), Carl Rexroad (Survey), and Jeff White (SPEA)

Professors Emeriti: Robert Blakely, J. Robert Dodd, John Droste, Donald Hattin, Norman Hester, Erle Kauffman, N. Gary Lane, Judson Mead, Haydn Murray, Albert Rudman, and David Towell

Research Scientists: Bruce Douglas, Erika Elswick, Chusi Li, Peter Sauer, and Arndt Schimmelmann

Postdoctoral Fellows: Alan Hoffmeister and David Finkelstein

Library: Linda Zellmer (Librarian), Barbara Cox (technical services), and Linda Stewart (circulation/reserves)

Staff: Kim Schulte, administrative assistant, chair's office; Patty Byrum, administrative secretary, chair's office; Amy Beatty, grant monitor/administrative support, fourth floor; Ruth Droppo, senior office services assistant, third floor; Christina Comerford, grant monitor/administrative support, fifth floor; Richard Gibson, resident manager, Geologic Field Station, Montana; DeAnn Reinhart, office services assistant, business office; Mary Iverson, student records; Cindy Hale, administrative secretary, Geologic Field Station; Ken Dehart, computer systems manager; Terry Stigall, geophysics electronics technician; Steve Studley, manager, mass spectroscopy lab; and David Dahlstrom, computer support, geofluid computational lab.

Lectures and Presentations

Colloquium Series 2001–02

- Aug. 27, faculty research presentations
- Sept. 10, Indiana Geological Survey research presentations

• Sept. 17, **William K. Hart**, Miami University: “Tephrostratigraphy and Tephrochemistry of the Middle Awash Region, Ethiopia”

• Sept. 24, **William I. Ausich**, the Ohio State University: “Origin and Early Evolution of Crinoids” (Owen Award Lecture)

• Oct. 1, **A.M. Celâl Şengör**, Technical University of Istanbul: “Is the Present the Key to the Past or the Past the Key to the Present?” (Sigma Xi Lecture)

• Oct. 4, **John Gibson**, Landmark Graphics Corp.: “The Future of Petroleum Geophysics - Great Scientists Needed Immediately: Apply Within” (Tudor Memorial Lecture)

• Oct. 8, **Colin C. Harvey**, visiting faculty, Indiana University: “Geothermal Energy — An Alternative Energy Source”

• Oct. 15, **Judith L. Hannah**, Colorado State University: “Re-Os Behavior in Mafic Magmas and Terrestrial Diagenetic Materials: Extracting Information from Open Systems”

• Oct. 22, **Meenaski Wadhwa**, Field Museum of Natural History: “Mars: The Perspective from Martian Meteorites”

• Oct. 29, **Enrique Merino**, Indiana University: “Mineral Replacement, ‘Force of Crystallization,’ Pressure-solution: Some History, New Views, Consequences for Rocks and Water-rock Interaction”

• Nov. 1, **Steve Ingebritsen**, U.S. Geological Survey: “Land Subsidence in the United States” (Birdsall-Dreiss Lecture)

• Nov. 12, **Mark A. Wilson**, the College of Wooster: “A Paleontological Perspective on Calcite Seas”

• Nov. 19, **Christine Shriner**, Indiana University: “A Petrological Approach to Archaeological Problem Solving”

• Nov. 26, **Haydn Murray**, Indiana University: “Kaolin Development — Brazil”

• Dec. 3, **Peg Yacobucci**, Bowling Green State University: “Explosive Evolution in a Cretaceous Sea”

• Jan. 14, **Graham E. Fogg**, University of California, Davis: “A Geologic Approach to Simulation of Subsurface Hydrology”

• Feb. 18, **George Guthrie**, Los Alamos National Laboratory: “Eat, Breathe, and Be Wary? The Biogeochemistry of Inhaled and Ingested Minerals”

• Feb. 21, **David Bish**, Los Alamos National Laboratory: “Environmental Applications of Clays and Zeolites”

• Feb. 25, **Chuanlun Zhang**, University of Missouri: “Geomicrobiology in the 21st Century: A Personal Perspective”

• Feb. 27, **Brian Beard**, University of Wisconsin: “Iron Isotope Mass Balance of the Oxygenated Earth”

• March 18, **John Swenson**, University of Minnesota, Duluth: “Where’s the Beach? Shoreline Response to Eustasy in a Moving-Boundary Framework for Continental-Margin Sedimentation”

• March 25, **Xiangkun Zhu**, Oxford University, UK: “Transition Metal Isotope Geochemistry and Cosmochemistry”

• March 28, **John H. McBride**, Illinois State Geological Survey and University of Illinois: “Unearthing the Midwest with Exploration Geophysics”

• April 1, **Lisa Tauxe**, Scripps Institution of Oceanography and University of San Diego: “Hunting the Earth’s Magnetic Field” (JOL/USSAC Distinguished Lecture)

• April 10, **James H. Knapp**, University of South Carolina: “The Vrancea Zone of Romania: Mantle Seismicity in Search of a Viable Subduction Zone”

• April 24, **Arthur B. Weglein**, University of Houston: “Removing Multiple Reflected Seismic Events from a Heterogeneous, Anisotropic Earth with Absolutely No Information About the Subsurface”

• May 13, **Mauizio Battaglia**, Stanford University: “Unrest at Long Valley Caldera: GPS and Gravity Investigations”

• May 29, **G. William Monaghan**, Michigan State University and Colgate University: “Holocene Millennial-Scale Cycles of Lake-Level, Alluviation, Climate, and Archaeological Site Burial in the Great Lakes and Mid-Atlantic Regions”

Other presentations

• Sept. 18, **William K. Hart**, Miami University: “Eruptive History and Petrogenesis of Recent Volcanism on the Oregon Plateau”

• Nov. 19, **Alan Hoffmeister**, Virginia Tech: “Comparison of Drilling Predation patterns Between the Late Paleozoic and Mid-Cenozoic”

• Jan. 14, **Graham E. Fogg**: “Ground Water Vulnerability and the Meaning of Ground Water Age Dates”

• Feb. 7, **Derek Fullerton**, Exmin

Corp.: “Genesis of Diamonds”

• Feb. 14, **Jeff Severinghaus**, Scripps Institute of Oceanography: “Precise Relative Timing of Atmospheric Methane and Climate Variation”

• Feb. 19, **George Guthrie**, Los Alamos National Laboratory: “From Structural Complexities to Concrete Applications: The Many Facets of Clay Science”

• Feb. 22, **David Bish**, Los Alamos National Laboratory: “The Heterogeneity of Clay Minerals”

• Feb. 26, **Chuanlun Zhang**, University of Missouri: “Microbial Biogeochemistry and Biocomplexity in the Gulf of Mexico Gas Hydrate Systems”

• Feb. 28, **Brian Beard**, University of Wisconsin: “Experimental Methods for Determination of Iron Isotope Fractionation Factors”

• March 26, **Xiangkun Zhu**, Oxford University, UK: “Transition Metal Isotopes: Techniques and Applications”

• March 29, **John H. McBride**, Illinois State Geological Survey and University of Illinois: “An Integrated Geophysical and Geological Study of an Intraplate Seismic Zone: Northern New Madrid Seismic Zone”

• April 11, **James H. Knapp**, University of South Carolina: “Imaging the Thickest(?) Sedimentary Basin in the World: Deep Seismic Reflection Profiling of the Petroliferous South Caspian Basin”

• April 25, **Arthur B. Weglein**, University of Houston: “An Inverse Scattering Subseries for Locating the Correct Spatial Location of Reflectors Without Knowing or Determining the Correct Wave-Speed”

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Geologic Field Station Update

Revised schedule leads to successful, uneventful summer

Summer 2002, when compared to summers past, was blissfully uneventful and academically successful. Last year we lived through all of the unforeseen ramifications of condensing the former Options I and II of G429/429e into a single offering and, at the same time, moving G329 into an early summer time slot. This year we knew what to expect and many (but certainly not all) of the pitfalls were avoided. The summer started with 13 talented students in G329. We continue to have a small but loyal non-IU following with one student each from Wesleyan and Kent State Universities. The faculty included **Jim Brophy**, **Dick Gibson**, **Erika Elswick**, **Clara Cotton**, **Andrew Oliphant**, and **Mark Person**. We had the added talents of **Dave Dahlstrom**, who assisted Mark Person for a week with various field hydrology exercises. This is the same faculty as last year, which suggests that we may finally be seeing some much-needed stability and continuity within the G329 faculty. The course now includes four to five daylong segments on geology (Brophy and Gibson), geomorphology and soils (Elswick), field ecology (Cotton), and hydrology (Person) and is capped off with a comprehensive (too comprehensive, say some students!) final study project. For the first time, the course actually started in Bloomington, with a three-day "orientation" period during which the students were given much of the background information necessary for the ensuing field work in Montana. The highlight of the course was, as always, the three-day trip to Yellowstone, which included a trip over the Beartooth Pass (with a chance sighting of four to five mountain goats), a night in Cooke City (with some heated pool games at the Hoosier Bar!), a trip around the Grand Loop (with various water chemistry exercises interspersed with pure tourism), and a night at Old Faithful.

G429/G429e started in early July and finished in mid-August. We had an enrollment of 62 students, which, from the teaching standpoint, was easily manageable. Logistically, we could handle more students (easily into the 70s), and there is no doubt that both the field station and the university could use the additional income. Consequently, if you know of any good students who are looking for a good (no ... not good ... the best!) field program, please steer them in our direction. The faculty included **Bruce Douglas** (associate director

of academics), **Ed Ripley**, **Sue MacDonald**, **Tom Howald**, and **Paul Jewell**. Ed Ripley and Paul Jewell arrived at the field station one week early to design a new teaching module that concentrated on fine-scale "mine" mapping and associated environmental problems. The project was deemed a success and, with some minor fine-tuning, should become a regular segment in G429/429e.

On the non-academic front, several things occurred. First and foremost, all of the dormitories and offices were paneled, thus covering up Styrofoam insulation board that has been exposed now for more than five years. The paneling was made possible by a very generous contribution from **Rocky Orgill**, AM'71, who has recently moved to Cody, Wyo., and will, we hope, become a regular visitor to the field station. The annual Pig Roast was held once again, and we had well over 50 friends and neighbors attend. Unfortunately, the weather did not cooperate, sending torrents of rain our way on the day of the picnic, but a good time was still had by all.

This year we were all reminded, once again, that the Field Station facility is more than 50 years old and in need of tender loving care (and a major overhaul!). One morning all of the drains in the upper campus wash house simultaneously backed up, indicating a major blockage somewhere in the system. Because the sewer system had been replaced in the mid-1980s, this came as somewhat of a surprise. After a visit from the local Roto Rooter outfit, it was determined that the wash-house had never been hooked up to the new system and was still operating off of an original (c. 1950s) buried septic tank and field! After three days of excavation, during which the men

and women were "sharing" the large men's shower room in the lower campus wash house (reminiscent of scenes from the movie *MASH*), the problem was finally solved. Out of all this, however, came the recognition that the plumbing in the upper (and lower) campus wash houses has deteriorated to the point where leakage sends gallons of water per minute into the sewer system and the main septic field, located beyond the lower campus. Not only does this have the potential to destroy the septic field, but it also puts added stress on the main water pump, which had to be replaced last year. The bottom line is that a decision has been made to replace all of the plumbing in the upper and lower campus wash houses over a two-year period. This will be an expensive project (greater than \$10,000). Previous requests for financial support from the university for such an undertaking have been unsuccessful. Though we will try again, it is most likely that we will have to pay for this much-needed renovation out of our own maintenance fund. Any financial contributions to help offset the cost of this necessary renovation will be greatly appreciated.

On a final note, at least one lawsuit stemming from the 1998 fatal auto accident involving a field station vehicle is still active. In early March, Indiana University lost an important legal ruling that bolstered the plaintiff's case; the actual trial to determine whether or not Indiana University will have to pay damages was scheduled for early November. Due to a last-minute ruling by the judge, the trial has been continued to a later date. More information on this will undoubtedly come your way in next year's alumni bulletin.

— Jim Brophy



Education in the field at the Geologic Field Station

Indiana Geological Survey Update

Grant enables atlas of digital maps

Indiana will soon join the growing number of states that has a computer-based atlas of geographic information, thanks to a grant from the Indiana Department of Transportation that is being shared between the Indiana Geological Survey and an Evansville-based consulting firm. Known as a geographic information system or GIS, the atlas of digital maps presents information on a variety of themes ranging from geologic features to power lines to hydrology to county boundaries. The themes can be assembled by the user in any order, creating a custom map to suit a specific need.

Indiana Geological Survey staff will work with collaborators to obtain data from a variety of state and federal agencies, including the Environmental Protection Agency, the United States Geological Survey, the Federal Emergency Management Agency, the Indiana Department of Environmental Management, and the Indiana Department of Natural Resources. The information then will be edited and processed into standardized format.

The data will include the geology, biology, history, mineral resources, caves and karst, hydrology, geologic hazards, and demographic and infrastructure features of the state. Included in the geologic hazards are earthquake epicenters, faults, and paleo-liquefaction features.

"It's a powerful way of delivering all kinds of information. We're taking information, standardizing it, and compiling it into a database, making the data more readily

available and easily manipulated," GIS project director **Denver Harper** said.

The Indiana Geological Survey has already laid much of the groundwork for producing a statewide GIS. Last fall, IGS staff completed a GIS for southwestern Indiana. They compiled 171 layers of geospatial information for 26 counties. That GIS includes the counties along and west of Indiana State Road 37 and south of Interstate 70, and Brown County. (To use the southwestern Indiana GIS, go to the IGS Web site at <http://igs.indiana.edu> and follow the link from the front page. It is also available for sale on CD-ROM; contact the IGS sales office for more information, (812) 855-7636.)

"We're expanding a successful project from southwestern Indiana to the rest of the state," IGS director **John Steinmetz** said.

The Department of Transportation plans to use the information to aid in transportation planning. The information can also be used in urban development planning, business development, and industry.

The IGS will also make the statewide data available on the Web and on CD-ROM. The Web version will consist of interactive maps, complete with the capability to zoom and pan, and will include metadata and browse graphics. Then anyone will be able to create custom maps of Indiana, including whichever pieces of information are relevant to their own purposes.

Researchers plan to complete the project by January 2004, but new information will continue to be added into the indefinite future.

State Geologists Annual Meeting

The Indiana Geological Survey served as host organization for this year's annual meeting of the Association of American State Geologists (AASG) held in New Harmony, Ind., June 23–25. The membership of the AASG consists of the directors of geological surveys in each of the 50 states and Puerto Rico. The meeting was convened in the recently rebuilt Rapp Granary/David Dale Owen Laboratory in New Harmony (see separate story in this issue). Historic New Harmony was selected for this meeting because of the role that town played in the development of geology in early 19th-century United States. It was there that David Dale Owen established his famed laboratory and mounted numerous expeditions to explore the geology of the then young state of Indiana and the Northwest Territories. Approximately 150 visitors, including state geologists, some of their staff, their spouses and families, and various public officials and dignitaries were able to attend. Indiana and the IGS had a wonderful opportunity to show off Hoosier hospitality.

IGS bookstore gets functional facelift

We invite you to come in and shop at the Indiana Geological Survey bookstore, located in the IGS building on the Indiana University Bloomington campus. You can browse IGS publications and choose from a variety of geologic gift items, such as IGS T-shirts and caps, popular geology books, whetstone coasters, and posters. The bookstore has been redesigned to give you better access to our products. And now we can validate your parking stub from the Fee Lane garage (with purchase), so that parking will cost only \$1 per hour.

Located at the corner of 10th Street and Walnut Grove in Bloomington, in the east wing of the IU Geology Building, we are open from 8 a.m. until noon and 1–5 p.m. weekdays.

Web site redesigned

The IGS Web site has a new look! The new design includes many features that improve the performance of the site and help visitors find information faster and easier. The

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The IGS hosted the AASG annual meeting, held this year in New Harmony, Ind.



Publications are more accessible than ever at the redesigned IGS bookstore.

Survey

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home page of the new site serves as a source of news about the site, the IGS, and Indiana geology in general. Visit the site at <http://igs.indiana.edu>.

Feedback from around the country already has been quite positive. For instance, from the Texas Bureau of Economic Geology, we heard, "I wanted to tell you what a great job you did. It's beautiful ... well organized, and uncluttered."

Sections reorganized

The internal organizational sections of the Indiana Geological Survey have recently been reorganized. The Mineral Resources Section is now the Coal and Industrial Minerals Section, with **Nelson Shaffer** as head; the Energy Resources Section is the Subsurface Geology Section, with **John Rupp** as head. Staff from the former sections have been reassigned to better reflect the missions of the new units.

Survey staff notes

Carl Rexroad, eminent micropaleontologist and longtime IGS geologist, was honored by the American Association of Petroleum Geologists for his 50 years as a member of that organization.

The Professional Geologists of Indiana recently awarded a 2002 Certificate of Appreciation to IGS publication sales office manager **Janis Fox**. Specifically, PGI noted Fox's outstanding organizational skills,

prompt responses to requests, and hard work in helping people seeking information from the IGS. The PGI also recognized **Dick Powell**, IGS research affiliate, with a PGI Distinguished Service Award for his lifelong dedication and contributions to the understanding of Indiana geology and advancing the Geological Survey. Fox and Powell received their awards at PGI's annual meeting in April.

The U.S. Geological Survey has again funded, through its STATEMAP program, the continuation of IGS mapping efforts in Indiana's Heartland. **Matt Berry, Steve Brown, Ned Bleuer, Marni Dickson, Walter Hasenmueller, Christina James, Jennifer Olejnik, Ray René, and Robin Rupp** are involved in this project. The Indiana Heartland region is experiencing an extreme rate of growth; planners need accurate bedrock geologic maps to assess

local mineral resources that can be used to sustain growth at the lowest possible cost and to identify bedrock aquifers that the increased population is likely to use as a source of ground water.

Maria Mastalerz, coal geologist, received a grant from the Indiana Department of Commerce for a two-year project to study mercury distribution in Indiana coals.

John Comer and John Rupp (IGS), and **Peter Ortoleva** (Department of Chemistry and the IU Laboratory of Computational Geodynamics), received authorization from the U.S. Department of Energy to begin Phase II of a project to develop a simulation-enhanced fracture detection methodology. The project will integrate basin simulation with seismic and other data to predict the location and producibility of fractured gas reservoirs.

Nelson Shaffer has been consulting with archaeologists from the Glenn A. Black Laboratory of Archaeology at Indiana University about the mineralogical aspects of artifacts from the Hoosier National Forest. He has also been advising the DNR Division of Reclamation about using GPR for archaeological studies of mining areas.

Sam Frushour, Denver Harper, and Nancy Hasenmueller attended the Karst Workshop sponsored by the U.S. Geological Survey and the National Cave and Karst Research Institute hosted by the Kentucky Geological Survey. The purpose of the workshop was to discuss guidelines and standards in producing state digital karst maps that could be linked to and be helpful

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Carl Rexroad investigates enigmatic microscopic conodonts using digital photomicrography.

Faculty News

Abijit Basu has been teaching in the Honors College as well as in the department. He serves on the advisory boards of Collins Living Learning Center, India Studies, and Individualized Majors Program on campus, and on the Science Board of the International Research School of Planetary Sciences (Italy). He continues publishing and conducting research on lunar regolith with NASA support and on the Venice Lagoon with support from CNR (the Italian equivalent of NSF and the National Research Council in the United States). He was on a NASA grants panel on instrumentation. He is a member of the science board for the International Research School for Planetary Science. Basu is chair of the Faculty Affairs Committee of both the Bloomington campus and the university as a whole, as well as Faculty Councils and the Honorary Degrees Committee of IU. He continues to edit the GSA book series (see article in this issue).

During the past year **Simon Brassell** has been working on sediment cores recovered during his participation in ODP Leg 198, which drilled Shatsky Rise in the West Pacific. The organic-rich sediments contained up to 35 percent total organic carbon, derived from algae and bacteria. Brassell has given presentations on this research at many venues, including North-Central GSA, a workshop on Cretaceous

Climate and Ocean Dynamics in Colorado, the Organic Geochemistry Gordon Research Conference, the VM. Goldschmidt meeting (Geochemistry Society) in Davos, Switzerland, the GSA annual meeting in Denver, and the AGU meeting in San Francisco. He also participated in the planning stages for the future of ocean drilling. In June, Brassell co-authored a workshop on Course Portfolios at the American Association of Higher Education meeting in Boston. He continues to participate in the Scholarship of Teaching and Learning program on campus. Brassell visited Britain last April for his parents' 50th wedding anniversary.

In addition to his usual summer spent at the Judson Mead Geological Field Station where he is director, **Jim Brophy** traveled to Greece, where he collected samples from the Aequina Volcano and worked with **Christina Shriner** in collecting clay samples that may have been used for pottery making by the ancient Greeks. He is currently conducting experimental studies on dissolution rates of silicate minerals in basaltic magmas. In cooperation with **Chusi Li**, he is studying the behavior of Ni in sulfur-bearing basalt systems. He has recently completed a paper on plagioclase textures in sea floor basalts from the East Pacific Rise. Brophy collected samples used in this study a few years ago on a dive in

the deep submersible *Alvin*.

Last year we reported on **Erika Elswick's** Ocean Drilling Program cruise to the South Pacific. She is now working on samples collected on the cruise and plans to publish papers on trace element distribution in one of the cores and on a sulfur budget based on S stable isotopes combined with organic carbon in low temperature, distal veins. She participated in the Continental Scientific Drilling Program sampling party in Mexico City from the Chixulub Impact crater core. Elswick and graduate students **Ernest Johnson** and **Sohel Anwar** spent two weeks studying and sampling the Permian Santa Rosa Group strata in Belize. The students will be working on stratigraphic and geochemical projects in this unit. Elswick returned to Montana last summer to teach soil and water chemistry as part of G329 at the field station.

Last summer, **Bruce Douglas** made his annual trip to the Judson Mead Geological Field Station, where he is associate director. Douglas was especially involved with the environmental option of G429. He is a member of the steering committee of the Griffy Research Preserve (see separate article) and has been actively involved with expanding programs at that facility. He has prepared a guidebook to the geology of the preserve and led public field trips at the site.

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Survey

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in the development of a national karst map.

Agnieszka Drobniak has joined the staff of the Coal and Industrial Minerals Section as a coal resource specialist. She will be undertaking a number of tasks related to the geology and utilization of Indiana coals. She recently obtained her doctorate at the University of Mining and Metallurgy in Krakow, Poland. Drobniak had spent six months at the Indiana Geological Survey in 2001 as a scholar supported by the Batory Foundation.

Brent Foshee has joined the Center for Geospatial Data Analysis as an assistant hydrogeologist. Foshee worked as a research associate with the IGS in 1998 and most recently has been a seismic data manager at the University of Alaska in Fairbanks. He is working with **Sally Letsinger** on the Source Water Assessment Project and is completing his master's degree in geophysics in the Department of Geological Sciences.

Wilfrido Solano is our new reservoir geologist who will be working on the CO₂ sequestration project.

Ginger Korinek has joined the Center for Geospatial Analysis as a research assistant; she is working on developing watershed modeling tools using GIS with IGS hydrologist Sally Letsinger and **Greg Olyphant** of IU's Department of Geological Sciences.

For the past year, **Leslie Drozen** has done a wonderful job at the IGS as the editorial intern. She is working on a second bachelor's degree in geology and on a master's degree in secondary science education at IU. We

wish her well as she pursues her studies; she will be missed.

Micah Foust is the new research associate hired to develop GIS coverages of the Illinois Basin for a project sponsored by the U.S. Department of Energy to predict the location and producibility of fractured gas reservoirs.

— *Deborah DeChurch*

AASG Mentored Field Experience plays important role in research

Drew Smith, an undergraduate in the Department of Geological Sciences, finished collecting data for his field work component of an Association of American State Geologists Mentored Field Experience project mentored by IGS geologists **Todd Thompson** and **John Johnston**. Smith's work is an integral part of Thompson and Johnston's Lake Superior water level research. They are studying the modern shoreline so that they can interpret ancient shorelines preserved further inland. Smith's work included collecting beach profiles, grain-size samples, box cores, vibracores, and GPR lines.

Faculty news

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Graduate student **Erica Pfiffer**, working under Douglas's direction, recently completed a study of xenoliths from Pliocene lava flows in southern South America. These xenoliths are samples of subsurface rocks in the area.

Last year, **Michael Hamburger** spent a delightful sabbatical semester, together with his family, in Boulder, Colo. He spent the leave working with colleagues from the UNAVCO Consortium, an NSF-sponsored research organization that supports research using Global Positioning System measurements for a variety of earth science applications. His research with geophysicist **Chuck Meertens** involved application of GPS measurements for volcanic and tectonic studies in the Philippines. Along with a team of IU students, Hamburger completed a major GPS field experiment in the wilds of southern Indiana, Illinois, and western Kentucky this summer. Hamburger and **Gary Pavlis** co-direct the IU PEPP Earthquake Science Program, a high-profile

seismology outreach program that brings research-quality seismic instruments into schools around the region. Hamburger has led workshops on magmatic processes and on education and outreach, in connection with planning for the EarthScope initiative.

This year, **Claudia Johnson** is looking forward to teaching a renamed version of GL14, now called *Dinosaurs and Their Relatives*. She expects a full house. Johnson has been exceptionally busy during the past year preparing her tenure dossier. She has been studying the tropical reef ecosystem with an emphasis on synthesizing patterns of reef evolution and demise. She is examining reefs that evolved under warm, "greenhouse" conditions. Ultimately she hopes to be able to make predictions about the future health of the modern reef ecosystem. She was invited to present a summary of her work at the Geological Association of Canada Annual Meeting, at the University of Saskatchewan last May 2002. Johnson has been a Paleontologic Society Distinguished Lecturer for 2000-02. She took graduate students **Sonya Hernandez** and **Leigh Fall** and IU STARS

undergraduate **Selena Medrano** to Puerto Rico to study development of Oligocene reefs. Johnson is the contact person for paleontology on our departmental Web site and answers 20-30 questions each year from local fossil collectors, teachers, parents, and kids with fossils. (See separate article on outreach programs.) Johnson says she has had no time for leisure activities this year, with tenure preparation!

Noel Krothe led his Hydrogeology of Carbonate Systems course to Mammoth Cave last year. They studied the stratigraphy, geomorphology, and paleo drainage involved in formation of the cave. Krothe, **Mark Person**, and **Gary Pavlis** team-taught Field Methods in Hydrogeology on Nantucket Island in Massachusetts, where Person has an ongoing research project. They stayed at the University of Massachusetts field station. They used a variety of chemical, physical, and geophysical techniques to study the aquifer system. Krothe also spent six weeks on a lecture tour in Slovenia, the Czech Republic, and Italy last summer, discussing the hydrogeochemistry and isotopic composi-

Linda Zellmer becomes head of Geology Library

On Jan. 14, 2002, Linda Zellmer became head of the Geology Library. Zellmer has a strong background in both geology and library science, making her well suited for her new position. She is a native of Oconomowoc, Wis., a town between Madison and Milwaukee, "on the edge of the kettle moraine." She earned a BA degree with a dual major in geology and biology from the University of Wisconsin-Oshkosh before moving to the College of William and Mary, where she earned an MA degree in marine science. After working for a time for Texaco, she returned to school at the University of Wisconsin-Milwaukee, where she received a master's degree in library and information science. She began her library career in the Physical Science Library at Oklahoma State University before moving to the University of Wyoming, where she was geology and map librarian. In her position prior to coming to Indiana, Zellmer was map librarian at Arizona State University at Tempe.

Zellmer has been active in several national and regional professional library associations, including the American Library Association, Special Library Association, and Geoscience Information Society. Currently she edits the *Western Association of Map Libraries Information Bulletin*. She is especially knowledgeable in the field of geographic information systems and brings to our library a wealth of knowledge in various computer applications, especially in relation to maps.

One of the first problems that Zellmer has had to face at IUB is an ever-growing collection with no increase in space for shelving new publications. An additional problem with our cramped quarters is that the aisle width and shelf spacing in the Geology Library do not comply with the Americans with Disabilities Act standards. One solution to this problem will be to store seldom used publications in an auxiliary library facility elsewhere on campus. This material can be accessed quickly, but will not be occupying valuable shelf space in the library. Zellmer notes that we have many volumes such as annual reports,

schedules of oceanographic cruises, and statistical reports, which are of limited interest as research materials, that can be stored in the auxiliary facility. Another program that will not only save shelf space but will protect older journals is the JSTOR project. Older volumes of some journals such as the *American Journal of Science*, *Journal of Geology*, and older paleontologic journals would be scanned and available in digital form, with the actual volumes stored in a secure, off-the-shelf location.

Recent years have seen a revolution in map publication. Increasingly, maps are available online, often without printed counterparts. This has caused an increasing need for large color printers when paper copies are needed. We are fortunate to have such printers in the Indiana Geological Survey and the Geography Library, but the time could come when we will need a plotter in the Geology Library also.

Zellmer pointed out that generous donations by geology alumni and others through the years have helped the Geology Library maintain strong collections when funding from the general budget has not been sufficient to buy all items that were needed. The Kaska Fund has been especially helpful in maintaining our paleontologic library collections. Additional help is needed, however, for acquiring special items such as geologic reference materials, a treatise on geochemistry, the geologic map collection, and geologic publications for non-scientists.

We welcome Zellmer to our geological family and wish her a long and fruitful career in the Geology Library.



Linda Zellmer

tion of mineral springs in southern Indiana. He is conducting joint research with geologists in those countries. After 27 years of service on the departmental faculty, Krothe will be retiring at the end of the academic year.

Chusi Li and **Ed Ripley** have received NSF support to study Ni-Cu deposits in western China, Siberia, and Labrador. This work has already resulted in the publication of several papers. Li and **Jim Brophy** are cooperating on high-temperature experiments to study formation of nickel deposits from magmatic systems. Along with **Enrique Merino**, Li is studying replacement features in the Bushveld Complex of South Africa. Li should be commended for the remarkable accomplishment of co-authoring four of the total of eight papers in a special issue of the *Journal of the Geological Society of South Africa* on platinum-group elements.

On the home front, Li's wife, **Wenan Liu**, is now a computer programmer for the IU Human Resources office. His teenage daughter, **Angela**, is on the Bloomington High School South swim team and teaches math to students after regular school hours. Li reports that his 4-year-old son, **Frank**, is a budding environmentalist who will not let his parents spray the ants in the kitchen!

See the chair's greeting and other parts of the *Hoosier Geologic Record* for information on activities of **Chris Maples** during the past year.

Greg Olyphant received a special commendation from the IU Science Coalition, which IU President Myles Brand notes recognizes his "... pioneering efforts in developing a faster and more accurate system for predicting *E. coli* blooms" in the Great Lakes. Olyphant is an organizer of the Center for Geospatial Data Analysis, which is administered by the Indiana Geological Survey with **Ed Hartke** as director. The principal researchers in the center are Olyphant, **Denver Harper**, PhD'89, and **Sally Letsinger**, PhD'01, both from the Indiana Geological Survey. Through contracts and grants totaling more than \$900,000, the center presently employs four full-time research scientists (all IU graduates or graduate students) and provides research assistantships for four departmental graduate students. In addition, they sponsor two undergraduate student interns. As part of the start-up package for the new IU Griffy Research and Teaching Preserve, Olyphant received funding to install and instrument three stream monitoring stations. Each station is in a unique ecological setting.

Last year, **Enrique Merino** and his

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Lisa Pratt studies "Life on the Fringes"

Lisa Pratt and graduate student **Erik Boice** have been studying life in one of the places you would least expect to find anything alive, in fluids in 2.8 billion-year-old rocks 3.1 kilometers below the surface in a gold mine in South Africa. Believe it or not, compelling evidence indicates that anaerobic, sulfate-reducing bacteria are alive and well in the water under these conditions. Pratt and Boice have extracted water from these rocks, taking great care not to contaminate it with outside microbes. The ratio of stable isotopes of sulfur in sulfate and sulfide in the water can most convincingly be explained only by the presence of sulfate reducing organisms in the water. To obtain these samples, Pratt and Boice have descended deep into the mine, often having to use rickety ladders and crawling through narrow spaces to reach the sampling site. The study is being funded by a grant from NSF as part of their program to support research on life in extreme environments.

This summer, Pratt, **Donald Burke** from the chemistry department, and **Carl Bauer** from the biology department learned that they have been awarded \$1 million to study life in alkaline lakes that dry up annually. The program is called "Life at the Edge of Hydration." Again, this research is designed to study life at the extremes under conditions that hardly seem hospitable for life in any form. Material for the study will come from the Warner Valley Wetlands of south-central Oregon. This is an area of internal drainage in a basaltic terrain, perhaps not unlike conditions that may have prevailed on a very primitive Earth or Mars. The study is aimed at understanding microbial response to these conditions at scales ranging from individual molecules to organisms and communities. Pratt and her students will monitor seasonal changes in the water and sediments using microelectrode arrays, radiation spectrometry, and stable isotopic analyses of hydrogen, carbon, oxygen, and sulfur. Burke and his group will be studying ribozymes from organisms collected in the field, emphasizing reactions that might have been used by some of the earliest organisms on Earth. Bauer's group will study the diversity of microbial species found in the lakes and will culture microorganisms from the lake to study their physiological and

geochemical characteristics.

One of the major goals of both of these studies is to better understand conditions and processes that led to the origin of life on Earth or other planetary bodies. Perhaps this study will help to answer the question of whether there is or was life on Mars.

The field crew prepares to descend in the South African gold mine, site of Lisa Pratt's research on life on the fringes.



Erik Boice climbs up rickety ladder in South African gold mine.



Ken Dehart joins staff



Ken Dehart

The most recent addition to our department staff is our computer systems manager, **Kenneth R. Dehart**. Dehart is a native Hoosier who has lived in Bloomington for the past 30 years. He received his BS degree from IU in biology and chemistry education in 1974. He stayed at IU after graduation, working with computers in the chemistry department. In 1985, he received an MS degree in computer science and went to Washington, D.C., where he worked for the BDM Corp., a firm that did contract work for the Department of Defense. He returned to IU and the chemistry department in 1987, where he worked as a computer specialist, specializing in UNIX support. He was a member

of a team of computer support people in chemistry, and so his work was more specialized than it is in geology, where he works with all faculty, staff, and students with problems on PCs and Macs as well as UNIX systems.

Dehart is married and has two children and three stepchildren. His interests include real estate and the stock market. When asked what he thought the biggest changes would be in computing in the department in the next few years, Dehart responded that we will see more work being done on laptops with increased use of wireless connections. He says that he has found his new job in geology very enjoyable and commented that people have been helpful and understanding. We are pleased to welcome Dehart to our geology family.

Research Center at Laurentian University, is on campus on a sabbatical leave. Ripley serves on the IUB Educational Policies Committee. He is also an associate editor for *Geochimica et Cosmochimica Acta* and *The Canadian Mineralogist*. He is serving on the NSF panel for petrology and geochemistry.

Peter Sauer is one of the team of geologists who succeeded in obtaining a grant from NSF to purchase a new isotope-ratio-monitoring mass spectrometer. The new instrument will be very valuable in Sauer's ongoing research into paleoclimate and provenance of organic molecules in lake and ocean sediments. In collaboration with **John Hayes** of Woods Hole Oceanographic Institution, Sauer has continued his paleoclimate investigations of the Black Sea based on D/H ratios of biomarkers. In addition, he has developed compound-specific D/H ratios of biomarkers from Arctic lake sediment. In March, Sauer took part in a lake-sediment coring expedition of lakes in northwest Iceland in collaboration with **Giff Miller** (University of Colorado) and **Aslaug Geirsdottir** (University of Iceland). Sauer will be using these sediments to investigate late-glacial and Holocene environmental change (both natural and anthropogenic) in a region where climate variability has a major influence on human occupation. The most important event last year in the life of Sauer and wife **Debbie** was the birth of **Noah** last September.

Among other projects, **Arndt Schimmelmann** continues to conduct research on thermal maturity in source rocks with **Maria Mastalerz** of the Indiana Geological Survey. He also has been conducting research on organic material from the New Albany Shale with graduate student **Grzegorz Lis**. He and graduate student **Miriam Attenoukon** are studying carbonaceous material from meta-sediments from Appalachian Mountains in New England. Schimmelmann is principal investigator on a grant that provided funds for purchase of a new mass spectrometer, which should be installed in the biogeochemistry labs this year. On the personal level, Schimmelmann continues to be active as a leader for the Boy Scouts.

With publication of the results of the paleohydraulic studies of the Lower Cretaceous foreland basin deposits in Wyoming, **Lee Suttner** and his students have completed a nearly 15-year program of study in the Western Interior. Now Suttner has rekindled his interest in the Pennsylvanian arkosic rocks in Colorado. In May, he co-led a field trip to Colorado with **Lyn Sorengan** of the University of

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Faculty news

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family went to Spain during spring break for a big reunion of relatives (a total of 40) in the city of Cuenca. Merino returned to Spain in the summer to participate on a research panel and to see spectacular outcrops of dolomites in the Cretaceous Basque-Cantabrian Basin. He is working on the idea that the brecciated and banded textures common in these and many other dolomites are produced by the force of crystallization generated by dolomite veins. Merino continues to work at a distance with Ray Fletcher, **Yifeng Wang**, PhD'93, **Joe Meert**, and **Angels Canals** of the University of Barcelona, and in Bloomington with **Chusi Li**, **Ed Ripley**, and graduate student **Ye Zhang**, on agate origin, geochemical ramifications of replacement and force of crystallization, dolomitization, silcretes, terra rossa, and on the thermodynamics of reactions involving petroleum-derived contaminants. **Mike May**, BS'82, PhD'92, may soon join in the terra rossa study.

Gary Pavlis is spending the academic year (2002-03) at the University of California, San Diego, on sabbatical leave.

Mark Person participated with **Gary Pavlis** and **Noel Krothe** in a field methods in hydrogeology course on Nantucket Island last summer. He also taught in the G329 course in Montana.

Lisa Pratt is one of three collaborators (with **Donald Burke** in chemistry and **Carl Bauer** in biology) to receive a five-year, \$1

million award from the David and Lucille Packard Foundation's Interdisciplinary Science Program (see sidebar on page 19). This is the first Packard Grant that Indiana University has ever received. Pratt served as chair of the steering committee for the new Science Building that was approved by the IU Board of Trustees last fall. Pratt is cutting back on her administrative involvement so she can concentrate on research. Last spring Pratt received the Outstanding Educator Award from the Eastern Section AAPG. The daughters of Pratt and husband **Bruce Douglas**, Madeline, 13, and Isabel, 9, are busy with school activities, especially soccer. Pratt, the two girls, and Pratt's father, 91, made their annual trip to Montana last August to join Bruce at the end of his teaching duties at the Judson Mead Field Station.

Ed Ripley is working on several projects concerning magmatic mineral deposits (several in collaboration with **Chusi Li** (see above)). Graduate student **Jeffrey Mariga** is working on the problem of country rock assimilation and ore genesis at Voisey's Bay. **Paula Shafer** is doing her dissertation on the origin of Pt-group element mineralization in the Birch Lake area of the Duluth Complex. **Arindam Sarkar** is just beginning MS work on magmatic sulfide ore genesis. **Wes Matthews** is finishing his MS work on the genesis of some pegmatites in the Black Hills. **Sisir Mondal** is in Bloomington for a year from Jadavpur University in Calcutta studying chromite-related PGE deposits. **Mike Leshner**, BS'74, MS'76, director of the Mineral Exploration

A tribute to Mary Iverson for 38 years with the department

Mary Iverson has the longest tenure of any present staff member. She celebrates her 38th anniversary with the department next April. She's had her present position as keeper of graduate and undergraduate student records since at least 1977. Iverson has also served as the chair's secretary, keeper of the keys, and coordinator of student office assignments. She's often the first contact for students making inquiries or sending in applications and often their last contact as well, as she helps guide graduating students through the complexities of getting dissertations bound and dotting all the i's and crossing all the t's of the degree-granting process. The shelves in her office are filled with original copies of theses and dissertations, as well as up-to-date materials for incoming and applying students.

Tom Hanley, PhD'75, expressed a very common feeling among alumni: "What I remember most about Mary is her great infectious sunny smile that would always make you feel happy when you had the good fortune to run into her. I really felt she cared about the individual graduate students."

Bill Elliott, MS'98, PhD'02, has these recollections of Iverson: "I remember meeting Mary at the Indianapolis airport on my visit to Indiana University as a prospective graduate student. She met me at the gate, and then we quickly rushed to a second gate in the airport to greet another visiting student. She didn't want the student to feel confused or lost. She is committed to making students feel welcome and meeting their needs. Thanks, Mary, for your sunshine, and for your work!"

Lisa Rhoades, MS'91, PhD'99, has this to say about Iverson: "She is and was for me while at IU a godsend! She not only guided me through the mysterious maze of paperwork required to complete my degrees, and

made sure I met all deadlines, but she also was one of my best friends and confidants. Whenever I needed help with course or degree requirements or when I was confronted with seemingly impossible hurdles to overcome, Mary was there to give me a hand. She guided me through, around, and over all the obstacles that had a way of popping up. She brightened every day with her smile and laughter and was always there when I needed someone to lean on. I attribute the eventual successful completion of my degrees in part to Mary. She should be highly praised and recognized for all she has done for the faculty, staff, and students of the IU Department of Geological Sciences. Her presence in the department and efforts on behalf of the students are part of my fondest memories of IU! The friendship she extended to me will always be near and dear to my heart. I love you Mary!"

Several of our alumni got to see Iverson for the first time in years at the GSA meetings in Denver, where she was working at the IU recruitment booth. **Dick Gibson, BS'71**, stated, "Her connections with alumni, current students, and all the people who visited the booth made it a wonderful spot within the convention. I wouldn't be surprised if Mary single-handedly has impacted [some of the] prospective students enough to make them come to IU!"

Thank you, Mary, for a job well done. But it is obviously much more than a job to you, and the department has benefited greatly from that. If there is one constant through the many changes the department has undergone in the last 38 years, it is Mary Iverson. By the way, Mary, you don't have to always call me "Dr. Dodd." Bob would be fine.

(Note: This article was modified from an entry prepared by Dick Gibson for the departmental Web site.)



Mary Iverson

Faculty news

(continued from page 19)

Oklahoma for students in his basin analysis course to study the Fountain, the Cutler, and the Minturn Formations. In August, Suttner and **Greg Mack, MA'75, PhD'77**, returned to the Colorado Springs area, where his initial work on the Fountain Formation served as the stepping stone to the comprehensive work done by a number of his former students in the area during the 1980s. In July, Suttner made an invited presentation at the AAPG sponsored Hedberg Research Conference on "Late Paleozoic Tectonics and Hydrocarbon Systems of Western North America." This conference had a special focus on the enigmatic sedimentary-tectonic history of

the Ancestral Rocky Mountains. The conference may lead to creation of a more formal multi-institutional effort to better understand the Late Paleozoic history of the western interior. Suttner and his wife, Ginny, both will be retiring at the end of this academic year. They hope to continue in a part-time volunteer way to serve the two academic institutions with which they have been affiliated (Ginny is principal of St. Charles School). Suttner also will continue his work with the GSA Foundation. The Suttners gained two new grandchildren during the past year, as daughters Lisa (residing in Bloomington) and Lori (living in Grand Rapids, Mich.), gave birth to boys. Daughter Jennifer and her family continue to live in Orlando, where her spouse is employed by the

Disney Corp. and she continues in human resources for the Kellogg Corp. Son Jim is a CPA in Bloomington.

Bob Wintsch is on sabbatical leave for the academic year. He is still recovering from a concussion he received in June 2001 while doing field work in New England. (Actually, he was walking to McDonald's for breakfast at the time. Is there a moral there?) He is still doing research in New England and also is working with students and other geologists in the southern Appalachians. He has projects under way in Tibet and is planning research in the Alps based on preliminary field work undertaken during his present sabbatical. He led a G420 field trip last May to New England and Ontario, studying 2.5 billion years of history in 10 days. Wintsch says they had a ball.

What do emeritus faculty do after retirement?

We currently have 10 emeritus faculty members in the department. If the trend continues, we will have more emeriti than regular faculty members! Each is enjoying a full retirement with a variety of activities within and outside of the Department of Geological Sciences. As many of our alumni may be especially interested in their former mentors who are now retired, we thought a special article on what they are doing would be appropriate. As you can see from the sketches below, our emeritus faculty have not retired to "sit in the rocking chair."

Bob Blakely has been retired since 1986 and is still active with volunteer work and travel. For many years Blakely has been a volunteer with the Red Cross, including service on the chapter's board. He also volunteers by teaching computer classes to seniors in the SeniorCyberNet program and in the Bloomington Hospital's Community Health Education Courses. Blakely has also served on the Advisory Board for the department for many years. He continues to be interviewed about and asked to give talks on the seismicity of the Midwest. Blakely and wife Rose were international travelers for many years. They have visited every continent except Antarctica. Recently they have concentrated on travel within the United States. Their current project is to explore and photograph the major rivers within our land. So far they have journeyed along the upper Mississippi and the Ohio Rivers. They plan to explore the Missouri River this summer.

You are looking at one of the things that has been keeping **Bob Dodd** busy during the last two autumns, i.e., editing the *Hoosier Geological Record*. Last spring, he taught a special short course in laboratory methods in carbonate petrology for graduate students in the department. He plans to teach a lecture course in carbonate petrology this spring. He has also taught two continuing studies courses on topics of "Limestone and Tombstones" and "Geology for Travelers." Dodd is editor of the Annuitants *Newsmatch*, the newsletter for the IU Annuitants Association. He and wife Joann have traveled extensively since his retirement and frequently give slide presentations on their adventures to places such as Micronesia, New Zealand, Australia, Lord Howe Island, Patagonia, and China. Dodd continues to be an avid runner, bicyclist, and birder.

Come to the Indiana Geological Survey most any morning and you will find **John Droste** hard at work studying well logs and samples. Droste is continuing to do one of the things that he enjoys most, researching

the subsurface of Indiana. Among the many projects Droste has completed since retirement was a detailed subsurface study of the Pennsylvanian that he conducted with the late **Alan Horowitz**. One of their discoveries in this study was marine carbonate buildups in the Brazil Formation, long thought to be non-marine. Droste also completed a detailed study of the Mississippian Muldraugh Formation. He is currently nearing completion of a project to designate and describe key wells around the state, at least one in each county. Logs from the wells will be scanned into digital form and will be available on the Indiana Geological Survey Web site for use by geologists everywhere. They will be able to select scale and presentation form for the logs at the click of a mouse to fit their particular needs. Droste has no specific project in mind to follow the key well study, but he bubbles with enthusiasm when discussing the Salem-St. Louis interval in the Indiana subsurface. A favorite non-geological pastime is studying the fish fauna in "lakes in the Borden," often with longtime fishing buddy **Stan Keller**. Droste and wife Mary frequently take short trips but usually stay close to home.

Those of you who know **Don Hattin** can guess that he is always on the go. Hattin continues to do research on problems concerning the Cretaceous of the Western Interior. At the start of each fall semester, he leads a field trip for the new graduate students, usually including the fabled trip on the train to study a railroad cut south of French Lick. Hattin has also led special field trips to the gypsum mines near Shoals and to other localities in southern Indiana. His interest in railroads is as strong as ever, and he regularly does volunteer work for the French Lick Museum railroad. Hattin and wife Marge have traveled throughout the world since Hattin's retirement, including trips to Australia, New Zealand, Fiji, and England. They also travel extensively in the United States. The Hattins have been active in such organizations as the University Club and the IU Annuitants Association.

Although **Norm Hester** is retired from the department and the Indiana Geological Survey, he is not really retired. He has been on contract with the U.S. Geological Survey, serving as director of the seven-state Association of State Geological Surveys affiliated with the Central United States Earthquake Consortium. He is in charge of initiating, promoting, and coordinating earthquake hazard-related research in those seven states. Hester has recently moved but is still in Bloomington except when

traveling in connection with his employment.

The most recent addition to the emeritus ranks is **Erle Kauffman**, who retired at the end of 2001. Kauffman continues to keep regular hours at the department. He has had eight papers published since his retirement and continues his work on Cretaceous fossils. He is particularly interested in fossils from concretion zones and mosasaur and fish bites on ammonites and nautiloids. With several other researchers, he is currently working on biostratigraphic charts based on rudists and other fossils for the Caribbean area. He has been in the field this past year in Colorado, Wyoming, and South Dakota. He enjoys the somewhat slower pace and being able to "do his own thing" that retirement allows. Kauffman also enjoys attending concerts, operas, and plays, as well as fishing (in Colorado and Indiana). So far we have not heard stories of the big one that got away!

Gary Lane has continued research and writing since his retirement in 1995. He taught an Honors College course in the natural history of southern Indiana for two years after retiring. He has been a co-author or author of several papers on crinoid paleontology. Involved in this research were trips to Xinjiang-Uygur autonomous region in northwest China in 1995, 1997, and 2000 with former students **Chris Maples**, MS'85, PhD'85, and **Johnny Waters**, MA'76, PhD'78. He has also authored a book on the history of geology at IU titled *Geology at Indiana University: 1840-2000* (which is available for purchase for \$21.50 from the department). Lane has also been a frequent contributor to the *Hoosier Geologic Record*. He has sponsored numerous field trips for the IU Division of Continuing Studies. He gave presentations on David Dale Owen at the dedication of the Granary at New Harmony in 1999 and for the annual meeting of the Association of State Geologists at New Harmony in 2002. Lane and **Bill Ausich**, MS'76, PhD'78, combined their interests in paleontology and folklore in a study on St. Cuthbert's beads on the island of Lindisfarne (the Holy Island) in northeastern England. The beads are crinoid columnals weathered from Middle Carboniferous rocks and found on the beaches of the small island.

One of the most regular attendees at Monday afternoon colloquia is **Jud Mead**. He continues to serve as a member of the Advisory Board for the department. Mead and wife Jane enjoy retirement in their home in the woods east of Bloomington. They spend summers in New Hampshire.

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Faculty Research Grants, 2001-02

- BASU, A. (NASA) — "Petrologic Evolution of Lunar and Meteorite Parent Body Regolith"
- BRASSELL, SIMON C. (TEXAS A&M UNIVERSITY) — "ODP Leg 198 Research"
- BRASSELL, SIMON C. (TEXAS A&M RESEARCH FOUNDATION) — "Biogeochemistry of Lower Aptian Organic-rich Sediments"
- ELSWICK, ERIKA R. (TEXAS A&M UNIVERSITY) — "Exploration of the Coupling C, S Stable Isotopes in a Hydrothermal System, Eastern Manus Basin"
- HAMBURGER, MICHAEL W. (NSF) — "Measurement of Tectonic and Volcanic Deformation in an Active Island Arc, Luzon, Philippines"
- HAMBURGER, MICHAEL W. (UNIV CORP ATMOSPHERIC RESEARCH) — "Volcano Geodesy and Education and Outreach Activities"
- HAMBURGER, MICHAEL W. (INC RES INST SEISMOLOGIC RESEARCH) — "PEPP Instrument Center"
- HAMBURGER, MICHAEL W. (DOI US GEOL SURVEY) — "GPS Constraints on Present Strain in the U.S. Mid-Continent"
- HAMBURGER, MICHAEL W. (IND COMM HIGHER EDUC) — "Teacher Training and Curriculum Development in Seismology"
- JOHNSON, CLAUDIA (NSF) — "Comparative Role of Scleractinian Corals and Ancient Rudist Bivalves in Cretaceous Reefs"
- KROTHER, NOEL C. (SCI APP INTL CORP) — "Groundwater Investigation at the Ammunition Burning Ground, Crane Division, Naval Warfare Center"
- LI, CHUSI (NSF) — "Olivine Geochemistry and Stable Isotope Studies of the Giant Jinchuan Ni-Cu Sulfide Deposit, Western China: Investigation of Ore Genesis in a Magma Conduit"
- MAPLES, CHRISTOPHER G. (SHELL OIL CO FDN) — "Shell Fellowship"
- OLYPHANT, GREG A. (STATE OF INDIANA) — "Evaluation of Storage and Movement of Contaminants in Confined Animal Operation"
- OLYPHANT, GREG A. (STATE OF INDIANA) — "An Evaluation of Properties of Soils that Determine Their Suitability for Use as On-site Septic System Absorption Fields in the Morainal Area of Northeastern Indiana"
- OLYPHANT, GREG A. (US DEPARTMENT OF AGRICULTURE) — "Demonstration Project Involving Research,

- Education, and Outreach: Willow Creek Watershed, Montana"
- OLYPHANT, GREG A. (STATE OF INDIANA) — "Development of a Three-Dimensional Saturated/Unsaturated Ground Water Model for Evaluation of Wetland Restoration Options in the Great Marsh, Indiana Dunes National Lakeshore"
- PAVLIS, GARY LEE (NSF) — "Direct Imaging of Crust and Upper Mantle Structure with Broadband Seismic Arrays"
- PAVLIS, GARY LEE (NSF) — "Princeton Earth Physics Program Instrument Center"
- PAVLIS, GARY LEE (US DEPT OF DEFENSE) — "Seismic Catalogue and Accuracy"
- PERSON, MARK AUSTIN (BECHTEL BWXT IDAHO L) — "Computer Modeling of Regional Groundwater Flow and BTEX Migration in Sedimentary Basins of the Colorado Plateau"
- PERSON, MARK AUSTIN (BECHTEL BWXT IDAHO L) — "Assessment of Long-term Variations in Soil Moisture and Regional Groundwater Flow Across the Snake River Aquifer in Response to Potential Climate Changes"
- PERSON, MARK AUSTIN (UNIV OF MINNESOTA) — "The Role of Fluids in the Cooling History of Metamorphic Core"
- PERSON, MARK AUSTIN (NSF) — "The Role of Aquifers in Paleoclimatic Reconstruction of Glaciated Watersheds"
- PERSON, MARK AUSTIN (DOI US GEOL SURVEY) — "Hydrothermal Fluid Flow and Ore Formation in Great Basin,

- Nevada"
- PRATT, LISA M. (PRINCETON UNIVERSITY) — "A Supplement to the Subcontract Proposal to Princeton University: South African Ultra Deep Mines Long Term Sites for Interdisciplinary Studies into Extreme Environments of the Deep Subsurface"
- SCHIMMELMANN, ARNDT (INTL ATOMIC ENERGY A) — "Development of Benzoic Acid Oxygen Stable Isotope Standards for Calibration of On-Line Mass-Spectrometric 18-O/16-O Determinations of Organic Oxygen"
- SCHIMMELMANN, ARNDT (US DEPT OF ENERGY) — "Significance of Isotopically Labile Organic Hydrogen in the Thermal Maturation of Source Rocks"
- SHRINER, CHRISTINE (DR M AYLWIN COTTON FOUND) — "The Application of an Integrated Analytical Approach to the Study of 'Aegean Ware'"

Answers to History Quiz

1. Two
2. 1926
3. 1955
4. Holes left when trees were removed
5. \$3.6 million
6. 1959
7. Kenneth Owen, Richard Owen's great-grandson
8. Haydn Murray
9. Participants in Tom Hendrix's 1968 G-420 field trip

Emeritus faculty

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One would hardly know that **Haydn Murray** has retired. He still has an active lab in clay mineralogic research in the department and last year had two research associates working with him. Murray has served as a consultant to the U.S. Department of Energy as an expert in industrial minerals. He travels extensively in connection with consulting work on clay deposits, especially in Brazil and China. Last September, he was keynote speaker at a conference on Global Kaolin Exploration and Development sponsored by the Society for Mining, Metallurgy, and Exploration.

Al Rudman continues to be active in the geophysics group. He has taught his Signal Analysis course and this spring will co-teach Introductory Geophysics with his colleague Qizhi Chen. Most days will find Rudman in his office talking to graduate students when he isn't staring fixedly at his new Sun Blade computer. However, he and Joan Lauer have found time to do some traveling. They visited southern Italy, where Rudman was stationed in the army in 1945, went with an Alumni Travel group to southern Spain (Andalusia), visited Rudman's relatives in Hungary, and, most recently, spent a week with the grandkids at the IU Alumni Association's Camp Brosius in Wisconsin.

Shortly after retirement, **Dave Towell** and wife Lindsay purchased a fifth-wheel trailer and truck to pull it. They have enjoyed travels to Florida, Colorado, Michigan, and many points in between. Last summer they took a cruise to Alaska. The Towells have three grandchildren in Bloomington and enjoy "baby-sitting" and sharing in their full young lives.

Student News

Degrees awarded, 2002-03

Bachelor of Arts

Nicholas M. Carr (Lawrenceburg, Ind.)
Janet R. (Sheets) Cordua (Seymour, Ind.)
Whitney E. Hatch (Dunkirk, Ind.)
Neil D. Sharp (Gary, Ind.)
James K. Yarber (Bloomington, Ind.)

Bachelor of Science

Ryan N. Ahlersmeyer (Pleasant Lake, Ind.)
Amy K. Borcherding (Bartlett, Ill.)
Micah L. Foust (Pittsboro, Ind.)
Melissa A. Gibson (Fortville, Ind.)
Stanley W. Gofaski (New Whiteland, Ind.)
Joanna M. Jakobczak (Ann Arbor, Mich.)
Melissa K. LeTourneau (Greenwood, Ind.)
Michael D. McKendry (Indianapolis, Ind.)
Rebecca L. Riall (Rossville, Ga.)
Neelambari R. Save (Mumbai, India)
Zachariah M. Simpkins (Osceola, Ind.)
Nicholas A. Staller (Peru, Ind.)
Neil E. Whitmer (Lawrenceville, Ill.)
Scott A. Wisher (Noblesville, Ind.)

Bachelor of Science/ Environmental Science

James S. Boswell (Paoli, Ind.)
Scott H. Bushroe (Fort Wayne, Ind.)
Christopher R. Swan (Evanston, Ind.)
Ken S. Rubel (Mission Viejo, Calif.)

Master of Science

- Kirsten M. Bannister, Tacoma, Wash. (2001): "Fluid-Flow Pathway Model of a Carbonate Reservoir: Outcrop Investigations of Bedform Architecture and Diagenesis, Salem Limestone"
- Beth Ann Bartel, Redmond, Wash. (2002): "Magma Dynamics at Taal Volcano, Philippines from Continuous GPS Measurements"
- Daniel Capps, Downers Grove, Ill. (2002): "A Post-Calumet Shoreline in Southern Lake Michigan"
- Shannon R. Jock, Fort Covington, N.Y. (2002): "Delineation of Joint Orientations Using Ground Penetrating Radar, Electromagnetic Conductivity and Azimuthal Resistivity at the Naval Surface Warfare Center in Crane, Ind."
- Taehong Kim, Seoul, Korea

(2002): "Geostatistical Characterization of Hydrogeologic Heterogeneity in a Glacial-Lacustrine Aquifer System: Lake Michigan Rim, Northwestern Indiana, U.S.A."

- Erika L. Pfeiffer, Grosse Ile, Mich.

(2002): "Source Region Conditions of the Xenoliths from a North-South Transect of the Chile Trench Subduction Zone"

- James Van Alstine, Morris, Minn.

(2002): "Field Analysis of an Exposure Surface Within the King Hill Shale Member (Upper Pennsylvanian Lecompton Limestone), Midcontinent, U.S.A."

- Shayne A. Wiesemann, Rolling Prairie, Ind. (2001): "Tectonic Significance and Depositional Process of Diamictites and Wackes in the Lower Cretaceous Cloverly Formation, Wyoming"

- Rachel I. Walker, Brisbane, Australia

(2001): (Research project) "Quality of Selected Coal Seams from Indiana: Implications for Carbonization"

Doctor of Philosophy

- William S. Elliott, Jr., Latrobe, Pa.

(2002): "Climatic and Tectonic Significance of the Sedimentology, Provenance, and Stable Carbon Isotope Geochemistry

of Continental Mudrocks of the Cloverly Formation (Lower Cretaceous) in Wyoming"

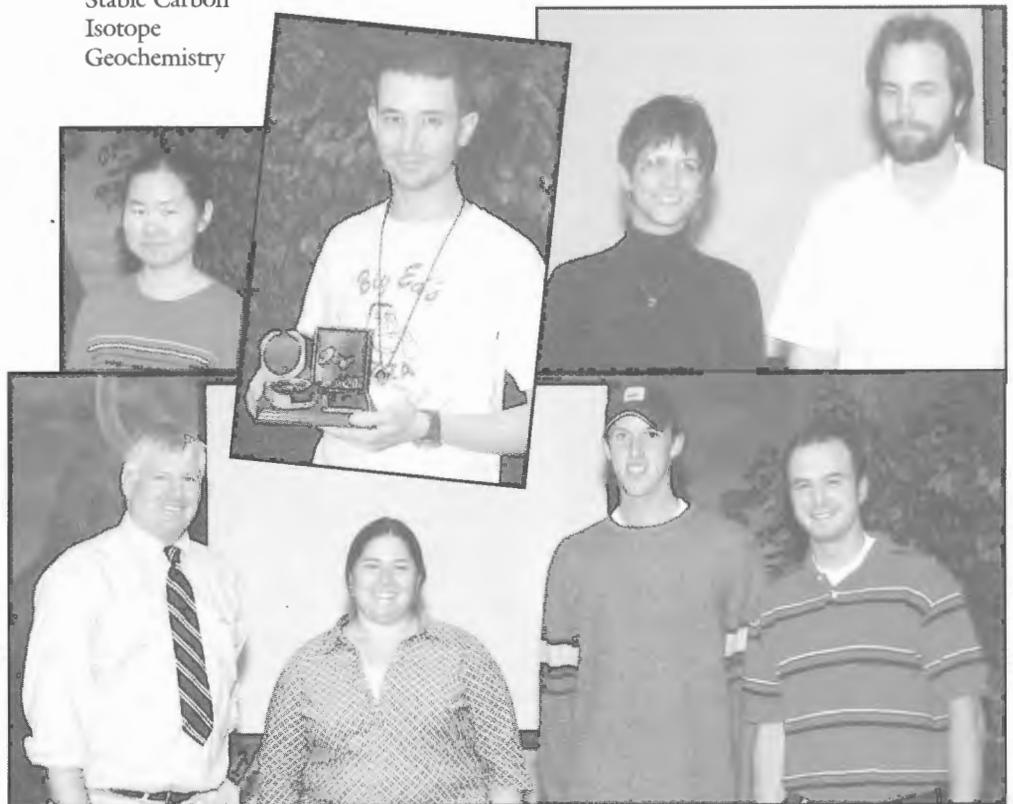
- Timothy W. Johnson, Auburn, Ala. (2001): "Oxygen Isotopic Fractionation in CO₂-Laser Microprobes: Testing the Metal Oxide-Metal Fluoride Chemical and Isotopic Exchange Hypothesis"

- Scott L. Neal, San Bernardino, Calif. (2001): "Multichannel Analysis of Forward Scattered Body Waves"

- Nur Iskander Taib, Kuala Lumpur, West Malaysia (2001): "Open System Magmatism, and the Emplacement of the Partridge River Intrusion, Duluth Complex, Minnesota"

Student Awards & Grants Undergraduate

- N. Gary Lane Beginning Geologist Award: Eric Cercone (Cheektowata, N. Y.)
- Junior Award: J. Brian Balta (Portage, Ind.)
- Professional Development Award: Neelambari Save (Mumbai, India) and Mike McKendry (Indianapolis, Ind.)



Graduate students recognized at the annual awards ceremony included, clockwise from upper left, Xiujun Yang, Warren Bigelow, Sarah Pietraszek-Mattner, Adam Davis, Mike Oslos, Mike Cooper, Jennifer Bush, and undergraduate adviser Jim Brophy.

- Faculty Scholarship (Senior) Award: Aaron Wood (Mitchell, Ind.)
- Field Station Scholarships: Deiss Award — J. Brian Balta (Portage, Ind.)
- Mead Scholarships: Aaron Wood (Mitchell, Ind.), Laurie M. Huff (Amarillo, Texas), Cory McWilliams (Bloomington, Ind.), Melissa LeTourneau (Greenwood, Ind.), Rebecca Riall (Rossville, Ga.), Andrew Smith (Hagerstown, Ind.), Mikki Osterloo (Bristol, Ind.), Antonio Buono (Hammond, Ind.), and Paul Stumpner (Bloomington, Ind.)

Graduate

- Estwing Award (Hammer) and Outstanding Academic Achievement: Rachel I. Walker (Brisbane, Australia)
- Department of Geological Sciences Award for Academic Achievement: Shannon R. Jock (Fort Covington, N.Y.)
- Outstanding Associate Instructors: A. Erik Boice (St. Petersburg, Fla.) and Russell F. House (Oxford, Ala.)
- Departmental Citizenship Award: Ernest Johnson (Los Banos, Calif.)
- John B. Patton Awards: Matthew Campbell (Spartansburg, S.C.), Adam Davis (East Aurora, N.Y.), Russell House (Oxford, Ala.), Shannon Jock (Fort Covington, N.Y.), and Laura Slade (Grovetown, Ga.)

Fellowships

- Dean's Minority Fellowship: Sonya Hernandez (El Paso, Texas)
- Dean's Fellowship: Shawn Wheelock (Gualala, Calif.)
- Chancellor's Fellowship: Matthew Campbell (Spartansburg, S.C.)
- Chevron Oil Fellowship: Xiujun Yang (ChaoYang LiaoNing, China)
- BP/Amoco Fellowship: Adam Davis (East Aurora, N.Y.)
- Shell Oil Fellowship: Kate Remmes (Bloomington, Ind.)
- Women-in-Science Fellowships: Stephaney Puchalski (Lacey, Wash.) and Sarah Pietraszek-Mattner (Glenwood, N.Y.)
- McNair Fellowship: Miriam Attenoukon (Baltimore, Md.)
- NSF Fellowship: Jeffrey Mariga (Kadoma, Zimbabwe)
- AAPG Grant-in-Aid: Rachael I. Walker (Brisbane, Australia)

Two companies recruit in department

Two companies sent representatives to the department to recruit full time employees and interns during 2001-02.

- ExxonMobil (Barbara Rassmann and

Kirsten Bannister) on Sept. 23-27, 2002

- ChevronTexaco (David Smith and Mary Parke) on Sept. 30 and Oct. 1, 2002

Helping kids learn to love geology

Each year, the department is asked to participate in programs around the state and community designed to appeal to kids. This helps to spread a favorable image of

geology, the department, and the university. Last year, faculty and students from the department participated in programs at Wonderlab, the Dino-Quest Festival in Salem, Ind., and a science event for Brownies in Bloomington.

Last April, **Claudia Johnson** led a team that included Emeritus Professor **Erle Kaufmann** and graduate students **Erica Barrow**, **Stephaney Puchalski**, and **Kate Remmes** to the Dino-Quest Festival, which

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Participants in the Hydrogeology of Carbonate Systems trip to Mammoth Cave National Park included, from top left: David Lampe, Noel Krothe, Sohel Anwar, Kate Remes, Shawn Wheelock, John Johnson, Francesca Zucco, Stephaney Puchalski, Wanda Allo, William Tackaberry, Shannon Jock, and Erika Barrow.



Faculty and students in the Field Methods in Hydrogeology course taught on Nantucket Island, Mass., are, from left, kneeling: Gary Pavlis, Mark Person, Winston Anyanwu, Chengliang Fan, and Will Tackaberry; standing: Dave Dahlstrom, Noel Krothe, Shawn Wheelock, Xiujun Yang, David Lampe, Terry Stigall, Francesca Zucco, Linda Zhang, James Boswell, and Ginger Korinek.



Award winners at the spring 2002 DOGS Daze research extravaganza are, from left, Sarah Pietraszek-Mattner, Dan Capps, Tom Kulp, Laura Slade, John Johnston, and Mike McKendry.

Student news

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was held on the square in Salem. The festival was sponsored by the Kid Care Coalition and drew hundreds of kids interested in dinosaurs and other fossils. The IU group had a table loaded with fossils, and they talked to kids (ages 2–12) and parents about fossils large and small.

For the last two years, the department has been represented in the Brownie Math and Science Event. This is a two-day activity held in Swain Hall for 6- to 8-year-old girls and their leaders. The department joined the biology, chemistry, math, and physics departments for the event, with each department having a room for their activity. Groups of 20 or so girls rotated from one room to another every 25 minutes, with a total of approximately 100–150 girls and leaders visiting the rooms each day. They are led through some hands-on activities to help them understand a basic scientific concept or process. In November 2001 the girls had a 5- to 10-minute talk and question-answer time concerning formation of caves. The leaders prepared a scaled down 3-D demonstration, and they passed around speleothem specimens for the girls to look at and touch. They then divided into smaller groups to do a similar 3-D dissolution-cave-sinkhole demonstration, and each girl made her own chocolate stalactite!

In November 2002 the students introduced the girls to trace fossils. The Indiana Geological Survey prepared a set of dinosaur tracks that were placed on the floor outside the room, leading the way to the geology room. The presentation began with a discussion of how trails are formed and preserved. The girls saw a demonstration of how traces form, and they viewed some easily seen trace fossil samples. In small groups, the Brownies made their own

traces using semi-melted chocolate as a substrate. The girls took home their chocolate trace fossils (if they didn't eat them on the way!).

The imaginative presentations were organized by geology majors, mostly graduate students. Those participating in 2001 were Mimi Attenoukon, Dave Lampe, Bridget Mulvey, Tom Olszewski (postdoc), Sarah Pietraszek-Mattner, Stephaney Puchalski, Kate Remmes, Paula Shafer, and Rachel Walker. Participants in 2002 were Meredith Beilfuss, Jarrod Black, Kelly Burchett, Leslie Drozen, Logan Hopkins, John Johnston, Bridget Mulvey, Sarah Pietraszek-Mattner, Stephaney Puchalski, Kate Remmes, Jennifer Rose, Paula Shafer, and Rachel Walker.

SGE reactivated

The IU chapter of Sigma Gamma Epsilon, the geology honorary society, was reactivated last April. Currently the organization

has about 25 active members, both undergraduate and graduate. The primary function is to be the student organization that handles academic extracurricular activities for the department. Officers for the 2002–03 school year are Sarah Pietraszek-Mattner, president; Aaron Wood, vice president; Sonya Hernandez, secretary-treasurer; and John Johnston, corresponding secretary. Faculty advisers are Erika Elswick and Claudia Johnson.

This year the organization plans to organize and sponsor several activities, including:

- DOGS Daze — The third annual research extravaganza! This is our major event. All alumni are invited. The event takes place on Friday, March 7, 2003. It will run all day, with tentative plans to have a picnic the following day to celebrate work well done. SGE hopes to have professionals from different career backgrounds stop in and let students know that there is life after college!

- Sponsoring a colloquium speaker for the spring semester.

- Contributing articles to *The Compass*, the quarterly journal of earth science research published by SGE. Several master's students have already expressed an interest in publishing parts of their research in the journal this year.

- Fund raising for "core rescue" in Belize. Erika Elswick suggested this project after seeing many meters of core rotting in the elements while she was conducting field work in Belize this past summer.

The group is still looking for service project ideas! They welcome suggestions from readers of *HGR*.

The Rho Chapter of SGE at IU has a long history. It has undergone periods of great activity followed by times of dor-

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Spectators view posters during DOGS Daze student research presentations on April 12.

Alumni Notebook

Before 1960

Chris Maples and Sara Marcus report visiting with **Fred Latimer**, BA'37, and hearing of some of his adventures in the department in pre-World War II days.

James W. Batchelor, BA'46, remembers measuring sections at IU's first geology field camp at the Princeton/Beartooth Camp at Red Lodge Montana during the summer of 1949. He is a retired geology professor from McNeese State University and lives in Las Vegas.

Wesley E. Williams, BA'49, writes to say that he is turning all hydrocarbon drilling operations over to his son, Kelly, while he is going to concentrate on hard rock minerals. He is president of Flag Drilling Co. Inc. and a partner in Flagship Drilling Co. in Destin, Fla.

We were really pleased to receive a letter from **Gordon Grender**, BS'51, AM'52, who now lives in Blacksburg, Va. The letter accompanied a number of photos taken at the field station and around campus between 1950 and 1952.

Grender says to tell **Jud Mead** that he knew his geophysics course was going to be great "when he gave us that triple-integral gravity question during the first class!"

Seymour S. Greenberg, MA'53, PhD'59, lives in West Chester, Pa., with his wife, **Susanne Greenberg**, BA'57, MA'58.

James Smith, BA'55, has retired from a 34-year career with Rocketdyne where he worked in the engineering department and later in contract administration. Rocketdyne is responsible for the liquid propulsion engines for the

Apollo moon project and the space shuttle main engines. He plays racquetball and recalls playing hand ball with Charles Vitaliano while in Bloomington. He has a home on the cliffs at La Verkin, Utah, and enjoys hiking, mountain climbing, weight training, and traveling. He maintains his interest in geology as a member of the Dixie Geological Society.

At its meeting in Bloomington, Oct. 4-6, 2001, the department's Advisory Board named **Malcolm Boyce**, MA'56, **George Nevers**, MA'57, and **Stanley Anderson**, BS'72, MA'73, Honorary Life Members of the board for their long and outstanding service to the board and to the department.

George B. Derner, BS'58, MAT'61, retired in 1997 as a field engineer, project engineer, and business development

coordinator for Harza Engineering Co. in Chicago. He and his wife, **Carol A. Derner**, AB'56, MA'58, now live in Henderson, Nev.

Gary E. Henry, MA'58, received the American Association of Petroleum Geologists' Distinguished Service Award in 1996. He is still generating, assembling, and selling oil and gas drilling prospects. He is an independent petroleum geologist in Wichita Falls, Texas.

Robert L. Cullers, BS'59, MAT'62, is a professor at Kansas State University but plans to semi-retire within the next year. He lives in Manhattan, Kan.

1960s

Larry Skelton, BA'60, is assistant director for Wichita
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Student news

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mancy since its founding in 1926. See Gary Lane's book, *Geology at Indiana University, 1840-2000*, for a discussion of the founding of the SGE chapter at IU. It is great to see SGE as a vital force in IU geology again.

AAPG student chapter established at IU

Under the leadership of graduate student **William Tackaberry**, a group of geology majors have joined forces to form a student chapter of the American Association of Petroleum Geologists at IU. As of last fall, 19 graduate and undergraduate students have applied for membership in the chapter. The purpose of the chapter is to broaden resources available to students in the department. As members of an AAPG chapter, students are encouraged to present research at the annual AAPG Student Expo, apply for both graduate and undergraduate research grants, and attend AAPG short courses. The chapter's most valuable asset to its members and the department is access to the AAPG Visiting Geologist Program. AAPG has compiled a list of AAPG professional members who are willing to

present talks on a wide variety of subjects. The group hopes to bring in at least one speaker to the department each semester. They also plan to co-sponsor activities with other student organizations.

The first activity of the chapter was to host Janine Barnard from Marathon on Oct. 10. She gave a talk titled "From Education to Exploration: What to Expect of Your First Few Years in the Oil Business."



Participants on research trip to Puerto Rico led by **Claudia Johnson** pack fossils for shipping home. Students are, from left: **Leigh Fall** (IU graduate student), **Jorge Velez** (University of Puerto Rico at Mayaguez undergraduate), **Selena Dedrano** (IU undergraduate), **Sonya Hernandez** (IU graduate student), and **Michael Martinez** (University of Puerto Rico at Mayaguez graduate student).

Alumni notebook

(continued from page 27)

Operation, of the Kansas Geological Survey. He has received several awards during his professional career, including a scholarship from the American Federation of Mineralogical Societies, Outstanding Public Service Award from AAPG in Houston, and a service award from the largest school district in Kansas. He is president-elect of the Kansas Academy of Science.

Michael Mound, MA'61, PhD'63, has been appointed product manager, Collaborative Production Management and Industrial IT Solutions, Minerals and Mining, for ABB's Paper, Printing, Metals, and Minerals Business Area. The company employs 170,000 people globally. The head office is located in Switzerland, with another corporate office in Sweden. Mound moved to Baden, Switzerland, in spring 2002.

Ronald J. Walton, BS'61, of Evergreen, Colo., paraded with classmates holding their 40th reunion banner during Homecoming 2001 in Bloomington. He writes, "Although it rained and we lost to Illinois, we had a great time. Staying at the

Memorial Union was a real treat with all the activities there. Dinner at the DeVault Alumni Center and lunch at the Mellencamp Pavilion were excellent."

Jerry Lineback, PhD'64, is an environmental geologist for the Kansas Department of Health and Environment. He is working on a project involving cleaning up hazardous waste in Kansas through the voluntary cleanup and property redevelopment program. He is also taking care of his 10 acres of tallgrass prairie and traveling the back roads of the west as often as possible.

Larry Woodfork, BS'64, MA'65, retired as director of the West Virginia Geological and Economic Survey and as state geologist effective Jan. 1, 2002. Woodfork's career with the West Virginia survey spans 33 years, including serving as director from 1988 until his retirement. Woodfork was a gubernatorial appointee serving under four governors during five terms, a record for the state. The West Virginia Senate passed a resolution "commend-

ing the public service and professional accomplishments of Larry D. Woodfork."

Woodfork was presented with a copy of the resolution in the Senate chamber on Feb. 26 by Senate president and lieutenant governor Earl Ray Tomblin. Woodfork has served as an officer in several national geological organizations, most recently president of the American Geological Institute (2001). He has also received many prestigious awards, including the Distinguished West Virginian Award, commissioning as a Kentucky Colonel,

and the Ben H. Parker Medal from the American Institute of Professional Geologists. He was the 1991 recipient of the Richard Owen Award from our department.

Donald L. Brobst, MAT'65, is president of the Central Susquehanna Valley chapter of the North American Butterfly Association. He is retired and lives in Lock Haven, Pa.

1970s

Rocky Orgill, MA'71, recently moved to Cody, Wyo., and stopped by to visit one of his favorite places, the Judson Mead Geological Field Station.

Dick Gibson, BS'71, who is resident manager of the Judson Mead Geological Field Station, reports that Earth Day at the field station was a success. More than 50 people came to the field station from Whitehall, Butte, Ennis, Waterloo, and Drummond. The participants enjoyed three talks in the afternoon and lots of visiting.

K.S. Sheikh Ali, MA'74, works for BP-Amoco, Sharjah, United Arab Emirates, having been located until recently at Qatar, which has the second-largest gas reserves in the world. In November 2002, he was transferred to the BP office in Sunbury, U.K. (near London), for four to six months of studying fracture patterns and reservoir characteristics of the prolific carbonates of the UAE.



In 1950, G429 students, from left, Bill Voss, Bill Flanagan, Tug Chilcoate, and Norm Barker stopped at Yellowstone Lodge on their way to Montana. Photo courtesy of Gordon Grender.

Advisory Board



Advisory Board members attending the October 2002 meetings in Bloomington were, from left, Ken Vance, Tom Straw, Bob Blakely, John Steinmetz, Derek Fullerton, Kim Schulte, John Bubb, Glen Heishima, Dick Gibson, Johnny Waters, Chris Maples, and Frank Pruett.

Since 2000 his family has been living in Houston, where Ali visits several times a year as work schedule permits, and also for a month or two each summer. Ali's son attends Georgia Tech in Atlanta, where he is studying bioengineering. His daughter has recently entered the University of Houston, where she will study optometry. Their youngest child is in high school.

After graduating from IU, **Jerry Cook**, BA'75, went to Idaho State University where he earned an MS degree in geology in 1983. He worked as a surveyor for the U.S. Forest Service for several years before becoming an earth science teacher. He has taught earth science, physical sciences, and math in such exotic places as Pocatello, Idaho, Kuwait City, Seoul in South Korea, Yangon in Myanmar, and Phoenix, Ariz. Cook and wife **Dell Taylor** enjoy outdoor activities and recently returned from caving in a lava tube near Flagstaff.

Andrew Campbell, BS'77, was recently appointed chair of the Department of Earth and Environmental Science at New Mexico Tech in Socorro, where he has been on the faculty since

1983. He continues to teach courses in mineralogy, ore deposits, and stable isotopes. This year he is upgrading his 14-year-old stable isotope lab with a new mass spectrometer and many new sample preparation devices. Although his main interest is still in ore deposits, having a mass spectrometer has involved him with stable isotope applications to hydrology, soft rocks, and soils.

Edward Isaacs Jr., BA'78, BGS'97, is a science teacher at Eaton High School in Eaton, Ohio. He and his wife, Vickie, live in Richmond, Ind.

James W. Farnsworth, BS'79, writes, "We've now settled in Houston after assignments in Scotland, Alaska, and London. I've recently become involved with the University of Texas's geoscience department as a member of their advisory board." He is vice president of North American Exploration for BP America Inc.

1980s

Colin Harvey, PhD'80, was recently appointed head of the geothermal, minerals, and groundwater organization for the New Zealand government. He will be overseeing the research of about 30 scientists and is based in Wairakei, near Taupo in the middle of the geothermal area on the North Island of New Zealand.

Harvey spent last spring in Bloomington teaching in the department. He also found time to train for running a full marathon in Louisville last April. Harvey says he would

like to hear from friends in the United States. His e-mail address is colinharvey@clear.net.nz.

Barbara Ransom, BS '80, is now grants administrator for the Petroleum Research Fund of the American Chemical Society in Washington, D.C.

Bill Bandy, MA'81, is geologic and engineering manager for Team Energy LLC in Bridgeport, Ill. Team Energy LLC produces about 900–1,000 barrels of oil per day in Illinois and Indiana and, with about 50 employees, is one of the largest independent companies in the Illinois Basin. Bandy's staff includes eight members, including geologists, engineers, and a draftsman. The company also offers its services on a consulting basis to others. Bandy, who was an outstanding distance runner in college, serves as assistant junior high track coach for distance runners for his local school district.

Dave Drake, BS'84, has been a hydrologist for EPA in Kansas City for the past 10 years. After leaving IU he earned an MS degree in geology from the University of Missouri–Kansas City. He enjoys life in the Kansas City area and regularly attends events sponsored by the IU Alumni Club. He enjoys meeting old friends at national meetings such as GSA.

Rob Duncan, BS'84, MS'89, is now a senior project geologist with an environmental consulting firm in Indianapolis.

Robert C. Earle, BS'87, MS'91, has been a professional geologist in the Philadelphia area for 11 years. He writes that the best thing that ever happened to him was the IU Field Station in the summer of 1987.

1990s

Dave Dershin, BS'90, lives with his wife and young daughter in Fairbanks, Alaska. Dershin is on the faculty of Lathrop High School, where he teaches geology and applied physics (robotics). After living for six years in a small cabin, Dershin decided to build a house, serving as general contractor, framer, electrician, and plumber. He and his family moved into their new home late in the summer of 2000. Dershin reports that he has nine



Frank Kottlowski (standing) and Joe Gunnel are seen in the "Coal Center" in this 1950–51 photo. Photo courtesy of Gordon Grender.

dogs and two sleds, and from their home they can run their sled dogs on hundreds of miles of well-groomed trails. At an Oct. 9, 2002, science curriculum meeting, Dershin met **Don Triplehorn**, AM'57, who teaches geology at the University of Alaska.

Lisa Rhoads, MS'91, PhD'99, continues employment in New Orleans for TexacoChevron, where she works with regional geology of the Gulf of Mexico Deep Water Basin. She is involved with the research arm as well as exploration. Rhoads recently went on a field trip to the Monterrey,

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G429 students were not always involved in serious study, even in 1950. Playful students in the back row, from left, are Del Elston, Bob Hite, J. Barr, Bob Voss, and Sam Reilly; back to front are John Miller, Gordon Grender, Bill Flanagan, and Cornelius Connolly. Photo courtesy of Gordon Grender.

1950–51 era:
Note what is
now Wildermuth
Center (the old
field house) in
the background.
The students are,
from left, Gene
Taylor, Harold
(Diz) Deane, Bill
Flanagan, and
Denny Lucas.
Photo courtesy of
Gordon Grender.



Alumni notebook

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Mexico, region to look at compression structures that are analogous to those found in the Gulf of Mexico subsurface. Last fall she served as chair of the United Way campaign for the New Orleans office of TexacoChevron. She has also been appointed to the Academic Liaison Committee of AAPG.

Kevin Ellett, BS'92, is a hydrogeologist with the U.S. Geological Survey in Davis, Calif., and will be going to Melbourne, Australia, on a Fulbright Scholarship.

Yifeng Wang, PhD '93, is on the technical staff at Sandia National Laboratories, where he is involved in studies of deep geological nuclear waste repositories both for Yucca Mountain and Waste Isolation Pilot Plant projects. For the last two years, his research has focused on environmental applications of nanostructured materials and the geochemical implication of nanostructures in

geologic media. He lives in Carlsbad, New Mexico. He and wife, **Jianjun Lin**, have a 10-year-old son. Jianjun is a software engineer for Sandia. Early this year, Yifeng returned to his native China. He reports that the experience was thrilling because of the rapid changes taking place in China. He literally could not find his parents' house.

Chris Gellasch, MS'94, is enjoying his third year of teaching at the U.S. Military Academy at West Point, N.Y., where he was promoted in July 2002 to assistant professor in the Department of Geography and Environmental Engineering. For the past three semesters, Gellasch has been course director for physical geology, and is now course director for hydrogeology. In March 2002, Gellasch presented a paper at the NE Section, GSA, and presented the keynote address at the conference of the New Jersey Earth Science Teacher Association. On March 31, 2002, Gellasch married Dr. **Amy Shell** in a Bloomfield

Hills, Mich., wedding ceremony that included entrance to the reception hall though crossed sabers of six uniformed West Point cadets! Shell is a civilian professor of mathematics at the U.S. Military Academy. Next summer, Gellasch and Shell will transfer to Grafenwoehr, Germany, where Gellasch will take command of the 71st Medical Detachment (Preventive Medicine).

After spending several years at Iowa State University, **Anna Carmo**, PhD'97, joined the geology faculty at the University of Kentucky. She is now setting up an organic geochemistry lab there and is pleased to be within easy driving distance of Bloomington, where she can cooperate in research with our organic geochemistry group.

Craig Rankin, MS'97, lives in Houston, Texas, where he is presently employed with Anadarko Petroleum Corp. as an exploration geologist in their International New Ventures group. He keeps busy playing softball, coaching junior high football, and fishing with his IU buddies **John Hohman**, PhD'98, and **Nathan Way**, PhD'97.

Young-Rok

Park, PhD'98, is now an assistant professor at Kangwon National University in Korea.

Bill Elliott, MS'98, PhD'02, is now on the geology faculty at Southern Oregon University in Ashland, Ore.

2000s

Carrie Nolan, MS '00, who works for ExxonMobil, visited the department last March to teach a seminar to students and faculty on the StratWorks software which has been donated to the department by the Landmark Corp.

Alex Sessions, PhD'01, is at the Woods Hole Oceanographic Institution as a postdoctoral fellow in **John Hayes's** research group. In 2003 he will become a faculty member at the California Institute of Technology.

Melissa Gibson, BS'02, is a first-year graduate student at the University of Wyoming, where she is studying vertebrate paleontology with Jay Lillegraven. For her master's thesis she will be investigating fossils from lacustrine units in the Hanna Basin of south-central Wyoming.



Gordon Grender gave this photo the mysterious title "Don Munich and his bobcat." Have you ever seen a bobcat on a leash before?

Help us find these lost alumni

We have lost contact with the following alumni. If you have any information about their current location, please let us know. Send e-mail to uaarec@indiana.edu or call (800) 824-3044.

Melissa A. Buciak
John E. Cocroft
Scott A. Fagen
Daniel R. Fara
William F. Foster
Julie L. Golding,
Roger L. Hertenhausen

John K. Lehner
Shawn E. Niemi,
Larry D. Rushing
Daniel A. Sundeen
Diana G. Utz
Kurt W. Valko
John C. Vandivier

Honor Roll of Donors (Sept. 1, 2001, to Aug. 30, 2002)

Many thanks to those who have contributed to the IU Department of Geological Sciences!

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Alexander, Richard and Jeannie	Cordua, William and Jan	Godersky, John and Barbara Covey	Kauffman, Carolyn
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Bahr, John and Susan	Dean, Claude	Graham, Michael and Kate	Johnson
Basu, Abhijit and Iloria	Dean, Mildred and Lyndon	Green, Don	Keller, Stanley and Teresa
Bear, Glenn and Lorie	Derner, George and Carol	Griest, Stewart	Kemmerer, Bryan
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Brophy, Jim and Evelyn	Ferry, James and Jean	Heien, Gene	Lankston, Robert and Marian
Bryant, Napoleon	Fertal, Thomas	Heiser, Lois	Lea, Elinor
Bubb, Janet and John	Fetter, Charles Jr. and Nancy	Henderson, Stephen and Kathryn	Leininger, Susanne
Bucklin, Lou	Filippini, Mark	Hieshima, Glenn and Suzanne	Leonard, Mark and Kim
Budd, John and Janet	Fish, Ferol and Lois	Kairo	Letsinger, Sally
Byrum, Roy and Patricia	Foster, David and Marsha	Hildreth, George and Janet	Lewis, Daniel
Callis, Joseph and Anne	Fout, James and Helen	Hill, Richard and Barbara	Leyenberger, Terry
Carney, Brett and Dianne	Fritz, Arthur and Jean	Hinton, Richard and Maryellen	Lucas, Bruce and Sheba
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Cleveland, John and Elinor	Gibson, Richard	James, Bruce and Susan	Mathews, David and Betty
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	Girdley, William	Johnson, Gerald and Marilyn	McCammon, Richard and Helen
	Glassman, Scott	Kammer, Thomas and Heidi	

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Ray Gutschick, longtime friend of IU geology, dies

Many of our older alumni will remember **Ray Gutschick** as a faculty member at the IU Geological Field Station from 1950 to 1960 and in 1962 and 1969. He also used the field station as a research base in other years when he conducted research projects with **Lee Suttner** and former IU faculty member **Tom Perry**. He was a professor in the geology department at the University of Notre Dame from 1947 to 1979, serving as department head from 1954 to 1970. Gutschick died on Oct. 22, 2002, at age 89 at his home in Medford, Ore., where he and his wife, Alice, had moved in the late 1980s.

Gutschick was perhaps best known for his work on stratigraphy and paleontology of Paleozoic rocks of the western United States. For many years, he mapped and interpreted the geologic history of the complex structure exposed in the Kentland Quarry in northwest Indiana. Gutschick received many honors during his long and distinguished career, including the Neil Minor Award of the National Association of Geology Teachers in 1977.

Many of us who were fortunate enough to have known Gutschick will always cherish memories of his enthusiasm, optimism, and caring friendship.

In memoriam

We have recently learned of the passing of the following alumni of the department:

Walter J. Dahmer Jr., AB'50 (Oct. 28, 2001)
Benjamin Edwards, BS'53, AM'56 (July 28, 2002)
Jacob P. Hamilton, AB'49 (Feb. 14, 2002)
Jack L. Harrison, BS'54, AM'55, PhD'58 (Aug. 20, 2002)
William P. Noone, BS'59 (April 16, 2002)
Ernest J. Rexing, (Mar. 23, 2002)
William S. Simonsen, AM'67 (Sept. 10, 2002)
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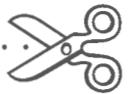
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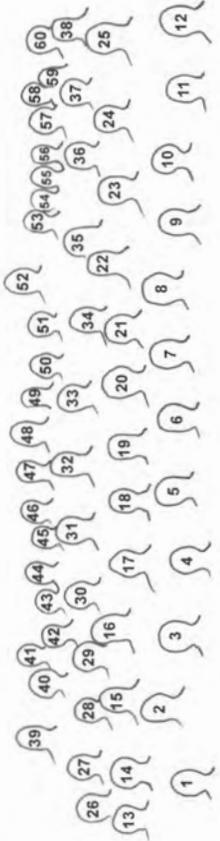
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