

# HOOSIER GEOLOGIC RECORD

Alumni Newsletter of the Department of Geology

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December 1987

## A LETTER FROM THE CHAIRMAN

Dear I.U. Geology Alumni,

This is my first letter to you as Chairman of the Geology Department. Gary Lane finished his term as Chairman last July 1. We are all very grateful to Gary for his leadership of the Department through three very eventful years. Four new members joined our faculty during his tenure and four have retired. The Department celebrated its 100th birthday in 1986 during Gary's chairmanship. The Owen Awards were established. Great progress was made at painting halls and office walls which had gone unpainted for almost 25 years. Computer, drafting, and photography facilities for students were greatly expanded. The faculty formally adopted a series of policies for governing the Department and several laboratories were extensively remodeled. I am sure many other items could be added to the list, but this is enough to show how the Department has prospered during Gary's term of leadership. Thank you, Gary, for three great years. You are a tough act to follow!

Bob Shaver officially announced his retirement from both the Geological Survey and the Geology Department at the end of this year. Bob has been a faculty member in the Department since 1956. He has made major contributions to the Department as a teacher and researcher, and has been one of its most dependable and effective servants. We will miss him greatly - even his multi-page, sometimes obscure memos! Bob plans to remain active in research in the Department and Survey.

We are recruiting for a new faculty member in hydrogeology. We hope to be able to introduce this person to you in next year's newsletter. Hydrogeology is probably the most rapidly growing area of geology at the moment. We need help in teaching courses and advising students in this area.

I would like to congratulate the Indiana Geological Survey on the occasion of its 150th birthday. Many geologists from the Survey and Geology Department attended the Survey's sesquicentennial celebration in New Harmony in mid-October. Not only was the ceremony and conference great, but the locale and

weather could hardly have been better. The Department and Survey continue their strong ties. Norm Hester and I hope they become even stronger with time.

For the last few years our numbers of undergraduate majors has been declining from a maximum of over 200 in the early 1980's to about 60 for the last two years. We hope that we have "bottomed out" and will soon start to rise again. The graduate enrollment has declined less dramatically from about 105 in the early '80's to 60 this year. Because fewer bachelor's degree holders are graduating, the pool of potential graduate students is declining. Competition is now going to be intense for that limited pool.

We have seen some good signs of improved employment prospects in the petroleum industry this fall. The number of interviewers has increased and the major companies are actively hiring. The major companies seem to be particularly interested in summer hires. This suggests that they are looking ahead to hiring more full-time people in a year or two.

I would like to publicly thank the many alumni who have contributed to the department during the past year. These funds have allowed us to establish a new computer room for student use, help finance research by 7 graduate students, help support attendance at geological meetings by 16 students, and helped in many other ways with our teaching and research missions.

With warm wishes,

Bob Dodd, Chairman

#### STUDENT AWARDS

Numerous awards were presented to outstanding undergraduate and graduate students at our annual spring awards ceremony. Current scholarship and fellowship holders were also recognized. The Senior Faculty Award was given to Christine F. Heavilon of Columbus, Ohio and Dianne L. White of Columbia City received the Junior Award and the Charles Deiss Field Station Scholarship. Other I.U. Bloomington students receiving Field Station awards were Robert C. Earle of Indianapolis, Kurt A. Eberhardt of Mishawaka, Tammie L. Gerke of Cincinnati, Ohio, Anthony R. Hoch of Fort Wayne, Charles E. Keener of Palmyra, D. Edward McDaniel of Connersville, M. Ross Vandrey of Indianapolis, and Doreen A. Zaback of Bloomington.

Graduate fellowship holders who were honored were David Hirt of Kent, Ohio (Shell Oil Company Fellowship), Dennis Sponable of Mechanicville, New York (Chevron Oil Company Fellowship in Geophysics), and Anthony Martorana of Madison, New Jersey (Graduate School Fellowship). Katherine Freeman of Potomac, Maryland was honored for her receipt of a three-year NASA Graduate Student Researchers Program Award. The 1986-87 Estwing Company Award to an outstanding graduate student was presented to Lori Zinn of Delmar, New York.

Teaching awards for outstanding service as associate

instructors were also presented. Mark Brown of Farmington, New Mexico received the award for courses for non-majors with Barbara Gruver of Arlington, Virginia receiving honorable mention. The outstanding associate instructor award for major courses was given to William Nellist of Indianapolis.

Sigma Xi, the national research honorary society, honored Christine F. Heavilon with one of its two I.U. awards for undergraduate research at its spring awards and initiation ceremony. Joy Beier, a graduate student from Portage, was inducted as a newly elected member of the society.

We were especially pleased to learn that Mark Brown received the best student paper award at the Annual Meeting of the North-Central Section of GSA, held April 29 -May 1, 1987 in St. Paul Minnesota.

#### WILLIAM THORNBURY - IN MEMORIUM

The Department lost one of its most cherished faculty members when Professor Emeritus William David Thornbury passed away in Bloomington on November 12, 1986. Bill retired from the University in 1970 after 45 years as a student and teacher. Bill was born in English, Indiana, and spent his early years there. He graduated from I.U. in 1925 with the B.A. Degree in Geology and election to Phi Beta Kappa. Bill received the Ph.D. Degree in Geology from I.U. in 1936 and in the succeeding years developed an international reputation for his writing in geomorphology. His book Principles of Geomorphology, first published in 1954 and subsequently revised, became the standard textbook on the subject in the world and continues to be used today. His second textbook, Regional Geomorphology of the United States was also extremely well-received. Bill made his greatest contributions to I.U. through his teaching and service at all levels, both in the Department and across the campus. He is especially remembered by graduate students for his courses in geomorphology and glacial geology and he made a strong impact on all of them. He is survived by his lovely wife Doris, his son David and his wife and Bill's grandson, William David Thornbury II of Salt Lake City, Utah, and by his sister, Mary Flanigan of Bloomington. All of us who knew Bill Thornbury will miss him very much but treasure our relationships we had with him.

#### DEPARTMENTAL NEWS

The Department of Geology Alumni Council held its annual meeting in Bloomington on January 16-17, 1987. A highlight was a panel discussion on employment opportunities in geology led by Council members who drew upon their wide ranges of experience. Participants were introduced by Gary Lane and included Janet Borgerding Murphy, Wayne Bundy, Dick Gibson, Frank Pruett, Doug Reynolds, Tom Straw, and Dan Tudor. We were very pleased with the large turnout for this employment forum. It was particularly well-received by our students and should have helped them to focus their career objectives. We will surely want to repeat this sort of meeting between alumni, students, and faculty again in the future.

The I.U. Libraries are currently in a budget crisis as are most if not all university libraries because of the very rapidly spiraling cost of acquisitions, particularly of serial publications. The Geology Library, of course, is strongly impacted as well. Contributions to the Department of Geology can be earmarked toward use by our library if individuals or corporations so choose. We are pleased to announce that Exmin Corporation, the international mineral exploration company which established the base of its USA operations in Bloomington six years ago, has recently donated \$5,000 to the I.U. Foundation specifically designated for the Geology Library. We are most grateful for their support.

Financial support from alumni and other friends, both individual and corporate, continues to greatly assist us in meeting our needs and helping us to improve the quality of the Department. Alumni and friends of our geophysics program have provided us with research equipment as well as funds to assist us in obtaining additional computer hardware and software. Chevron recently gave to the Department sophisticated seismic equipment valued at approximately a half million dollars. Shell Oil Company has donated \$10,000 for unrestricted use in our graduate program and Exxon Corporation has recently contributed \$5,000 for unrestricted use in both the undergraduate and graduate programs. We appreciate their contributions along with those of others who have given support to the Department. It makes a tremendous difference in the quality of our program because these funds can be used for purposes not covered by our university budget.

The University is funding major renovation of a number of research laboratories in the Geology Building, mostly on the third floor. This will not only give Dr. Lisa Pratt excellent research space, but also will provide a number of other faculty with markedly improved facilities for their research. An initial amount of \$200,000 has been allocated for the first phase this year. This might be increased in the near future or alternatively additional funds are expected to be available in two years to complete the project.

A new computer lab for student use has just been completed next to our library. Included in the hardware is a Macintosh SE microcomputer and a laser printer along with extensive software including graphics packages. This will be especially useful for word processing and illustrations for theses, term papers and other student projects. This project was financed by alumni and industrial contributions.

Extensive remodelling of the kitchen at the Field Station is now in progress. This follows painting of virtually all of the buildings at the Montana facility this past summer. This is the first major renovation at the Station since it was built. Further changes are planned including possible expansion of the resident manager's house and installation of a new water supply system. This is an appropriate place to extend our sincerest thanks to Mr. Gene Hinton who retired as Field Station resident manager this past spring after nineteen years of service. No university employee was ever more dedicated and loyal than Gene. Not only did he perform his duties in an outstanding fashion, but he was always there with a smile and eagerness to help student,

staff, and faculty alike at any time of day or night. Gene and his family have all served us over the years and were honored by a visit and reception held in Bloomington last February timed to coincide with attendance at a couple of home games played by our NCAA champion basketball team. Gary Hinton, Gene's son, has taken over the position of resident manager and we are benefiting immediately from his enthusiasm for the job as we undertake the major renovations at the Station.

The annual fall field trip of the Great Lakes Section, SEPM was held at I.U. on October 9-11. Seventy-seven participants from the midwest area attended. Attendees looked at Mississippian carbonate rocks following which there was a social hour and banquet. Bill Hay, National President of SEPM was the featured banquet speaker. Bob Dodd and Abhijit Basu organized the trip with help from other faculty and graduate students. The preparation of the trip was also part of a special I.U. seminar in carbonate petrology.

Also in October, the Department again participated in the expanded Physics, Astronomy, Geology Open House for high school science teachers and their students. Dr. Mike Hamburger organized our part of the program with help from Dave Towell, several faculty, and numerous students including members of Sigma Gamma Epsilon. Mike presented a general talk on big earthquakes in Swain Hall and demonstrations and laboratory visits were arranged in the Geology Building to include seismology, rock mechanics, paleontology, and computer applications. We are pleased with our role in this science open house, have some ideas for next year, and plan to continue participating annually with the hope that we may recruit additional geology majors.

As for earthquakes, the Richter scale 5.0 quake of June 11 centered near Lawrenceville, Illinois just a few miles northwest of Vincennes kept Dr. Gary Pavlis busy with television, radio, and newspaper media. It was widely felt in south-central Indiana and there was some minor local damage.

Dorothy Vitaliano retired from the USGS on December 20, 1986. As with Charles, we continue to see them, although their trips to the far corners of the world and their research activities keep them pretty busy. They just returned from a trip to Nepal!

An overflow crowd of alumni and friends attended our cocktail party at the GSA meetings in Phoenix in October. Don Hattin led a rousing rendition of the I.U. fight song for the benefit of the University of Michigan alums next door. (I.U. had downed Michigan on the gridiron two days before.)

We will have an alumni cocktail party at the AAPG meetings in Houston in March. We hope that you will join us if you are in the Houston area at that time.

For some time after the I.U. win over Syracuse in basketball, we found ourselves reminiscing about basketball and earlier years. G-100, G-103, and G-104 have been courses that men and women student athletes in all sports have taken to meet science requirements for graduation. Gary Lane thought that many of you might like to hear some of John Droste's memories of these students. Here are John's words: "Because Coach Knight is so very serious about class attendance, I check basketball attendance

before I start every lecture. After a week or two of classes, I have little trouble because most students voluntarily select the same seat consistently. There is something of a pattern at least for some students, between personality and seating habits in large lecture rooms. The quiet and serious basketballers such as Steve Alford, Ray Tolbert, and Mike Woodson all sat in just about the same seats, although they were enrolled in G-103 in different years. I could always count on seeing them in the back third of the center section several seats in from the west side! They had near-perfect attendance records. Through the years, the tall centers such as Uwe Blab and Dean Garrett, almost always sat about half way back in either the east or west section (never in the center section). Uwe always sat on the west side, and stuck his long legs out into (actually, almost all the way across) the aisle separating the west and center sections of seats. At times I wondered about how serious these long legs would be as a roadblock in the aisle if we had a fire! Dean Garrett sat just on the opposite side of the room in the east section of seats several semesters later. Dean is a contortionist, and he somehow stuffed his legs up-hill and under his seat. From time to time during the lectures he would twitch and gyrate to get his legs rearranged into another contorted geometry. When Randy Wittman took G-103, he was already well known (recognized) on campus. He and Ted Kitchel had such outgoing personalities that no matter where they sat they had much friendly visitation all around them. John Laskowski ("Laz") took G-103 before he became famous as "super sub", but even then his warm personality made him the center of attraction before class started (especially among coeds!). Certainly Jim Crews and Tom Abernethy were among the most shy basketballers when they took G-103. They took the course as freshmen and before they had any campus "recognition". It was well into the fourth week of the semester before I spotted them -two quiet gentlemen sitting way in the back of the lecture hall paying close attention to lecturer and taking extensive notes (in those days I could see all the way to the back row of Woodburn Hall-100!). Campus recognition produced a situation last semester that I'd not seen before. Keith Smart had campus recognition, of course, before his last-second shot against Syracuse. But overnight he changed from "campus recognition" to "instant most-popular celebrity" status. Many students brought the small-size, souvenir basketballs to class for Keith to autograph. The crowds were so large that at least once he didn't finish the autographing until the next class was ready to start. I have one more short entry, one that I have not related to more than a few people until now. You just may remember how Scott May's breaking of his arm (wrist) in the Purdue game of 1975 cost us a near certain national championship. Scott took G-103 the next summer, and on one day that summer I saw "happiness" the likes of which I'd not seen before or since. Just a moment before class was to begin, Scott appeared in the doorway with a smile and glowing aurora that radiated supreme joy. He raised his arm and THE CAST WAS GONE! What also must be added is that these young men, each in their own time and all in their own way, are all-star people (even if they didn't make anyone's all-star team). Coach Knight develops class student athletes, solid

citizens, and just the kind of people you'd be pleased to have as friends. Through the years we've had many young men and women who were competing in all intercollegiate sports take our non-major courses. Of course, many more memories could be recalled for them that parallel those of the basketball players."

#### FACULTY RESEARCH GRANTS

Faculty research continues to grow in scale as evidenced by our increased number of externally funded research grants. As a result, we have more research assistants among our graduate students than ever before (14). Grants held at the moment include the following:

A. Basu (NSF)- Potential of detrital opaque minerals in provenance interpretation.

A. Basu (NSF)- Petrologic evaluation of lunar and meteorite parent body regolith.

J. Brophy (NSF)- A detailed petrologic study of Kanaga and Segum: an attempt to confirm the temporal evolution of Aleutian arc centers.

J. Dunning (NSF)- A study of the effects of aqueous chemical environments on rock fracture.

J. Dunning (NSF)- Chemical weakening of geologic materials.

J. Dunning (Dow Chemical)- Ceramic research.

M. Hamburger (USGS)- Spatial and temporal patterns of seismicity in the Garm region, USSR: applications to earthquake prediction and collisional tectonics.

D. Hattin (NSF)- Upper Cretaceous thoracican cirripeds (stalked "barnacles") of the central Great Plains region.

J. Hayes (PRF)- Carbon-Isotopic studies of organic diagenesis. Also, grants from Finnigan Corp., Chevron, NSF, NASA and University of New Mexico.

N. Krothe (Purdue)- Tritium and nitrogen isotope analysis for selected ground and surface waters of southern Indiana.

S. Manchester (NSF)- Systematic affinities, age, and biogeographic relationships of fossil floras from the Eocene Clarno Formation of Oregon.

E. Merino (Amer. Chem. Soc.)- Petrographic, analytical, and kinetic study of the diagenesis of Mesozoic arkoses, Connecticut.

H. Murray: Oil-DRI and Grassman Trust Fellowships for student research support.

G. Pavlis (NSF)- Crustal imaging through geotomography and wavefield migration of reflected head waves: application to the Kentland dome.

E. Ripley (NSF)- Distribution and genesis of platinum group elements in the Dunka-Road and Babbitt Cu-Ni deposits, Duluth Complex, Minnesota.

L. Suttner (Amer. Chem. Soc.)- Environmental controls on the petrology of sandstone in a Pennsylvanian fan-delta.

R. Wintsch (NSF)- Geochemical assessment of mass transfer and volume change during slaty cleavage development.

R. Wintsch (NSF)- Fault mechanics: the role of mineral reactions in fault rocks.

DEPARTMENT OF GEOLOGY FACULTY AND STAFF

Professors: Abhijit Basu, James Brophy, Roy Christoffersen, David Dilcher, J. Robert Dodd (Chairman), John Droste, Jeremy Dunning, Michael Hamburger, Donald Hattin, John Hayes, Norman Hester, Noel Krothe, Gary Lane, Enrique Merino, Haydn Murray, Greg Olyphant, Lawrence Onesti, Peter Ortoleva, Gary Pavlis, Lisa Pratt, Edward Ripley, Albert Rudman, Robert Shaver, Lee Suttner, David Towell (Associate Chairman), Robert Wintsch

Research  
Scientists: Michael Dorais  
Alan Horowitz  
Steve Manchester

Librarian: Lois Heiser

Secretaries: Sarah Burton, Administrative Assistant  
Patty Byrum, Senior Secretary, Business Office  
Mary Iverson, Student Records  
Kay Kinder, Geologic Field Station  
Kim Schulte, Faculty Secretary, 3rd Floor  
Debbie Still, Faculty Secretary, 4th Floor  
Wanda Pennington, Faculty Secretary, 5th Floor

Staff: Gary Bayer, Thin Section Preparator  
Mark Gilstrap, Analytical Chemist  
Gary Hinton, Field Station Resident Manager  
Rea Kersey, Drafting Technician  
Charles Miller, Machinist  
Kimberly Sowder, Drafting Technician  
Terry Stigall, Electronics Technician  
Steve Studley, Electronics Technician  
Jim Tolén, Draftsman

Professors  
Emeritus: Robert Blakely, Judson Mead, John Patton,  
Charles Vitaliano

FACULTY NEWS

Abhijit Basu of the Department and Nelson Shaffer of the Indiana Geological Survey were in the news recently with their description of a meteorite recently identified in Indiana. It probably fell about 30 years ago and was found in a cornfield near Seymour in 1976. The eight-inch long meteorite is the first found in Indiana since 1959 and appears to be an unequilibrated ordinary chondrite. Dr. Basu recently completed his term as President of the I.U. Chapter of Sigma Xi. Soon he expects to be chairing the Advisory Board of the Collins Living Learning Center at I.U. He also was appointed to the Lunar and Planetary Sample Team which advises NASA on extraterrestrial sample collection and analysis.

Bob Dodd has been busy in addition to his administrative work with preparation for the SEPM field trip and guidebook, and by collaborating in the revision of his textbook co-authored with Robert Stanton, Paleoecology - Concepts and Applications.

Don Hattin has been appointed to a three-year term on the North American Commission on Stratigraphic Nomenclature, which includes members from ten professional societies that represent Canada, Mexico, and the United States on matters of classification and nomenclature for stratified and non-stratified rock bodies throughout the continent. Don also finds time to continue as a fireman on the railroad out of French Lick!

John Hayes and Dave Dilcher are among just four faculty from I.U. to receive prestigious John Simon Guggenheim Fellowships this year. Dave will be studying the evolution of fossil flowering plants. John will continue his biogeochemical studies of sedimentary organic matter and travel to Australia and Northwest Territories, Canada.

John Hayes will be in Canberra, Australia during January-June, 1988 as Visiting Scientist, Bureau of Mineral Resources, Division of Continental Geology where he will be working in collaboration with Dr. Roger Summons. John also will be Visiting Fellow, Research School of Biological Sciences, Australian National University, engaged in research with Dr. Graham Farquhar. During July, John will be on Victoria Island, Canadian Northwest Territories with A. H. Knoll (Harvard) and K. Swett (University of Iowa) for field work on an NSF-supported, five-year study of a Precambrian carbonate sequence. John will chair the Gordon Conference on Organic Geochemistry at Holderness School, Plymouth, New Hampshire, August 15-19.

Henry Gray, Senior Scientist with the Indiana Geological Survey and Professor of Geology, part-time, has retired after a 33-year career at Indiana University. Henry began as a coal geologist with the Survey and was head stratigrapher beginning in 1963. In recognition of his contributions to the State of Indiana, the Geological Survey, and the Department of Geology, he was named by Governor Robert Orr to the Council of the Sagamores of the Wabash. We also thank Henry for his many contributions to the Department. We're sure he will enjoy the extra time he will now have to work with his antique autos, including the 1919 Franklin touring car which he has restored, and also his 1929 Franklin sedan.

Alan Horowitz notes that he is collaborating in separate studies with Johnny Waters (MS, '76; PhD, '78) of West Georgia College and Brad Macurda, and Jim Stratton (MAT, '67; MA, '72; PhD, '75) of Eastern Illinois University. Former students visiting Alan, such as Larry Knox (MA, '71; PhD, '74) who is a visiting professor from Tennessee Technological University, "will find that the character of my office has changed very little over the years. Books and reprints still cry for space (and organization) and the much worn chair I inherited from Jim Stratton still provides a place for me to nap and for visitors to sit in and sink below eye contact because of the debris on my work table".

Brian Keith received the best paper award for the Eastern Section, AAPG Meeting of 1987. Brian also notes that he and Norm Hester will be teaching petroleum geology beginning this coming

spring. In order to give students the broadest possible background, they are asking alumni in the oil business to consider if they have any subsurface log examples that can make interesting examples/exercises to use in the course. Our selection here is limited for the most part to the Illinois Basin area. Examples from other parts of the U.S. or the world illustrating geology or reservoirs different from this area would be very welcome. In addition to logs (several, if possible), Brian and Norm would need correlations and background geology or references. All of this would be extremely valuable to the students.

Gary Lane is currently on sabbatical leave and became president-elect of the Paleontological Society at the annual meeting held in Phoenix in late October.

Enrique Merino spent two weeks at the University of Marseille (France) during January 1987 during which he gave three lectures on self-organization textures in sedimentary rocks. He also spent five months as a visiting professor at the Soil Science Department, Universidad Politecnica of Valencia, Spain where he gave a short course on dynamics of diagenesis in sedimentary basins and did field work on cement bands in Triassic red beds. Enrique also has been appointed as an associate editor of the Journal of Sedimentary Petrology for the period August 1987-August 1990).

Haydn Murray has been elected president of the Society of Mining Engineers for 1988. He lectured at the Sixth Meeting of the European Clay Groups in September in Sevilla, Spain and presented the invited introductory lecture to the Symposium on Technological Applications of Clay Minerals at the annual meeting of the Clay Minerals Society in Socorro, New Mexico in October. Haydn is vice-president of the Illinois-Indiana Section of AIPG and executive on loan to the I.U. Foundation for the "Campaign for Indiana" fund raising effort. He serves as associate editor of Applied Clay Science (Elsevier) and Minerals and Metallurgical Processing (Soc. of Mining Engineers). Haydn also proudly notes that this year during his continued service as I.U.'s faculty athletic representative to the NCAA and the Big Ten Conference, the University had the best overall performance by its athletic teams of any school in the conference topped off by the NCAA basketball championship. Haydn serves as the chairman of the athletic faculty representative's rules and legislation committee.

John Patton has been busy. He continues to serve as an advisor to the Indiana Energy Development Board, still represents the Geological Survey on Committee C-18, Natural Building Stone, of the American Society for Testing Materials, was involved with the arrangements for the Indiana Geological Survey sesquicentennial celebration, and presented the after-dinner address at the New Harmony ceremonies. John has been involved in an advisory capacity with the restoration of the Soldiers and Sailors Monument in Indianapolis along with the planned restoration of the State Capitol for its centennial anniversary in 1988. John attended the annual meeting of the Association of American State Geologists in Traverse City, Michigan in June, his first time as an honorary member.

Gary Pavlis was selected by Chevron, U.S.A., Inc. to participate in the 1987 Visiting Professor and Placement Officer Program in recognition of his contribution to the geophysics program at IU. He visited New Orleans in August to see Chevron facilities and made a helicopter tour over the Mississippi River delta to observe the drilling and production operations on a platform facility, saw a demonstration of interactive seismic computer workstations, and had discussions with managers and technical staff people. Everything went extremely well except that the glasses he was wearing on the helicopter ride fell onto the delta as he was leaning out to get a good view!

Lisa Pratt has won the George C. Matson Award for presenting the best paper at the annual AAPG meeting in Atlanta. Lisa's paper was titled "Petroleum generation and migration in lower Jurassic sequences, Hartford Basin, Connecticut and Massachusetts." Her co-authors were Robert C. Burruss, USGS, and Paul E. Olsen of Lamont-Doherty Geological Observatory. The paper was chosen from a field of 133 presentations. Lisa is the first woman to win the Matson citation.

Ed Ripley was a participant in the USGS-sponsored program on mid-continent strategic and critical minerals.

Al Rudman has just returned from sabbatical leave at the Hawaii Institute of Geophysics where he taught a senior course in seismology and was involved in separate seismic research projects with L. Neil Frazer, Barry Leinert, and Fred Duennelier. Al also visited seismic observatories in France and Hungary. Al is currently Departmental Undergraduate Adviser.

Bob Shaver complains that although retiring at the end of December, unlike other retirees, he may not be allowed to go immediately to the golf course, on a fishing expedition, or even to his flower garden, as he has promised major manuscripts to the I.U. Press, Michigan Basin Geological Society, and Indiana Geological Survey. A principal activity this year has been as coordinator for the Indiana Geological Survey's sesquicentennial celebration in New Harmony. Bob received a plaque honoring him as one of the ten living past editors of the Journal of Paleontology at the 1986 annual AAPG-SEPM Meeting.

Dave Towell is serving again as a member of the Bloomington Faculty Council and as a member of several campus-wide committees including the Educational Policies Committee, Student Affairs Committee, Campus Calendar Committee, Subcommittee on Student Athletes, and Radiation Safety Committee. In the Department, he serves as Associate Chairman, Associate Director of the Field Station, and Departmental Graduate Adviser. He also served as editor of this newsletter!

Roy Christoffersen is our reigning Screwball for 1987 having received this honor at the 1986 Christmas Party. He is the first person to win this award during his first semester on the faculty. He must be well qualified!

Bob Wintsch served as a CIC exchange faculty member at the University of Michigan, Ann Arbor during the fall semester, 1986-87. Bob and Sue introduced their new son, Timmy, to a cooler climate than Bloomington's.

## ALUMNI NEWS

GEORGE LECKIE (MS, '62; PhD, '64) has retired from British Petroleum and now has an independent consulting business.

JERRY A. LINEBACK (PhD, '64) is now Assistant State Geologist for the Georgia Geological Survey and is Hydrology Program Manager. Prior to accepting the position in Georgia, Jerry spent 17 years as a geologist with the Illinois Geological Survey, followed by 5 1/2 years with Robertson Research in Houston, Texas.

RICHARD A. SURFACE (BS, '51) has retired from Mobil Oil Corp., Los Angeles California, as Senior Staff Operations Engineer, after 34 years of service.

DON C. STEINKER (BS, '59), Professor of Geology at Bowling Green State University is currently Associate Managing Editor of Journal of Paleontology and National Vice-President, Northeastern Province, Sigma Gamma Epsilon.

LOUIS C. KONETSKI (MA, '67) is served by a new post office which is certainly special: North Pole, Alaska 99705 (a Fairbanks branch).

DOUG KAYES (BS, '78, MA, '79) is working in Jakarta, Indonesia for Mobil Oil Indonesia exploring for oil and gas primarily in East Kalimantan.

BRIAN MASON is retired, but still working at the Smithsonian on Antarctic meteorites and New Zealand granites and gneisses.

BEHTAZ COMPANI-TABRIZI (BS, '76; MA, '82) has been working as a geophysical interpreter at Pennzoil Co. in Houston, Texas for the past five years. It was nice to see him when he visited Bloomington recently.

JEFF OSLUND (MA, '79) has recently been transferred to Enserch Exploration, Inc.'s Offshore District as Area Staff Geophysicist in charge of offshore geophysical operations. He was formerly in Area Staff in charge of the Ark-La-Tex geophysical group. Raclene and Jeff have two daughters, Ashley (4) and Heather (1-1/2). They now live in Dallas, having moved from New Orleans three years ago.

BILL DIXON, JR. (BS, '58; MA, '66), Engineering Geologist with the Illinois State Geological Survey has been named to head a northeastern branch office of the Survey at the State of Illinois Center in Chicago.

IRA D. TAYLOR (BS, '50; MA, '52) notes that Jean and he have formed Taylor Energy Corporation of Amarillo, Texas.

WES PEIRCE (MA, '52) is retiring as Principal Geologist after 31 years with the Arizona Geological Survey. Maxine and Wes plan to combine travel with outdoor, house, and mountain cabin activities. In addition to completing some unfinished research, Wes plans to maintain an interest in new approaches to elementary and secondary earth science education.

BARRY KUES (PhD, '75), Associate Professor of Geology at the University of New Mexico, Albuquerque, finished a four-month stint as Acting Chairman and a five-year period as Assistant Chairman in December 1986. Barry is currently on sabbatical leave and continuing his research on Lower Cretaceous stratigraphy/paleontology and Pennsylvanian mollusc faunas of the southern Western Interior. Barry is author of "Fossils of New

Mexico" (U. New Mexico Press) and is currently editor of the New Mexico Journal of Science. For three years, Barry served as a member of the State Policy Advisory Committee during planning stages of the New Mexico Museum of Natural History which opened its doors in 1986.

LARRY BALTHASER (MA, '63; PhD, '69) continues to teach geology and physics at Cal Poly State University, San Luis Obispo.

ROBERT L. SIMS (BA, '50), Geophysical Advisor for Anadarko Petroleum Corp., has taken early retirement. Previous to joining Anadarko in 1980, he had been Manager of Geophysics for Sun Gas Company's Offshore Division and earlier had gained field experience with The Pure Oil Company and Seismograph Service Corp. He has been an active member of the Society of Exploration Geophysicists since 1953. Mr. and Mrs. Sims will continue to reside in Houston while pursuing various hobbies, including golf and traveling.

RON GOLOUBOW (BA, '82) continues to investigate ground water and soil contamination in the states of California, Arizona, and Oregon for Brown and Caldwell, Consulting Engineers, Pleasant Hill, California.

MIKE MOUND (MA, '61; PhD, '63) has been President of Chemtech Associates of Costa Mesa, California since 1983. Chemtech is sole and exclusive agent for Sveriges Geologiska AB, the commercial arm of the various Swedish geological entities under the Ministry of Industry including the Swedish Geological Survey (SGU) and the Swedish Nuclear Waste Management Co. (SKB). Chemtech also is a major consultant organization for barter and countertrade with Third World countries. Currently, they are also working on specialized refugee housing modules for the United Nations.

DIANE MATT (BA, '73) received her M.Sc. in surficial geology from the University of Calgary in 1975 and has lived in Denver for the past 12 years. She is Executive Director of Associated Landscape Contractors of Colorado, a non-profit professional association. Diane also guides as many river trips as possible through the Grand Canyon a desire which she attributes to her taking one of the two long-remembered IU spring field trips/seminars of the early seventies.

JOHN MACKEY (BA, '75) of Bloomington has formed Mackey-Tanner Petroleum which develops, leases, and drills oil and gas prospects in the Illinois Basin.

GEOFF GLANDERS (BS, '81) has been selected to manage ATEC Environmental Services Division in Indianapolis which performs hydrogeologic investigations and groundwater clean-ups using well point systems, interceptor trenches and various pumping schemes. He was a short-course instructor for Holcomb Research Institute's course on quality and pollution of groundwater in April, 1987.

GREG WAHLMAN (BA, '72, M.A., '74) is still a paleontologist with Amoco Production Co. in Houston. During 1987, his Ph.D. dissertation on Ordovician molluscs from the University of Cincinnati was edited for publication as a U.S.G.S. professional paper.

MARK S. SONNTAG (BA, '71) has accepted a new position as Assistant Professor/Planetarium Director in the Department of Physics at Angelo State University, San Angelo, Texas.

MARTY YATES (MA, '84) is now Director of the Microprobe

Laboratory at the University of Maine, Orono.

JOMAAH ALAWI (MA, '79; PhD, '85) is Assistant Professor at King Saud University, Riyadh.

TARIQ AL-JASSAR (MA, '81; PhD, '85) is Geologist with the Geological Survey of Iraq in Baghdad.

S. ROSS TAYLOR (PhD, '54 and Owen Awardee) had a feature article on the origin of the moon published in American Scientist, the journal of Sigma Xi, The Scientific Research Society.

JAYNE SIEVERDING (MA, '81) an exploration geologist with Chevron USA in Denver has presented co-authored talks on a Mississippian reservoir study from the Southwestern Wyoming thrust belt at three meetings this year, AAPG (Los Angeles), SEG (New Orleans), and at the Rocky Mountain Association of Geologists annual meeting. Jayne also has been involved in a Chevron geophysical training program and has been out "bird-dogging" her first seismic crew in Oklahoma.

JAMES MILTON GROMER, an undergraduate geology major at IU from 1961 to 1964, passed away on June 18, 1987. We extend our condolences to his family. He came from Mitchell. Jim was a certified professional geological scientist with AIPG.

CHARLES RINEHART (BS, '78; MA, '82) Senior Geophysicist, International Exploration Services Organization, Conoco Inc., has returned to Houston after working a year and a half in Norway on Barents Sea exploration.

CHERYL METZ (BA, '79) wife of Chuck Rinehart, has also returned from Norway and in May, 1987 completed her M.S. degree from the University of Texas on the Permian Basin of west Texas. She has begun work on a Ph.D. degree in geology at Miami University, Oxford, Ohio.

RONALD KLUSMAN (MA, '67; PhD, '69), Professor of Chemistry & Geochemistry, Colorado School of Mines, has been elected Secretary of the Association of Petroleum Geochemical Explorationists for 1987.

RON BELAK (MA, '78) left IU to join Cities Service Corporation in Tulsa and in 1980 moved to Apache Corporation in Denver. In 1983 he joined Hambro Bank to start an oil and gas operation and was involved in originating and structuring oil and gas investments. Currently, Ron is completing an M.B.A. degree at the University of Colorado, Boulder and plans to embark on a new career in commercial lending and venture capital, including the oil and gas industry.

LARRY D. WOODFORK (BS, '64; MA, '65) Assistant State Geologist of the West Virginia Geological and Economic Survey and Adjunct Professor in the College of Mineral and Energy Resources at West Virginia University has received the Distinguished Service Award of the AAPG. He has been instrumental in the growth and success of the AAPG Eastern Section and was President of the Eastern Section in 1979-1980. In 1985-1986 he was chairman of the AAPG House of Delegates and served on the AAPG Executive Committee. Larry also has served AIPG in numerous offices and was national president of that organization in 1983 and has been recipient of its Martin C. Van Couvering Award for Distinguished Service.

ALLEN H. NELSON (MA, '72) has become senior geological production engineer, Weyerhaeuser Co., Tacoma, Washington.

Previously, he was development geologist, Unocal, Oklahoma City.

JOHN C. BOLLENBACHER (BA, '43), chief petroleum geologist for and vice-president of the Coronado Oil Co., Denver, married Martha H. Reed of Bloomington, Indiana on August 16, 1987. The bride is the daughter of Edna B. Heseman of Indianapolis and the late Earl J. Heseman.

VERNON P. SCOTT (MAT, '66) was recently honored by the Oklahoma House of Representatives as "Mr. Geology of Oklahoma" for his role in teaching geology. Vernon also was voted Outstanding Undergraduate Instructor at Oklahoma State University.

AILEEN WOJTAL DUC (MA, '75) is on leave from ARCO Oil & Gas Co. and in England with her husband, Chaz who has transferred to ARCO International. Their third child was born in June, 1985. This year Aileen published part of her Ph.D. dissertation in Sedimentology.

JEFF COOK (BS, '78) and TESS KWIECIEN COOK (BS, '81) visited Bloomington in June and, although observing obvious changes, they tell us they were pleasantly surprised at how things around the University seemed as they were when they were students.

STEPHEN HENDERSON (BS, '70; MA, '74) received his Ph.D. degree in 1984 under the direction of ROBERT FREY at the University of Georgia. He is now teaching at Oxford College of Emory University in Oxford, Georgia. Steve married Kitty Langmyer in May, 1986 in Orchard Park, New York, the couple having met while she was completing her masters degree in geology at the University of Georgia.

CRAIG A. McCAMMACK, (BA, '82) has become a consulting engineering geologist with The Geologic Outfit, Anaheim, California. Previously he was an exploration geophysicist with Tenneco Oil, Lafayette, Louisiana.

RANARD J. PICKERING (BA, '51; MA, '52) has become Chief, Office of Atmospheric Deposition Analysis, USGS. Previously, he headed the Quality of Water Branch. Ranard has also been designated as the Department of Interior representative on the Interagency Scientific Committee of the National Acid Precipitation Assessment Program.

LUCY KUIZON (MA, '76) recently headed a field crew of seven U.S. Bureau of Mines geologists undertaking an inventory of mineral potential of the southern Lemhi Mountains, Idaho. Lucy has worked with the Bureau of Mines for six years. Previously she worked as a minerals specialist with the Bureau of Land Management in Elko, Nevada and Casper, Wyoming.

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