

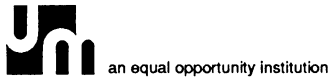
# GEOLOGY

ALUMNI NEWSLETTER

NOVEMBER 1990



UNIVERSITY OF MISSOURI-COLUMBIA



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# GEOLOGY

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11/90

## FACULTY & STAFF

Roster	2
News	2
Publications	7
Research grants	9
Meetings	9
A.G. Unklesbay Library	10
Keller's Birthday	10

## STUDENTS

Recent degrees	11
Organizations	11
Awards	12
Professional activities	15

## VISITING SPEAKERS

16

## SPORTS SCENE

16

## DEVELOPMENT ACTIVITIES

Geology Development Board	17
Endowment and Development Fund	17

## ALUMNI

Reflections	20
Wyoming	21
Recent gatherings	22
Special recognition	23
Activities	24
In memoriam	36

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Walter Keller and A. G. Unklesbay

## FROM THE CHAIRMAN

As I write this, the governor of Missouri is meeting with his advisers to determine priorities among the state agencies. The state seeks to deal with a shortfall in tax revenues. A glance at the newspaper and discussions with colleagues elsewhere tell me that this situation is not peculiar to MU and to this state. We do not know how this will affect us, but can assume that some financial retrenchment will come our way. Last year Tom Freeman occupied this page of the Newsletter with an outline of the ways in which the faculty, staff and students of the department intended to use the endowment funds that you, the alumni and friends of the department, planned to raise. He, like our governor, could not anticipate the economic turn-down that is responsible for the current budgetary difficulties. We are fortunate to have those monies already raised and available at this time. The most recent tally showed pledges of nearly \$650,000 toward the million-dollar goal, and about \$250,000 already contributed. As I have said to some of you in acknowledging your contributions, the moral support and vote of confidence we receive from our alumni are worth almost as much to us as the money that you have provided. (Please note that this is not an indication that we could prosper just as well from an occasional pat on the back.) We intend to function in a way that will justify your efforts in our behalf.

Construction of the dining room at Camp Branson was completed on schedule and it has provided food to the first class to use it. The only complaint I have heard is that the hallway leading to the lavatory is dimly lighted. That did not generate a lot of excitement on my part. One of the alumni who visited Camp Branson last June has provided his impressions which appear elsewhere in this Newsletter. Fortunately the cost of construction came in sufficiently below the estimates that we are able to convert the original dining hall into a dormitory for female students without needing additional funds.

Dr. Susan Carroll, a geochemist, joined the faculty in late summer after a postdoctoral year in Europe. Be sure to read her statement which appears herein. We currently are recruiting a seismologist to replace the departed Tom Owens. Stay tuned for further developments.

Publication costs provided by the Geology Development Fund.

On the cover: Dr. Walter D. Keller still going at 90.

## Roster

### ASSISTANT PROFESSORS:

Paul E. Blanchard (University of Texas, 1987)  
Hydrogeology  
Susan A. Carroll (Northwestern, 1989)  
Low temperature geochemistry  
Joseph F. Engeln (Northwestern, 1984) Geophysics

### ASSOCIATE PROFESSORS:

Robert L. Bauer (University of Minnesota, 1982)  
Precambrian geology  
David W. Houseknecht (Penn State, 1978) Sandstone petrology and diagenesis  
Peter I. Nabelek (SUNY Stony Brook, 1983) Trace-element geochemistry  
Kevin L. Shelton (Yale, 1982) Economic geology  
Michael Underwood (Cornell, 1983) Sedimentology

### PROFESSORS:

Raymond L. Ethington (University of Iowa, 1958)  
Conodont biostratigraphy  
Tom Freeman (University of Texas, 1962) Carbonate petrology  
Glen R. Himmelberg (University of Minnesota, 1965) Chemical petrology  
William D. Johns (University of Illinois, 1952) Clay mineralogy  
James H. Stitt (University of Texas, 1968) Trilobite biostratigraphy  
George W. Viele (University of Utah, 1960)  
Tectonics

### RESIDENT EMERITI:

Walter D. Keller (University of Missouri, 1933)  
Clay mineralogy  
A. G. Unklesbay (University of Iowa, 1942) Paleontology

### STAFF:

Louis R. Ross, Senior Electron Microscopist  
Bob Heidlage, Librarian  
Beverly Sapp, Administrative Associate  
Marsha Bulen, Senior Secretary

## Faculty and staff news

### FACULTY

**Bob Bauer** completed a very productive research leave last spring that included time for research, writing and working with his graduate students. He made presentations on his recent work in the Laramie Range, as well as continuing work in northern Minnesota, at the USGS and at several universities. Both Bob and his graduate students presented papers at the Institute on Lake Superior Geology held last spring in Canada and at a recent Penrose Conference held in Bellingham, Washington. Bob had a busy summer that included six weeks teaching at Camp Branson and four weeks of field work studying the Early Precambrian rocks in northern Minnesota. The work in northern Minnesota, funded by NSF, is an integrated study of the relationship between deformation, metamorphism and plutonism and is being conducted in cooperation with the geochronology lab at the Royal Ontario Museum. The research is designed to evaluate the pressure-temperature-time and deformation histories in these ancient rocks in order to compare them with younger terranes that have more obvious relationships to plate tectonic settings.



**Paul Blanchard** has kept busy this past year teaching, pushing graduate students along, and trying to do some research at the same time. Paul claims some success on the graduate student front as Joe Richards finished his thesis, and Brian Kelly has called frequently to report progress on his thesis. Joe is rapidly becoming the USGS groundwater expert in Rolla, and Brian is working for Burns & McDonnell in Kansas City. The theses of Paul's other five graduate students are at various stages of incompleteness. The most exciting news on the research front is that Paul is part of a team of researchers from MU and the USDA Agricultural Research Service who received funding for a five-year, \$3.5 million study of the impact of agricultural chemicals on water quality. This study is one of five similar studies in the Midwest and is part of the President's Water Quality Initiative (which thankfully survived the budget negotiations). Paul reports making good use of the theses of Tom Hessemann and Lee Gorday as the study will be conducted in the Goodwater Creek watershed in Boone and

## NEWS

Audrain Counties. Along with the study of the agricultural chemicals, Paul is piggybacking some really interesting work on interflow, groundwater recharge, and transport in fractured glacial till.



**Susan Carroll** after completing her doctoral dissertation in January, 1989, on the dissolution kinetics of silicate minerals at the Department of Geological Sciences, Northwestern University, with John V. Walther, headed for Europe. Her postdoc was a unique opportunity to experience Swedish and French cultures and to investigate aqueous geochemical problems from the perspective of chemists and physicists. Susan's project was concerned with the mobility of radioactive waste in the geosphere and, in particular, investigating the interactions between trace elements and carbonate minerals in groundwaters. The project involved two phases: (1) the solution-geochemistry experiments, which were carried out at the Department of Inorganic Chemistry, Royal Institute of Technology in Stockholm, Sweden; and (2) analysis of the carbonate phases with high energy ion beam techniques, at the Department of Nuclear and Mass Spectrometry, National Center of Scientific Research in Orsay, France. Currently Susan is developing undergraduate and graduate environmental/low-temperature aqueous geochemistry programs. Research areas include the investigation of rock-water interactions in the silicate and carbonate systems at near earth surface conditions.



**Joe Engeln** is on a two-year leave, working in Washington, D.C. with NASA as acting head of the geodynamics division.



**Ray Ethington** looked forward to an easier year when he handed the presidency of SEPM to his successor in San Francisco in June. He spent late June in Wyoming with the group of alumni and university administrators that visited Jackson Hole and Camp Branson. And then, yes, another trip to central Nevada and western Utah to collect from Lower/Middle Ordovician boundary beds with Rube Ross, (Colorado Mines), Jim Sprinkle (UT-Austin), and Jim Loch (MU graduate student). Conodonts that co-occur with graptolites of Australian affinities

in limy beds of the eugeoclinal Vinini Formation in the Roberts Mountains are being studied in association with Stan Finney (Cal. State, Long Beach) and promise to contribute in a major way to current international efforts to stabilize the subdivisions of the Ordovician. He was selected by acclamation as the fourth Chief Panderer of the Pander Society (explanations provided in plain brown envelopes on request), in which role he succeeded Carl Rexroad, an MU alumnus. Since assuming the chairmanship of the department, he has been struggling against a rising tide of paper, but hopes that it will ebb soon and allow more time for pandering. Current plans are a trip to southern Nevada in the winter and back to Eureka County if time allows in the summer of '91.



**Tom Freeman's** year is being spent in Spain where he is resting after his eight-year stint as department chairman. Tom also is doing research on seafloor spreading, teaching and giving talks in Barcelona and Madrid.



**Glen Himmelberg's** research activities during the past year focused on two major areas: (1) the petrogenesis of ultramafic-mafic complexes which occur in a belt from Duke Island to Klukwan in southeastern Alaska, and (2) investigations of the thermobarometry and metamorphic evolution of orogenic belts in southeastern Alaska, which is part of an interdisciplinary study of crustal formation processes during collision of lithospheric plates. In pursuit of these activities he spent three weeks in the field in southeastern Alaska during the past summer operating from the U. S. Geological Survey's research vessel R/V Karluk. Federal budgets allowing, Glen will return to the field in Alaska next season to continue these investigations. He also is making plans for research leave next academic year to devote full time to the above research projects with the U. S. Geological Survey in Menlo Park, California. Glen continues to teach Optical Mineralogy and Physical Geology and this year will return to teaching Igneous and Metamorphic Petrology while Peter Nabelek is on sabbatical leave.



**Dave Houseknecht** has survived a year punctuated by numerous highlights. During the 1989-90 academic year, he spent four weeks touring as an AAPG Distinguished Lecturer on the topic Role of Compaction in Determining Sandstone Porosity. The tour took him to New Mexico, Arizona, California, Idaho, Saskatchewan, Montana, Colorado, Texas, Tennessee, Alabama, Indiana, Illinois, Nebraska and Iowa. Dave also presented seminars at Northwestern, University of Texas-Austin, Bureau of Economic Geology, Oklahoma City Geological Society, and Illinois-Indiana-Kentucky Geological Societies, plus talks at the AAPG Rocky Mountain Section meeting, the GSA national meeting, and a source rock symposium in Norman, Oklahoma. At the AAPG convention in June, Dave received the Outstanding Paper Award in the 1988 Journal of Sedimentary Petrology. Fortuitously, the award was presented by Ray Ethington who served as President of SEPM last year. Dave and Ed Pittman co-hosted a symposium on Clay Minerals in Sandstones at the Clay Minerals Society meeting in October. The symposium attracted 40 speakers from Europe, Canada, South America, and the United States. Dave is currently busy editing papers from the symposium for a SEPM Special Publication. Dave and Stephanie sold their house in March, moved into a rental property in May, spent the summer overseeing construction of a new house, and moved into the new home in early October. Everyone is settling in nicely, although much unpacking remains to be done as of early November. Ellen (13) continues to be busy with school and theater, and Walt (9) with soccer and Teenage Mutant Ninja Turtles.



**Bill Johns**, is on sabbatical leave in Pittsburgh, Pennsylvania this academic year, and it just happens to be in close proximity to their summer lake home in Swanton, Maryland. Marianna is recuperating nicely at this writing.



**Walter D. Keller** writes for us the following account: "We had a return meeting here (first one here was in 1953) of the Clay Minerals Society, October 6-11, at which our Alums and other clay daubers were especially kind to me; for these remembrances I am most grateful. For example, the

Keller 90 Kaolin Symposium was a nonagenarian honor birthday gift; moreover, there was a luncheon for me that day proving that there is (was) an apparent free lunch for me. Governor Ashcroft proclaimed it Walter D. Keller Day, although I have never been a politician. I showed at the luncheon a birthday greeting "card," 37 inches vertically long, received from "Chuck" Ye, MA thesis with me in 1948, Nanjing, saying in 100 different Chinese dialects, "live a long life," the 100 ways implying 100 years. Prof. C. P. Ting, MA thesis with me in 1950, Changsha Univ., sent a beautiful book illustrating Chinese arts and crafts. Olga Lahodny, Zagreb, brought a hand-size clock of the picturesque Black Forest design. Jack Tlapek, MA thesis in 1962, and Fred Strothman financed a Keller Scholarship in Geology via the Geology Development Board, which held its meeting that week, and to add icing to the cake. Many, many thanks to all of you; you 'made my day' for the year."



**Peter Nabelek** is on leave this year and is spending his time in France.



**Richard Sedlock**, is Visiting Assistant Professor for the fall semester while he covers the classes normally taught by Joe Engeln. He will be appointed as Adjunct Assistant Professor effective January 1, 1991. Richard grew up in Cleveland, Ohio, and thus is a diehard fan of Cleveland's hapless major sports teams. His education is BA from Northwestern in 1980, followed in turn by MA from University of California-Santa Barbara in 1982, and a PhD from Stanford in 1988, all in Geology. His dissertation dealt with the evolution of Mesozoic rocks representing a subduction complex, arc, and ophiolite in west-central Baja, California using field, structural, petrologic, geophysical, geochronologic, biostratigraphic and geochemical data. His study showed that normal faulting had elevated deeply buried (15-30+km) blueschists in an accretionary prism. His postdoctoral work at Northwestern included (1) evaluation of the tectonic evolution of California west of the San Andreas Fault by assessment of historic development of the fault system and prediction of

future displacements and seismic risks, and (2) a study of the tectonic evolution of Mexico and northern central America. He assembled the largest data base ever completed for the latter region which he divided into a new set of terranes; he developed paleogeographic reconstructions covering the last 1000 Ma. His plans for the future include field and laboratory studies of strongly deformed arc, ophiolite and subduction complex rocks in southern Baja, California, and structural and tectonic studies of mylonites along a major terrane boundary in the Guerrero-Oaxaca region of southern Mexico with geologists from the National University in Mexico City.



**Kevin Shelton** returns to the fold after a well-deserved research leave during which he focused on two projects involving the chemistry of fluid-rock interactions : (1) geochemical reconstruction of basinal fluid flow, and (2) thermal and fluid histories of accreted rocks in the Franciscan terrane of California (a cooperative project with Mike Underwood). The highlight of Kevin's leave was a two-week NSF-sponsored workshop and field trip to Brazil where he was able to visit world-class Precambrian shear-zone-hosted gold deposits. He also had a chance to see outcrops of Archean granulites that only coincidentally "happened to be on the beaches of Rio and Salvador". This year, through geochemical research on two topics of Missouri geology, Kevin continues to foster cooperative scientific interaction with faculty at UM-Rolla. He is beginning a two-year NSF-sponsored study of the sulfur isotope geochemistry of detailed mineral parageneses in Mississippi Valley-type lead-zinc deposits of southeast Missouri with Richard Hagni (UMR) in order to test the involvement of multiple basinal fluid sources during ore deposition and was recently awarded a Missouri Research Assistance Act grant with Jay Gregg (UMR) to study the alteration of sedimentary carbonate aquifers by basinal fluids in the Ozark region. On the non-academic front, Kevin finally learned how to hit his long irons and lowered his nine-hole handicap to a four. Benjamin (now also four) gives Lois a break two mornings a week while attending Leslie Ethington's playschool.



**Jim Stitt** had a busy year teaching during 1989-

1990. In the fall, he taught the Physical Geology course vacated by the departed Tom Owens, in addition to Introduction to Paleontology. In the winter, he taught the afternoon section of Geology 1 and Advanced Paleontology, and in the summer he taught Geology 1. Needless to say, he was glad for the August break. In the fall, Jim, Ray, Steve Hohensee (MS 1989) and Charles Stone (Arkansas Geological Commission) presented a poster on the Upper Cambrian trilobites from the Collier Shale in Arkansas at a symposium sponsored by the Oklahoma Geological Survey. Jim also was one of a number of contributors to another presentation at the same meeting on the biostratigraphy of the Arbuckle Group. Research continues on the Arkansas trilobites and in Texas on the Franconian-Trempealeau boundary and on the Cambrian-Ordovician boundary interval. In May, Jim accompanied his graduate students to Oklahoma to collect more Upper Cambrian brachiopods for Rebecca Freeman (MS thesis) and more trilobites from the Kindblade Formation for Jim Loch (PhD dissertation). Jim continues to serve as Director of Graduate Studies for the department. On the home front, Betty is teaching Spanish at Oakland and Jefferson Junior High schools, Tanya is a senior in MU's School of Journalism, and Merrilee is a freshman at the University of Texas at Austin.



**Mike Underwood** returned from his well-deserved sabbatical leave in Hawaii with a new perspective on life. During the Fall 1989 semester he taught Sedimentology and chaired a Theme Session on The Hydrology and Thermal Structure of Accretionary Prisms for the GSA annual meeting in St. Louis. In November, Mike was the recipient of the prestigious Gold Chalk Award (Division of Physical Sciences) "In recognition of outstanding achievement in the education, training and development of graduate-professional students" on the MU campus; this makes Mike the only person in the history of the Department of Geological Sciences to receive both Purple Chalk and Gold Chalk Awards. Mike took research leave during the Winter 1990 semester to participate as a shipboard sedimentologist on Leg 131 of the Ocean Drilling Program, which drilled through the toe of the Nankai accretionary prism offshore Japan. Immediately after the cruise (62 days at sea), Mike traveled to San Francisco to chair a symposium on Active-margin Sedimentation

for the AAPG national meeting. He then journeyed to east-central Alaska to conduct a field investigation of the Kindik Basin region, in cooperation with workers from the USGS and ARCO Alaska; he returned to Columbia with gruesome stories of hand-to-hand combat with wild hordes of mosquitoes. Two of Mike's graduate students defended their theses during the past academic year, and four remaining students are working on a variety of projects involving the thermal evolution of accretionary prisms and thrust belts in the circum-Pacific. Mike was recently elected second vice-chairman by the membership of the GSA sedimentary geology division, and he has taken over the departmental administrative responsibility of Director of Undergraduate Studies. At home, Gail is in her final year of study for the BS Ed in elementary education; Alexis moved up the Junior-High league, and Nik is attending fourth grade.



**A. G. Unklesbay**, having long been behind times on dinosaur research and knowledge, spent a week last summer visiting the famous dinosaur quarries in "Dinosaur Triangle" of Colorado and Utah. Believe it or not, they trusted him with a small paint brush and ice pick to help uncover a large legbone. Unk has resumed work on the layman's version of the Geology of Missouri. Maybe he can get it finished before the Paleozoic stratigraphers and the Pleistocene experts again revise their ideas on nomenclature. Trying to be an example for all of you, he spent an hour every day last week talking to "gifted" third- and fourth-graders about rocks and minerals; especially about those important to the economy of Missouri. Many of the local teachers skipped geology as undergraduates and need help. How are things where your kids go to school? Unk will spend part of the winter in New Zealand and southeastern Australia. Looking at the geologic maps and their complexities, he expects to be stratigraphically lost most of the time.



**George Viele** returned from field camp and then disappeared to Greece, where he says he's doing research in a remote cactus filled section of the island. Are you trying to stick it to us George?

## STAFF

**Marsha Bulen**, Senior Secretary, is beginning her fifth year with the department. Besides getting used to the new computer system, Dr. Viele kept her busy with the field camp preparations, and Dr. Stitt with the new graduate student recruitment. After taking a four-day cruise to the Bahamas this past spring, Marsha stayed very busy helping Dr. Johns and Dr. Stitt prepare for the Clay Minerals Society conference that was held in Columbia this past October. At home, Marsha is busy with both children in school (and helping the youngest recuperate from a broken arm).



**Bob Heidlage**, Librarian, spent some of the summer cleaning up after a water leak in the map collection. He's looking forward to the availability of the new GEOREF data-base on CD-ROM, due out from AGI in November. Bob attended GSA in Dallas as a member of the Geoscience Information Society and enjoyed visiting with the many department alumni.



**Lou Ross**, Sr. Electron Microscope Specialist, was a recipient of a Staff Development Award last spring to attend a short course at Lehigh University in SEM and X-ray microanalysis. He attended the annual Microbeam Analysis Society conference. Lou established a national user society for labs still utilizing the ARL EMX electron microprobe, the first newsletter will be out soon. Currently he is evaluating the hardware and software to automate the microprobe with a personal computer. Together with Eric Hathon, his RA he presented a poster at the 27th annual Clay Minerals Society meeting demonstrating a new technique for quantitative analysis for mixed layered clays on samples prepared for X-ray diffraction. Lou is in his last term on the Arts and Science Staff Network.



**Beverly Sapp**, Administrative Associate, is serving her second year with the Arts and Science Staff Council, and is Chairwoman of the Staff Recognition Committee and the Spring Luncheon. The department has been kind enough to present the staff with new computers. We're having fun now!

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- DiTullio, L., Laughland, M., Byrne, T., and **Underwood, M.**, 1989, Thermal constraints on the growth of an Eocene accretionary prism in southwest Japan. *Geological Society of America, Abstracts with Programs* v. 21, p. A314.
- Underwood, M. B.**, Laughland, M. M., and Kang, S.M., 1989, Thermal effects of ridge subduction: An example from the Shimanto accretionary complex, Japan. *American Geophysical Union Transactions*, v. 70, p. 1380.
- Underwood, M.B.**, 1990, An overview of forearc bypassing: The roles of submarine canyons and unconfined turbidity currents. *American Association of Petroleum Geologists Bulletin*, v. 74, p. 783.
- Underwood, M.B.**, and Laughland, M.M., 1990, Thermal evolution of "hot" accretionary prisms in California and Japan. *American Association of Petroleum Geologists Bulletin*, v. 74, p. 783.

## Research grants

### American Chemical Society

Houseknecht	\$ 40,000
Shelton	40,000
Underwood	40,000

### Arco

Underwood	5,100
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### Exxon

Houseknecht	10,000
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### Missouri Research Assistance Act

Shelton	7,636
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### National Science Foundation

Bauer	70,000
Houseknecht	90,000
Shelton	73,656
Underwood-OSD	28,686
Underwood/Shelton	89,994

### Ocean Drilling Program

Underwood	39,706
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### Petroleum Companies Consortium

Houseknecht	65,000
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### Texaco

Shelton	5,000
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### United States Geological Survey

Himmelberg	20,000
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### USDA

Blanchard	320,000
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### Water Resources

Blanchard	70,000
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## Clay Minerals Society Meeting

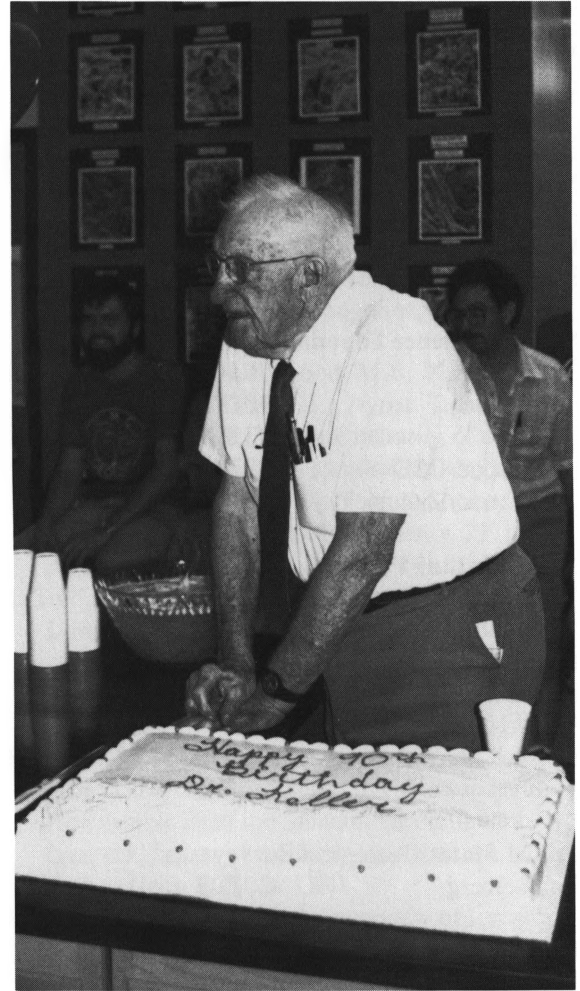
The Department of Geological Sciences hosted the 27th Annual Meeting of the Clay Minerals Society in Columbia on October 6-11, 1990. Three hundred people attended the meeting, including clay mineralogists from 12 foreign countries. Walter Keller was the honoree of the meeting, and a special four-session symposium, the Keller-90 Kaolin Symposium, was held to honor him in his 90th year and to review the state of research on kaolin. A volume of Keller's selected works was given to each registrant. (Funds for this publication were donated by alumni Ray Holifield, Herman Ponder and Jack Tlapek.) Dave Houseknecht organized a second four-session symposium entitled Clays in Sandstones which had a large audience. A variety of other papers were presented at three general sessions. Alumni Jim Westcott, Chuck Stack (UMR), Randy Miles and, of course, Walter Keller ran a highly successful field trip looking at east-central Missouri fireclays, tills and associated soils. Bill Johns and Jack Burst were the co-chairmen, Jim Stitt functioned as Treasurer, Mike Underwood ran the audiovisuals, and various other faculty and graduate students contributed to the success of the meeting that many attendees called "the best Clay Minerals meeting they had ever attended."

## DEDICATION OF A.G. UNKLESBAY GEOLOGICAL SCIENCES LIBRARY

## Dr. WALTER D. KELLER'S 90th BIRTHDAY CELEBRATION March 13, 1990

The following alumni, friends, faculty and staff gathered to honor Dr. A. G. Unklesbay on April 27, 1990, for the dedication of the library in his name.

Hank and Lillian Allen  
Robert L. Bauer  
Marsha Bulen  
Patty Dreyer  
Sue Drury  
Burnett and Jessie B. Ellis  
Raymond L. Ethington  
Tom and Peggy Freeman  
Eric and Lori Hathon  
Bob Heidlage  
Bob Heller  
Quinton Hennigh  
David Houseknecht  
Bessie Hume  
Catherine Hunt  
Dave Jamerson  
Marjorie Jamerson  
Mark Jamerson  
Phillip Jamerson  
Waltaer D. Keller  
Harry B. Robinson  
Mark B. Robinson  
Lou Ross  
Beverly Sapp  
Jim and Betty Stitt  
Fred and Pat Strothmann  
Allen and Lisa Unklesbay  
Kenneth and Nan Unklesbay  
Jerry Vineyard  
Joseph Wood  
Jack and Edith Wright



Bob and Gerrie Heller with Dr. A. G. Unklesbay

In order to surprise Dr. Keller on his birthday, we had to take over the SEM room, where Lou Ross had put up a nice poster display of Distinctive Morphologies of Clay Minerals by Dr. Keller.

## Recent Degrees

### Bachelor of Science

Jeffrey Alpert  
Craig Boucher  
Vincent Buening

Eric Page  
Carl Payne  
Werner Sherman

### Master of Science

#### Bauer, Rita

Fluid inclusion study of the regionally extensive, epigenetic Bonnetterre Dolomite, southeast Missouri

Supervisor: Shelton

#### Davis, Milford

Structural geology of the Maumelle zone, eastern Ouachita Mountains, Arkansas

Supervisor: Viele

#### Dincau, Anthony

Diagenesis and porosity evolution of sandstone from the Wagon Wheel #1 Well, northern Green River Basin, Wyoming

Supervisor: Houseknecht

#### Kang, Sin Mok

Clay mineralogy, diagenesis, and metamorphism of the upper Shimanto belt, Muroto Peninsula, Shikoku, Japan

Supervisor: Underwood

#### McNamara, Daniel

Evidence for azimuthal seismic velocity anisotropy in the Basin and Range Province: Implications for middle to lower crustal tectonic processes

Supervisor: Owens

#### Schulz, Marjorie

Hydrothermal manganese oxyhydroxide mineralization of volcanoclastic rocks from the Mariana and Izu-Bonin Arcs

Supervisors: Shelton & Underwood

#### Thomas, Timothy (Marty)

Influence of depositional facies and paragenesis on distribution of reservoir quality and gas production in lower Springer Sandstones, eastern Custer and northeastern Washita Counties, Oklahoma

Supervisor: Houseknecht

## Organizations

### Sigma Gamma Epsilon

Epsilon Chapter enjoyed a productive 1989-1990. During the last year, our membership tripled. We received \$1,000 from the Student Organization and Activities Committee of the Missouri Students Association. This money has been allocated to support the visiting speaker program, funding students attending professional meetings and for miscellaneous supplies. Other fund-raising efforts included: T-shirt sales, test booklet sales for Principles of Geology students, and coffee mug sales. With membership increasing and high morale, I'm sure this will be another fine year for Sigma Gamma Epsilon.

Robert Orr, president

### The Geology Club

Once again the Geology Club started the academic year with sales of rock and mineral specimens to the students in the introductory geology classes. The response was excellent, and the proceeds will be used to update equipment in the Department of Geological Sciences that is available for use by students. New officers were elected, and five new members joined the club. The fall picnic/party was a rousing success, and plans are under way for the winter get together. Boy Scout groups and fellow geologists who attended the Clay Minerals Symposium toured our facilities with members of the Geology Club as guides. Revision of the rock and mineral packets, sales of T-shirts, and a spring trip are being considered as possible activities during the remainder of the year.

Gordon McWilliams, president

## Student awards

### Field thesis support

Chevron USA, Inc. has continued to provide support of field-based thesis and dissertation research. Their 1990 gift of \$4,000 provided per diem field subsistence for the following:

**Quinton Hennigh**

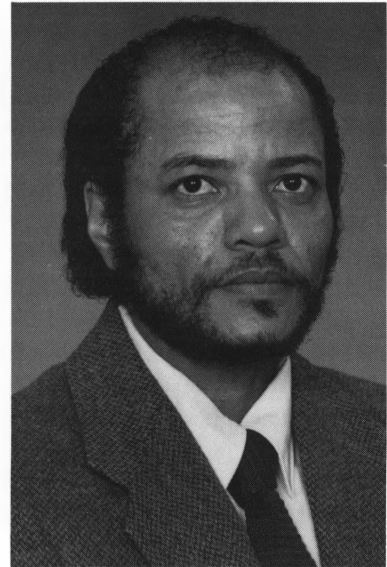
**Gordon McWilliams**

**Terry Roark**

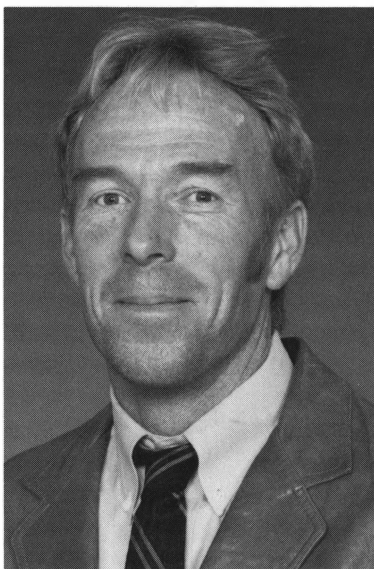
### Academic-year awardees



**Mary Clark**  
Chevron USA, Inc. Fellow

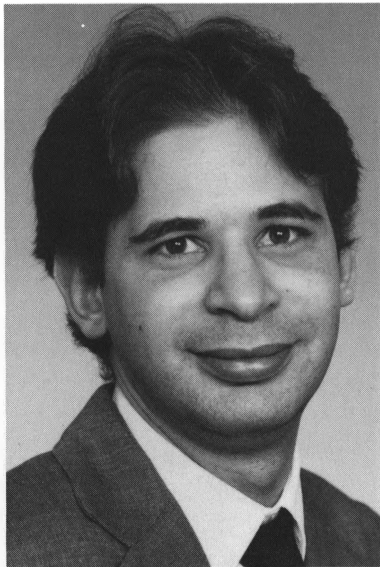


**Isaac Chandler**  
Gus T. Ridgel Fellow



**Terry Roark**  
Amoco Foundation Master's Fellow

The Gus T. Ridgel Fellowship was established to honor Dr. Gus T. Ridgel, the first black person to earn a graduate degree from our University. Instituted in the spring of 1987, this fellowship provides an incentive to minority graduate students to attend the University of Missouri-Columbia. Ridgel fellows receive an annual stipend of \$12,000 and a waiver of tuition and fees.



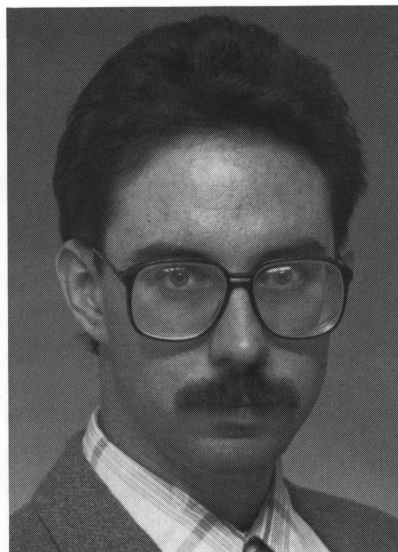
**Isac Burstein**  
Maurice G. Mehl Scholar



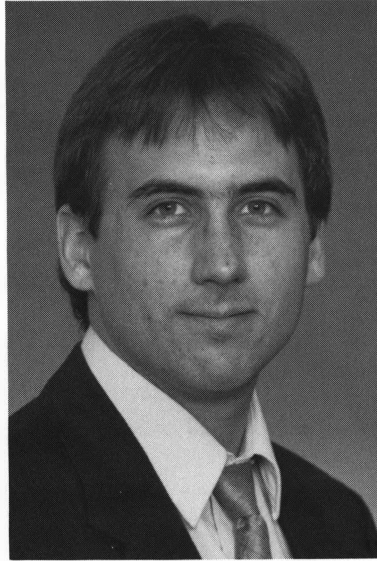
**Rebecca Jones**  
Maurice G. Mehl Scholar



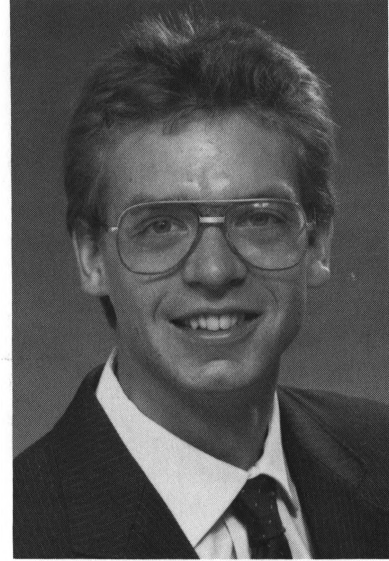
**Russell Dresbach**  
Maurice G. Mehl Scholar



**James Loch**  
Maurice G. Mehl Scholar



**Quinton Hennigh**  
Boyd Endowment Scholar



**Gordon McWilliams**  
Leonard D. Harris Scholar



**Deborah Bergfeld**  
Geology Endowment Scholarship

## Camp Branson awardees

### Clayton H. Johnson Scholar

David Joslyn

### Dorothy V. Nightingale Scholar

Deborah Bergfeld

### Raymond E. Peck Scholars

Kathy Chadd  
Charles Keller  
Donald Harnden  
Dan Switek

## Student presentations

### American Association of Petroleum Geologists meeting , San Francisco, California

Hathon, Lori, and Houseknecht, D.W., Grain-cement relationships, Sespe Sandstone, Ventura Basin , presented at AAPG/SEPM annual meeting in San Francisco, June, 1990. (supervisor: Houseknecht)

### Clay Minerals Society conference, Columbia, Missouri

Hathon, Lori, Clay mineral diagenesis, Sespe Formation, Ventura Basin, poster presentation at Clay Minerals Society conference in Columbia, Mo, October 1990. Lori's poster received the best poster recognition for this meeting. (supervisor: Houseknecht)

### Geological Society of America Annual Meeting, Dallas, Texas

Ted Haeussler, Geochemical studies of the Tongyoung Au-Ag-Te deposits, Republic of Korea: Evidence of meteoric water dominance in a Te-bearing epithermal system (supervisor: Shelton)

Quinton Hennigh, Sulfur isotope studies of early copper (bornite pod) & zinc mineralization in the Viburnum Trend, Mo: Do <sup>32</sup>S-enriched sulfides indicate basement sulfur and metal sources? (supervisor: Shelton)

### Geological Society of America South-Central Section 24th Annual Meeting, Stillwater, Oklahoma

Diane Krueger, Conodonts from Graptolite Facies, Ouachita Mountains, Arkansas" (supervisor: Ethington)

### Student Abstracts

Hathon, E.G. , Ross, L.M. Jr., Johns, W.D., 1990, Quantitative major element analysis of clay minerals as oriented aggregates by SEM/EDS. Abstracts with Programs, 27th annual Clay Minerals Society meeting, p. 56. (supervisor: Johns)

Krueger, D., and R. L. Ethington, 1990, Conodonts from Graptolite Facies, Ouachita Mountains, Arkansas. 1990 Geological Society of America, Abstracts with Programs, v. 22, p. 12. (supervisor: Ethington)

Laughland, M.M., Underwood, M.B., Solomon, R.M., Shelton, K.L., 1990, Thermal maturation and hydrothermal overprinting: An example of a "hot" accretionary prism from the King Range terrane, northern California. Geological Society of America, Abstracts with Programs, v. 22, p. 324. (supervisor: Underwood)

Laughland, M.M., Underwood, M.B., Shelton, K.L., Solomon, R.M., 1990, Miocene hydrothermal overprint and tectonic evolution of the King Range terrane, northern coast of California. American Geophysical Union, Transactions, v. 71, p. 1223. (supervisor: Underwood)

Orr, Robert, 1990, Bulk mineralogy, clay mineralogy, and diagenesis of sediments cored at ODP Site 808, Nankai Trough Accretionary Prism. American Geophysical Union, Transactions, v. 71, p. 1627. (supervisor: Underwood)

## Student Publications

Laughland, M.M., and Wiley, T.J., and Underwood, M.B., 1990, Thermal maturity, tectonostratigraphic terranes, and regional tectonic history: An example from the Kandik Basin, Alaska, in Nuccio, V.F., and Barker, C.E. (eds.), Applications of thermal maturity studies to energy exploration, p. 97-111.

## Student Awards

To foster closer ties between professional paleontologists and those in the academic community the American Association of Paleontological Suppliers (SAAPS) created the James R. Welsh Scholarship. Offered in consultation with the Paleontological Society, the scholarship is designed to support graduate student field studies of macrofossils, either vertebrate or invertebrate. This year Jim Loch was selected as the first recipient of the Welsh Scholarship. The funds awarded allowed Jim to accompany Dr. Ethington to Utah and Nevada in order to make initial collections of trilobites and brachiopods across the base of the Ordovician Whiterockian Stage.

## VISITING SPEAKERS

**Alden B. Carpenter**, Chevron Oil Field Research Company, "Characterization of a fractured reservoir: Monterey Formation, California."

**Ray Holifield**, B. Ray Holifield and Associates, Irving, Texas, "Innovative methods in the exploration and production of hydrocarbons: horizontal drilling--Past, present and future."

**Martin Frey**, University of Basel, Switzerland, "Very low grade metamorphism of clastic sedimentary rocks."

**Joao Moraes**, ECOS, Belo Horizonte, Brazil, "A case of groundwater contamination and aquifer remediation in Brazil."

**Roger Searle and Ruth Rusby**, University of Durham, England, "Tectonics of the Easter Microplate."

**Robert Laudon**, University of Missouri-Rolla, "The price of oil: Systematic cycles or chaos?"

**Richard Sedlock**, Visiting Assistant Professor, University of Missouri, "Blueschists in Baja: Depositional metamorphic and uplift history."

**Roy Van Arsdale**, University of Arkansas, "Sub-surface structure of the eastern Arkoma Basin."

**Denis Kolata**, Illinois Geological Survey, "Tectonic history of the Illinois Basin: An overview."

**James Murowchick**, University of Missouri-Kansas City, "Low-temperature formation of pyrite and marcasite."

**Dietmar Schumacher**, Pennzoil Company, Special Seminar on "Basin Evaluation: Applications of Geochemistry to Basin Evaluation and Basin Modeling."



### Sports scene

The Ray Holifield and Associates faculty-staff-student softball team stole the honors this year—first place in their city league. Congratulations to the team and thanks to Ray Holifield for making their victorious season possible.

Dr. Stitt reports that the Faculty/Staff/Student Golf team did not repeat as league champions this year. He noted philosophically that how you play the game also is reported to be important. Those participating were Drs. Stitt, Shelton, and Underwood, Bob Heidlage, Bob Orr.

Five people from the department participated in the Arts & Science bowling tournament this past spring during Arts & Science Week. Those participating were Lou Ross, Marsha Bulen, Matt Mankowski, Eric Hathon and Paul Kastens. The team placed second in the tournament, and received t-shirts from the College.

## Development activities

### Geology Development Board

**Ray Holifield, chairman**  
Ray Holifield & Associates  
Irving, Texas

**Tom Ware, vice chairman**  
Independent Geologist  
Evergreen, Colorado

**Richard Boyd**  
Independent Geologist  
Casper, Wyoming

**Joseph G. Butera**  
Wainoco Oil Corp.  
Houston, Texas

**Evard Ellison**  
Independent Geologist  
Houston, Texas

**Jerry Eyer**  
Earth Science & Resources  
Institute  
Columbia, South Carolina

**Donald S. Garvin**  
Braxton Oil & Gas Corp.  
Oklahoma City, Oklahoma

**John H. Gatchell**  
Ray Holifield & Associates  
Oklahoma City, Oklahoma

**Ernest P. Knirk**  
Exploration Manager  
Arkla Exploration Company  
Shreveport, Louisiana

**John H. Marshall, Jr.**  
Marshall Energetics, Inc.  
Dallas, Texas

**Dan E. McMillen**  
Independent Geologist  
Oklahoma City, Oklahoma

**Robert C. Miles**  
Exploration Group Supervisor  
Amoco Production Company  
Houston, Texas

**M. Clay Parsons**  
Mobil Oil Co. (Retired)  
Sweet Springs, Missouri

**Herman Ponder**  
ATI Exploration Inc.  
Golden, Colorado

**David W. Rapp**  
UMC-Grad. School  
Columbia, MO

**Robert C. Roehrs**  
Independent Geologist  
Denver, Colorado

**Fred Strothmann**  
Cap Corporation (Retired)  
Edmond, Oklahoma

**M. Ray Thomasson**  
Vice President  
Pendleton Exploration  
Englewood, Colorado

**Jerry Vineyard**  
Deputy State Geologist  
Div. of Geol. & Land Survey  
Mo. Dept. Natural Resources  
Rolla, Missouri

**Tom Ware**  
Independent  
Evergreen, Colorado

**Eddie A. Williamson**  
Division Exploration Manager  
Amoco Production Company  
Houston, Texas

## Endowments

The department will benefit in future years from six endowment funds that were established during the past year as part of the \$1,000,000 fund drive. The names used to identify these funds, the purposes for which they are dedicated, and the contributors who established them are listed below. Additional contributions to these endowments are welcome.

### Lily Marie Carter Endowed Geology Fund

Established by a contribution from Lily Marie Carter for the benefit of the MU Department of Geological Sciences.

### Walter D. Keller Scholarship Fund

Established by John W. and Lucille Tlappek in honor of Dr. Keller and for the benefit of full-time graduate students in the MU Department of Geological Sciences. Additional funds for this scholarship were received from Freddie Strothmann.

### Pearl Todd Sando Perpetual Undergraduate Scholarship Endowment Fund

Established by Herman and Barbara Ponder for the benefit of undergraduate geology majors at MU.

### Fred Strothmann Perpetual Undergraduate Geology Scholarship Fund.

Established by Freddie Strothmann for the benefit of students majoring in geology at MU (exclusive of hydrology and geophysics).

### John M. Ware Memorial Endowment Fund

Established by Donald S. Garvin and Tom Ware in memory of John M. Ware and for the benefit of the Department of Geological Sciences at MU.

### Williamson Family Endowment

Established by Eddie A. and Constance A. Williamson to provide income for the benefit of the Department of Geological Sciences at MU.

## Development Fund continues to enjoy support

### FRIENDS

#### \$1-99 annually

Donald Blackstone  
 Boone Registered  
 Beekeepers  
 Jane Brinton  
 Wayne Canis  
 Claire B. Davidson  
 Ricard Dowd  
 Burnett and Jessie Ellis  
 James Hays Evans  
 Richard M. Felton  
 Cornelia French  
 T. J. Gallivan  
 Norman G. Grannemann

Horace Griley  
 Andrew G. Gunn  
 Katharine Gunnell  
 Ross Heinrich  
 Bruce Hunter  
 Cordell M. Johnson  
 Paul C. Knowlton  
 Charles Krohn  
 Raymond J. Leone  
 Bill Mansker  
 Moniteau County Health  
 Staff  
 George E. Moore, Jr.  
 Joao A.P. de Moraes

Dennis Ojakangas  
 Daniel Patterson  
 William Quinn  
 Mark Russell  
 Herbert Sartori  
 David D. Smith  
 William T. Smith  
 Joseph Swartz  
 John Taylor  
 Laurence G. Trudell  
 John Wall  
 Frances T. Wilkinson  
 David W. Woolery  
 Kristine R. Zes

### COLUMNS CLUB

#### \$100-499 annually

James Adams  
 Caroline Bajsarowicz-Borg  
 Arthur Banet  
 Robert L. Bauer  
 Leroy E. Becker  
 Michael Bernthal  
 James H. Brown  
 Jack D. Burgess  
 George T. Cardwell  
 Scott C. Christenson  
 James W. Danser  
 Robert D. Diem  
 Leon S. Ditzell, Jr.  
 John W. Ellison  
 Samuel P. Ellison  
 E. Ted Flanigan  
 Robert L. Foster  
 George H. Fraunfelter

Douglas Frick  
 Mark Fridley  
 Alice C. Fuerst  
 John H. Gatchell  
 Martha George  
 Barry Goldstein  
 Joseph Hazel  
 John B. Hendren  
 Glen R. Himmelberg  
 William M. Hoag  
 Daniel H. Jones  
 Raymond Jones  
 Walter D. Keller  
 David King  
 Larry Knox  
 Earle F. McBride  
 Stuart A. Maier  
 Kenneth E. Markwell

Thomas A. Medary  
 Aliene E. Mitchell  
 Robert J. Pauken  
 Karen A. Pritchard  
 Carl B. Richardson  
 Thomas D. Rush  
 Lawrence J. Seright  
 Marjorie Cramer Smith  
 Craig A. Stewart  
 David J. Steyaert  
 James H. Stitt  
 Kenney Susewind  
 Roy O. Taylor  
 Michael B. Underwood  
 George W. Viele  
 Jerry D. Vineyard  
 Robert E. Warmbrodt  
 Chester Whorton

## RECENT CONTRIBUTORS

**TOWER CLUB****\$500 or more annually**

David K. Bauman  
Ann Dorsey Clapp  
Christopher Clark  
David K. Davies  
Stephan M. Eisner  
Celeste Engel  
Raymond L. Ethington  
Rosa E. Ethridge  
Jerome A. Eyer

Louise Faurot  
Thomas J. Focht  
Robert L. Heller  
William D. Johns  
Arthur R. Kasey  
David Andrew Kemmer  
Ernest P. Knirk  
Dan E. McMillen

Elmer Patterson  
Michael Quearry  
Mrs. Donald Ross  
Dietmar Schumacher  
Marshall K. Shurnas  
Martin T. Steinbis  
A. G. Unklesbay  
Alan Zick

**JEFFERSON CLUB**

**\$10,000 and above, given or pledged over a 10-year period. Previous giving and corporate matching, past and future, are credited.**

Richard Boyd  
Tom Freeman  
Don Garvin  
Paul Gerdemann  
Frank Gorham  
Ray Holifield  
Hugh Looney  
John H. Marshall

Jane Espy Meyer  
Robert C. Miles  
M. Clay Parsons  
Herman Ponder  
David Rapp  
Bob Rayl  
Fred Strothmann

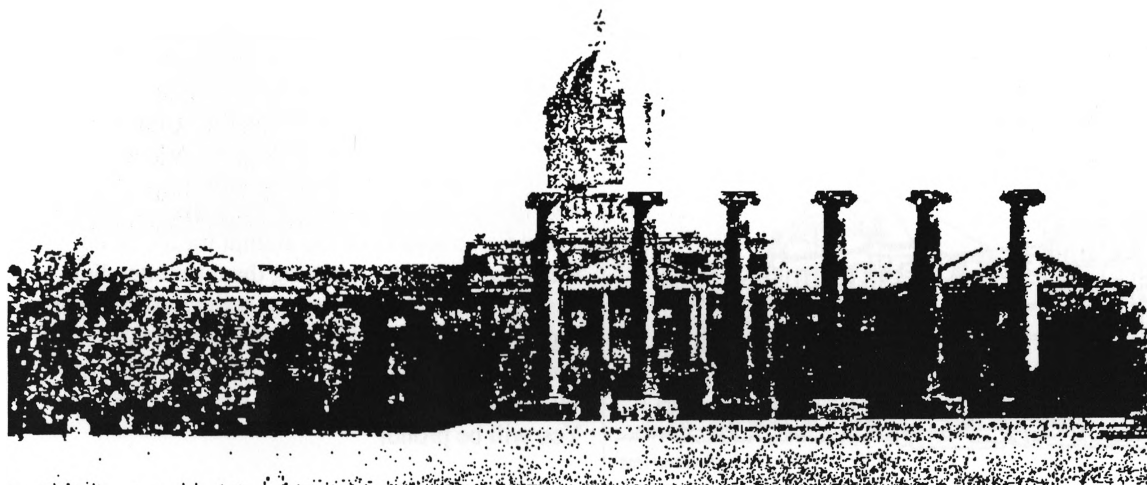
Robert K. Sylvester  
M. Ray Thomasson  
Jack Tlappek  
Keith Tuthill  
Tom Ware  
James F. Westcott  
Eddie A. Williamson

**CORPORATE MATCHING**

Amoco  
Anadarko  
B.P. American  
Braxton  
Chevron

Exxon  
Haliburton  
Marathon  
Mobil  
Pennzoil

Phillips  
Texaco  
True  
U.S. Gypsum



## Reflections

### 35 YEARS LATER

by Dave Rapp

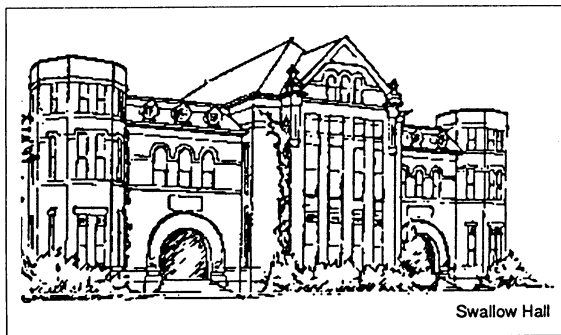
My return to school at MU was, initially, fraught with many uncertainties, but half-way through the first semester the uncertainties have been replaced by the challenge of learning new things and trying to keep up with the other graduate students. Believe it, or not, even the fundamentals of calculus and chemistry are slowly coming back.

The University and Columbia have, of course changed. The University has, most certainly, improved its physical plant with new buildings and research labs. The "new" Geology Building is a first-class facility, especially when compared to Swallow Hall. The availability of research equipment, i.e., scanning electron microscope, mass spectrometer, stable isotope lab and improved X-ray diffractometer allow much broader and more detailed study than in the past.

Columbia has tripled in size (60,000 population) since my first time here, but it is still easy to get around town. The old hangouts are long gone, but they have been replaced by new, and in most cases, better ones. The growth of the city, in my opinion, makes it a better place, especially for students.

Some things never change. The administrative side of the University still tends to be a massive bureaucracy. Money remains a problem for University projects and faculty salaries, and graduate students continue to run out of money as month-end approaches.

The good news about things not changing is that "Unk" and Dr. Keller are here every day!, the Geology Department Faculty is outstanding and the opportunity to learn is alive and well.



Swallow Hall

### ODE TO CAMP BRANSON

by John Marshall

What a thrill to be at Camp Lander again.  
Of course, they changed the name,  
But the place is almost the same.  
Bright girls and boys dot the land.  
But they are not smarter than the old hands,  
When it comes to a hammer and hand lens.

I don't know when I've had so much fun  
As when three bright students escorted  
Three old dogs over familiar ground,  
With their well-worn map in hand.  
All alumni can be proud  
That they are a part of the heritage of this land.

As you can see, nostalgia runs high for me as well as others who visited Camp Branson in June. This is the first time I have been back since 1949. It was Betty's first time and she marveled at the rustic or rather spartan nature of the past. She did not relish finding mice trapped in the old kitchen sink each morning. Tales still are a part of camp. But this is where the almost the same comes in. We were there to celebrate the opening of the new (first class) dining hall; it is something to behold. The alumni are to be congratulated on what they have done for their geological department, not only this \$350,000 mess hall but for the two professorships as well as much needed equipment, plus help for students and faculty. As you know, we are in a \$1,000,000 endowment fund drive to help fund students who not only need help but are quality people. Most of us remember needing help, and almost all have done well with the training we received. I urge all Alumni to remember needing help and to do all they can in support of the \$1,000,000 endowment fund.

To help gain support for the department from University administrators, we were fortunate to have Chancellor Monroe and Dean Clark as our guests for the excursion. They now have a valuable insight into the operations of the department as well as the fierce loyalty of the alumni for the camp. Please write a letter thanking them for attending. Several hundred letters would solidify the alumni support of the camp and would only cost you a stamp. But most of all, if you are anywhere near Wyoming, go by and see what you have wrought. You will be proud!

DEVELOPMENT BOARD IN WYOMING



Jo. Monroe, Chancellor Monroe, Jack Tlapek and Beverly Makaruk.



Chancellor Haskell Monroe telling board member John Marshall how things really are.



Freddie and Pat Strothmann, along with Christopher "Kit" Salter, chairman of geography at MU.



George Viele explaining all things to Tom Ware, Dean of Arts & Science Larry Clark, Chancellor Haskell Monroe, Beverly Makaruk and Dr. "Kit" Salter, but are they listening?

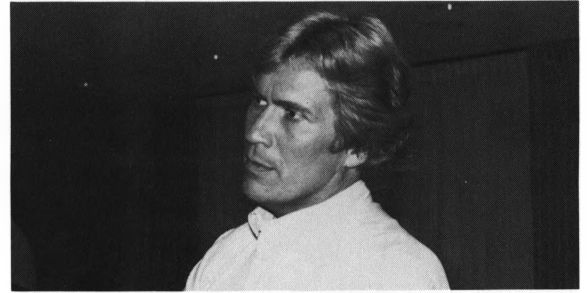


Mary Clark, MU field camp student explains geologic formations to Chancellor Haskell Monroe.

## AAPG\SEPM ALUMNI RECEPTION-SAN FRANCISCO, JUNE 4, 1990

We enjoyed having the following alumni and friends at our get-together in San Francisco and hope to see more of you at the next AAPG meeting in Dallas in April of 1991.

Caroline Bajsarowicz  
 Jerry Clayton  
 Mark Dando  
 Ted Flanigan  
 Tom Freeman  
 Jack Gallagher  
 Dallas Greenberg  
 Bruce and Linda Grethen  
 Mark Hodson  
 Ken Jackson  
 John and Annie Karlo  
 Ernie and Karleen Knirk  
 Larry and Sheri Knox  
 Dave and Susan Leach  
 Lowell Lischer  
 Hugh and Tillie Looney  
 Tim McHargue  
 Gary Mitchell  
 Mark and Cheryl Petersen  
 Mike and Eva Quearry  
 Claude M. Quigley, Jr.  
 Scott Raymond  
 Dietmar Schumacher  
 Larry Seright  
 Bob and Louise Smith  
 Norman Smith  
 Fred H. Strothmann  
 Jerry and Debbie Yunker  
 Tom Zeiner



Lowell Lischer listening intently to someone's story.



Gary Mitchell, David and Susan Leach.



Mark Hodson, Dallas Greenberg, Ann and John Karlo.



## Ann Dorsey Clapp

I enrolled in the University of Missouri during the Great Depression in the fall of 1933 and graduated in 1937 with an AB (with distinction) in geology. I did a year's graduate work at Missouri, researching conodonts of lower Fort Scott under Dr. Mehl and took courses from Drs. Branson, Mehl, Keller, Peck, Tarr and Trefethen.

When I couldn't make up my mind to major in geology as an undergraduate, Dr. Peck advised that, "There is always room at the top of the ladder - - aim high." Dr. Branson said, "Make your decision and never look back - - only forward." All those fellows in Devils Ice Box 1936 (last year's newsletter) were my contemporaries. Those were happy times! Perhaps some still remember "Annie Dumplings."

At the suggestion of Dr. Tarr, I applied for a scholarship in geology at Bryn Mawr College, to be one of 10 scholars selected from across the United States. I won the scholarship and took up residence in the graduate dormitory to work with Dr. A. Lincoln Dryden, their specialist in stratigraphy and fossils. I was awarded a PhD in 1940. My thesis was published in Department of Geology, Mines and Water Resources, State of Maryland, Bull. 2, 1948.

My research had taken me to Sharon, Massachusetts to Dr. Cushman's Laboratory for Foraminiferal Research. In Sharon, I met Arthur W. Clapp, a businessman and recent graduate of Boston University. We were married 50 years ago in September and have four wonderful children. Priscilla is a Deputy Assistant Secretary of State in Washington, D.C.; Stephen is a trial attorney in North Attleborough, Massachusetts; Douglas is a judge in Machias, Maine, and Virginia is co-director of a research foundation in Boston, Massachusetts. We have four grandchildren in college.

As a mother of four children, I did all those activities into which they led me - - all the time giving them frequent excursions in geology. Finally, when they could spare me, I applied to and was accepted at Dr. Bunting's Radcliffe College Free Year at Harvard to retread middle-aged scholars. I audited classes of all the greats in geology and didn't have to take a final exam! At the end of the year I accepted a teaching position in science at Dover-Sherborn High School in Sherborn, Massachusetts, where I became head of the Science Department accredited to teach biology and earth science. There I taught Investigating the Earth and felt lucky to be prepared for it. I taught for several years until I was 70, thanks to the wonderful career I chose at the University of Missouri.



Clapp Children, December 1949  
Stephen 5, Priscilla 7, Virginia 1, Douglas 3



Camp Lander Field Course 1936  
Ann Dorsey cooking on gas stove. You can see the steam rising from the coffee pot. Dorothy Davis on left. Note the bed rolls in front of the bus. The bus was plainly lettered:  
University of Missouri Geology

## Alumni Activities

**Kathleen Abel** (MA '78) sends her new address as Indianapolis, Indiana.

**Jannie Adams** (BS '84) is currently working for Oryx Energy in Houston, Texas. Jannie would like to hear from all her old buddies at MU.

**Henry (Hank) Allen** (BA '48, FC '49, MA '49) has relocated in Arkansas after retirement from Martin Marietta. Hank reports, "I still do some consulting work in industrial minerals when prospective clients can catch up with me."

Hank and Lil were in Columbia for the dedication of the A. G. Unklesbay Library in April.

**Les L. Allen** (BS '89) is an environmental analyst with Shell Oil Co. in Missouri.

**Marvin J. Andresen** (PhD '60) reports from Alaska: "My wife Pat and I both retired from the faculty of the University of Alaska, Fairbanks, as of June 30, 1990. Pat continues to direct the honors program at UAF on a part-time basis, and I am busy working at developing management information computer software. We continue to live in Alaska and Hawaii."

**Richard B. (Dick) Aylor** (BA '46, MA '47) went back to Wyoming for research for the first time in 44 years. The first time Dick went with Dr. Branson to study the Triassic-Jurassic. This year he went with EARTHWATCH to study Indian rock art or petroglyphs. "Never too late to do something new and different!"

**Doug Babcock** (FC '78, BS '78) is a Sr. Geologist for Shell Offshore, Inc. Doug reports "I'm quickly approaching the ten-year mark with Shell. After working for two years in Houston in our Rocky Mountain Division, they shipped me back to New Orleans to work the 'deep' water of Louisiana, and the 'shallow' water of the Texas shelf. Dana, Brock (9 yrs.), Brian (8 yrs.), and Brett (2 yrs.) take care of most of my weekend time. Best wishes to my old friends. Is Bret Matteo out there anywhere?"

**Caroline J. Bajsarowicz** (FC '82, MA '83) is with BP Exploration as a geologist. Caroline reports, "I'm on the move again — this time to Scotland. I'm the development geologist for the Thistle Field in the Northern North Sea. Please look me up at the BPX Rubislaw office if you

are anywhere near here!"

**Cliff Balster** (PhD student 1950-51) is still working summers mapping landforms and surface geology for the soil conservation service. Cliff finds that most landscapes in the northern Rockies are of mid- to late Pleistocene age.

**Art Banet** (MA '76) writes a lengthy letter from Alaska reminiscing that, "I have been away from MU for 15 years and still working in the industry. Just look at me, a lab thesis in geochemistry and so far I've done considerable field mapping, stratigraphy and probabilistic resource estimation, with geochemistry as a sidelight. I can only guess that is because the staff at MU is large enough for diversity yet not so big as to lose people, and because I got to meet Dr. Keller too! Actually, I had thought MU geology to be better than average, but having met many people from other schools, I have come to realize that the student:professor relationship at MU is by far a whole lot better than at many places. Better because faculty are congenial, there is ample opportunity for research and the staff consists of individuals who take pride in teaching. I certainly feel that I received a quality education, in a reasonable amount of time, without being alienated by the people and place."

**Constance K. Barsky** (Resch. Assoc. '71 - '77) reports, "Steve and I continue to enjoy life in Granville, Ohio. I am the administrative manager of the department of Chemistry at the Ohio State University in Columbus. We just returned from a fabulous eight days in Hawaii—the volcanoes gave us a whole new respect for earth forces. Every geologist should visit there sometime. Best regards to all."

**Perry David Beason** (BS '84) is a cartographer with Defense Mapping in St. Louis and doing O.K.!

**Jonathan Bellmann** (BS '88) relates a big "Hello everyone — support your local Geologist." Jonathan is an environmental engineer/geologist with REACT Environmental Engineers in the St. Louis area.

**Richard E. Berger** (FC '56, BA '57) has retired after 31 years with the City of New York Bureau of Water Supply, where he was involved with the construction of City Tunnel No. 3, for the past 20 years. Richard moved to Pennsylvania to build a house and enjoy life in his retirement.

**ALUMNI**  
**ACTIVITIES**

- Bill Berthold** (BS '85) is an engineer with Lenco in the St. Louis area and asks "I wonder what Fred Mertz is doing?"
- Shane R. Bird** (BS '77, FC '79) is working in the Austin Chalk now as project coordinator for the horizontal drilling program. Shane reports "It is exciting. Reminds me of the boom in the early '80's. Oryx is doing well, oil prices are up, and my cars are paid off. What more could a guy ask for? Hope everyone is fine. Stop in and see the Birds if you're in town." Shane is with Oryx Energy as a project coordinator in Dallas, Texas.
- Larry C. Birkes** (BS '71) is regional director of training for Marriott in California. Larry reports that he received his MA in 1979 from the University of Colorado in Psychology.
- David J. Bockelmann** (FC '76, BS '77) is project manager at Sverdrup Corp. in the St. Louis area. David reports "I went back to school while working for the State of Mississippi and earned an MS in Geo. Engr. Moved the family back to St. Louis and took a position involved with environmental, hazardous waste, and groundwater consulting. Anybody still in the St. Louis area — give me a call!"
- Joseph F. Born** (MS student '65) reports, "My wife Janet gave birth to our second child Megan Rose March 12, 1990, 4 lbs. 1 oz. Everyone is home, happy & safe!! I am still employed by Expl. Co. of LA as a development geologist and may I add — still receiving a salary last time I checked!! Thanks for the Newsletters."
- Uve Brand** (MA '76) was appointed Adjunct Professor of geology and planetary science, University of Pittsburgh in 1989. This year Uve is the 1990 Geological Association of Canada Past President's medal winner for outstanding contributions to research.
- Carla Kertis Brezinski** (MA '83) has been promoted within the Division of Health, Safety, and Mining Technology in the U. S. Bureau of Mines headquarters office in Washington, D.C. Carla directs a program of research on mine safety.
- William C. (Bill) Bridges** (FC '55, BA '56, MA '57) retired from the petroleum consulting firm of DeGolyer and MacNaughton. Bill is now planning on a reduced consulting schedule. Bill reports, "I have over 30 years experience in international oil and gas."
- James H. Brown, Jr.** (BA '48, MA '52) reports, "This summer my wife and I visited her relatives in British Columbia and came home via Rogers Pass, named for an American. There is a historical and interesting display at the summit. On our return to Lompoc, California, we put in a "geologic" lawn. We now have about 10% grass, 25% water-conserving plants and ground cover, and 65% rock. Southern California is in its fourth year of drought."
- David G. Burk** (BS '84) is in the environmental consulting business with the Radian Corp. which keeps him extremely busy. David is involved in numerous ground-water investigation studies throughout the United States. His first responsibility however, is to continue developing a marketing plan for Radian Corp. in the area of soil and ground-water bioremediation and waste minimization for industrial and municipal clients.
- John F. Burst** (FC '47, PhD '50) switched from rock chipping to concrete chipping when he visited "the wall" in Berlin last April. Jack watched the wall being built in '62 when he was in Europe with the Shell organization and helped knock it down with great pleasure.
- Robert E. Busch, Jr.** (FC '56, BA '57) has a late news flash: Bob purchased a 2400 ft. new (30-yr. old) building for his growing geotechnical firm in foggy Arcata, California. Simultaneously Busch Geotechnical Consultants (BGC) opened a branch in coastal Brookings, OR. Both offices are in a subduction tectonics environment characterized by rapid uplift and high seismicity. The Arcata office is in the on land area of the Cascadia subduction zone fold and thrust belt. Boys (7 and 4) are fine.
- John G. Callanan** (FC '80, BS '81) is self employed in Abilene, Texas.
- Wayne F. Canis** (MA '63, PhD '67) is a professor of Geology with the University of Northern Alabama and reports that he is doing fine and "hello to all."
- Kenneth R. Chapman** (MA '84) has moved from Annandale, Virginia to Radford, Virginia.
- Steven Chatman** (FC '77, BS '80) is principal hydrogeologist with McLaren in Springfield, Missouri.
- Clay Chesney** (MA '69) has moved to Arlington, Texas.
- Ann Dorsey Clapp** (BA '37) has a special column devoted to her in this issue on page 22.

**Joe M. Clark** (BA '25, MA '26) reports "my experience cooking on the 1924 field trip is standing in good stead as I am living alone with my dog, 'Bullet'. I am reading *From Beirut to Jerusalem* by Thomas Friedman which is very timely. Best regards to Tom Freeman and Walter D. Keller."

**Robert J. Cordell** (FC '46, PhD '49) is President of Cordell Reports. Bob tells us, "I am now in my 74th year, I probably will retire by year's end. As for extra-curricular activities, I have been doing a lot of writing, to wit: (1) my 285-page single-spaced-typed autobiography; (2) a total of 112 essays, most of which are one or two pages long, single-spaced; and (3) a narrative of the 14 foreign tours I have taken in the past 10 years - close to 200 pages, single-spaced. Also I have written an invited chapter on Carbonate Source Beds for Petroleum, for a forthcoming volume on carbonate rocks to be published by Elsevier. Regards to all!"

**John Crocker** (FC '50, BA '50) reports the following situation: "still working and having fun at it so will stay on for a while. We are still brokering industrial minerals, i.e. clay - talc - feldspar - silica - calcium carbonate to the coatings - aerospace - ink and plastics industry. Selling these 'dirt' products as extension to a growing business."

**Thomas C. Cummins** (BA '60) has lived in the Chicago area since 1970 and is involved in sales of investment management products, to pension plans, and 401 (K) savings and profit sharing plans. Tom is with the Travelers Corp.

**Liovando M. daCosta** is back in Brazil after spending some time with Dr. Johns as a Post Doc.

**Jim Danser** (FC '49, MA '50) reports that he and his wife, Alice, are still trying to visit and enjoy the many wonderful and interesting sights and features of our country. Being stranded with nine Navajo Brothers in northern Arizona because of a faulty electronic module, was one of many wonderful experiences. They were true hosts and a joy to be with. Made our day by towing us 35 miles to a garage that had the right part. There is seldom a dull moment touring with a motor home.

**Anthony (Tony) Daus** (FC '80, BS '81) is vice president of Geomatrix Consultants Inc. and tells us "I sure miss Camp Branson."

"**Christopher Daus** (FC '83, BS '83) is an attorney

with Husch, Eppenberger, Donohue, Cornfeld and Jenkins. Chris concentrates on construction law, environmental law, fidelity and surety law, and architects' and engineers' malpractice defense.

**George H. Davis** (MS '89) is mapping soils and finds it different from mapping rocks, but nonetheless George says "its still geoscience in a sense. C. W. Marbut, former professor of geology at UMC, is revered among soil scientists as a father of the modern soil taxonomy. In any case, mapping in the Missouri River bottoms has given me a real appreciation for clastic fluvial systems—apologies to Dr. Freeman."

**Mary Dew** (MA '87) is working as a consultant/freelance/contract technical writer. Mary is employed by Creative Courseware and is contracted to various companies. Mary married Anthony Lee, an electrical engineer with the Kansas City Power Company in October and will reside in Kansas City, Missouri.

**Richard H. Dowd** (BA '51) is working at the NASA Goddard Space Flight Center directing operational readiness tests for processing satellite telemetry from new satellites.

**Shirley J. Dreiss** (MA '74) is a Councilor Candidate for the Geological Society of America for a 3 year term 1990 - 1993.

**Keith Drummond** (FC '66, BA '67, MA '70) is President of Drummond Exploration Co. and has found the climate for oil and gas exploration in the Denver area hasn't been quite as good as skiing. Keith's firm is continuing to explore for natural gas in the Sacramento valley of California on retainer to Sierra Energy Co. of Reno, Nevada, and he still gets back to Missouri on occasion to visit family and friends at the University.

**Melanie A. (Sievers) Dunay** (FC '77, BS '77, MA '81) reports, "we're the proud parents of Aime'e Marta Dunay born 2/24/90. She's a true Mardi Gras baby, just wants to party all night long. Daniel started his PhD in computer science at Tulane this fall. We're enjoying New Orleans."

**Neil Elfrink** (BS '77) is employed with Peabody Coal. He is a certified emergency medical technician, scuba diver, concrete field testing technician, and bachelor. Neil has worked in oil and gas, base metals, precious metals, coal, teaching, research, construction and environmental engineering. Neil reports, "I'm studying

- hydrology at Oklahoma State University (OSU), I completed my Geology M.S. at Oregon State University (OSU), I guess Ohio State is next!"
- John G. Elliott** (FC '74) and his wife Lynn are spending a few weeks this fall "studying" Swiss mountain geomorphology and sampling Parisian culture. When they return John will participate in a new USGS project investigating potential hydrologic impacts of climate change in western Colorado.
- Burnett E. Ellis** (BA '44, MA '48) has retired after teaching geology at Columbia College (formerly Christian College) for the past 41 years.
- Jessie B. Ellis** (PhD '59) retired after teaching geology, geography and science education at Columbia College (formerly Christian College) for the past 36 years. Jessie reports, "we enjoyed our visits to the department of geological sciences this spring for Dr. Keller's birthday and the dedication of the A. G. Unklesbay Geological Sciences Library."
- Evard P. Ellison** (FC '46, BA '48, MA '49) is active and working. Ev also travels a lot and was in Columbia for the Development Board Meeting in October.
- John W. Ellison** (MA '77) moved back to Denver from Midland in the summer of '89. John reports, "It's great getting out of the cactus patch and back to the mountains." (See John, we squeezed you in!-Beverly).
- Samuel P. Ellison** (MA '38, PhD '40) reports, "I visited with Bob Drake in October 1989, presented a paper (that was printed) to the Ft. Worth Geological Society October '89 on Mississippian Conodont Zonation, North Texas. Served as president of the University of Texas-Austin, retired faculty-staff Association 1989-1990. This includes four general meetings of the association, and I attended the Geological Society Regional Meeting in Stillwater, Oklahoma in March, 1990. I'm really keeping quite busy."
- Brad A. Esslinger** (FC '80, BS '81, MA '83) says "Hi to all, I've just relocated to Brisbane Australia to assist Woodward-Clyde Consultants with a merger with the Australian Ground Water Consultants. I hope anyone in the neighborhood within the next 2 years can visit me in Brisbane. Contact me through my office address in Kansas."
- R. Kenneth Evans** (FC '47, BA '49) has retired from his position as Assistant Project Engineer with the Colorado Department of Highways.
- Jerome Eyer** (FC '57, BA '60, MA '61, PhD '64) has just moved to Columbia, South Carolina with the Earth Science and Resources Institute. We missed Jerry at our Development Board Meeting. Good luck in your move, Jerry!
- Raymond E. Fairchild** (FC '48, MA '50) retired from Hunt Oil Co., Dallas (Sr. V. Pres. of Int. Explor.) in 1988. Ray says he has spent the last 2 years in common labor on Fairchild Farms, Inc., building a home, cutting dead trees, trapping beavers and occasionally driving to Gilmer or Tyler. Ray has just accepted an appointment as President and director of Mayfair Petroleum Corp., a Texas based but London funded company that will serve as a base for new international exploration ventures.
- Paul Fancher** (FC '83, BS '83) is enjoying life and living in the Kansas City area. Paul still occasionally gets out in the field to test drill and oversee environmental jobs. His wife, Barb is expecting in October. Paul reports, "this is probably my last summer of bicycle racing. I still miss the Wind Rivers and good times in Lander."
- James B. Fels** (BS '88) and his wife Cathy are enjoying the new face around the house. Son Cory James was born February 8, 1990. Jim's wife is working for WIC in Salem as a nutritionist. Jim asks us to "tell everyone Hi, and if you are in the area, give me a call and we'll do some fishin'."
- Daniel Ferber** (MA '79) has had a busy year! Dan has remarried and is helping to raise two children and go to medical school.
- Catherine (Davis) Ferris** (BA 40) reports that she is now retired. Kitty hopes that there will be more reunions for the classes of the 40's.
- T. Edward (Ted) Flanigan** (FC '77, BS '78) reports, "I'm not an oil baron yet, but I'm sho 'nuff working at it — our second year as independent geologists went well, and we hope to get a couple of central Nevada wildcats drilled this year. I'm currently serving as president of the Nevada Petroleum Society." Ted is an AAPG Visiting Distinguished Speaker this year for the Western Region.
- Alan Founie** (FC '73, MA '76) moved back to Denver after a couple of years in Montana on the precious metals circuit. Al is still on the metals trip and enjoying it totally. Al reports, "After many moons of waiting for a permit, we

took 3 weeks, 10 people, 5 Kayaks, and 2 rafts and did the Grand Canyon late May thru early June — everybody should do it once!"

**James R. Frank** (FC '75, BS '76, MA '79) is living in California and working for Chevron in Africa.

**Douglas Frick** (FC '72, MA '80) reports, "after eleven years in the consulting business, I have finally learned how to avoid working 70 hours a week (just say 'no!'). I got in 18 days skiing this year, or 15 days more than my partner in Boulder, Colorado. Neil Skilton, if you're out there, we haven't heard from you in years? months?. Please write since I've lost your address. A big hello to the Junior Birdman and all his former disciples."

**Andrew Fridley** (BS '85) is enjoying life in the Beaver state. Andy is working for Portland schools as one of two environmental specialists, interpreting and trying to implement the mass of federal and state environmental regulations. Having partial success. Andy is still waiting for visits from fellow rock heads ... Richmond.

**Alice (Cooper) Fuerst** (MA '80) has taken a temporary leave of 3-7 years from the EPA to take care of her daughter. Alice wants to keep involved so she is the chairperson for the Blue Springs, Missouri solid waste management commission; chairperson of an environmental research committee for the Junior League; and on the Board of Directors for a citizens action environmental group.

**David Fulton** (MS '85) transferred to Salt Lake City to help set up a new office in the environmental and hydrogeological fields for Engineering-Science Inc. David says they are just 20 minutes from the world's best skiing.

**Sara (Mauldin) Fulton** (MS '85) with the help of David is taking care of their new son, Eric Marshall, born October 25, 1989.

**Craig Glassinger** (FC '69, BS '70, MA '72) reports, "to be in the oil and gas exploration has been, and continues to be, an exciting occupation with Forest Oil. The Lafayette division has at least doubled in size since 1982. My wife Martha (BS Math, MA Math '72, from Missouri) is currently working as a CPA in Lafayette. Our University of Missouri educations are our greatest resource."

**Jerry B. Golden** (MA '69) is manager of Operations and Development for Wexpro Co., in Salt Lake City, Utah.

**Barry A. Goldstein** (MA '77) reports, "Bridge Oil is a modest-sized Australian Oil and Gas explorer/producer. I had the opportunity to publish a paper on the Canning Basin (Western Australia) in '89. Olav Malvik has recently been transferred to Perth (from Bartlesville) by Phillips and I hope to clink the old beer mug together with Olav. The petroleum industry has really gone digital; PC's linked to each other in a network, geophysical work stations and CAD-Mapping packages are the 'norm' now. The Asian languages, Japanese in particular, would be an advantage to entry-level professionals seeking work."

**John A. Golson** (BA '43) is retired and has just moved to the Missouri Veterans Home, 920 Mars St., Mexico, Missouri. John would certainly like to hear from some of his old buddies. Jim Westcott spends some time with John a couple of days a week, when Jim is in town. A former neighbor of John's reports, "John has the best outlook on life of anyone I know. We always listen for John's whistling, and know that he's having a pretty good day."

**James P. Grady** (FC '79, BS '81) recently relocated in Dallas, Texas. Jim and his family say it feels good to be back in the mid-continent oil patch. Kathy is a systems programmer with American Airlines and the twins are now first graders. "I hope MU sports continue the upswing along with 'Geological Sciences'."

**Walter H. Granata** (FC '58, MA '60) has returned from Mexico and is now in Greenville, South Carolina.

**Norman Grannemann** (FC '74, MA '76) reports, "After 15 years of dormancy, I have an opportunity to apply some of Alden Carpenter's brine geochemistry for data from a project whose purpose is to analyze regional aquifers in part of the Michigan basin. Wish me luck."

**James B. Green** (BA '39) is now retired, retired). He spent 2 summers at Camp Lander (now Camp Branson); his Geology mentor was Dr. Mehl; 1 year in office in basement of Swallow Hall (graduate classes in geology); 28 years in the U. S. Army (retired as Colonel in 1966); 23 years with Lockheed (retired again April 30, 1989).

**Andrew Gunn** (FC '72, BS '76) is now in Hampton, Virginia with Metro Services/Newport Shipyard.

**Alice Lee Gustin** (BS '80) is a geologist in Gustin

**ALUMNI  
ACTIVITIES**

Enterprises. Alice reports, "my husband and I have lived in the Wind River Valley for 8 years. We have been active in Federal Land Planning and our local gem and mineral club. I have had a 2 year contract with the BIA as safety monitor for the #1 dangerous dam in Wyoming (Washakie). We welcome visitors who like the relaxed Wyoming atmosphere and wonderful vistas."

**Richard P. Hamilton** (FC '53, MA '55) reports, "Teaching science at Mt. Greylock Regional High School since 1961, mostly earth science, geology and environmental science. Presently I am division head for science, math and technology. I do a little 'geologizing' each summer, either here in the northeast or elsewhere. I spent a part of last summer studying Cascade volcanos, Mt. St. Helens in particular. I traveled through Iceland with a group of students last year, also. I expect to be doing science curriculum work this summer."

**William D. Hart** (MS '85) is now in his 5th year of contract minerals exploration. He is presently working in the Carolina Slate Belt, the oldest gold district in the U.S. Bill and his wife are both consulting for Piedmont Mining out of Charlotte, North Carolina. Bill wishes, "Congratulations and good luck to Ray."

**Joseph Haseman** (BA '36) is still consulting in the field of minerals beneficiation. Joe did some fishing and mountain hiking in Lake City, Colorado with his children and grandchildren in August. Joe also sends his "best wishes to my professor and friend Dr. Walter Keller. I wish I could get to Columbia to see him."

**Joseph E. Hazel** (FC '54, BA '56, MA '60) is now the chairman of the department of geology and geophysics at Louisiana State University.

**Robert L. Heller** (MA '43, FC '48, PhD '50) reports, "Last November, after an interval of nearly 50 years I returned to the SE Missouri section of the Ozark Mountains to do field work. The area is the same area I studied for my masters thesis many years ago. In addition to working on the SE Missouri structural problem I serve on the Boards of the American Geological Institute Foundation, the Wolf Ridge Environmental Learning Center, the Superior Hiking Trail Assoc., the Lake Superior Center and the St. Luke's Hospital Foundation. And I thought retirement was going to mean more time for reading and rocking!"

**Robert Hinkson** (BS '85) has been with the Missouri Department of Natural Resources since 1987 working in the waste management program, hazardous waste enforcement unit. Bob's work involves developing enforcement actions against violators of state and federal hazardous waste management laws. Bob reports, "I enjoy the work very much. The waste management industry is booming, and qualified people are in demand in government, industry, and consulting. Hello geology department, and all my contemporaries, wherever you are."

**William "Bill" Hoag** ((MA '57) says, "retirement can sure turn a weekend into an anti-climax. Imagine going to the hardware store on a Wednesday — no crowds and actually being waited on."

**Troy L. Holcombe** (FC '62, MA '64) doesn't have much to report since last year except, "I'm still hard at work starting a paleoclimate program at NGDC and sitting on the editorial boards of 3 intergovernmental Oceanographic Commission regional bathymetric charting projects: Gulf of Mexico/Caribbean, Central Eastern Atlantic, and Western Indian Ocean. Presently I'm taking a hard look at starting a research project on some aspect of Holocene geology which seeks answers on climate change during the last 10,000 years."

**William C. Hood** (FC '58, BA '59) is still in the international part of Amoco, responsible for exploration efforts in Denmark and Sweden. Bill reports that there are several MU alumni in the international group now, including Eddie Williamson, who recently became his boss. On the family scene, his youngest son Ron, has graduated from MU, and his other two children have each made them grandparents.

**Kenneth Houser** (MA '82) is with Delta Environmental in Tampa, Florida

**Antonio M. Irisarri** (BA '29, MA '29) is a Headmaster in Cartagena, Colombia, South America.

**Kenneth Jackson** (FC '77, BS '77, MA '79) has moved within the Houston, Texas area. He's now on Wilkshire Court.

**Arthur Kasey, III** (St. 1970) received the "Outstanding Earth Science Teacher Award" by the Central Section of the National Association of Geology Teachers last spring. The banquet and ceremonies were held deep within Fantastic Caverns near Springfield, Missouri. Art con-

veys, "Once again, my thanks to Dr. Keller for his influence on my teaching. Most of the professors at the ceremony were well familiar with Dr. Keller's excellence!"

**W. Marshall Keathley** (MA '42)

**Kathleen (Stephens) Keathley** (MA '44) report "we are thoroughly enjoying retirement. Trailer trips to Montana, New Mexico, Death Valley, etc. have intrigued us. Now we are building a cabin at 10,500 feet in the Torryalls and are looking forward to rocking on the deck watching deer, elk, bear, mountain lions and birds frolicking about. We still plan to do some travelling but mostly in winter. Does anyone have an address for Mary Helms?" If they do and would notify the department, we could forward it to Kathleen.

**David (Andy) Andrew Kemmer** (BA '74, FC '75, MA '78) reports, "Mary and I had our second child, Callie Elizabeth, June 4th; Anadarko closed their office in Denver July 1; I resigned to start Kemmer Energy Corp. (Sept. 1) after taking the summer off to play in the mountains. Other than that, nothing has happened!"

**Robert Kick** (FC '77, BS '78) has made the transition to environmental science from petroleum research quite satisfactorily. Bob is enjoying his job and his co-workers. Bob reports that, "the learning curve is steep." Bob and Beth now have a baby girl.

**David T. King, Jr.** (PhD '80) is continuing research on the Cretaceous of the Alabama Coastal Plain and Jurassic Smackover Fm. He also is interested in research of the Waulsortian "reef" facies worldwide. David and Janet are continuing their work on Alabama's carnivorous dinosaurs and restoration of the Albertosaurus they found in 1982. David reports, "Janet continues teaching here. We say 'hello' to all old friends. Hope to see friends at GSA, GCAGS, etc.."

**Donald L. Kling** (FC '59, BA '60, MA '62) is an independent geologist in Corpus Christi, Texas.

**Paul C. Knowlton** (FC '50, BA '51) moved from his downtown office in New Orleans to his home in Covington. Paul is still working as a consultant and trying to overcome the effects of the "oil bust."

**Larry M. Knox** (FC '75, MA '76) reports, "Sheri, Peter, Anna, and I survived the move from New Orleans to Houston last August. Though a little hotter, Houston is noticeably less humid so the mold in my lungs has died, making life more

comfortable. Enjoyed seeing a few old friends at AAPG in San Francisco. Does anyone know in which corner of the world Rich Petrus and Mark Zatezalo are hiding?"

**Mark A. Kuhn** (MA '81) and his wife Beth are now proud parents of 3 sons. Erik (4 1/2), Jeremy (2 1/2), and Adam born 2/9/90. Mark reports that Erik and Jeremy are good big brothers.

**Romaine L. Kupfer** (FC '48, MA '49) is retired and they are enjoying Colorado summers and Louisiana winters.

**Jean C. Lewis** (MA '82) is with the USGS, Water Resources, in Trenton, New Jersey.

**Terry Joseph Liles** (BS '85) is Project Manager at ATEC Associates in Dallas, Texas, and tells us, "the environmental consulting business is still going strong, it's giving geologists great career opportunities. Dallas is not as scenic as Seattle, but we are adjusting. The bad thing is my boss is a University of Kansas graduate. P.S. What do you call a geologist in Texas? Hey waiter!"

**Lowell K. Lischer** (FC '71, BS '72, MA '74) is Chief Geologist with True Oil Company in Casper, Wyoming.

**John M. Long** (BS '74) is a consulting petroleum geologist in San Antonio, Texas.

**Edward T. Lucas** (FC '46, BA '50) sends "Regards to those whom I knew. I have pretty well recovered from a stroke in January '90. I adore not working officially and spend most of my time working in my Japanese Garden and eating out!"

**Kenneth McGee** (FC '70, BS '70, MA '73) was in Columbia visiting the department this past summer. Ken is looking well and enjoying his position with the USGS in Vancouver, Washington.

**Timothy McHargue** (FC '70, BS '71, MA '74) reports, "Jan and I have separated after 15 years and that has been difficult for both of us. Otherwise, things are going well. The regional geology of West Africa (my job) is still the same but my understanding of it gets worse everyday. I'm helping to organize the AAPG poster sessions in San Francisco this year — hope you can all make it here for some sour dough bread and wine."

**Kenneth P. McLaughlin** (BA '39, MA '41) is retired and reports, "We have left the coast and moved back up river to Tennessee. The southern winters were not that much of an im-

provement, and we became tired of beating across Mobile Bay every time a hurricane threatened. There is nothing like the Tennessee River."

- Kirk McQuillan** (FC '75, BS '76, MA '79) is a student at Concordia Seminary.
- Olin MacNamara** (FC '77, BA '79) is a self-employed consultant. Olin reports, "Still surviving as an independent, going on 5 years now! 1989 was slow to crawling business-wise, but '90 looks much better. I had the pleasure of getting to know Dr. Frank Conselman back in '83 first in a business environment, then as a friend, and was sorry to see him pass away. He was a geologist's geologist. I've found my Mizzou education to be broad and solid, but do wish I'd studied more...I'm primarily doing exploration and well site work for local independent oil operators in the west central Texas area. Adios!"
- Olav Malvik** (FC '76, MA '77) has moved down under with Phillips Australian Oil Co. Olav is Exploration Manager. Olav - is Perth better than Bartlesville? — Bev.
- Eugenia Manford** (BS '88) is a data base analyst with Defense Mapping in Ashburn, Virginia.
- Melvin Marcher** (FC '51, BA '53, MA '54) is still pursuing those elusive rare books on natural history for his rare book business. Melvin is collecting material for a possible book on G. W. Featherstonhaugh, who was the first geologist hired by the U. S. Government to examine lead mines in Missouri.
- Keith Scanlan Matlock** (MS '86) plans to join the elite PhD fraternity by the end of the year. Keith is currently president of Georgia Tech bar bell club. He is also very involved in social justice ministry with Chapel Hill Harvester Church and the Catholic Church.
- Brett Matteo** (FC '79, MA '81) is an investment banker with Smith Barney doing municipal finance — mostly public power utilities. Brett reports, "I work out of both New York and Philadelphia, but live near Atlantic City. Nice commute — 110 miles round trip to Philadelphia; 280 miles round trip to N.Y.C. My son Paul is 18 months, bench presses 315 lbs!"
- John J. Maurer** (BS '86) is working towards a masters degree in industrial hygiene from Central Missouri State University. John has been with REACT Environmental Engineers since May, 1988 as an environmental scientist.
- Robert C. Miles** (FC '74, BS '75, MA '77) reports,

"So far I've had a great year with lots of travel to East Africa and Europe on business. Had a great visit to the field camp in Lander in June and realized how much I enjoyed and learned there. Howdy to all the old crowd! My two daughters continue to grow like weeds and Lisa is doing great."

**John C. Miller** (FC '65, MA '68) has lived in Tampa, Florida for the past 15 years with wife, Mary, and son Christopher (21), and daughter Jana (18). As senior hydrogeologist with CH2M Hill, the nation's largest environmental engineering firm, he is responsible for groundwater protection programs. John is also U.S. representative on International Assoc. of Hydrogeologists Commissions on groundwater protection and hydrogeology for developing nations. Last time you saw him (1967) he was off for two years in Panama.

**William (Bill) Mills** (FC '78, MA '80) is still working in Houston for British Petroleum. Bill is currently assigned to offshore production in Louisiana. Bill reports, "Elaine and Nicholas (now 4) are doing fine. We still keep in touch with the Horrell's, Yunker's and Tedesco's and send our best to those class mates we haven't seen in a while, especially Rob Kalish. When last heard from, he was learning Spanish intending to spend "some time" in South America."

**Arthur H. Moore** (FC '67, MA '70) relates, "Meridian consolidated in 1989 with almost 30% reduction in the exploration staff. Fortunately, I am still here. There are now three Moores in college, Greg (20), born while I was finishing my Masters, is in his third year at UNC; Beth (19) is in her first year of Psychology at CSU; Diane (wife) is working on a Masters in pastoral care. Brian (12) is the only one still at home. The family dynamics are changing."

**Morgan Newton** (MS '85) reports, "The circle is closing! I am pursuing a degree in physical therapy at UMC, starting June '90. Hello to Scott Slagley, Leslie, Chuck. Will I be rehabilitating Ray Holifield & Associates Rotator 2 cuff injuries?"

**John L. Nold** (FC '62, BA '63, MA '64) is still "stamping out geo-ignorance" at CMSU and working summers doing mineral exploration. During the summer of 1989 John worked for Cominico in northwest Montana, north Idaho and southeast British Columbia searching for another Sullivan Mine within the Belt Super-

group.

**Jack Norman** (FC '58, BS '60) Jack relates, "upon graduation I spent seven years with Sinclair Refining Co. in sales and changed careers in 1968 into health care. Even though I enjoy health care I often think about my Branson summer camp and still have fond memories of my years at MU in the Geology department. Peck, Johnson, Keller, Viele and Mehl left their imprint on my career. I am currently President of a 340 bed hospital in Venice."

**Richard W. Ojakangas** (FC '55, MA '60) is a fixture at the University of Minnesota-Duluth with research projects in India, South Africa, Finland and USSR. One of Dick's interests is in ancient glaciations.

**Jack O'Leary** (former MA student) is a Project Engineer with Gale Associates, Inc. in Rhode Island.

**Daniel J. Patterson** (BS '81, MA '86) was a summer geologist with ARCO in Midland, Texas for the summer of 1990.

**Elmer D. Patterson** (FC '48, BA '49, MA '50) relates that his only geologic function is to be on the scholarship committee of the Roswell Geological Society.

**Robert John Pauken, Jr.** (FC '65, PhD '69) is presently conducting a regional geological study of the Australian plate. Bob attended the Apea Conference in Darwin in June and presented a paper on Mobil's Sanaga Sod gas field, offshore Cameroon, West Africa in September at the M. T. Halbouty Conference on Giant Fields of the Decade (1979-1989) in Stavanger.

**Jack J. Pennington** (FC '46, MA '47) retired after 43 years as a petroleum geologist last May, and closed his office. Jack plans to work on a sadly neglected golf game and travel a bit. Good luck Jack!

**Claude M. Quigley, Jr.** (BA '41, MA '42) flew to Kansas City late last May and then on to San Francisco for the AAPG meeting. He also attended the AAPG Delegate meeting, the XOTEX group, and the SEPM lunch. Claude wonders, why the department has not included planetary geology? We did several years ago, but not at the present.

**John M. Reader** (FC '82, MS '85) sends his regards from New Orleans and the news that they have a new daughter Caitlin Mae. He also hoped to see any Branson or MU grads for Mardi Gras — just call him at Shell, New

Orleans. Johns says, "Hi to George, Marianno, and Uncle Tom. Laissez les bon temps rolle!"

**John Repetski** (FC '69, MA '73, PhD '75) John, Donna, and the boys are still enjoying the countryside in suburban D.C./VA. The conodont work has taken a turn toward the Midwest; John's doing Ouachitas work with Dr. Ethington again, some lead-zinc work with Dave Leach, and conodont work related to New Madrid earthquake studies. John reports, "Field work and other travel has been cut back in recent years — the government must consider basic geology one of those frills to be trimmed. Fortunately it's close to the field work areas that John Taylor and I have staked out in the Appalachians. And there are enough Mexican restaurants here now to keep us going in the manner to which we've become accustomed. Cheers to all!"

**Roger F. Rice** (M '70) reports, "I enjoy the newsletter and hearing news from the geology department and its graduates."

**Harry B. Robinson** (BA '28, MA '33) reports, "as previously noted, I was an instructor in geography and geology part time at MU, Stephens College, Christian College, and Central Methodist from 1933-1940. In 1940 I started work with the National Park Service, retiring in 1969 after serving in capacities as Park Naturalist, museum curator, historian, and park planner. I moved back to Columbia in 1970, where a hobby of book searching and appraisals turned into a business difficult to get out of. I am now out of the book searching, but still doing limited appraising for the State Historical Society, Ellis Library, and the Columbia Public Library. I try to quit but they won't let me. I want to do some writing, but at 87 I will forget what I want to write about if not started within the next two years."

**David R. Rothbard** (FC '79, PhD '82) has been on assignment to BP's Sunbury Research Center near London, England for over a year. David related, "things do look different from the other side of the ocean (and road). It's been a great professional and personal experience for me and the family. I would have liked to come to the Clay Conference but it conflicted with other matters."

**Audrey C. (Lipke) Rule** (BA, '75, MA '78) her husband, Bill, and daughter, Amy, are living in Tuscaloosa, Alabama where her husband is an

- assistant professor in engineering mechanics. Audrey was an instructor teaching intro to geology but is returning to graduate school for her masters in elementary education. Audrey wishes all her old buddies a big, "Hello, and drop in or drop us a line."
- William A. Ryan** (BA '38, MA '40) says "Two events have changed the Ryan family. Son Jim, and his wife Lynne, presented our first grandchild Brendan James Ryan in February. Elder son Ed, and wife Joan, traveled to Thailand in June to adopt a 2 1/2 year old daughter. Parents, Bill and Iva continue to play music for dances and other programs. (Bill on sax and clarinet and Iva the piano and organ)." Bill recently presented his collection of family sheets to the Mormon Library in Salt Lake. (7 - 8,000 families).
- Stephen Ryland** (FC '69, BS '70, MA '71) is still consulting in geophysics and geology out of Pasadena, California, travelling to Latin America often. Steve also owns CAL-GOLD mining supplies and relates, "If anyone wants cheap Bruntons or other supplies let me know - discount to MU alumni."
- Nick Saum** (MA '62, PhD'70) stopped by the office this fall and talked with Dr. Keller and Beverly about his recent activities. Seems as though Nick is still enjoying the science of "Ballooning" and won a \$20,000 balloon at the 6th World Gas Balloon Championships, and world championship in the 1st World Roziere Balloon Championship in Tyndall, SD in September of this year. The balloon he piloted was energized by heated helium. Nick set 24 world records in a Roziere Balloon AM-2 in 1984, Grover Windsor Award 1984, Championship Director US National HAB Championships in 1985 & 1987, 1st Place South African Int. Ballon Race in 1986. Nick said he used his geology training about 50/50 with ballooning.
- Gene W. Schmidt** (BA '55) is still Director of the Groundwater Management Department of Amoco's Environmental Affairs and Safety. The group has grown to 23 employees consisting of hydrogeologists, engineers and chemists. Gene's department is responsible for prevention and remediation for all subsurface and groundwater environmental impacts, worldwide, for all Amoco subsidiaries. Gene reports, "Environmental responsibility is an integral part of every aspect of Amoco's business activities."
- Marjorie (Jorie) Schulz** (MS 1990) Relates, "after an extremely long hiatus I have completed my masters degree! I am still with Pacific Marine Geology at the USGS, and looking forward to several research cruises in the South Pacific. If any of you are in the Bay Area please feel free to look me up."
- Craig S. Schwandt** (MS '88) sends a friendly, "Howdy, I'm still finishing my doctoral at South Dakota School of Mines. However I followed my advisor to New Mexico and now have a half-time position with the Institute of Meteorites. I wish everyone well and invite friends to stop by if they are in the area."
- Eugene (Buddy) Schweig** (BS '75) led a New Madrid Seismic Zone field trip at St. Louis GSA meeting. Buddy also announced their third child, Amy, born 2/19/90.
- Kriston H. Scott** (MA '81) reports, "I cannot say I'm really using my MA in Geology right now. After I was laid off from the Oil and Gas Industry in 1982, I went back to school and got a degree in Computer Science from Texas A&M and am using that. I enjoyed seeing everybody at the AAPG convention in San Antonio!"
- Patricia (Trish) Settles** (MS '88) is with Dames & Moore in Boston, Massachusetts.
- Scott A. Slagley** (MS '84) reported in from Reston, Virginia and sends his "hello" to fellow alumni.
- David D. Smith** (FC '59, BA '59) retired last November after 25 years of teaching physics, physical science and math at Lompoc High School in California. Dave asks, "Why don't I read in the media about college professors 'burning out'? Maybe it's time to visit Snowden, Reeseman, and Fraunfelder?"
- Jesse (Joe) Snowden** (FC '61, MA '61, PhD '66) is now Dean of Science at Southeast Missouri State University in Cape Girardeau, Missouri.
- John H. Spotts** (FC '49, BA '50, MA '51) retired after 34 years from Chevron, and recently moved to Orem, Utah and is working on their new home — after which he plans to do volunteer work, geological, scientific or otherwise.
- Thomas H. (Josh) Stark** (FC '79, BA '80) is President (1989-90) of the Indiana-Kentucky Geological Society; has a publication *Intra-Continental Rift Systems of the United States of America and their Economic Association* (1990), Dickas, A.B., Chernikov, G.B. A., Zaichikov, G., and Stark, T. H.; *Address/ Kentucky Oil & Gas Ass'n., Tectonic Controls of Silurian*

Reef Growth in Southwestern Indiana (1990). Announced discovery of English Graben (southern IN) and proposed poly-phase rift development of New Madrid Rift Complex. He is married and his wife's name is Kimberlee and his 9 1/2 month old son is Cody. "Hi, everybody."

**Martin Steinbis** (FC '75, MA '80)

**Sue (Eubank) Steinbis** (FC '74, MA '77) write, "We're still alive in Houston. Sue says 'if the mother's place is in the home, why am I always in the car?'. Sue and the children are very active and successful in school activities. Sue's not making too many friends on the tennis court. Starting out in the C league she's now at the top of the B group. We took the family on a great camping trip to Scotland this summer. Our boxes and suitcases well exceeded the 60 pound limit being stuffed with rocks. Amoco brings new challenges daily, mostly involved with coping with workload. Cheers to all."

**John Stewart** (MA '84) moved from being a state regulator to private consultant and has enjoyed the new challenges. John writes, "The environmental field is going full swing in North Carolina as I am sure it is elsewhere. The family is all fine - Stewart #2 is due in the middle of August. I guess we'll be environmentally conscious and go with cloth diapers — how fun!! Hi to all — give us a call if you are in the area."

**Warren Stoffey** (BS '72) obtained a BS in Nursing from St. Louis University. PA training at Stephens College, Columbia, Missouri. He is a Captain in the Air Force stationed at Eaker Air Force Base Arkansas. Warren has recently obtained a Masters degree in Management from the University of Arkansas. Married 9 years, no children.

**Joseph Swartz** (BA '39) and wife Marge, toured Alaska last spring. Joe said, "We got a long look at the Alaska highway and enjoyed a lot of great roadside geology. Best wishes from Blue Eye, Missouri."

**Robert W. Taber** (FC '49, MA '51) reports, "After leaving MU, I worked for 27 years as an oceanographer at the Naval Oceanographic Office and the National Oceanographic Data Center. I was chief scientist on extended oceanographic surveys in the Hawaiian and Alaskan areas. The survey included collecting and analyzing bottom sediments obtained by corers and grab samplers.

I retired 12 years ago, and for the past two years I have been working three days a week as a volunteer instructor at Holmes Educational State Forest in western North Carolina. I have been out of touch for a long time, but I remember Dr. Unklesbay and he has not been out of my thoughts. It was a privilege to study under him, and I have many good memories of my years at the University of Missouri."

**Stuart Take** (FC '82, BS '83) is with Travelers Mortgage in Ballwin, Missouri.

**Larry Tedesco** (FC '77, PhD '81) sends, "Greetings to all. Cindy and I are adjusting well to life in Houston, and have renewed ties with friends from New Orleans and UMC. Cindy and I spent two wonderful weeks in June in northern Italy. Saw lots of beautiful artwork, architecture, and stonework."

**Mark A. Thomas** (MA '82) reports, "Leslie and I had our first child, Eva, this summer. I'm finishing my PhD this fall. The new degree has absolved sins of previous employment. The oil industry now considers me desirable. I start at Shell (SWEPI) this fall."

**Michael L. Trout** (FC '67, BA '68, MA '74) reports, "On January 1, BP combined its gas marketing and E & P operations in the on shore lower 48 states into a wholly owned subsidiary: TEX/CON. One other geologist and I are responsible for the continental U.S. outside the Anadarko Basin and Gulf Coast. Thus far the job has been very interesting and the management is trying not to act like a major oil company."

**Roger D. Tullberg** (BS '84) is a loan officer with State Street Bank and Trust in Attboro, Massachusetts.

**George Ulmo** (FC '78, MA '79) is an independent geologist exploring for oil and developing discoveries. George conveys, "the family is doing fine — we just got back from three and a half weeks in Ecuador, South America visiting family and friends and the beach. It's good to be back. 'Hi' to Glen Himmelberg, Doug Frick, B.B. Broom, and Tom Freeman."

**Patrick J. Vezeau** (FC '78, BS '80) chief resident, Department of Oral Surgery, University of Iowa Hospital relates, "was blissfully wed August 9, 1990 to Debra Benjamin, who just completed her oral pathology residency at the University of Iowa. I'll be finishing my oral surgery residency in June '91. (Gotta job?) Best wishes to

field camp '78 crew."

**Kenneth B. Via** (FC '59, BA '51) is part owner and manager of Via Farms after retiring from the Air Force as a Lt. Colonel.

**Jerry D. Vineyard** (FC '55, BA '58, MA '63) is Deputy state geologist of Missouri, and has been named State Water Plan Director, to produce Missouri's first state water plan since 1938. The 1938 document was developed by State Geologist, Henry A. "Chief" Buehler, with the assistance of a citizens advisory committee.

**Michael B. Vosbein** (69-70) is general manager, exploration and petroleum with ARAN Energy. Mike reports, "surviving the bust by opening an office for ARAN Energy out of Dublin, Ireland in Houston, Texas."

**Robert W. Waddell** (BS '88) reports, "just bought a house in the Denver area and invite all past acquaintances to drop a line, a dime, or a visit on their way to the ski slopes (I might join them). Or summertime mountain adventures. The Denver economy is rebounding and environmental firms abound. Job potential here in Denver area." Bob is staff engineer with Woodward-Clyde Consultants.

**John H. Wall** (PhD '58) is part-time research scientist with the Geological Survey of Canada. John reports, "with reference to item in Nov. '89 Newsletter re: John Wall being reported alive and well in Canada, he wishes to reaffirm this and to further advise that he is conducting an active research program in the Canadian Arctic and Western Interior regions. In the Arctic he is involved in a joint research project on Jurassic foraminifera and biostratigraphy with Russian colleagues in Leningrad, while south in Alberta he is engaged in multidisciplinary research in event-sequence stratigraphy with sedimentologists, palynologists, geochemists, etc. resulting in a paper in the January 1990 issue of Jour. Sed. Petrology, with more on the horizon".

**Richard Waugh** (FC '74, BS '75, MA '77) is an instructor at the University of Wisconsin, Platteville and relates, "I'm into my 12th year of teaching at the University of Wisconsin-Platteville, and still enjoy it greatly. Research interests have taken me as far as Peru and as close as the next county. Therese and I have two daughters, Katie (6) and Liz (3)."

**Paul Weaverling** (FC '79, MS '87) is Sr. Production Geologist with Mobil in Colorado. Paul re-

lates, "at this writing, Colleen and I reside in Colorado....however, in Mobil's fervor for re-organizing we might soon be heading to Liberal, Kansas (alternatively labeled many things such as 'the Outback', 'Hell', 'Pergatory', etc. by my colleagues). My regards to all the Room 4 gang, wherever you might be. Tom, best of luck to you in your upcoming visit to Spain."

**Roy J. Weidle** (FC '80, BS '80) reports, "I'm here in St. Louis working at the map factory with ARL and the gang. If you're in town, look me up, I'm in the book."

**Todd Wheatley** (MS '88) is currently beginning the second year of his MBA program at the University of Colorado. He plans to graduate in August, 1991. Todd spent the summer working for Exxon's Eastern Exploration Division in Houston.

**Jack W. Whitehead** (BA '56, MA '62) has been in Corpus Christi for 22 years in the oil and gas industry. Jack relates, "waiting out the slump in the oil business. Hope to get back to the MU campus in the not-to-distant-future."

**Chester D. Whorton** (BA '25, MA '26) reports, "Paul Farmer and wife, Alicc, Mizzou grads about 1940, from Mattoon, Illinois visited us in March. Although we had not known each other before, we had a very pleasant meeting. I am still playing golf once a week. I do not expect to get to Columbia this year, would like very much to have any Mizzou grads who come this way for the winter to visit me." Chester lives in Green Valley, Arizona.

**Lee Wilkening** (FC '79, BS '80) reports, "I recently moved from Dallas to the Valley of the Sun, Phoenix, Arizona, to look for water. It's hot, but not humid — unlike Missouri summers, and besides, I can easily escape to the mountains to cool off. I still try to cycle 150-200 miles per week, as time permits. If anyone that I have lost touch with is coming through Phoenix (or is already here), 'I'm in the book'."

**Don Williams** (FC'70, BS '71, MA '74) stopped by the office to say he was still alive. Don is helping 12 and 13 year old boy scouts with their badge requirements for Geology. Don is with the Soil Conservation Department of the USDA in Columbia, Missouri.

**James Wilmesher** (FC '86, BS '86) tells us, "I'm working hard, but still enjoying California. I understand through Mary G. Zell, a coworker (with Geraghty & Miller) that Terry Lyles, Padd

Quinn, Andy Fridley, and Paul Richmond are in the Seattle area. Richard Fisher I believe is still in Schnectady, New York. Hope all is well with you all. Hello to: Dr. Ethington (and congratulations!), Dr. Underwood, Dr. Viele, Dr. Bauer, and Bev. — Take care."

**Hiram B. Wood** (BA '37, MA '38) of San Diego, California reports, "I'm eating three meals each day, and I can scratch almost every spot that itches, but my days of doing field geology are over. Effective March, 1990 this geologist was physically benched. Last year was a very bad year for Nancy and me. From now on we plan to age gracefully, to stay out of hospitals, and to enjoy living in this pleasant San Diego climate. Geology is not dominating. Regards to all."

**Donald G. Woolverton** (FC '71, BA '72, MA '75) is a geophysicist with Conquest Exploration Company in Houston, Texas.

**Tom Zeiner** (MA '74) reports, "I've accepted a transfer to beautiful Bakersfield California. Two hours to Los Angeles — two hours to the coast — the desert - the mountains — two hours to California! We're developing heavy oil stream floods and diatomite reservoirs — about as diverse as you can get. Sure enjoyed the Mizzou get together at AAPG."

## In memoriam

**Donald Biggs** (FC '47, BA'49, MA'51) Department of Earth Sciences, Iowa State University passed away in February.

**Newton Chute** (former faculty) who has been with the Department of Geology at Syracuse University was reported by Pat Bickford to have passed away several years ago.

**Frank B. Conselman** (PhD '34) passed away December 4, 1989 and his obituary was published in *The Professional Geologist*, Vol. 27, Number 8.

**Alexander D. Elkin, Jr.** (BA '48) passed away March 26, 1990 in Denver, Colorado as reported by his brother.

**George H. Harrington, Jr.** (BA '40) mail was returned marked "Deceased."

**Louise K. Johnson**, widow of Clayton H. Johnson passed away February 23, 1990. After her passing the Clayton H. Johnson Memorial Scholarship Fund was renamed "Clayton H. and Louise K. Johnson Memorial Scholarship Fund."

**Merle C. Prunty Jr.**, (BS '36, MA '40) has recently been reported as having died in 1982.

**Henry Glenn Walter**, (MA '31) passed away in Logan, Utah, April 6, 1990, at the age of 88, per an article in the AAPG bulletin.



Ray Ethington (then SEPM President) presenting award for outstanding paper in Journal of Sedimentary Petrology to Dave Houseknecht at SEPM Annual Meeting in San Francisco in June 1990. Dave clearly was surprised to receive this recognition.



