

# GEOLOGY NEWS LETTER



INDIANA UNIVERSITY

DEPARTMENT OF GEOLOGY

December, 1979

Dear Geology Department Alumni:

The Department of Geology at Indiana University is growing. This year, 1979/80, we have approximately 200 undergraduate majors and 80 graduate students. Since the last newsletter, Professor Tom Hendrix resigned and is now chairman of the Department of Geology at Grand Valley State Colleges in Allendale, Michigan. His replacement joined us this year and is Dr. Jeremy Dunning. Dr. Dunning received his Ph.D. degree from the University of North Carolina and taught for one year at the University of Oregon. We are very pleased to have him on our faculty. His research interests are diverse, and presently he is working with NASA as a research fellow on acoustic measurements of fractures.

The field station in Montana continues to excel, and this fall Professor Judson Mead was honored by receiving the Neil Miner Award which is given annually by the National Association of Geology Teachers for excellence in teaching. We are very proud and honored that Dr. Mead received this richly deserved award at the annual meeting of the Geological Society of America in San Diego in November.

The faculty members in the Department of Geology have received \$684,742 in grants to support their research activities. These grants are very valuable to the department in that a large number of graduate students are supported as research assistants. In addition, we have 10 fellowships of which three are industrially supported, one is given by the Graduate School, and six by the Department of Health, Education, and Welfare.

Inflation is a continuing problem in that it makes our limited budget even more stringent. We need donations from our loyal alumni and friends in order to maintain our excellence. As one of our eminent alumni, Dr. Robert R. Shrock, pointed out in the last newsletter, your contributions, however large or small, are desperately needed, so please take a moment and contribute to one of our funds at the Indiana University Foundation. Be sure to make your check payable to the Indiana University Foundation/Department of Geology Fund or whatever fund you desire.

We welcome letters, advice, and visits from our alumni. Please notify us of any address or status changes so we can keep our records current. You can be proud of your university and the Department of Geology as it continues to grow and turn out excellent geologists.

Sincerely,

Haydn H. Murray  
Chairman

SPECIAL ALUMNI GIVING FUNDS

The Department of Geology maintains several special alumni giving funds. Why not honor a former teacher or friend, or express your appreciation for your I.U. geology degree by contributing to one of these funds?

Cumings-Malott Fund  
Charles Deiss Fund  
Ralph E. Esarey Fund  
Galloway-Perry Fund

Arch McPheeters Fund  
William Rawles Fund  
William Thornbury Fund  
Excellence in Geology Fund

FACULTY NEWS

Robert F. Blakely has published two Geological Survey Occasional Papers with A. J. Rudman and B. D. Kwon: Paper #23, "Fortran program for reduction of gravimeter observations to Bouguer anomaly"; and Paper #26-F., "Program for correlations of Stratigraphic Time Series." Dr. Blakely has also received a patent for a tsunami warning device with W. M. Adams and Judson Mead.

David Dilcher is continuing his study of the evolution of early angiosperm plants. Dave attended the national meetings of the Botanical Society of America in Norman, Oklahoma in August, 1979. He has also recently been awarded a five year research grant by the National Science Foundation.

Robert Dodd, Assistant Chairman of the Department of Geology, presented a paper at a symposium on Neogene correlation (Biostratigraphic datum-planes of the Pacific Neogene) at Stanford University in June, 1978. He spent most of July, 1979 in the field in northern California studying the paleoecology and depositional environment of fossils in the Humboldt Basin. In April, 1979, Dr. Dodd was conference director for a symposium on field and applied geology sponsored by the Lilly Foundation, for private college teachers from Indiana. He has, at this time, nearly completed work on a textbook on paleoecology he is writing with Robert Stanton of Texas A & M University.

John Droste continues his involvement in teaching the large beginning geology course, G103. He has also been active in a stratigraphic research program with Bob Shaver and Carl Rexroad of the Indiana Geological Survey on various stratigraphic problems in Indiana. John continues his hobby of collecting and restoring antique furniture. He and Gary Lane frequently attend local auctions.

Jeremy Dunning is spending his first year on the geology faculty at IU. He is the department's new structural geologist, replacing Tom Hendrix, who accepted a teaching position at Grand Valley State College in Allendale, Michigan. Dunning received his Ph.D. from the University of North Carolina and conducted his thesis research on the submicroscopic and microscopic analysis of stable crack propagation in synthetic quartz. He held a teaching position for a year at Oregon State University before coming to IU. Jeremy presented papers at the 1978 National GSA meetings in Toronto; at the AGU fall, 1978 meetings in San Francisco; and at the 1979 National GSA Meetings in San Diego. He spent the summer before his arrival in Bloomington in San Francisco on a NASA Ames Research Faculty Fellowship, which will be renewed next summer. Jeremy is co-editor of the NASA Special Publication "Oasis Report," and has just been awarded a Faculty Grant by the AAPG Structural Geology School.

Donald E. Hattin is continuing his research on the stratigraphy and paleontology of the Cretaceous deposits of the western interior. Dr. Hattin has attended several meetings over the past two years, including the AAPG National meetings and the North-Central GSA meeting in Duluth. He is program chairman for the North-Central GSA meeting in Bloomington this year. As a result of his long time interest in trains, Don is currently a fireman trainee on the French Lick-West Baden and Southern Railroad, a small excursion line in southern Indiana.

John Hayes is presently a visiting professor in the Department of Earth and Space Sciences and Institute of Geophysics and Planetary Physics at UCLA. With 14 others, including Professor Howard Gest (IU Department of Biology), Kim Wedeking, a graduate student in chemistry at IU, and David DesMarais of NASA (a 1974 Ph.D. graduate of this department), he is participating in the work of the "Precambrian Paleobiology Research Group", an international cooperative group gathered at UCLA by Professor J. W. Schopf. The group is funded by NSF, NASA, various foreign agencies, and the regents of the University of California, and is exploring the micropaleontological and organic geochemical records in Archean sedimentary rocks, many of them collected during a round-the-world trip last spring.

An organic chemist and mass spectroscopist by training, Hayes jokes that he was used as a rock carrier during that trip, but has recently been more professionally employed in laboratory investigations of the organic carbon contents and volatile element stable isotopic abundances of the materials collected. The overall goals of the group are oriented around the construction of boundary conditions for the compositions of the early atmosphere and hydrosphere, and on exploring the consequences of these conditions in terms of the origin and evolution of life on earth. A symposium is planned at the end of the group's activities next summer, and a final report is to be issued in book form.

Alan Horowitz attended the Ninth International Congress on Carboniferous Stratigraphy in May at Urbana, Illinois, and led a day of Field Trip 7 of the Congress. Dr. Horowitz is currently working with colleagues on a revision of the blastoid genus Pentremites, funded in part by an NSF grant.

Cornelis Klein spent seven months studying iron formations in Australia last year on a Guggenheim Fellowship. Dr. Klein's field work entailed several weeks in the outback of the Hamersley Ranges of the northwestern part of Western Australia, where he systematically sampled various iron formations for mineralogic and petrologic study. His field assistant in Australia, Ph.D. candidate Martin Gole (University of Western Australia), came to IU to work with Dr. Klein in February, 1979.

Dr. Klein presented a paper at the Annual Meetings of the Geological Society of Canada in 1979. He served as chairman of the Nominating Committee for Fellows of the Mineralogic Society of America in 1979, and has been associate editor of *The American Mineralogist* since January 1977. Among his other honors and awards, Kase now includes the Screwball Award which he received at this year's Christmas party!

Noel P. Krothe's research activities are illustrated in two recently published papers: "Anomalous occurrence of Na-HCO<sub>3</sub> water in a carbonate terrain" (*Ground Water*, Nov.-Dec., 1979); and "The Chemistry of icings and spring water in a permafrost environment, Brooks Range, Alaska" (*Proceedings of Soil-Water Problems in Cold Regions*, Elsevier Scientific Publishing Company). Noel attended the National GSA meetings in Toronto in 1978, and gave papers at the Northeast Regional GSA meetings in Hershey, Pa. in 1979; the Rocky Mountain Regional GSA meetings in Fort Collins, Colo. in 1979; the AGU meetings on Soil-Water Problems in Cold Regions in Calgary, Canada in 1979; the National GSA meetings in San Diego in 1979; and the National AGU meetings in San Francisco in 1979.

Gary Lane is currently working on an NSF-sponsored research project on the paleobiology of Carboniferous microcrinoids from Indiana and Tennessee. One large manuscript has already been submitted on this project, and two additional manuscripts are in the works. From March through September, 1979, Dr. George D. Sevastopulo from the Department of Geology at Trinity College, Dublin, Ireland, was in Bloomington working with Dr. Lane on microcrinoids. Sevastopulo also taught a six-week seminar on Carboniferous stratigraphy and correlation between western Europe and North America. Dr. Lane is the author of an elementary textbook in paleontology entitled "Life of the Past" which is being used in several universities.

Judson Mead was honored this year with the Neil A. Miner Award, which is made annually by the National Association of Geology Teachers to an outstanding geologic educator. The award, which recognized Dr. Mead's teaching excellence on the Bloomington campus and as director of IU's summer field program, was presented at a special luncheon at the National GSA meetings in San Diego. Dr. John Patton made the presentation speech which was followed by a response by Dr. Mead. This is an award of national significance which reflects very favorably both on Jud Mead and on the IU Department of Geology.

Warren Meinschein presented a paper this year at the J. Clarence Karcher Symposium (in chemistry) and gave a talk at the University of Oklahoma. He was recently elected a Fellow in the Explorers Club and in the Curri Institute of Chemistry. In addition to his involvement in teaching and research in the Geology Department, Warren is Associate Dean for Academic Affairs in the School of Public and Environmental Affairs (SPEA). Warren will be on sabbatical leave in Port Aransas, Texas during the spring semester of 1980.

Enrique Merino attended the annual GSA meetings in 1977 (Seattle), 1978 (Toronto), and 1979 (San Diego); a Gordon Conference on Inorganic Geochemistry in New Hampshire in August, 1979; and the AGU meetings in Washington D.C. in May, 1979. Enrique has recently published a paper entitled "Internal consistency of a water analysis and uncertainty of the calculated distribution of aqueous species at 25°C" (Geochim. Cosmochim. Acta, 43, pp. 1533-1542). Another paper, "Temporal development of fabric in uniaxially-stressed polycrystalline media--a theory", which he co-authored with IU chemist Peter Ortoleva, has been accepted for publication in Contrib. Mineral. Petrol.

Haydn Murray (Chairman) is the program chairman for the Industrial Minerals Division of AIME for 1979-80 and responsible for organizing the fall meeting in Tucson (Oct. 17-19) and the annual meeting in Las Vegas (Feb. 24-28, 1980). As chairman of the North Central Section of the GSA for 1979-80, he will also organize the section meeting to be held at IU on April 10th and 11th, 1980. Dr. Murray is chairman of Working Group 23 of the International Geologic Correlation Program entitled Kaolin Age and Genesis, and attended the 10th Symposium on Kaolin Genesis in Hungary and Czechoslovakia September 3-12, 1979.

John Patton devotes much of his time to his duties as head of the Indiana Geological Survey; he also serves on a panel on natural building stone appointed by the National Academy of Science-National Research Council to study the applicability of Public Law 95-87 (Surface Mining Control and Reclamation Act of 1977) as it relates to dimension stone. Over the past year he has also given talks on Indiana geology and geologists at the Indiana Academy of Science Meeting (Anderson College), and at the International Carboniferous Conference (New Harmony). Other presentations at the Lilly Conference on Geology (in Bloomington), at the University of Wisconsin-River Falls, and at the Indiana Public Transportation Conference (Bloomington), centered around federal energy policy and outlook.

Edward Ripley has recently published two papers: "Sulphide petrology of basal chilled margins in layered sills of the Archean Deer Lake Complex, Minnesota" (Contrib. Mineral. Petrol., vol. 69, pp. 345-354); and "Oxygen and hydrogen isotopic studies of ore deposition and metamorphism at the Raul mine, Peru" (Geochim. Cosmochim. Acta., vol. 43). Ed attended the 1978 National GSA meetings in Toronto, and before the meetings, participated in a two week field conference and symposium on Canadian Ni-sulfide deposits. Last year he received a grant from NASA to study evidence of sulfate reducing bacteria in Archean rocks.

Albert Rudman is spending his sabbatical this year in Hawaii, where he is involved in a research project on the feasibility of using geothermal heat as an energy source. Dr. Rudman's recent publications include "Analysis of geophysical logs from the Hawaii Geothermal Project well" (Geothermal Resources Exploration in Hawaii, no. 5, Hawaii sheet

of Geophysics Report 78-8, 23 p.); and "Fortran program for correlation of Stratigraphic Time Series--Part 2 Power spectral analysis" (with others, Indiana Geological Survey Occasional Paper 26, Geophysical Computer Program 6, 28 p.).

Robert Ruhe continues his duties as head of the Water Resources Research Center. He led the 1978 spring field trip of the Friends of the Pleistocene and was a field leader in the Lilly Conference in April, 1979. Among his many publications are "Estimate of clay-mineral content: additions of proportions of soil clay to constant standard," (with Caroline Olson, in *Clays and Clay Minerals*, v. 27, pp. 322-326, 1979); and "Clay-mineral weathering and Quaternary soil morphology," (with Carolyn Olson and Karen Brunson in *Quaternary Soils*, W. C. Mahaney, ed., *Geo. Abstracts*, Univ. East Anglia, Norwich, Eng., pp. 109-123.)

Robert Shaver continues to be extremely active in research on the stratigraphy and paleontology of Silurian reefs, as reflected in his numerous papers and colloquia (in the U.S. and Canada) on these geologic structures over the past two years. Dr. Shaver has also led several field trips to areas of reef outcrop, and as field trip chairman for the North-Central Section of the GSA, is organizing the field trip program for the 1980 meetings. Over the past year he has attended the Michigan Basin Geological Society meetings in East Lansing; the AAPG and SEPM Annual meetings in Houston; and the Lilly Conference on Geology at IU. Dr. Shaver has also been occupied with appointments, chairmanships and with his many service activities through the AAPG and SEPM in 1978 and 1979.

Lee Suttner, along with Tom Hendrix, organized and chaired a symposium on field station programs for the NAGT and GSA in the fall of 1978, and was, with Charles Vitaliano, a principal convenor of a Penrose Conference "Granite II" in Boulder, Colorado last June. Lee attended another Penrose Conference in Mammoth Lakes, California; the GSA national meetings in Toronto (1978) and San Diego (1979); and all of the G.L.S.-SEPM meetings over the past several years. Lee was "honored" with the Screwball Award at the 1978 geology Christmas party.

David Towell attended the National GSA meetings in Toronto (1978) and San Diego (1979) and a Penrose Conference (Granite II) field trip to the Boulder Batholith, Butte, Montana in June, 1979. Dr. Towell continues to serve the department and the university through the Faculty Council. Dave and Enrique Merino are colloquium co-chairmen this year, and Dave is currently the Geology Department Graduate Advisor.

Charles Vitaliano was, along with Lee Suttner, a principal convenor of a Penrose Conference "Granite II" held in Boulder, Colorado last June. (The conference is described in this newsletter). Dr. Vitaliano then spent several weeks in July and August in the mountainous area of the Argolid Peninsula, Greece, where he mapped carbonate rocks, associated serpentine-peridotites and covering Tertiary sediments in a cooperative project with the Classical Archeology Department of Indiana University and the California Institute of Technology.

One of the most eminent and vital members of the Department of Geology over the past 32 years, Dr. Vitaliano will retire from active teaching this spring. He will, however, retain an office and maintain close ties with the department. Dr. Vitaliano considers his interaction with students one of the most rewarding aspects of his career as a geologist, and promises that he will continue to be available for counselling. As his current and former students know, he shares a great deal more than his research and teaching skills with young geologists--he has offered friendship and personal encouragement to each of his many students over the years. Far from retirement in the conventional sense, Dr. Vitaliano is already planning several research projects to be initiated over the next year. Without a doubt, many more valuable contributions in the field of volcanic geology and igneous rocks will result from this work, in keeping with Dr. Vitaliano's long tradition of excellence and innovation in his profession.

Robert Wintsch recently synthesized many years work with the paper "The Willimantic Fault, a ductile fault in eastern Connecticut" (American Jour. of Science, vol. 279, pp. 367-393). He continued his field studies in the metamorphic terrain of Connecticut last summer with a USGS grant, and is now engaged in the petrologic analyses of newly collected samples and data. Bob has also continued his experimental research in high temperature/high pressure reactions. He presented a paper at the 1978 AGU meetings in Washington, D.C., and was invited last spring to participate in an NRC-sponsored symposium on the Moodus, Connecticut region--one of many New England areas with a long history of yet to be explained seismic activity.

#### PENROSE CONFERENCE

A Penrose Conference entitled Granite II: Near Surface Batholiths, Related Volcanism, Tectonism, Sedimentation, and Mineral Deposition was convened by Professors Charles J. Vitaliano and Lee J. Suttner of the Indiana University Department of Geology, and by Professor Donald W. Hyndman of the University of Montana in June, 1978. The conference, which formed the second in a series of three on the subject of granite rocks and batholiths, took place at the Fairmont Hot Springs at Gregson, Montana on the edge of the Boulder batholith, a typical near-surface batholith with ample evidence of associated volcanics, derived sediments, and mineral deposits. Six half-day discussions focused upon such subjects as volcano-plutonic association; the emplacement and form of shallow granitic batholiths; volcanic environments and their relationship to plutons at depth; sedimentation associated with the emplacement and unroofing of batholiths; tectonics around shallow batholiths; and metallic mineralization and behavior of water associated with shallow-level plutons.

Two days of field trips, designed to illustrate the topics of discussion, covered much of the Boulder batholith and the envelope of volcanic and earlier intrusive igneous rocks of the central and southern part of the batholith, as well as the sedimentary rocks derived from the batholith by erosion. The second day of the field trips ended with a visit to the Indiana Geological Field Station at Cardwell, Montana.

Penrose Conferences are sponsored by the Geological Society of America and are designed to bring together workers in a particular geologic specialty in order that they might assess the state of the discipline and explore new avenues of research. Granite II brought together 86 noted geologists from nine different countries. In addition, seven graduate students from various U.S. universities were afforded the opportunity to attend as student associates.

Granite I: The Origin and Evolution of Granitic Magmas, was convened in September, 1978 in the Sierra Nevada Mountains of California. Granite III: a special symposium and technical session on the nature and origin of granitic magmas, was held at San Diego, California, in conjunction with the annual meeting of the Geological Society of America in November, 1979.

#### CERTIFICATION OF PROFESSIONAL GEOLOGISTS IN INDIANA

The 1979 session of the Indiana General Assembly passed Senate Enrolled Act No. 35, which provides for certification of geologists by the State of Indiana and states that

After June 30, 1980, no person other than a certified professional geologist may stamp or seal any plans, specifications, plats, reports, or other documents with the seal or stamp of a certified professional geologist, or use in any manner the title "professional geologist", "registered geologist" or "certified geologist" unless he is certified under this chapter.

The Act establishes requirements for certification and assigns responsibility for administering the law to the Indiana Department of Natural Resources, which has, in turn, delegated the processing chores to the Geological Survey.

Regulations have been drafted, provisionally approved by the Natural Resources Commission, and made the subject of a public hearing on November 29. The regulations as modified from comments and suggestions now return to the December meeting of the Natural Resources Commission for adoption and then will be transmitted to the Attorney

General and to the Governor for signature. The latter steps may by law require 60 days, and the regulations, after approval, will then be filed with the Secretary of State. If this schedule proceeds without hitch, application forms can be printed and the certification process put in motion in late February or early March.

#### RETIREMENT

Maynard Collier, the department's chemist, retired in May of 1979, after completing more than 30 years of faithful service to the department and university. Many former graduate students will remember Maynard for his patient help with their chemical analytical problems. During his years at I.U. Maynard had laboratories in Owen Hall, Wylie Hall, and finally in the "new" Geology building. Maynard and his wife Winnie continue to live in Bloomington although they travel frequently. They attend all of the home football and basketball games (and even some of the basketball games held elsewhere). Maynard also now has more time to pursue another favorite hobby: fishing.

#### IN MEMORIAM

On July 3, 1979, Ellen L. Freeman, long-time librarian in the Department of Geology, died unexpectedly after a brief illness. Ellen had been the Geology Librarian at I.U. since 1958. She was born in Hopkinsville, Kentucky in 1927. Her undergraduate training was at Tulane University and the University of Houston, and she held a master's degree from Columbia University. Ellen was quite active in various professional organizations, and in 1968 she received the Hammond Incorporated Library Award for her work in promoting the effective use of maps and atlases. Ellen will long be fondly remembered and greatly missed by hundreds of present and former students and faculty members of the Department of Geology and of the Indiana Geological Survey.

#### STUDENT AWARDS

1977-78

Upperclassman Award--Ronald Cohen  
Faculty Scholarship Award--Brenda Bomber  
Deiss Award--Ronald Cohen

1978-79

Upperclassman Award--Anthony Withnell  
Faculty Scholarship Award--Bruce Smith and Ronald Cohen  
Deiss Award--Bruce Smith  
Cumings Award--William I. Ausich

#### FELLOWSHIPS

1978-79

Graduate School Fellowship--Ronald Jorgensen  
Texaco Fellowship--Mark Reifenstein  
Grassman Fellowship--Colin Harvey

1979-80

Graduate School Fellowship--Stuart Kelly  
Graduate School Fellowship--Albert Shultz  
Texaco Fellowship--Steven Jenkins  
Grassman Fellowship--Colin Harvey

#### 1968 AYI'ERS HOLD REUNION IN BLOOMINGTON

On August 26, 1978 the alumni of the Academic Year Institute (AYI) of 1968 held a 10th year reunion in Bloomington. Seven of the original 18 graduate students who received their M.A.T. degrees that year attended the get-together. Present were: Dr. Harvey B. Barrett (Virginia Beach, Va.), Mr. David R. Burd (Perkiomenville, Pa.), Mr. Dave G. Clarkson (Randolph, N.Y.), Mr. Bruno Goldschmidt (Stratford, Ct.),

Mr. Wallace Helber (Culver, In.), Dr. Walter E. Jackson (Durango, Colo.), and Mr. Mike C. Kelleher (University City, Mo.).

Several faculty and staff and members of their families also attended the affair. Among those present were Dr. and Mrs. Haydn Murray, Dr. and Mrs. John B. Patton (Dr. Patton tended bar), Mr. and Mrs. Iverson, Miss Mary Beth Fox, Dr. and Mrs. William D. Thornbury, Miss Ellen Freeman, Dr. and Mrs. Robert F. Blakely, Dr. Robert Shaver, Dr. John Droste, Dr. J. Robert Dodd, Dr. Donald E. Hattin, Dr. and Mrs. Judson Mead, Dr. David G. Towell, and Dr. Warren Meinschein.

Reunion activities included an informal gathering, a tour of the Geology building and its facilities, a reception, and a dinner program. The event, the "first" reunion ever to be held by any AYI, was indeed a very enjoyable experience for all and according to several of the AYI'ers the Hoosier Hospitality couldn't have been better. (My personal thanks and gratitude to Mary Iverson, Mary Beth Fox, Dr. Patton and Dr. Murray for their help, support and assistance).

Harvey B. Barrett

#### ALUMNI NEWS

WALLACE K. AIKEN, Jr. (B.S. 1958), an administrative assistant to the general counsel of Eli Lilly Co., is the new advisory board chairman for the Volunteer Bureau, a United Way agency.

HELEN BEIKMAN (A.M. 1952) is the new staff geologist for Special Programs in the U.S.G.S. Office of Mineral Resources, Reston, Virginia.

RONALD BELAK (A.M. 1978) is working for Cities Services in Denver, and has been studying Tertiary deposits in California.

MARCEL BERGERON (A.M. 1979) is now working for The Water Resources Office of U.S.G.S. in Indianapolis.

JANET BORGERDING (A.M. 1976) of Cities Services Co., Tulsa, has been named Editor-Elect of the Geophysical Society of Tulsa.

DAVE BOTTJER (Ph.D. 1978) worked on Cretaceous chalks of the east and west Gulf Coast Plains as a post-doctoral fellow with the U.S.G.S. at the Smithsonian Institute and now has a teaching position at the University of Southern California in Los Angeles.

ANDREW CAMPBELL (B.S. 1977) is now in the Ph.D. program in Geology at Harvard University.

CLYDE CODY (A.B. 1972; A.M. 1978) is working for Cities Services in Midland, Texas.

RONALD COHEN (B.S. 1979) received a three year NSF graduate fellowship and is now pursuing a Ph.D. in Geology at Harvard.

EDWARD CRISP (Ph.D. 1975) is working for the Syrian-American Oil Corp. in Damascus, Syria.

PETER DAHL (Ph.D. 1977) is now an Assistant Professor of Geology at Kent State University in Ohio.

HOLLY CATHERINE CAROLYN DEIS (B.S. 1975), a geologist with Texaco, Inc., married David Graves Gardner, also with Texaco, in November, 1978.

DONALD ECKERTY (B.S. 1965; A.M. 1968) of Getty Oil Co., has been elected president of the Permian Basin Geophysical Society.

CHARLES W. FETTER, Jr. (A.M. 1966; Ph.D. 1971) has been appointed chairman of the Geology Department at the University of Wisconsin-Oshkosh.

JAMES FOUT (A.M. 1979) is a geologist with Exxon Corp. in Oklahoma City.

TODD FRAZIER (A.M. 1973) spent 2½ years with the Hunt Energy Corp. in Dallas doing exploration, development and well site work. He is now with Dome Petroleum in Calgary, Canada, in exploration.

LAVERNE FRIBERG (Ph.D. 1976) is an Assistant Professor of Geology at the University of Akron, Ohio.

JON GIFFIN (A.M. 1978) is working for Texaco in Houston.

C. STEPHEN HASSE (Ph.D. 1979) is a post-doctoral fellow in geology at Yale University.

WILLIAM F. HANNA (B.S. 1960; A.M. 1962; Ph.D. 1965) is the new chief of the U.S.G.S. Branch of Regional Geophysics in Denver.

DARREL HERD (A.B. 1971), a geologist with the U.S.G.S. in Menlo Park, Ca., has discovered a geologically young fault running the length of the O'Neill Forebay Dam in Merced County, Ca. The Bureau of Reclamation and the California Department of Water Resources are now conducting additional geologic investigations of the area near the dam.

WILLIAM C. HERRING (B.S. 1965) has been promoted to the position of Senior Environmentalist with Amax Coal Co.

THOMAS C. HIESTAND (A.B. 1922) was presented with the AAPG Distinguished Service Award on April 2, 1979. He died on April 3rd in Houston, Texas.

JAMES F. HOWARD (Ph.D. 1966) has a consulting firm, Howard and Associates, Inc. in Owensboro, Kentucky.

INDA IMMEGA (Ph.D. 1976) is a research geologist with Shell Oil Co., in Houston, Texas.

ELIZABETH INOUYE (B.S. 1979) is working as a petroleum geologist in Midland, Texas.

THOMAS J. JACKSON (Ph.D. 1974) has left a position with Sun Mark to join Mobil Laboratories in Dallas, Texas, where he will be involved in organic geochemical research.

CALVIN JAMES (Ph.D. 1977) has joined the faculty at Notre Dame.

STUART KELLY (A.M. 1979) presented a poster session on his thesis at the San Diego GSA this year.

STANLEY CRAWFORD KENT (A.B. 1967), a lawyer in Colorado Springs, Colo., was married in June to Florence Robodoux Lambert.

NORMAN R. KING (A.M. 1970) has left the University of Tennessee at Chattanooga, and is currently employed by Getty Oil Co., in Denver.

C. M. LESHER (A.M. 1976), after three years as a mineralogist with the Iron Ore Co. of Canada, is now in a Ph.D. program in geology at the University of Western Australia, Perth, Australia.

WULF MASSELL (A.M. 1969) has been elected to the AGI Education Committee.

HELEN McCAMMON (Ph.D. 1959) has been elected to the AGI Education Committee and to the AGI Nominating Committee.

MADelyn MILLHOLLAND (A.M. 1976), after two seasons as an exploration geologist in Alaska, is now a geologist with Houston Oil and Minerals Co., Denver, Colo.

GEORGE NEVERS (A.M. 1957) has been elected Senior Vice President in charge of exploration and production of Coastal States Gas Corp.

SALEH OKLA (Ph.D. 1976) is teaching in the Geology Department of the University of Riyadh in Saudi Arabia.

RONALD PERKINS (Ph.D. 1976) has been nominated as Secretary Treasurer of SEPM for 1980-82.

ALLEN O. PERRY (B.S. 1961) has been named to head the Technical Services Division of the Region III Office of Surface Mining (Dept. of the Interior) headquartered in Indianapolis.

ANN PICKERING (A.M. 1978) is working for Shell in Houston.

GIANFRANCO RINALDI (Ph.D. 1975) and WEN-YEN HUANG (Ph.D. 1975), who have been working as organic geochemists with the Indiana Geological Survey on the New Albany Shale Project in Houston, Texas, and are now in Dallas, Texas, respectively. Gianfranco and Wen are both involved in organic geochemical exploration. Gianfranco has recently been promoted to Senior Research Technologist.

RONALD ROGERS (A.B. 1932), who retired in 1975 from the Soil Conservation Service, visited the Department in October of this year.

ROBERT SCHWARTZ (A.M. 1968; Ph.D. 1972) has joined the faculty at Allegheny College in Meadville, Pa.

DIANE SUCHOMEL (A.M. 1975) has been engaged in research on carbonate rocks with Shell Oil Co.

STUART ROSS TAYLOR (PhD. 1954) has received a Doctor of Science degree from Oxford University, England, and was recently elected as a Fellow of the Australian Academy of Science.

BRUCE TENDALL (A.M. 1978) is a petroleum geologist in Houston, Texas.

GREGORY WAHLMAN (A.M. 1975) has accepted a job with Amoco in Houston.

MARK WIECHMANN (A.M. 1979) is a geophysicist with Exxon Corp. in Corpus Christi.

The following alumni gave talks at IU recently:

RICHARD ALEXANDER (Ph.D. 1972), an Associate Professor at Utah State University, presented a colloquium in the fall of 1978.

DONALD SIX (A.M. 1951) of Texaco, Inc. discussed exploration case histories in a fall, 1978 colloquium

DANIEL TUDOR (Ph.D. 1972), of Chevron Oil Field Research, discussed current seismic developments in a fall, 1978 colloquium.

JOHN UTGAARD (A.M. 1961; Ph.D. 1963) a Professor of geology at Southern Illinois University gave a talk at IU in the fall of 1979.

The following alumni returned to IU to interview for prospective employees recently:  
HARRY DEMBICKI (Ph.D. 1977) of Continental Oil Co., in November, 1979.  
GERALD HENDERSON (A.M. 1972; Ph.D. 1974) of Atlantic Richfield Co., in October, 1979.  
RAYMOND PFEIFFER (A.M. 1975) of Texaco, Inc., in October, 1979.  
HOWARD RENICK (B.S. 1964; A.M. 1965; Ph.D. 1969) of Gulf Oil Co., in October, 1978.  
DORENE BUDNICK WEST (A.B. 1975) of Gulf Oil Co., in October, 1979.

Editors Note:

We depend on you for much of our alumni news. Please let us know of any news-worthy items either about yourself or other alumni. Your former I.U. classmates would like to know what you are doing these days so please share your news with them by sending the information to the Geology Department or to one of the faculty members. We would especially like to know about new jobs, moves, retirement, and honors you may have received.

ALUMNI COUNCIL, DEPARTMENT OF GEOLOGY, INDIANA UNIVERSITY

HONORARY MEMBERS

William D. Thornbury (A.B. 1925, Ph.D. 1936)  
Robert Schrock (A.B. 1925, A.M. 1926, Ph.D. 1928)

To June 1980

Arthur Fritz (B.S. 1956)  
Wayne Fowler (A.M. 1953, Ph.D. 1955)  
John Patton (A.B. 1938, A.M. 1940, Ph.D. 1954)  
Charles Wier (A.M. 1954, Ph.D. 1955)  
Roy Williams (B.S. 1961, A.M. 1962)

To June 1981

Stephanie Hrabar (A.M. 1967)  
Frank Kottowski (A.B. 1947, A.M. 1949, Ph.D. 1951)  
Helen McCammon (Ph.D. 1959)  
Douglas W. Reynolds (A.M. 1965)  
Dan Tudor (B.S. 1955, 1957, Ph.D. 1972)

To June 1982

George D. Brown (Ph.D. 1963)  
Nancy R. Darnell (A.M. 1975)  
Richard I. Gibson (B.S. 1971)  
Stanley Hamilton (B.S. 1963)  
Frank Pruett (B.S. 1957, A.M. 1959)

Ex Officio in Bloomington

Robert Blakely (A.B. 1946, M.A. 1948, Ph.D. 1973)  
Haydn H. Murray, Chairman, Department of Geology

DEATHS

Florence M. Elder (A.B. 1924)--August 29, 1974  
Thomas C. Hiestand (A.B. 1922)--April 4, 1979  
Joseph C. Holm (A.B. 1925)--January 17, 1978  
Robert Howden (B.S. 1950)--October 7, 1978  
Harold C. Hutchinson (A.B. 1951, A.M. 1952)--December 18, 1978  
Frederick D. Meyer (B.S. 1957)--October 27, 1979  
Mrs. Christine M. Newlin (A.M. 1932)--July 3, 1979  
John E. Organ (A.B. 1928)--March 17, 1978  
Lewis C. Sheek (A.B. 1970)--May 24, 1973  
Pearl Stout (A.B. 1923)--August 23, 1975  
Bobby Joe Worthington (B.S. 1952)--1977

We do not have addresses for the alumni included in the following list. Please write to the Department of Geology if you know where any of these graduates now reside:

Terry Allan Applegate - A.B. 1978  
David R. Berendsen - A.M. 1959  
Joseph Bodart, Jr. - B.S. 1956  
Thomas M. Bruns - M.A.T. 1979  
John R. Bullock - A.B. 1949  
Jose Candido - A.B. 1949  
Lok Sing Cheung - B.S. 1975  
Charles R. Connaughton - A.B. 1950, A.M. 1953  
Edward C. Coppin - M.A.T. 1970  
Robert C. Crevello - A.B. 1974  
Granville D. Foley - A.B. 1954  
Andre Fontaine - M.A.T. 1969  
John W. Gilmore - A.M. 1958  
Charles R. Glore - A.M. 1970  
Keith A. Hamilton - M.A.T. 1970  
John R. Harris - A.B. 1937, A.M. 1940  
Jeremy Jameson - A.B. 1973  
Christopher E. Kohler - A.B. 1976  
Joseph R. Kramer - B.S. 1964  
Lynn Edw. Lehman - M.A.T. 1972  
Mrs. A. P. McMann - A.B. 1924  
Mrs. Sharon M. Mahan - M.A.T. 1972  
Donald W. Mannan - B.S. 1951  
Gerry E. Messmer - M.A.T. 1970  
James B. Mosier, Jr. - B.S. 1963  
Carl W. Myers - A.B. 1956  
Earle S. Newcomer - A.B. 1949  
Douglas E. Otto - A.B. 1972  
Henry J. Papparazzo - B.S. 1952  
John H. Payne - A.B. 1979  
Michael C. Penz - B.S. 1964  
Peter B. Penzenik - B.S. 1970  
David A. Reed - A.M. 1970  
Edgar M. Roberts - B.S. 1954  
Robert A. Rudman - B.S. 1956  
Tom Todd - A.B. 1979  
Jan Alan Wade - A.M. 1978  
Stephen C. Warner - B.S. 1969  
Elliot S. Weinstein - A.M. 1971  
Douglas R. and Kathleen Wilke - A.M. 1967 and A.M. 1966 respectively

#### NEW ALUMNI DIRECTORY

A new directory of addresses of all I.U. geology alumni is now being prepared. If you would like to have a copy just write to us and we will be pleased to mail one to you as soon as they are ready.

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