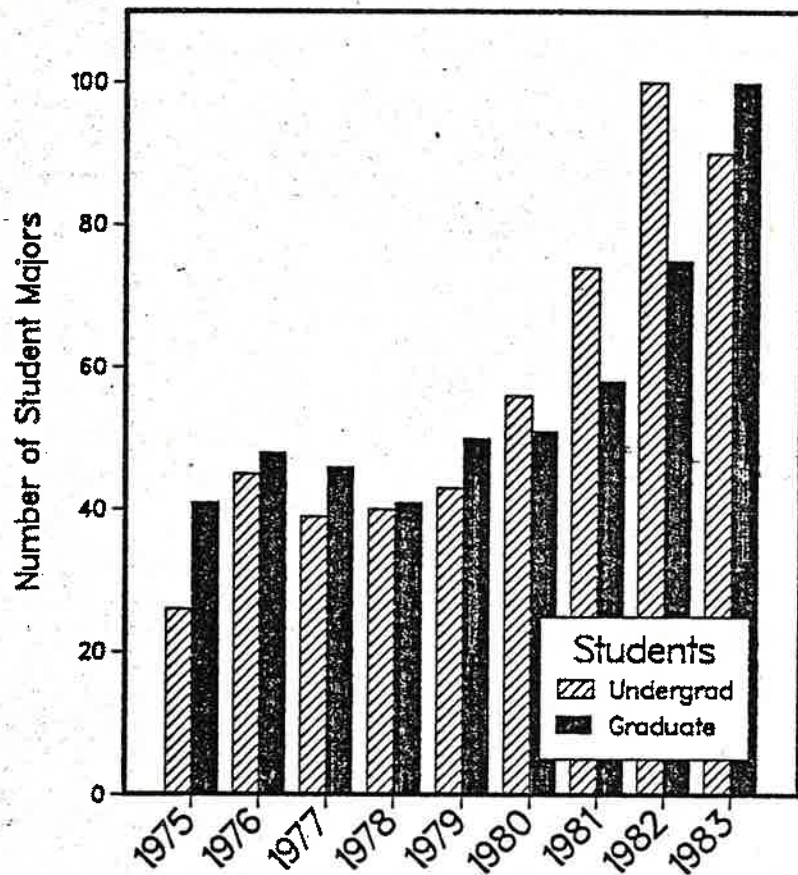


Tom Anderson

PITT GEOLOGY

1983-84: Increased Enrollment, New Faculty



Department of Geology and Planetary Science
University of Pittsburgh

Alumni Newsletter

Fall, 1983

Dear Alums,

The arrival of the Fall Term reminds us here in the Department that it is time to begin preparation of our annual Newsletter and thus to keep you informed of recent events in the Department. The Department continues to be an active, hectic, but interesting place to work. Total student enrollment in our undergraduate and graduate programs remains high, but in response to the cyclic "boom or bust" nature of employment opportunities, the number of new students in our entry-level courses has declined. There currently are about 90 undergraduate majors and 90 graduate students in the Department. These numbers represent an all-time high in both categories. Enrollments in most courses have declined but still remain at a high level. As examples of current enrollments, there are 41 students in physical geology, 44 in mineralogy, 39 in igneous and metamorphic petrology, 36 in structural geology, and 37 in well logging.

On the grim side, job opportunities, as evidenced by the general absence of on-campus recruiters and employment offers made, are tighter now than at any time during the 1980's. The situation is at a near-disastrous level. Companies are expressing no interest at all in students with a B.S. degree, and only graduate students in geophysics seem to have a good chance of employment. Information from other departments indicates that this is a nation-wide situation. On the somewhat brighter side, perusal of recent (September) issues of the Oil and Gas Journal reveals that the number of active drilling rigs in the U. S. continues to increase from a low last April. It remains to be seen if this will result in an improved job market.

Several important changes in our faculty occurred during the past year and additional changes are continuing into the present year. Heinz Dehn retired from the University at the end of 1982. Heinz joined the Department in 1962 and has been our analytical geochemist for over 20 years. He will be sorely missed; we wish him all the best. Our second retiree is Takesi Nagata. Professor Nagata, who retired in April, 1983, joined the Department as a Visiting Professor in the late 1950's. This association is probably an all-time record as a Visiting Professor, but it is really nothing new for Professor Nagata because his entire career has been characterized by great success and by going from strength to strength. With his retirement, Professor Nagata becomes the University of Pittsburgh's first Visiting Professor Emeritus! We hope that he will continue to visit us in the coming years. Norman Flint has also announced that he plans to retire. He intends to take early retirement beginning in January, 1984. He will thus be our third retiree in recent years. Norm is our most senior faculty member in terms of continuous employment. He joined the Department in 1949 and has served the University competently, conscientiously, and effectively the entire time. He is widely regarded, and deservedly so, as being the very best teacher in the Department. I doubt that few, if any, of our students have been anything but positively influenced by his excellent teaching, high professional standards, and wise counsel as undergraduate advisor.

We are pleased to announce the addition of three new faculty members. Maurice Deul joined the Department this September. Maury comes to us from the U. S. Bureau of Mines where he was employed for many years. He is primarily a coal geologist and will be helping us develop a program in coal geology.

Professor Chiao-Min Hsieh of the now-defunct University of Pittsburgh's Geography Department also joined our Department in September. Professor Hsieh is an expert on the geography of China. We look forward to many years of cooperative interaction with Professor Hsieh. Our third new faculty appointee is Dr. Stephen Kennedy who will be joining us in January, 1984. Steve received the Ph.D. from South Carolina in 1982. His main specialty is in quantitative aspects of clastic sedimentology. We look forward to his arrival.


The faculty continues to be active. In addition to our teaching of introductory courses, courses for our majors, and graduate-level courses, we are busily pursuing a variety of research projects. As an example of our research productivity, during the current decade of the 1980's the faculty and graduate students have collectively published an average of about 55 (70 this past year) research papers, technical reports, and abstracts per year. This figure is almost double the collective average per year of about 28 for the 1970's. Research expenditures from external research grants and contracts for the year totaled \$192,888. The Department awarded 22 B.S. degrees, 7 M.S. degrees, and 1 Ph.D. degree during the year.

You will note that we have added a new section of Alumni News to this year's Newsletter. On behalf of the faculty, may I say that we certainly enjoyed hearing from you and learning what you are now doing. If any of you have any other ideas on what you would like to see included in next year's issue, please let us know.

I personally want to thank all of you who contributed to our fund raising campaign. Your financial support is truly appreciated. Your assistance in helping us improve our programs is important to us. Incidentally, I neglected to mention last year that many companies will match your contribution on a dollar-for-dollar, or better, basis. It is my understanding that all you have to do is complete an appropriate form which should be available at your company's personnel office and mail it, along with your check, to us.

Thanks again for your interest and support. Please stop by for a visit if you are in the Pittsburgh area. Sleep warm.

Sincerely,


Edward G. Lidiak
Chairman and Professor

News of the Faculty

Thomas H. Anderson

My year has been divided into two parts: teaching in the fall followed by months of field research in Sonora, Mexico during the winter. The fall teaching schedule which included courses in structure and plate tectonics was punctuated by attendance at the Geological Society of America meetings in New Orleans. Actually, in the Winter term which included teaching three courses, I only managed my schedule because of a great deal of help from my colleagues who carried much of my load! The projects in Mexico involve basic field mapping. One is focused along a great fault where students are mapping complicated structure and stratigraphy. Another study is a cooperative project with the U. S. Geological survey which also emphasizes field mapping.

Closer to home we are attempting to characterize linears in the Appalachian plateau and decipher diagenesis in Devonian sand.

My year culminated with a trip to Colombia, where Ed Lidiak and I participated in the 10th Caribbean Geological Conference. What a tectonically active place! I hope that better understanding of South American geology helps in unravelling the mysteries of Mexico.

Michael Bickerman

My interests and studies in the volcanic rocks of southwestern New Mexico continue, with a quadrangle map nearing completion. The potassium-argon dating part of the work has been slowed by several mass-spectrometer malfunctions caused by aging of the components, though we are trying to update the facility. The ion-specific electrode potassium analysis method is slowly rounding into use.

The main peak of enrollments seems to be passed and the huge introductory classes of a year ago have passed into the "core" courses, leaving more normal enrollments in the Geology 15 (Physical Geology) this term (about 38 at last count). The Ore Deposits class has been moved to this Fall semester and has 13 currently signed up, while the Isotope Geology class has 6. Aside from teaching three classes this term, I am advising 10 CAS students, and still running the departmental seminar program. The seminars meet Thursdays at 4:00 P.M. (coffee beforehand at 3:45 P.M.) in 203 Thaw Hall. Incidentally the 200 level of Thaw is now air-conditioned--so come on out and enjoy the seminars in comfort!

William A. Cassidy

Aside from teaching, my major effort continues to be made in Antarctic field work. During last field season (Dec., 1982 - Jan., 1983), the Antarctic Search for Meteorites (ANSMET) Project had three separate teams in the field: a two-person team conducting ice-flow measurements at Allan Hills, a four-man team at

Thiel Mountains and Pecora Escarpment, and a four-man team on the continental ice plateau to the West of Allan Hills. The Thiel Mountains site is only 325 miles from the South Pole, and is supposed to be a dreadful place. I wasn't sure I could withstand the harsh conditions we expected there, so I ruled out my own participation in that group, and instead led the party operating west of Allan Hills. The Thiel Mountains group then had a wonderful warm season with almost no wind and we had a very difficult summer, with temperatures down to -15°F and incessant strong winds. Our two-person team made almost no progress because you can't survey accurately over long distances in high winds and my team operated most of the time on the strength of sheer stubbornness.

Stubbornness sometimes pays off, however, and we were rewarded by discovering a couple of new meteorite stranding zones on the ice, and a small meteorite just caught in the act of weathering out for the first time since it had fallen. This little fellow was only partly exposed at the ice surface, so we chopped out a big block of ice and sent the specimen back still in situ. It will be an important specimen because until now it has not been possible to determine the age of really ancient ice. Several investigators currently are working on this problem, and getting some results, but until now they had no way of knowing whether or not their answers are correct. The terrestrial age of a meteorite can be determined by its content of remaining cosmogenic isotopes, and the terrestrial age of the meteorite should be the same as the age of formation of the ice enclosing it. A lot of "ice people" are excited about this.

Meanwhile, back at the Thiel Mountains, our other reconnaissance party found themselves wishing for stronger winds: The mild weather had induced an unnaturally heavy snowfall and they needed several days of strong wind to clear the ice so that meteorites, if they were there, could be found. No winds came, but based on the small areas of exposed ice they were able to search, we think there are major new meteorite accumulations at two sites eighty miles apart. To us, this means work for the future--for as long as the National Science Foundation wishes to continue its support.

You may have wondered about our two-"person" team doing ice measurements. This consisted of John Annexstad, O.A.E. (Old Antarctic Explorer) and his very pretty daughter, Kris. John works at the Johnson Space Center and had made the field scene with us several times before. He wanted his daughter to have the Antarctic experience; she was eager to go and seemed qualified; they formed a two-person team that worked out very well. Kris was the third woman to be part of the ANSMET project. The others were Ursula Marvin (twice) from the Smithsonian Institution and Ghislaine Crozaz from Washington University, St. Louis MO.

In last year's newsletter I mentioned an anorthositic meteorite we had found. This has turned out to be a lunar sample! It is a very typical lunar highlands breccia, apparently blasted off the lunar surface during a crater-forming impact. We don't know where on the moon it came from, but the odds favor the lunar farside, just because there are more highlands areas there. Subtle geochemical trends across the nearside face of the moon also suggest it comes from the farside. If true, it would be our first sample from that whole hemisphere of the moon. "Lunar people" are excited about this Antarctic meteorite. Meanwhile, watch this column in the future for news about two possible Martian samples see you next time!

Alvin J. Cohen

At present there are two graduate students in my group doing research on mechanisms of color center production in smoky quartz. Eventually we hope to develop a better method than liquid inclusion techniques for a temperature-pressure marker using natural impurity-doped quartz. Another Doctorial candidate is exploring similar phenomena in pure and impurity-doped SnO_2 (cassiterite) in order to learn more concerning the properties of this important economic mineral.

I have had two publications during the past year. Also two papers on rose quartz and a review paper on germanium-doped quartz have been submitted to Journals in the past few months.

During August I collected samples of amethyst quartz, along the north shore of Lake Superior for a current research project I am carrying out on this material.

Maurice Deul

This is the beginning of my first year as a full time member of the university teaching staff so I don't have much to report on university related activities. During 1982 I taught "Coal Science," Winter term and "Coal Geology," Fall term, both as evening courses. One of my objectives as a full time staff member is to develop a full scale coal geology program. "Coal Petrology" is a natural follow-up to the courses already offered. Because I hold a joint appointment with the Mining Engineering department some of the future course offerings will be offered jointly such as "Geologic Hazards in Mining."

I have just completed 20 years as a researcher at the U. S. Bureau of Mines in the area of mining research and have directed and managed research in methane drainage from coalbeds, mine ventilation, acid mine water control, control of fires in abandoned coal mines as well as studies on various aspects of coal and mining geology. So don't be surprised to find that some of the graduate theses in the future will deal with some of these topics.

Incidentally, I graduated from Union College (Schenectady, NY) with a major in geology and from the University of Colorado with an M.S. in mineralogy. All my experience in coal and organic geochemistry came during the conducting of investigations for the U. S. Geological Survey, Bituminous Coal Research Inc. (now associated with Pitt), Consolidation Coal Co. R&D and the U. S. Bureau of Mines at Pittsburgh and Bruceton.

Visit me at 414 SRCC.

Jack Donahue

The 1982-1983 academic year was quite busy. I only taught in the Fall term when I was involved with two graduate courses, Sand and Sandstones and Perspectives in the Pleistocene (with Jim Adovasio in Anthropology). In the Winter term I enjoyed a release from teaching since I was on a one term sabbatical. Because I chose not to leave Pittsburgh, my other involvements at Pitt stayed at normal levels.

Three of my graduate students completed degrees this year. Frank Vento completed a master's degree on the geoarchaeology of the Rensch site in Illinois. The work will be published by the Illinois State Museum. Frank is teaching at Slippery Rock State University and continuing part-time on a Ph.D. degree. Basim Al-Qayim completed his Ph.D. on depositional environments of the Ames limestone and returned to Iraq to accept a teaching position at a university in the northern part of the country. Jeff Hill completed a master's degree looking at quartz and feldspar distribution in the Devonian Marcellus shale in the Appalachian Basin. Jeff is presently looking for a position in the hydrocarbon industry.

Either I or my co-authors presented papers at a number of meetings. Two Appalachian Basin Associates presentations were made. Chris Laughrey and I gave results of our work on the Medina-Tuscarora Sequence in October while Jeff Hill, Bud Rollins and I gave the results of research on the Marcellus Shale in April. I gave two papers on geoarchaeology at the GSA meeting in New Orleans. In April I attended Crown Prince Hassan's Second International Conference on the history and archaeology of Jordan in Amman, Jordan and gave a paper on the work I have been doing on two Early Bronze sites in the Dead Sea Valley. Two weeks after returning from Jordan, I chaired a session at the Society of American Archaeology meeting in Pittsburgh where Tom Jorstad, Tom East, Jim Adovasio and I gave a paper on work being done in North Dakota. In terms of publication, the year saw the appearance of four papers mainly in geoarchaeology and the submission of five manuscripts for inclusion in journals and books. I am presently working on organizing the centennial volume on geoarchaeology for the GSA. Many people have indicated an interest in submitting manuscripts to the book and it is beginning to take shape. I have also been in contact with Van Nostrand Reinhold Company about starting a new journal of geoarchaeology and that should begin in summer, 1984.

My research continues on from the previous year's with completion of some projects and initiation of some new ones. Chris Laughrey and I are completing a manuscript for submission to the AAPG Bulletin on the diagenesis in the Medina-Tuscarora in Pennsylvania as well as working with Dave Krinsley at Arizona State on the use of backscatter SEM in sandstones. Victor Glohi, a student from the Ivory Coast and Tim Murin from Pittsburgh are working on Upper Devonian Sandstone in Pennsylvania. Selami Toprak, from Turkey, is working on the geology of some coals in Turkey. In geoarchaeology, Tom Jorstad is working on completing his master's degree on upland sites in the North Dakota badlands. Femi Olaniyan is working toward completion of his Ph.D. on sedimentation at Bab-edh-Dhra and Numeira, two Early Bronze sites in Jordan and Frank Vento is working towards a Ph.D. on sedimentation at rock shelters in Mississippi. Bud Rollins, Tom Anderson, Jim Richardson (Anthropology at Pitt), Mike Moseley (Field Museum at Chicago) and I hope to begin a project in coastal Peru next summer looking at geological constraints on Moche and Chemu (Pre-Inca) culture along the coast. In addition, there is a possibility of my joining a coastal survey in Oman along the Persian Gulf and Indian Ocean early in 1984.

Norman Flint

As I write this note to be included in the 1983 Newsletter I am embarking on my last term at Pitt before officially retiring on January 1, 1984. At the end of this Fall Term I will have completed 35 years and 4 months at the University,

and in all those years I have seen the great majority of you who receive this Newsletter complete requirements for either a bachelor's degree or an advanced degree. For me and for some of you, this all began when our department was housed on the 11th floor of the Cathedral of Learning which we shared with the Geography Department. Since that time, we have moved to Clapp Hall, then to Langley Hall, after that to Engineering Hall (or Old Engineering as we call it) and the two attached buildings, Thaw Hall and the Space Research Coordination Center (SRCC) where we are currently located.

I have decided to take advantage of Pitt's Early Retirement Incentive Plan which is too attractive to pass up. My plans are to stay in Pittsburgh and maintain an office in the department. I hope to do some consulting work and publish some of the studies that several graduate students and I have done on landslide problems in Allegheny County. Speaking of graduate students, I am major advisor to three of them (Bob Weiss, Tim Kuntz, Paul Coyle) who will not finish before I retire. However, I will be around to see them through to the completion of their work. I am also on the graduate committee of several other students whom I will not leave in the lurch either.

There will be some traveling in years to come for my wife and me, but there are no definite plans at this time. No doubt when classes begin in the Winter Term, and I realize that I am not teaching any of them, I'll be hit by a feeling of being somewhat "lost." But I can also foresee that I am going to be busy and operating in essentially the same environment so that it will be more of a change to a different life-style than to retirement, itself.

Best wishes to all of you. I hope you feel that your years at Pitt, although not as numerous, were just as enjoyable and worthwhile as mine.

Bruce Hapke

During 1982-83 he was on sabbatical leave at the NASA Ames Research Center near Mountain View, CA. In addition to sampling wines of the area, he studied the scattering of light by large, irregular particles and applied this result to develop further his equations governing the reflection of light from soils. He also is serving on a committee to analyse the results of a search for new asteroids by the Infra-Red Astronomical Satellite.

Edward G. Lidiak

During the past year, I have been involved in a variety of miscellaneous professional activities, which, in addition to continuing as departmental chairman for one last term, included teaching three undergraduate and two graduate-level courses, being the author or co-author of three published journal articles and seven abstracts presented at meetings, advising about five graduate students on M.S. or Ph.D. thesis projects, and working on two projects of the Geological Society of America's Decade of North American Geology. I also attended two G.S.A. meetings, the Society of Exploration Geophysicists Meeting, and the 10th Caribbean Geological Conference.

Current research projects that my students and I are working on include the possible extension of the New Madrid fault zone, the Precambrian Basement of Ohio, the Ellicott City granodiorite, Precambrian granites in the Arbuckle Mountains, Caribbean pyroxenes as clues to island arc development, and Magsat anomalies in South America. Incidentally, one of my former students, Jeff Kersting (M.S. '82) and I were pleased to learn that a recent deep well in the Mississippi embayment confirmed our ideas of a thick section of pre-Upper Cambrian sedimentary rocks in the Reelfoot rift. It's nice to be right some of the time.

One final note. Root Man (circa, middle 1970's) stopped by for a visit several weeks ago. He asked me to send greetings for him to all his fans.

Walter Pilant

During the past year, our Appalachian structural studies have turned up a number of interesting results. The major item of interest has been the remapping of Sugar Loaf Peak, MD, by my student, Mark Tucker as his Master's project. This rather isolated knob in central Maryland has been mapped any number of times, twice as Ph.D. projects; each time with a new interpretation. Using a thin bed (rich in magnetite) as a marker, Mark was able to make a new structural model and also to offer additional evidence that the Sugar Loaf quartzites are most likely correlative with the well known Weverton quartzite of the Chilhowee group in the Blue Ridge to the west. Of less importance, but yet significant, was the recognition that the "type" sections of the Weverton and Harper's formation in the vicinity of Harper's Ferry (often seen on our Pitt field trips) were anything but typical. It now looks as though both type sections have been doubled by overthrusting and that the intense deformation of the Harper's at its type section may well be due to the disturbance as this section was overthrust.

The "Poets and Musicians" are still coming to hear about "Our Restless Earth" and it is amazing to reflect on how much has changed since I started that course. Plate tectonics, hot spots, a new view of geosynclines and new theory of mountain building have all been added. But, in showing the 1967 film "Approach to the Prediction of Earthquakes," I still have to tell the class that this capability is still off in the future. We are still waiting for the "big one," a major earthquake in Southern California. The rest of my teaching is much the same, although recent graduates who took well-logging will be shocked to know that the formerly free text now costs \$27.50.

Harold B. Rollins

1982 proved to be an exciting year, filled with more than the usual hectic diversity. My research activities ranged from archaeogeology to stratigraphy to my first paleontological love, snails.

In August, John Harper and I presented a paper at the North American Paleontological Convention in Montreal. The paper dealt with the origin and evolution of monoplacophorans and gastropods.

Following that I barely had time to get ready for the highlight of the year-- participation in the University of Pittsburgh's Semester-At-Sea program. For three and one-half months I sailed around the world teaching geology to about 400 students from dozens of universities in this country and abroad. Imagine being able to take field trips around the great pyramids of Egypt, the phosphate deposits of Morocco and to sail right by Krakatau. The experience was made even more enjoyable because my wife Judy and son Steven were able to accompany me.

1982 was also a year that involved a lot of graduate student guidance and supervision. I had about 15 graduate students working on a great variety of thesis topics. Although I am more than a little biased, I feel that my graduate students are doing some very exciting research. One has developed a new method of lithic correlation of Carboniferous rocks and will shortly drastically revise existing stratigraphy of these rocks in the Appalachian Basin. Others are doing basic research on the Mississippian and Devonian rocks of the Appalachian Basin, the phylogeny of gastropod lineages in the Carboniferous, biostratigraphy of upper Paleozoic rocks using microgastropods, revision of the Carnahan Run - Woods Run interval in the Pittsburgh area, etc., etc.

I managed to publish or submit for publication three archaeogeology papers dealing with coastal Peru and North American sites. One paper, with Dan Sandweiss and Jim Richardson, came out in September of this year as a Carnegie Museum publication. Another was published last year as part of the New River Symposium Volume and dealt with diagenetic alterations of shell material resulting from inundation of archeological sites along Bluestone Reservoir in West Virginia.

I am currently awaiting funding (fingers crossed) on two projects: improved correlation of Carboniferous rocks of the Appalachian Basin (NSF) and study of annual incremental shell growth of molluscs along coastal Peru following the recent drastic El Nino event (National Geographic Society).

Victor A. Schmidt and Takesi Nagata

During this past year, Professor Nagata officially retired from his position as Visiting Professor at Pitt. In an informal ceremony with Dean Rosenberg, he was awarded Pitt's first and only Visiting Professor Emeritus. We will all miss his stimulation, advice, and conviviality during his visits, and we hope that it will be possible for him to return on an informal basis in the future.

The paleomagnetism lab has been busy with a number of different projects. Work with cave sediments has continued, a new technique for measuring magnetic susceptibility anisotropy has been developed and tested, and several new projects are being started. Anderson and Schmidt's paper on the origin of the Gulf of Mexico and the Caribbean region appeared in the August GSA Bulletin, and graduate student Ding-Wen Yuan has begun work on additional paleomagnetic tests of parts of this model. Collaborative work with Dr. Bill Schell of Radiation Health has turned up a surprising magnetic and isotope record contained in the Linn Run bog, some 50 miles east of Pittsburgh. We are also planning collaborative work with Dr. Robert West, new director of Carnegie Museum, in sediments from Nepal. Finally, Vic has become involved in the planning for a joint project of WQED-TV and the National Academy of Sciences--a seven-hour series of educational films on geophysics, to be produced during the next 18 months.

Ellis Strick

Ellis remains busy teaching oceanography and advanced geophysics courses. He is actively at work on a variety of manuscripts in theoretical geophysics. He sends his greetings.

Departmental News

Pitt Geology Club

The effective communication of geologic information is one of the primary concerns of the Pitt Geology Club. New ideas, theories and just general news are presented in an effort to keep members (and non-members) well informed. The Geology Club not only serves as an information pool, but acts also as an educational aid. This is accomplished by offering field trips, books and other services.

To sponsor events and defray costs the geology club provides several services. Rock and Mineral kits are sold to various introductory level and engineering students. For geology majors the club can provide geologic equipment (hammers, lenses, maps) as well as educational aids, such as the rock and mineral table produced by Elsevier's Compton's Field Guide, etc. A constant source of funds has been the coffee machine for use by all university members. The dues for the club are \$2.00 per term and are accepted at any time during the term.

Last year again proved to be a success. The club presented a number of speakers, not only from the department but also from industry. The Geology Club held a hot air balloon raffle and initiated the sale of 'Pitt Geology' baseball hats. Several field trips were offered including a basic mapping trip and a mineral collecting trip.

For this term the club hoped to expand membership by stimulating interest in the form of a Blue Ridge field trip and several collecting trips to well-known but exclusive areas. Once again raffles will play an integral part in the fund-raising. Thanksgiving turkeys, Christmas hams and Valentine Day dinners are some possible prizes. The club also wishes to buy used texts for re-sale and offers Friday help sessions. Since the field camp experience sessions were so popular these will continue to be part of our program.

The officers of the club consist of a President, Vice-President, Treasurer, and Representative at Faculty Meetings. An annual general election by club members selects the officers for the following Fall Term. This year's officers are:

President:	Shelia Warren
Vice-President:	Carol Smith
Treasurer:	Frank Benacquista
Representative:	Bill Snoke

Graduate Student Organization

GSO has purchased for the geology department a lettering disc, triomoner and dust cover for our Kroy lettering machine in the past year. We will be purchasing additional equipment in the future.

Sigma Gamma Epsilon

Since the last newsletter our Beta Chapter of Sigma Gamma Epsilon (national geological honor society) has doubled its membership to a total of 30 graduate and undergraduate students. This is a very good sign that our recently reactivated chapter is here to stay.

Sigma Gamma Epsilon conducted two field trips last school year which were open to all students. Both trips stressed Lower and Middle Paleozoic stratigraphy and structural geology of the Ridge & Valley Province of central Pennsylvania, and they were a great success. The first field trip for this school year will be an examination of stratigraphy and correlation of the Upper Pennsylvanian Conemaugh Group in southwestern Pennsylvania. We hope to begin a field trip guidebook series with this one-day field trip. Our chapter has also cleaned up the basement storage rooms in Old Engineering Hall, making them more feasible for storage of thesis and other research materials, and we maintain a graduate student news/employment bulletin board. Gretchen Sams was instrumental in starting to compile our employment file. This file contains information about current and future employment opportunities in southwestern Pennsylvania (mainly Pittsburgh) based largely upon information supplied by about 80 employers. Kathy Yusko has volunteered to complete the file which will then be available to anyone. The S.G.E. officers for 1983/84 are:

President:	John Anderson
Vice-President and Editor:	Rich Busch
Secretary and Treasurer:	Karen Wells
Historian and Corresponding Secretary:	Bob Weiss

SEMINARS

<u>Speaker</u>	<u>Topic</u>
W. A. Cassidy	Meteorites from the Moon and Mars?
Thomas H. Anderson	Tectonics & Plate Tectonics of Meso-America
Michael Schwartz	Growth opportunities for coal use
Robert Witkowski	Cosmic Dust Collection at the South Pole
Alvin Cohen	Why massive rose quartz turns smoky with radiation, while single crystals turn rosier.
Mohammed El-Emam	Attenuation of Seismic Waves.
Bruce Hapke	The Opposition Effect

Arthur B. Ford	The layered Dufek intrusion of Antarctica
David Brezinski	Genetic lithostratigraphy of Chesteran Strata of the Central Appalachians
Ellis Strick	The resolution of the seismic propagation in the Pierre Shale
John Harper	Iterative tectonics in the distribution of oil and gas fields in Pennsylvania
M. E. (Pat) Bickford	Proterozoic arc terrain in central Colorado
Mary Dawson	From Inner Mongolia to Yunnan

Graduate Student Publications

A number of graduate students have published accounts of their geological research since the last newsletter or have manuscripts in press. Many of these publications are co-authored by faculty advisors from Geology and Planetary Science (indicated by an asterisk).

- Brezinski, D. K., 1983. Development and ecological succession in a Late Silurian patch reef from central Pennsylvania. *The Compass of Sigma Gamma Epsilon*, v. 60, p. 13-24.
- Brezinski, D. K. and H. B. Rollins*, 1983. Genetic lithostratigraphy of the Mauch Chunk Group in the central Appalachians. Program of Appalachian Basin Industrial Association - Fall Meeting.
- Brezinski, D. K., 1983. Developmental model for an Appalachian Pennsylvanian marine incursion. *Northeastern Geology*, v. 5, no. 2, p. 92-99.
- Brezinski, D. K., in press. Paleogeology of the Late Mississippian trilobite Paladin chesterensis from southwestern Pennsylvania. *The Compass of Sigma Gamma Epsilon*.
- Busch, R. M., 1983. Sea level correlation of punctuated aggradational cycles (PACs) of the Manlius Formation, central New York. *Northeastern Geology*, v. 5, no. 2, p. 82-91.
- Busch, R. M. and H. B. Rollins*, 1983. Correlation of Appalachian Upper Pennsylvanian strata using an hierarchy of transgressive-regressive cycles (abstract). *Geological Society of America Abstracts with Programs*, v. 16, no. 6.
- Busch, R. M. and P. Janvier, in press. Jamoytius-like vertebrates from the Lower Devonian Manlius Formation of New York. *Journal of Vertebrate Paleontology*.
- Ceci, V. M. and E. G. Lidiak*, 1983. Chemical composition of Precambrian rocks from the subsurface of Ohio (abstract). *Geological Society of America Abstracts with Programs*, v. 15, no. 4, p. 216.

- Chen, Der-Shing Lee and V. A. Schmidt*. Paleomagnetism of the Middle Mississippian Greenbriar Group in West Virginia, U.S.A., in press, In: Van der Vou, Robert (ed.), Geodynamic Series: Permotriassic Continental Configurations and Pre-Permian Plate Tectonics.
- Hill, J., Donahue*, J. and H. B. Rollins*, 1983. Sodium bisulfate fusion and analysis of grain size distribution: use in correlation of the Marcellus Shale (Devonian, Appalachian Basin). Program of Appalachian Basin Industrial Association - Fall Meeting.
- Jorstad, T., Donahue*, J., East, T. and J. M. Adovasio, 1983. Distribution of cultural material within an aeolian sequence, Cinnamon Creek Ridge, North Dakota (abstract). Proceedings of 48th Annual Meeting of the Society for American Archaeology - Pittsburgh, Pa.
- Jorstad, T. et al., 1983. Antelope quarry chalcedony and its archaeological distribution in the Little Missouri Badlands, North Dakota. Proceedings 41st Annual Plains Anthropological Conference.
- East, T., Adovasio, J. M., Donahue*, J., Jorstad, T. and R. C. Carlisle, 1983. Identification and evaluation of some archaeological sites in parts of McKenzie, Billings, and Golden Valley Counties, North Dakota. North Dakota History Journal of the Northern Plains, v. 50, no. 2, p. 23-31.
- Laughrey, C. D., in press, Petrography and diagenesis of the Medina reservoir sandstone of northwestern Pennsylvania - implications for tight gas sand development in northwest Pennsylvania. Proceedings of Regional S.P.E. Meeting.
- Prosser, J., Spudis, P. and D. Scott, in press. Geologic map of the Michelangelo Quadrangle, Mercury. U.S. Geological Survey Atlas.
- Prosser, J., Boyce, J. and H. Masursky, in press, Geologic map of the Borealis Quadrangle, Mercury. U.S. Geological Survey Atlas.
- Rodgers, M. R. and T. H. Anderson* in press, The Tyrone-Mt. Union cross-strike lineament of Pennsylvania: A major Paleozoic basement fracture and uplift boundary. American Association of Petroleum Geologists Bulletin.
- Tucker, M. S. and W. L. Pilant*, 1983. Geologic interpretation of magnetic anomalies in the Sugarloaf Mountain area, Maryland (abstract). Geological Society of America Abstracts with Programs. v. 15, no. 2, p. 64.
- Vento, F. 1983. Sedimentology of the Rench Site. Proceedings of 48th Annual Meeting of the Society for American Archaeology - Pittsburgh, Pa.
- Wells, K., 1983. Detailed correlation and paleogeographic development of the Woods Run and Carnahan Run marine units (Upper Pennsylvanian) in southwestern Pennsylvania (abstract). Geological Society of America Abstracts with Programs. v. 16, no. 6.
- Welsh, R. A., Jr. and H. B. Rollins*, 1983. Depositional environment of the Oriskany Sandstone (Lower Devonian) in Somerset Co., Pennsylvania (abstract). Geological Society of America Abstracts with Programs. v. 15, no. 3, p. 127.

Christmas Party

The annual departmental Christmas party will be held this year on Friday night, December 9, 1983. This is a departmental-wide party in which faculty, staff, graduate students, and undergraduate majors attend. All departmental alumni are cordially invited. All that is required is that each person or couple bring along a dish of the food of your choice; the department furnishes liquid refreshments.

It's an excellent chance to meet new friends and renew acquaintances with old friends. A road map directing people to the party location will be available by late November. If interested, simply call the departmental office (412/624-4700) and we shall send you the necessary details. We look forward to seeing you at the party.

Gift of a Diffractometer from Gulf

During this past summer, Gulf Oil Corporation very generously gave the Department a surplus X-ray diffractometer and power generator. The unit has a Wide Range Goniometer with automatic sample changer. It will be used in both our teaching and research programs. Their gift is greatly appreciated.

Theses Completed (1982/83)

Heinecke, Thomas (M.S.), Magnetostratigraphic Correlation Between Terraces of the Green River and Sediments Within the Passages of Mammoth Cave National Park, Kentucky.

Hill, Jeffrey (M.S.), Sodium Bisulfate Fusion: Application to the Middle Devonian Marcellus Shale.

Krushin, James (M.S.), Geologic Hazards of Indiana Township, Allegheny County, Pennsylvania.

Lee, Der-Shing (M.S.), Paleomagnetism of Middle Mississippian Greenbrier Formation.

Tucker, Mark (M.S.), A Geological Interpretation of Magnetic Anomalies in The Sugarloaf Mountain Area, Maryland.

Vento, Frank (M.S.), The Geology and Geomorphology of the Rensch Site Peoria County, Illinois.

Yuan, Ding-Wen (M.S.), Relation of Magsat and Gravity Anomalies to the Main Tectonic Provinces of South America.

B.S. Degrees Awarded 1982/83

Andrews, Rhonda
Brown, William
Burtell, Stephen
Gazdik, Arthur
Graham, Robert
Hill III, John
Hlavay, Jay

Jeffreys III, Carl
Johns, John
Kozimer, Dennis
Moylan III, G.
Odasso, Michael
Panian, John
Phillips, Eugene

Phillips, Gregory
Pozzuto, Fred
Robertson, Mark
Sams, Gretchen
Schroettinger, Linda
Spatz, Rose Mary
Sweeney, John
Werner, Robert

Undergraduate Majors (Fall, 1983)

Adams, Michael T.
Aiken, John
Anderson, Daniel
Anderson, Janet
Anselm, Clete
Babcock, Dawn
Bender, Jack
Blyler, Tedd
Bond, Michael
Burns, Mark
Button, Don
Chaffo Jr., John
Chepega, Jr., Joe
Coll, Patrick
Conklin, Douglas
DeJohn, Mark
DeLucia, Nancy
Derewicz, Michael
Dirkmaat, Diane
Doyle, Dan
Dropkin, Mike
Effiong, A.
Fickel, Todd
Forster, Keith
Gillen, Tim
Gladish, Alan
Griffin, David
Hags, Ron
Hapke, Cheryl
Harris, Bob

Harshbarger, David
Havey, Michael
Holsing, Mark
Hinkle, Gregg
Hutton, Jeff
Irwin, Stuart
Janiszewski, Michael
Jasinski, Stephen
Katzin, James
Kimmer, Gerald
Kirmeyer, Ray
Klammer, Ed
Krimmer, Suzann
Kachnicki, Joseph
Kuchta, Matthew
Linn, Jeffrey
Macradou, Christopher
Maher, Thomas
Malek, R. E.
McDermott, Tim
McLaughlin, Laura
Meehan, Rose
Minsinger, Thomas
Murphy, William
Novack, Timothy
O'Connor, Joyce
O'Hara, Shawn
Perrot, Charles
Porta, Anthony
Pregel, Dean

Prosser, Jay
Rapp, Michael
Rasmusson, Kathleen
Richmond, Darrell
Ritner, Dean
Ritz, David
Robeson, Gary
Rogan, Michelle
Saari, Susanna
Schmidt, Ruthann
Sevcik, Robert
Shunberg, Mark
Sirc, William
Smith, Carol
Snoke, Bill
Stabile, Thomas
Steele, Edward
Stevens, Ralph
Synnott, Mary
Taylor, Nancy
Thayer, Cindy
Thompson, Ralph
Toomey, Daniel
Tracey, William
Trombetta, Maria
Vento, Paul
Vittorio Jr., Louis
Warren, Shelia
Wong-Wai, Donna
Zeider, William

Graduate Students - Full Time

Adekeye, Jacob
Anderson, John
Bajek, David
Basilone, Tim
Benacquista, Frank
Botterman, Bob
Brezinski, Dave
Buis, Patricia
Busch, Richard
Ceci, Vince
DeGrandis, Bob
El-Emam, Mohamed
Glohi, Victor
Hartley, Michael

Jacobsen, Joe
Jorstad, Tom
Jude, Monday
Kuntz, Tim
LaSota, Ken
Maniar, Papu
Mario, Annette
Olaniyan, Olufemi
O'Neil, Caron
Pachariyangkun, A.
Panian, John
Pawling Mara Jo
Presley, Susan
Prosser, Jim
Richmond, Cliff

Rodriguez, Jose
Santucci, Vince
Souza, Richard
Stephens, William
Tisin, Abdulmehdi
Toprak, Selami
Venn, Cynthia
Washko, Mary
Weiss, Robert
Wells, Karen
Woessner, Paul
Wood, William
Yu, Jianxin
Yuan, Ding-Wen
Zei, Bob
Zell, Paul

Graduate Students - Part Time

Adams, William
Andrews, Rhonda
Behum, Paul
Boe, Carl
Boyer, Charles
Burtell, Steve
Carlson, Michael
Chapman, Bradley
Coyle, Paul
Duck, John
Duerring, Nancy
Findle, Patrick
Graham, Bob
Hayward, Bill
Helbling, Michael

Henrici, Amy
Irdi, Gino
Izzo, John
Johnson, Shannon
Kollar, Albert
Kotcher, Janet
Krantz, Gary
Lang, Gerald
McCullough, John
McNaughton, Deborah
Miller, Fred
Molinda, Greg
Murin, Tim
Partlow, Deborah
Posney, Karen

Ralph, Steve
Sabin, Andrew
Schatzel, Steve
Storrick, Gary
Tobias, Marissa
Todd, Sandra
Uhren, Michael
Ulery, Jim
Weaver, Kirk
Welsh, Bob
Wetzler, Jeff
Witkowski, Robert
Yusko, Kathy
Zagorsky, Bill

Alumni News

Henry Adams (M.S. 1954) is Treasurer at A. T. Massey Coal Company in Virginia.

John Bates (B.S. 1977) is a District Supervisor for Exploration Logging U.S.A. Inc., Oklahoma City, OK. His advice to B.S. graduates-- "Consider graduate programs. The market for jobs (in domestic oil and gas exploration field) may be tight for the next 1-2 years."

Patricia Tarnay Bloomberg (B.S. 1981) is a junior in Civil Engineering at University of Lowell, Lowell, MA. She is working on another B.S. degree and expects to graduate in December of 1984.

- Ronald M. Bujai (B.S. 1972) is an attorney. He says, "Although I have not pursued geology as a career, I still am very much interested in it. I take two trips per year to various places to collect specimens."
- Bruce Cain (M.S. 1977) lives in Louisiana where he is a senior geologist with Shell Oil Co. Bruce reports, "South Louisiana is a great place for canoeing barring hurricanes!"
- David Cefola (B.S. 1979) received his M.S. from Texas A&M and is currently a geophysicist with Chevron, U.S.A. in Denver, CO. Dave had news about some other geology grads: Anne Baldrige (B.S. 1979) is currently working as a geologist for Sheridan Enterprises in Denver. Dave Becker (B.S. 1979) is working on his Ph.D. in geophysics at Texas A&M. Robert Marbury (B.S. 1979) is a geologist for Amueda and Ivey, Inc. in Denver, CO. Cathy Dugas Marbury (B.S. 1979) is a geophysicist for Williams Exploration Company in Aurora, CO. Mike Rodgers (B.S. 1979, M.S. 1980) is a geologist for Marathon Oil in Littleton, CO. Thanks for all the news, Dave!
- Chen-Lin Chou (Ph.D. 1971) is an assistant geologist with the Illinois State Geological Survey.
- Dan Clark (B.S. 1976) is a geologist with United States Steel Corporation. Dan manages the coal exploration field office in Mt. Pleasant, PA.
- Stephen Cline (B.S. 1981) is a completion engineer with Geosource Wireline Services in Texas.
- Franco Corona (B.S. 1977, M.S. 1980) is a research geologist with Exxon Production Research Company. Franco says, "In my 2 years with Exxon, I have become familiar with the geology and regional tectonics of many frontier areas of the world such as East Africa, France, and Sumatra, as well as many parts of North America." He also had news for us about other Pitt grads: Barry Rava (M.S. 1980) is with Conoco in Houston, TX. Mike Payne (Ph.D. 1979) is with Exxon Production Research Company in Houston, TX. Thanks for the information Franco!
- George Dellagiarino (B.S. 1970) is a staff geologist with Minerals Management Service/U.S. Geological Survey in Reston, VA. George is a geologic coordinator for offshore leasing on the Atlantic Outer Continental Shelf.
- Gary D'Urso (M.S. 1982) is a geologist with Gulf Oil and Exploration and Production Company, in Oklahoma City, OK. Gary says that John Fierstein (M.S. 1977) is also with Gulf in Oklahoma.
- Paul Etzler (M.S. 1981) is a geologist with Geo Spectra Corporation in Ann Arbor, MI. Paul is working in Iowa along Mid-continent Geophysical Anomaly.
- Wendelin R. Frantz (M.S. 1956, Ph.D. 1963) is Chairman and Professor of the Department of Geography and Earth Science at Bloomsburg State College, Bloomsburg, PA.
- S. B. Frazier (B.S. 1949, M.S. 1950) is an advisor to the Korea Petroleum Development Corporation in Seoul, Korea.

- Doris Haarr (Ph.D. 1976) is an assistant professor and departmental chairman of the Geology Department at Thiel College in Greenville, PA.
- Roger Higbee (B.S. 1971) is a hydrogeologist with Rochester & Pittsburgh Coal Co. in Indiana, PA. He reports, "I worked for 10 years with the Commonwealth of PA as hydrogeologist for the Bureau of Water Quality and Solid Waste Management and Division of Mine Subsidence."
- John Harper (Ph.D. 1977) is with the Pennsylvania Geological Survey where he is a supervisor and manager of oil and gas geology for state survey. John says he's "still a practicing paleontologist." He's also helping as coauthor on the new revised Pennsylvania Fossil Collecting guide as well as putting together his own fossil collecting guide for the Pgh. area.
- Richard Hipwell (B.S. 1974) is a sales manager with Coal Associates Adobe Mining. Richard reports, "I've been able to move around a little but still remain in western PA. I've become a coal broker, however, I do consulting in house when or wherever needed."
- Teresa Kaktins (B.S. 1978) is a graduate student at Pennsylvania State University. Terry reports, "As many of you know, my husband teaches at Pitt (Johnston Campus). We go on several field trips each fall and spring, local and far afield. We invite undergraduate or graduate participation in these--they tend to hard rock, glacial geomorph, hydrologic, and land-use planning topics."
- Bill Korth (Ph.D. 1981) is an Assistant Professor at Doane College, Crete, NE. Bill also reports that he is a Research Associate with Carnegie Museum and University of Nebraska State Museum.
- William S. Kowalik (B.S. 1973) is a Research Geologist with Chevron Oil Field Research Company in La Habra, CA.
- James E. Lacey (M.S. 1960) is an Assistant Supervisor, Geologic Research with Texaco in Houston, TX.
- David C. Lindahl is a geologist with Benjamin Coal Company in LaJose, PA.
- Edwin W. Lusk (B.S. 1957 and M.S. 1958) is president of Atlas Electronics in California.
- Stephen Mastovich (B.S. 1978) is an exploration and development geologist with Diamond Shamrock Corporation in Denver, CO. Stephen states that "upon graduation I worked in Johnstown, PA on a blacktopping crew, then moved to Houston where I worked construction. I worked in Texas, Louisiana, Arkansas and New Mexico. I finally got smart and moved to the Rockies where I started in Oil and Gas. Keep the Faith!"
- Russell P. Moran (B.S. 1978) lives in Pittsburgh, PA.
- Byron Franklin Morton (B.S. 1953) is President of Morton Associates Inc. Byron says, "This is primarily a one-man operation." Also, "I've been working in the Appalachian Basin ever since I graduated."

- Robert M. Nelson (Ph.D. 1979) is a senior scientist with the Jet Propulsion Laboratory. Bob also is co-chairman of Southern California Federation of Scientists.
- Mike Nolan (B.S. 1971) is an hydrologist with USGS in California. Mike says, his "past work has focused on effects of timber harvesting on resources of Redwood National Park and on impacts of eruptive products from Mt. St. Helens on stream systems near the mountain."
- Eric Norman (B.S. 1976, M.S. Mining Engineering 1978) is a mining engineer with Occidental Chemical Company. Eric has plans to be married in October, 1983.
- Warren Norton (Ph.D. 1975) is an Assistant Professor at Kent State University (Stark Campus) in Canton, Ohio. Wayne says, "Old friends are always welcome to visit--we're only 2 hours from Pittsburgh--upwind."
- Henry Pollak (Ph.D. 1972) is affiliated with the University of California, Department of Mathematics. Henry says that Rich Dodson and Stan Cisowski are there too. He reports that "California's got a fantastic climate and fantastic scenery!" (Henry, that sounds fantastic.)
- Pat Pontoriero (M.S. 1981) is a geologist with Gulf Oil Exploration & Production Company in New Orleans, LA.
- Mike Price (B.S. 1968, M.S. 1970) is a district geologist with Cabot Oil and Gas Corporation in Pittsburgh, PA.
- Frederick Ringel (B.S. 1979) lives in Carnegie, PA where he works at Mayview State Hospital.
- Paul Rydeski (B.S. 1968) is a geophysicist with U.S. Dept. of the Interior Minerals Management Service, Atlantic OCS/Eastern Region and lives in Arlington, VA.
- Henry Salver (M.S. 1962) is vice president, (Business Development) of GAI Consultants, Inc. located in Monroeville, PA. He's involved in "marketing activities, reconnaissance geology, seismic zoning studies, foundation investigations and foundation earthwork construction for power stations."
- Melissa Sandstrom (M.S. 1978) is working on her Ph.D. at the University of Texas. After graduation, she will be working for Shell Exploration in New Orleans.
- C. Ronald Seeger (Ph.D. 1966) is a professor of geology and geophysics at Western Kentucky University in Bowling Green, KY.
- John N. Seitz (B.S. 1974) is Chief Geologist for Anadarko Production Company in Houston, TX. John obtained his M.S. from Rensselaer Polytechnic Institute in 1975.
- Graig D. Shaak (Ph.D. 1971) is Associate Director of Florida State Museum, University of Florida in Gainesville, FL.
- James Swaney (B.S. 1967) lives in Metairie, Louisiana where he is a senior geologist with Valero Producing Company.

Robert C. Thornburg (M.S. 1979) is Division Geological Manager, Eastern Division, with Universal Resources Corporation in Dallas, TX.

Bill Tindell (B.S. 1948, M.S. 1950) is a petroleum geologist in Abilene, TX. Bill has been nominated for the office of Secretary of the American Association of Petroleum Geologists.

Thomas Watson (Ph.D. 1970) lives in New Orleans, LA where he is a geophysicist with Gulf Oil Exploration and Production Company. He reports, "I've spent 3½ (out of the last 5) years overseas with Gulf--in Venezuela and Norway."

Dave Wesolowski (B.S. 1976) is a Ph.D. candidate in the Geochemistry Program at Pennsylvania State University. Dave reports that Robert Bodnar is also a Ph.D. candidate in geochemistry at Penn State.

Robert Wood (B.S. 1957) lives in Pleasanton, CA where he is Division Engineer for Pabco Gypsum - Division of Pacific Coast Building Products Inc.

Richard Yeager (M.S. 1981) is an operations geologist for Esso Exploration, Inc. in Houston, TX.

Our thanks to the above alumni for taking the time to send us all this interesting information!

Missing Alumni

We were unable to locate addresses for the following alumni. If anyone out there has any information concerning them, please forward it along. Thanks!

Irwin I. Aarons
Karen Groves Bender
Joel Robert Bigger
William Harold Blauser
Donald Andrew Coleman
Albert Bernard Cramer
Murray T. Dougherty
Deborah M. Ehrlich
Robert Hunter Gleeson
Samuel Godich
William Clyde Heilman III
Wilbur C. Holland

Leigh M. Johnson
Chris Dennis Kambitsis
Robert J. Melvin
Robert E. Mershon
Chelluri Nageswar Rao
Dr. Martin W. Schramm Jr.
Margaret Louise Seruset
Robert F. Sitler
Richard Joseph Sobilo
Edward John Ticken
Major James J. Zentgraf

Alumni Response Form

Your response to the "Alumni News" section has been very positive, and thus we are including another form in this year's Newsletter. We hope the response will be even greater this year. We suspect that many old friends have lost contact with one another, and this is an excellent way of keeping in touch. Information about other alumni is also most welcome. The alumni section is probably the most interesting part of the Newsletter, so keep the cards and letters rolling in.

We are anxious to keep your current address on our mailing list and, therefore, solicit your cooperation in advising us if you move. Also, if you know of other alumni who do not receive our Newsletters, please send their names and addresses; we want to add them to our file.

Departmental Support

Once again, we ask you to consider supporting our departmental programs. We sincerely appreciate the support you have given us in the past and hope that you will continue to remember us. Your contributions are an important asset and permit us to continue improving the performance and reputation of the Department.

We want to remind you that the dollar value of your gift to the Department can be doubled, or even tripled, if you work for one of the many firms that have a "matching gifts program." Some of these companies are: Ashland, Atlantic Richfield, Conoco, Exxon, Gulf, Marathon, Mesa, Pennzoil, Shell, Texaco, etc. Although a number of you have submitted matching forms along with your gifts, possibly not everyone realizes that matching funds can essentially double the contributions received. So, please take advantage of this yourself and encourage fellow employees also to take advantage of the program. We thank you for your support.

Departmental Funds

Three departmental funds are currently in existence. The first of these is the Unrestricted Departmental Gifts Fund. This fund is a general purpose fund for miscellaneous professional expenses such as equipment purchases and support of faculty and students to present papers at scientific meetings. The second fund is the Frances Dilworth (B.S. 1978) Lidiak Memorial Fund, the purpose of which is to support the Departmental Seminar Series, and as additional funds are available, to support graduate student and faculty research projects. The third fund is the Departmental Field Vehicle Fund. We remain one of the few large geology departments in the country that does not have a vehicle for use in field trips and field work. The University's budget is such that we must go to outside sources for funds in order to purchase a vehicle. A large heavy-duty van with removable bench seats would best suit these dual purposes, and we are continuing our efforts among alumni and local corporations to raise the \$15,000 purchase cost. In these economically tight times, many of our graduate students do not have personal vehicles. The lack of transportation is a severe hindrance to their field studies. We appeal to our alumni to make donations, in any amount, to the Geology Field Vehicle Fund.

ALUMNI RESPONSE FORM

We ask you to complete this form so that in the next Newsletter we can include a section on "Alumni News." Thanks.

Name _____ Degree _____ Year _____

Address _____

Spouse's Name _____

Names and Ages of Children _____

Company you're affiliated with _____

Your position, title, etc. _____

Your duties? _____

Other items of potential interest to classmates: _____

Any information on other Departmental grads? _____

Please return to: Ms. Pat Dowling, Administrative Assistant, Dept. of Geology and Planetary Science, 321 Old Engineering Hall, University of Pittsburgh, Pittsburgh, PA 15260

FUND RAISING CAMPAIGN

We are now about to undertake a campaign to raise funds for the Unrestricted Departmental Gifts Fund, the Frances Dilworth Lidiak Memorial Fund, and the Departmental Field Vehicle Fund. If you have suggestions that will help raise the money, please give me a call (Ed Lidiak at (412) 624-4700) or write a letter. Of course, contributions from alumni for specific support of the funds will be most gratefully received.

It perhaps should be pointed out that contributions can be sent directly to the Department, or, if you prefer, they can be sent to the University of Pittsburgh as part of the University's annual fund campaign. If you choose the latter method and want the contribution ear-marked for the Department, then you must specify that the funds are for the Department of Geology and Planetary Science. All contributions are tax-exempt and will be acknowledged.

If you wish to contribute, (1) please indicate on the form below to which fund you wish to contribute, (2) fill in name and address, (3) cut form along dashed line, and (4) return form and contributions to Ms. Pat Dowling, Administrative Assistant, Department of Geology and Planetary Science, 321 Old Engineering Hall, University of Pittsburgh, Pittsburgh, PA 15260.

_____ Unrestricted Departmental Gifts Fund
_____ Frances Dilworth Lidiak Memorial Fund
_____ Departmental Field Vehicle Fund
_____ Other (please specify) _____

NAME _____

ADDRESS _____

AMOUNT _____