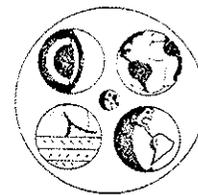




DEPARTMENT OF GEOLOGY

NEWSLETTER



Volume I No. 3

May 30, 1977

Dear Department Alumni and Friends:

Another year has quickly passed since the last Newsletter. Many of us in the Department regard the past year as "the year after North-Central Section of GSA." Hosted by our department last April, the meeting was a success, with nearly 500 geologists in attendance for field trips, symposia, technical sessions, and social activities. The long hours and hard work put in by the faculty and the many volunteer student assistants was responsible for its success. Several important publications resulted from the meeting and these along with other department publications are listed on p.

Although the University is still going through a period of adjustment with a changing enrollment pattern the department's enrollment is growing. Undergraduate majors in geology and earth science exceed 100 and about 30 graduate students are enrolled in the M.S. programs. In response to these increases the administration finally has approved a new faculty position for the department. The new faculty member is expected to have specialization in structural geology and engineering geology and also make a contribution to introductory level teaching.

Among the many special activities held this year the event which seemed to provoke the greatest interest among students and faculty was the visit of Dr. William S. Fyfe, a Visiting Scholar from the University of Western Ontario. A distinguished petrologist-structural geologist Dr. Fyfe presented stimulating lectures with follow-up discussions on "Geochemical Balance of the Earth" and "Large Scale Ore Deposits."

A seminar series organized by Dr. Straw on the Geology of the Rocky Mountains included presentations by Dr. Raymond Gutschick, Notre Dame University, "Devonian and Mississippian Sedimentation in the Central Rocky Mountains", Dr. Christopher Schmidt, Albion College, "The Thrust Belt in Southwest Montana", Dr. Robert Horodyski, University of Notre Dame, "Beltian Geology and the Belt Basin" and Dr. John Garihan, Indiana University, "PreCambrian Geology of the Ruby Range, Southwestern Montana."

Local talent involved in the series included Drs. Chase, Kuenzi, Schmaltz, and Straw.

In November, Dr. Chase conducted a structural geology field trip to the Rocky Mountains including Colorado Springs, Cripple Creek, and the Spanish Peaks Volcanic area. The trip ended with attendance at the annual meeting of the Geological Society of America in Denver. More than 25 students attended the trip along with Dr. Schmaltz. In Denver, the field trippers were joined by Drs. Passero, Grace, and Kuenzi in attending the various symposia and technical sessions. A reunion was held one evening with former students Jim Peterson, Taylor Mayou, Chuck Harrington, Rich Kimmel, Kent Murray, Jerry Aiken and Roger Steinneger attending. Former faculty included Art Reesman, John Lufkin, and Skip Davis.

Dr. Kuenzi assisted by Dr. Harrison lead a field trip with 10 students to the Florida Keys over the winter break as part of the Carbonate and Evaporite Depositional Systems class. Stops at outcrops, scuba diving on the Outer Reef tract and coring in Florida Bay were part of the study program.

Students receiving recognition this year include Russ Perigo and Kevin Wilson Senior Geology Award recipients, and Gayle Napolitano Senior Earth Science Award. Tim Cook received the Kalamazoo Mineralogical and Geological Society Summer Field Trip Scholarship. This is a modest cash award to help cover field trip expenses for a 5-8 week program. Last year the first scholarship went to Steve Bracken who attended Idaho State Field Camp.

University graduate student research awards were granted to John Fowler, Nate Fuller, Stacy Clark, Tim Marler and Betty Garrett.

Dr. Cronk was instrumental in obtaining an NSF matching fund equipment grant for the purpose of obtaining some much needed seismic equipment. Along with a new geophysics laboratory in the basement of Rood Hall the department's geophysics program is moving ahead.

The department is pleased to announce the promotion of Dr. W. Thomas Straw to the rank of Professor. Also, Dr. Straw will be on sabbatical leave for 1977-78 to study the geohydrology of coal mining in Montana, with the Montana Bureau of Mines.

A special permanent loan gift of four complete (8 halves) Cretaceous sandstone concretions with perfectly preserved fossil fish from Bahia, Brazil was received by the department for the Geology Museum from the Galesburg-Augusta School district. Good specimens are always welcomed and alumni are encouraged to send outstanding specimens for our museum collection.

The Geology Department Fund established over a year ago marked-time in 1976. No funds were received from department alumni as part of the University's Annual Fund drive. Former students are invited to make contributions to the Annual Fund with the designation for the Geology Development Fund.* All contributions are tax deductible. Michigan residents can take advantage of the special provision of a 50% credit on state income taxes for contributions to Western. This is in addition to any federal deduction. Also, some employers may have matching provisions for contributions to education. Funds are urgently needed to help the department offer the best in programs and such special events as, speakers, field trips, and scholarship awards. University funds have been reduced the last several years and the department urgently needs your help. If all of our many former students gave just a small amount it could add-up to a significant sum.

Many seniors and graduate students spent the year applying and searching for jobs. This is never an easy task. If any of our former students know of job opportunities with their employer, please report this information to me, so that I can direct our graduating students to these positions. Also, from all our students in industry, I would appreciate receiving the name and address of the person in charge of hiring so that I may correspond with that individual. Your help with these matters is important and would be appreciated, especially by our students.

Finally, it is up to you to keep the department informed of your current activities and of your latest mailing address. Please complete the information sheet and return it to me. Best of luck for a productive and enjoyable year.

Sincerely,



Lloyd Schmaltz

*Envelopes and cards are enclosed for your convenience.

Faculty and Staff News

Dave Kuenzi continued working on his Guatemala research and during winter semester lectured on various aspects of this work at Indiana University (Fort Wayne), University of Michigan, University of Wisconsin, and Albion College. He has submitted a proposal to NSF requesting funds to continue the Guatemala work and at the time of this writing is waiting for a decision.

During Winter semester, Dave taught for the first time an integrated lecture, laboratory, and field course entitled "Carbonate and Evaporite Depositional Systems." The course included a 12-day field trip to investigate Holocene, Pleistocene, and Tertiary carbonate environments and facies in Florida; a 2-day trip to Indiana and Ohio to examine Silurian platform carbonates, and a three-day trip to Alpena, Michigan to study a Devonian platform facies mosaic.

Caspar Cronk reports that this year's leading geophysical news in the department is the purchase of a Nimbus six-channel seismic system, and the acquisition of a room in the basement for a geophysical laboratory and for equipment storage. An additional course in geophysical field methods is being offered in the spring. One physics MS thesis on geophysics is almost complete and a geology MS thesis is under way. Last August a special two-day short course on refraction seismology and resistivity was offered at Western by Bison Instruments, and in June, Roy Lindseth, Society of Exploration Geophysicists President will be giving a full day seminar on the extraction of geological information from exploration seismic data. Work on the gravity expression of Silurian reefs is continuing and some high resolution seismic studies of the glacial materials are being planned. During the past year several of our graduates have been hired by geophysical contractors.

Dick Passero attended the G.S.A. Annual Meeting in Denver, Colorado including two field trips, Urban Geology of the Denver Area and The Environmental and Engineering Geology of the Front Range. Also attended N.S.T.A. Annual Meeting in Cincinnati. Dr. Passero along with Dr. Straw obtained a contract with Kalamazoo County Health Department for two graduate students to study non public water supplies in the County. He also initiated discussions with Berrien County officials to do the environmental geology of Berrien County along with Drs. Cronk, Schmaltz, and Straw. He was appointed to the Resources Recovery Committee of Region III and invited to attend State legislature discussions of solid and hazardous waste disposal. Editing of the first draft of a departmental publication on Environmental Geology of Kalamazoo County is completed. He is planning an M.E.S.T.A. conference on current environmental issues in Michigan for fall 1977 and, with Harold Stonehouse of MSU a conference for minority students interested in the sciences.

In May of 1976, Lloyd Schmaltz lead a six-day raft trip through the Grand Canyon for 23 Western Alumni. A similar trip for this year was scheduled along with an April trip for 31 students enrolled in the Department's Field Studies in Geology 339 - Grand Canyon class. The severe drought in the west forced cancellation of both raft trips because of low water releases from Glen Canyon Dam to conserve available water for late summer usage. Thirteen students elected to complete Geology 339 which covered much of the same route but substituted a one day round-trip hike to the bottom of the Grand Canyon for the usual 4 day raft trip. New areas studied on the trip were Mesa Verde National Park, San Juan Mountains, and the Black Canyon of the Gunnison.

Between teaching 600 students a year in introductory oceanography and large classes of majors, Bill Harrison has been representing the department in the Faculty Senate beginning Spring 1977 and the A.A.U.P. since last year. During the next year he will be the Secretary for the North-Central Section of the Paleontological Society. This summer will be very exciting for Dr. Harrison as he will be in Belize, Central America teaching Marine Ecology, on a coral atoll, for students in the Tropical Studies Program sponsored by Western's Biology Department.

John Grace reports it took a while to re-adjust to teaching after the sabbatical but fall and winter terms went by quite smoothly. He had a rather large enrollment in mineralogy and rocks and minerals; its getting to be a problem of where to put everyone. This spring he hopes to write a paper on sulfide minerals and in July will be attending a Gordon Research Conference in New Hampshire.

Tom Straw returned from Montana with a definite "hitch in his getalong" having tangled with Cretaceous rocks to the tune of a broken leg. His enthusiasm for field geology is undiminished and he, Dr. Kuenzi and Stacey Clark along with a number of our students will be associated with the Indiana University course this summer. He helped develop a citizen's information program for areawide wastewater management in southcentral Michigan, and is currently giving a series of lectures on this topic. He is being ably assisted by Susan Kaschner. Dr. Straw and Dr. Harrison attended the North-Central Section of the GSA at Carbondale, Illinois. Following the meeting Dr. Straw attended the Spring meeting of the GSA Council in Boulder, Colorado as the representative of the North Central Section.

Ron Chase continued to teach his normal complement of optical mineralogy, petrology and structural geology. In spite of having the largest enrollments in these classes which he has handled in many years, Ron and his students seemed to pull through quite well. His other professional activities included field work on the Idaho batholith during the summer of 1976, publication of three papers, attendance at the National GSA meeting in Denver and the Rocky Mountain Section of the GSA in Missoula, Montana where he led a pre-meeting field trip to the Idaho batholith, participation in a Penrose Conference in Tucson, Arizona (Metamorphic Core Complexes of the North American Cordillera), and a couple of visiting lectures dealing with Rocky Mountain tectonics. Where the schedule allowed, Ron managed to play tennis regularly (he and Dick Passero shared the WMU faculty intramural doubles championship) and putter around at restoring an old Mercedes sports car.

Bob Havira has had a fairly good year. He had a relaxing and enjoyable three weeks in England last spring (1976) with Barbara visiting friends and touring. This spring he offered his photography course again and was pleased with the response. He sends greetings to all!

Carol Gilbert is still running the office with the assistance of Mari Krull. She is residing in her hometown of Schoolcraft where you might find her jogging around the countryside on the "cooler" days. She is looking forward to a quiet summer to spend some time on her favorite project - refinishing antique furniture.

Earth Science News

The Earth Science Teaching Program is continuing as usual despite the declining enrollments in education and the undergraduate non-teaching earth science program has become very popular. The 307 Methods course again attended the Michigan Science Teachers Association Meeting. Some of the students stayed over for a get-together sponsored by the Michigan Earth Science Teacher's Association. Unfortunately, few were able to attend the National Science Teacher's Meeting which was held in Cincinnati, but those who did once again shared good times with members of the Michigan Earth Science Teachers Association at open houses in the Stonehouse-Passero room at the Quality Inn. Next fall we will host the annual meeting of the MESTA. The program will concern current environmental issues in Michigan. Speakers will include the chairman of the Michigan Environmental Review Board among others.

The graduate Earth Science Education program has become second in popularity to our new Environmental Earth Science program. Sue Kaschner and Len Reid are back this year. Mike Jurgeson is returning next year. Although we have a few students in the Educational program there doesn't seem to be as much interest among teachers in graduate programs that would require them to leave their present positions. Also, there seems to be more interest in environmental concerns than in traditional earth science programs at the present time. Both programs will continue however and the department objectives will be to provide programs to meet a variety of needs.

Geology/Earth Science Club Activities

The 1977-78 W.M.U. Geology/Earth Science Club Elections were held at the last club meeting, winter semester 1977. The new club officers are Leslie Lindbloom, Secretary-Treasurer; Stu Ellsworth, Vice-President; and Greg Yund, President. Rumor has it that attendance and participation of club members was down drastically in 1976-77. It is the aim of this year's club to reverse this. Activities for the coming year are still in the planning stage, but an acquaintance party is definitely in store early in the fall semester. Date, time and place shall be posted in the Department early in September.

During the past year the Club sold T-shirts as their only money making project and had a guest lecturer, Steve Sinotte who spoke on geodes. The Club also had a series of talks from graduate students in the department.

Graduate Students

Geology graduate students originate from several directions this year and are here for various reasons. But foremost on many lists is graduating, no matter how long it takes.

A graduate of Riyadh University, Saudi Arabia and former science teacher, Ibrahim A. Al-Jallal is interested in geo-chemistry. His thesis topic will concern groundwater. Upon graduating, Ibrahim will have a job in Saudi Arabia.

A hard rocker from Garret, Indiana and a graduate of I.U., Stacy Clark plans to do his thesis on the structural and tectonic history of the southwest margin of the Idaho Batholith and adjacent Sapphire Range. He will be doing field work this summer while working as a teaching assistant at the I.U. field camp.

A former resident of Battle Creek, Bill French has been here at W.M.U. several years. He finished his bachelor's degree here last year. He is in the Environmental Earth Science program and hopes to complete his thesis by Spring 1978 mapping environmental limitations for solid waste and sewage disposal. That is, between tearing down barns, wood working, hunting and fishing.

John Fowler is finishing his second year at W.M.U. His thesis is concerned with a petrological analysis of the red bed section encountered in the recent mid-Michigan deep borehole. John is also a new father, a girl born April 21, 1977.

Nate Fuller is hoping to finish his thesis on micrite production in the Virgin Islands by this summer. Both Hope College and the University of Wisconsin at Milwaukee have been blessed with Nate's presence. His interests are carbonate geology, going to Alaska sometime, and not getting an 8 to 5 job.

Yes, folks, Betty Garrett is still here at W.M.U. though she did get promoted to part-time faculty member. She is teaching Earth Studies 100 this semester and will be teaching part-time during the 1977-78 academic year while Dr. Straw is on sabbatical leave. Her pot sherds and work on the Black Mesa in Arizona are her big projects.

Dari Ghahremani is spending many hours trying to finish his thesis on the paleoecology of brachiopods of Sylvania, Ohio. He hopes to finish sometime during 1977-78.

The newest comer in the Geology Department, Jim Hahnenberg is a graduate of Central Michigan University and ex-M.S.U. student. He hopes to do his thesis in the area of economic geology, probably hard rock.

Since January, 1969, Bill Johnston has been "erratically" attending classes at W.M.U. He has worked off and on as an electronics technician at the Health Co. in Benton Harbor and as a Nuclear Quality Control Engineer in Dotham, Alabama. Bill plans to concentrate his studies in geophysics and structural geology.

Receiving his B.S. in geology from Murray State University of Kentucky, Norm Lovan is planning to finish his thesis on the delineation of glacial tills in southwest Michigan by the end of winter semester. Norm will be working for Texaco in New Orleans. As one of the more musically inclined graduate students Norm is accomplished at both guitar and jews-harp, familiar sounds of his presence in the grad office besides the clicka-clicka of his counter.

After a three year absence during which she taught Science at Holly Oaks Middle School in Holly, Michigan Sue Kaschner has returned to the Geology Department at Western to get her Masters in Environmental Earth Science. Sue is hoping to write a textbook for the 307 Methods in Earth Science class in cohorts with Dick Passero.

Rob Kell is putting the finishing touches on his thesis while at the same time being the proud new papa of a son. He will be working for Anaconda and attending Idaho State.

The phantom of Rood Hall, John Klanke, is a former Hope College student. His main interest is in Hydrology in which area he hopes to do his thesis. His goal is to find a job in the Midwest with a consulting or engineering firm.

Gary Konwinski is presently employed by the D.A. as a soil scientist, is also team teaching in the Agriculture Department, and is a part-time student in the Environmental Earth Science program. A former Wisconsin resident, Gary is planning a thesis on Soil Resource Development of the greater Portage City area.

From Long Island, New York, Jeff Mann is known as a proficient soccer player and cross country skier in the department and encouraged the formation of an intramural soccer team, the Schist-Kickers. A recent graduate of Potsdam University in New York, Jeff is interested in environmental geology and hopes to finish his thesis on water quality analysis for non-community water supplies in Kalamazoo County, in cooperation with the County Health Department

A mule-skinner from Elvins, Missouri, Tim Marler attended Murray State University in Kentucky before migrating to Kalamazoo. His interests are in carbonate and economic geology from an exploration standpoint. He plans to do his thesis on determining ore controls in the southwest Missouri, Viburnum Lead-Zinc district.

Jeff Martin is currently concentrating on his thesis work, reconstructing the depositional environment at Grand Ledge. Originating from Grand Rapids, Jeff attended Grand Valley State College. His future plans include finding a job with an oil company.

Organizer of the G.B.A. (Geology Basketball Association), Valerie Naeve is completing her third year as a graduate student at W.M.U. under a Ph.D. fellowship. From Bridgewater State College, Massachusetts, Val is hoping to complete her thesis on Pleistocene Paleocology and her Ph.D. in Environmental Science Education. Her future plans include a job teaching outdoor science and lots of travel.

Brockton, Massachusetts, the home of several other infamous geology graduate students, has sent Bill Norman to Kalamazoo on a year's leave-of-absence from his job teaching 9th grade Earth Science program and is planning a thesis concerning water quality of non-community water supplies in Kalamazoo County. Skiing the "mountains" of Michigan has been one of his favorite things to do.

Jim "Squeaky" Proffitt of Eddyville, Kentucky is another of the Murray State University graduates at W.M.U. this year. With a B.S. in biology, Jim is spending his time making up geology deficiencies and dreaming up a thesis in paleocology.

Leonard Reid is on a one year leave-of-absence from Sturgis High School to finish his master's in Earth Science education. He is interested in meteorology and environmental earth science. His research project involves the surface and groundwaters of St. Joseph County. Len is looking forward to returning to Sturgis next year.

Spawned from a quaint hospital in picturesque Forest Hill, Queens, New York, Thomas Allen Silverman has added a touch of class to the geology department this year. Sewage and garbage were his past major interests while attending Colby College in Waterville, Maine. Environmental Earth Science is his program with an emphasis on ground water, surface water, and soils around which his thesis will probably be centered. Future plans include working for a consulting firm in Environmental Science or for the E.P.A.

Bowling Green State University pointed Fred Skulina, Jr. in Kalamazoo's direction. Originating from Bellevue, Ohio, Fred has assisted Dr. Kuenzi in Earth History and Evolution laboratory sections. He spent last summer working for the Burwest Company in Uranium exploration in Montana.

Hard rock is Jeff Spruit's main interest, both musically and geologically. He attended Grand Rapids Junior College and Grand Valley State College receiving a B.S. in geology. He is still open to suggestions for a thesis.

1.633 years ago J. Hall Taylor started his career as a graduate student at W.M.U. Graduating from Lawrence University in Appleton, Wisconsin, Hall's main interest is geophysics. His thesis will involve seismic interpretation.

Another former Western student, Dave Young has returned after working in Ann Arbor as an operations programmer at Cyphernetics World-Wide Center Network headquarters. His interests are environmental geology, earthquakes, volcanoes, and computer applications.

Part-time graduate students in the department are: Bob Lerg, Virginia Loselle, Tom Fowle, Dennis Curran, Bill Williams, and Tony Visser.

This 'n That

Elizabeth (Buffy) Brown visited the department on her way to a new job at Seismograph Service Corporation in Houston, Texas.

Mike Cote was a guest lecturer for Earth Studies 100 in April. Mike is involved with the oil and gas division of D.N.R. He reports that he and Barb have a new son, Bryan born last December.

Gail Nelson and her husband have moved to Little Chute, Wisconsin. Ryan is three now and expects to have a new brother or sister in September.

John Kitzmiller is working for Core Laboratories Incorporated in Midland, Texas but plans to attend graduate school at Brigham Young University in Provo, Utah.

Lawrence and Margaret Goldman and son Robby visited the department. Lawrence has given up teaching high school in Durango, Colorado. He and Margaret now own the Monadnock Gift Shop in Mackinaw City. Lawrence's Field Guide to the Geology of Eastern Upper Peninsula of Michigan (see p.10) has been published by the department.

Connie Chenard is second in charge in the lab at Michigan Tech at Houghton - doing analysis of mine samples. She reports she is taking math and chemistry classes to help with her work.

Bill Harrison, Nate Fuller, Raymond Perez, Valerie Naeve and Betty Garrett attended the SEPM meetings in New Orleans. They were able to enjoy the hospitality of Gene Murray now working at Texaco, who made his living room floor available to the group. Also saw George Fingleton who is at Texaco too.

Raymond (El Roy) Perez writes that he is working for Core Laboratories in Carrize Springs, Texas, doing complete core analysis. El Roy took the plunge into matrimony. Ron Parker and Steve Bracken attended the wedding, Ron being the official photographer for the big occasion. Congratulations El Roy!

Bill Middleton of Citgo was a Christmas visitor to the department. And Christmas cards were received from Ron and Kathy DeWitt (Flagstaff, Arizona), Joe and Betty O'Sullivan (Brockton, Mass.), Tom Sherman (Liberia), Gracie (Stoll) Durgin (Arcata, California), John and Martha Heinsius (Midland, Texas), and Carol and Jim Peterson (Denver, Colorado).

Tom Sherman sent greetings from Brussels where he was attending the E.E.C. Meeting of the U.N. Law of the Sea-bed Committee where the questions of sea-bed resources and deep-sea mining were explored. In May he was in New York continuing the Sea Conference meetings at the U.N. In October he returned to Liberia and is now involved in a gold quantification project and a reconnaissance investigation of copper mineralization, both in eastern Liberia.

John Heinsius gets the department gold star award! He was the only one to fill in and return the information sheet included in last year's Newsletter! John is an exploration geologist for Texaco in Midland involved with the micro-paleontology of Pennsylvania rocks. He is co-authoring a paper on the Permian stratigraphy of part of the Glass Mountains, Texas.

Ellie Papadopoulos decided to go west young "person" . . . she has decided to try her geologic fortunes in California.

Warren French has left for a new job with Atlantic Richfield. Goes to Houston for training, then assignment.

Doug Daniels was a department visitor, he's now with Michigan Geologic Survey at Mt. Pleasant.

Charlie Cookman finally got his thesis on the Rockport Limestone finished and is now wearing suit and tie (can you imagine??) at Texaco in New Orleans.

We had a long letter from Mel Troyer who now has the job title of Engineer, Fire and Extended Coverage Department for Factory Mutual Engineering, Rolling Meadows, Illinois. Maybe it doesn't sound too geologically oriented but Mel's exposure to earthquakes, flooding and hydrology have proved to be an asset the other engineers didn't have. The job plus fringe benefits sure sounds like it beats teaching.

Anyone in Bellevue, Washington (near Seattle) can look around for Ron Parker - he's a soil tester for an engineering-geologist firm, Cascade Testing Laboratory, Inc. doing in-place density tests at construction sites. We'll be looking forward to photographs of the west next time he's back east.

Steve Bracken is soaking up the Florida sunshine while working as a geologist inspector on a drilling rig for the Corps of Engineers at Savannah, Georgia. He is helping investigate a bay as a possible site for a submarine base.

Doug Thompson also chose to answer the call to go west. He is a geologist with Northern Energy Resources Company in Portland, Oregon, but plans to spend his summer in Rawlins, Wyoming doing core drilling and field mapping for one of the company owned coal fields.

Uranium exploration in southern Texas is keeping Robert Zamboris busy. He's working out of Sunoco in Dallas.

We welcomed back several past students who gave papers at the North-Central Geological Society of America Annual Meetings held at Western in April 1976. Julie Stein, Jim Smith, Brian Shaw and Eugene Murray. Stewart Monroe, an ex-faculty member, now at Central Michigan University also gave a paper.

Current members of the department who gave papers at the meetings were:

- Robert Kell (co-authored by Dr. Chase)
- Steve Tripp (co-authored by Dr. Chase)
- Charles Cookman (co-authored by Dr. Kuenzi)
- Betty Garrett (co-authored by Dr. Grace)

Larry Mascotti and his wife are heading back to Minnesota to look into the possibility of obtaining a planetarium position. Upon leaving the Geology Department, Larry taught laboratory sections for the Physics Department during Fall and Winter terms.

Harriet Cloft - where are you and what are you doing? Betty Garrett.

If anyone is going west this summer and wants to avoid a water shortage, go to Flagstaff. Ron DeWitt of Flagstaff's water department promises an adequate water supply. He has become a frequent figure on the TV screen, has been quoted in the papers and has just recently worked with the Arizona legislature helping to draft proposals for water legislation. He represented the mountain areas and convinced the lawmakers that they had unique water problems as opposed to the desert, mining and farming districts of the state. Kathy's project at U.S.G.S. is a computerized lithologic map of the U.S. which should be completed in September. And she has been budgeted for an additional year to complete the data bank.

INFORMATION SHEET

Name _____ Year Graduated and Degree _____

Address _____ Phone _____ Major _____

Current Position _____

Professional Interests _____

Other News _____

Return to: Dept. of Geology, Western Michigan University, Kalamazoo, Michigan 49008

PUBLICATIONS
DEPARTMENT OF GEOLOGY
WESTERN MICHIGAN UNIVERSITY

Listed below are the publications available from the Department of Geology. If you wish to receive copies, please write to the Department of Geology, Western Michigan University, Kalamazoo, Michigan 49008.

Geology Series

Field Trip Guidebook Coastal and Environmental Geology of Southeastern Lake Michigan, William L. Wood, 1976	\$3.50	_____
Geology of the Kentland Structural Anomaly, Northwestern Indiana, Raymond C. Gutschick, 1976	\$2.50	_____
Guidebook for a Field Trip on Some Aspects of the Glacial Geology in the Kalamazoo Area, W. Thomas Straw, 1976	\$2.00	_____
Indiana Portion of Guidebook for a Field Trip on Silurian Reefs, Interreef Facies, and Faunal Zones of Northern Indiana and Northeastern Illinois, Robert H. Shaver, with a section on glacial geology by Ned K. Bleuer, 1976	\$2.00	_____
Guidebook for a Field Trip on the Thornton Reef (Silurian) Northeastern Illinois, with an Article on Distribution and Community Development of Trilobites, Thornton Reef (Silurian), Lloyd C. Pray, (to be published Fall 1977)		_____

Earth Science Education Series

A Bibliography of Geological Field Trip Guidebooks and Related Publications for Indiana, Kentucky, Michigan and Ohio (1950-1972), Education Committee, East-Central Section, N.A.G.T.	\$1.00	_____
A Field Guide to Geology of the Eastern Upper Peninsula of Michigan, Intended primarily for Secondary Earth Science Teachers, A. Lawrence Goldman, Jr., 1976	\$4.00	_____
A Field Guide to the Geology of Southwestern Michigan, Gregg R. Squire, 1972	\$2.50	_____

Miscellaneous

Sourcebook and Field Guide to the Geology of the West Central Lower Peninsula of Michigan, David A. Waltrip, 1973	\$3.00	_____
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