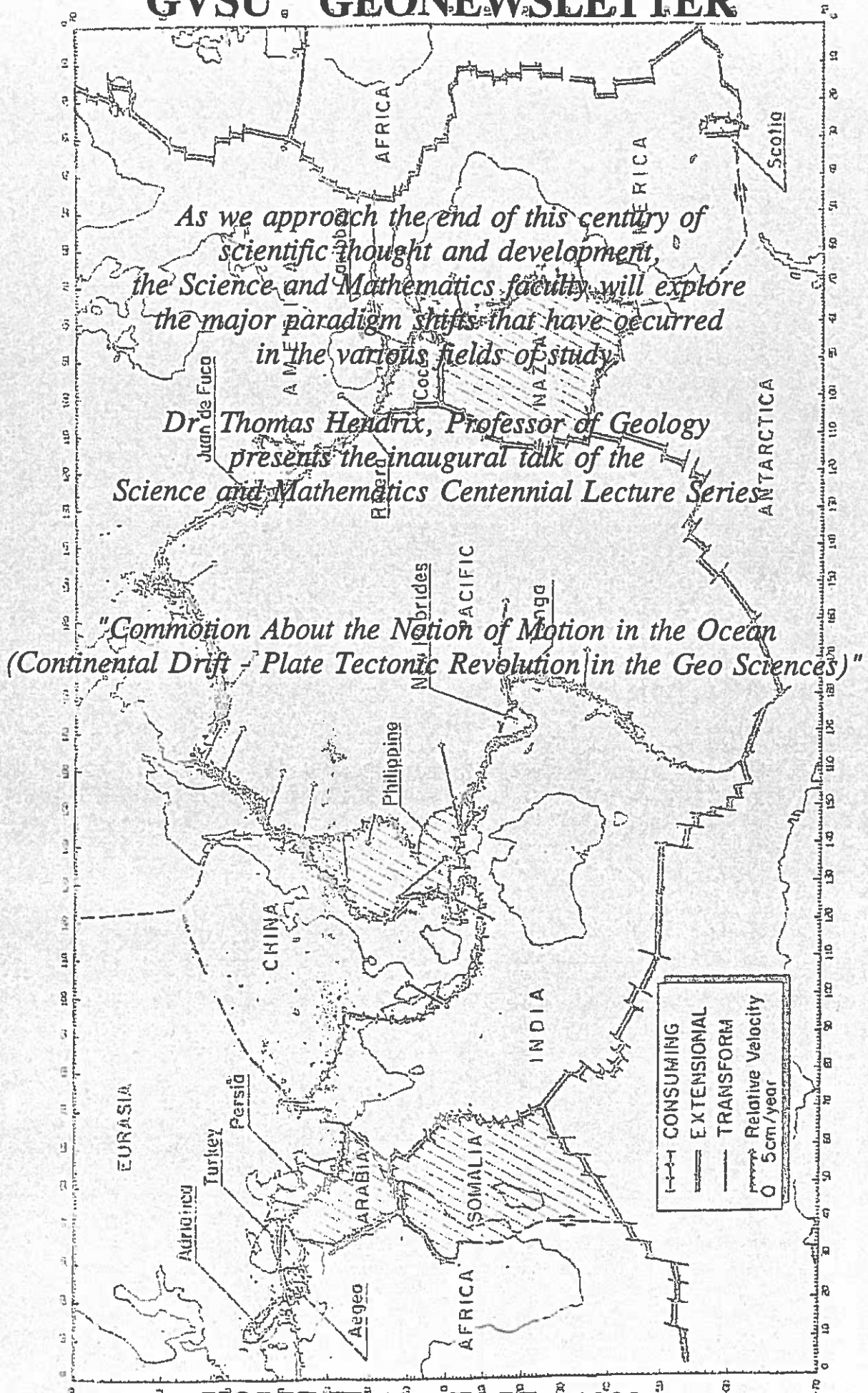


GVSU GEONEWSLETTER



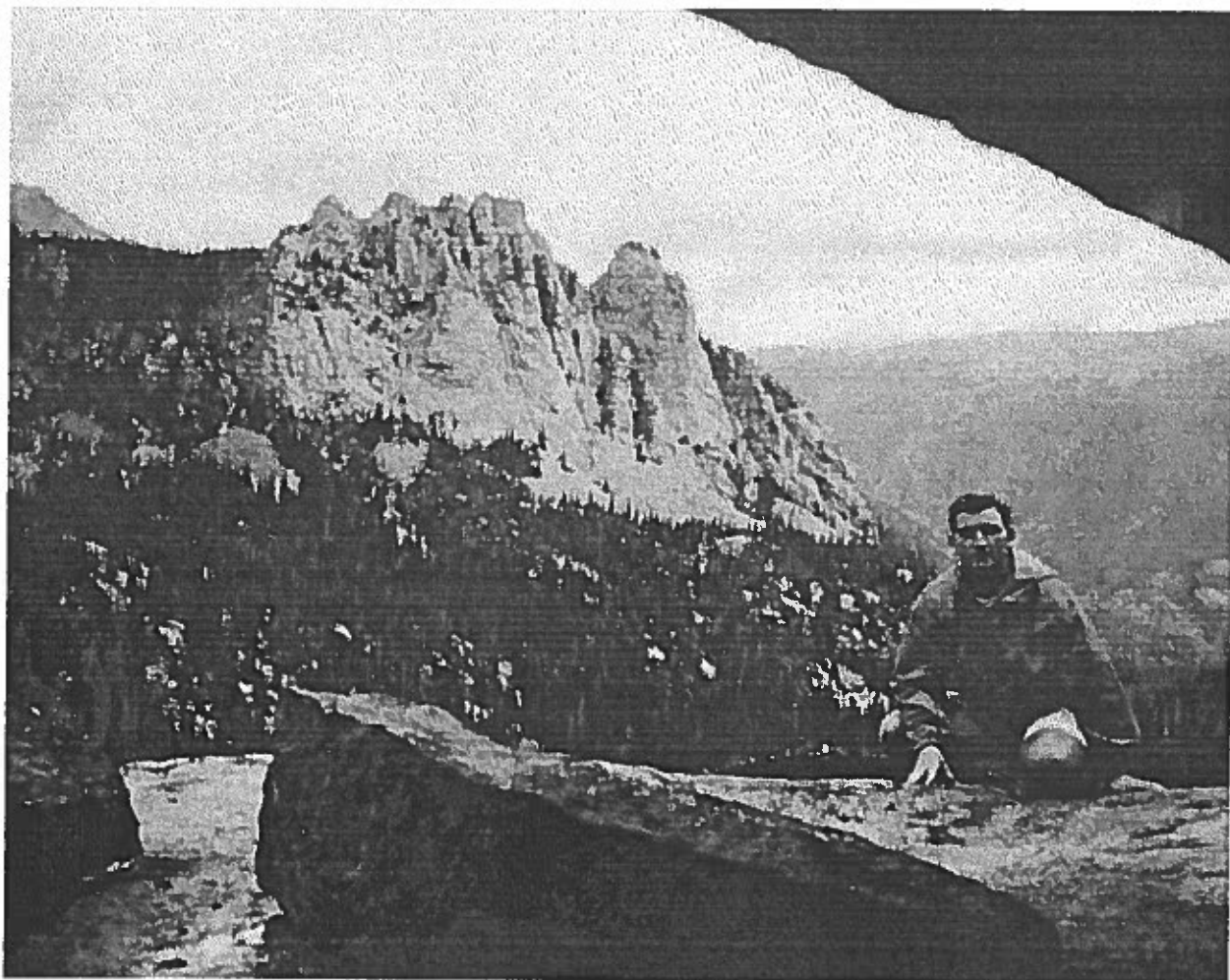
VOLUME 10 - FALL, 1992

GVSU GEONEWSLETTER

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Jon Hofstra in front of the Little Matterhorn arete which claimed his life a few days after this photo was taken.

DEDICATION

The 1992 Newsletter is dedicated to Jon Hofstra in honor of his enthusiasm for geology, his zest for outdoor adventure, his positive spirit of friendship, and his goodwill toward all. In the midst of living these attributes to the fullest, and while doing one of the things he loved most -- hiking in the mountains -- Jon was suddenly taken from us by a fall in Rocky Mountain National Park on August 16, 1992.

The shock and grief of our sudden loss will always affect the lives of all of us who were touched by Jon's spirit and his joy. Therefore, we will remember Jon, and we dedicate this to him, in his own positive spirit of joy, enthusiasm for nature, and love for the very kind of outdoor adventure that he was still experiencing until the moment he left us.

View From The Chair

This year is my third (and last!) year as Chairman of the Geology Department. I have enjoyed some aspects of this administrative job, but I won't miss the nitty-gritty, the buck-stops-here tasks that land on my desk almost daily.

My second term as Chairman (1990-93) has been a better time for geology and the department than the first term (1979-83). That term saw the beginning of the great 1980's turndown in geology jobs in the energy industry, and the resultant drop in majors. At Grand Valley that translated to a drop from 60 majors at the beginning of the decade to 25 at the end of the decade. The early eighties saw budget cutbacks, loss of faculty positions, and reorganization from the cluster colleges to the current divisional structure at Grand Valley. Geology shared in these cuts with the loss of a promising young geochemist, Gary Jacobs.

As I contemplate completion of my second term as chairman, the picture is much brighter. Enrollments and majors in geology are up sharply (to 800/semester and 75 majors), budgets are up 100 percent over 1983 levels, and the job market in environmental assessment and hydrogeology continues to be strong. Reflecting this, most of our majors express career interests in these fields. Also, we have finally recaptured the geochemistry position with the hiring of Patty Videtich ('76).

The one area where progress has not been made is in the area of space. With one-third more faculty than in 1983, 25 percent more majors and 400 percent more non-major enrollment, we have essentially the same space as we had in 1983. Space for faculty and student research is virtually nonexistent, and recently the students lost their last dedicated study space when the Lucke Reading Room was converted to a faculty office. Relief has been promised with a new science building, but a statewide freeze on capital expenditures for new academic buildings has put our building on hold for the last two years, and if the economy doesn't rebound soon, I expect the ban to be continued for at least another year. Meanwhile, we cope, but not happily.

I want to take this opportunity to thank my colleagues in the department for their cooperation, hard work and generally good humor in the face of almost overwhelming student numbers and space limitations. I sense a new spirit of involvement and commitment in the majors and that bodes well for the future. Bette Weerstra continues to keep the faculty on the ball as she has done for so many years, and to bail us out when we make unreasonable, last minute requests for her services. I'm convinced she is one of the small group of people who actually run Grand Valley State University on a daily basis. Last but certainly not least, I express my gratitude to Tom Bee and Jeff Woollette who perform valuable services for the department, and especially to Greg Wilson who has done outstanding teaching as our principal adjunct professor the past five years, often sacrificing personal and family time to fit our teaching needs. Greg sees his future as an instructor at Grand Rapids Community College, but I hope he can continue with us for another year or two until the CC job is permanent.

Finally, we enjoy the renewed contacts with graduates who drop by from time to time, and whom we see on field trips, at meetings or other professional activities. We appreciate your continued interest in the department. Keep it up. We also deeply appreciate your contributions to the Geology Development Fund and the Tremba Scholarship Fund. Details of these funds are given elsewhere in this newsletter, but it seems appropriate to point out here that both funds have exceeded the critical size needed to generate yearly funds for student scholarships, equipment and research. Over the years ahead, these "unrestricted" monies will become an important part of our margin of excellence. Thanks to all of you for your help.

Tom Hendrix
October, 1992

FACULTY/STAFF ACTIVITIES

Kevin Cole

During the last year my research (NASA/JOVE) has focused on development of computer software which derives hydrologic/geomorphic information from digital terrain data. This has been implemented on a very capable graphics workstation and any part of Michigan can be quickly analyzed. Field trips in the last year included a nine day collecting trip to Louisiana and Arkansas, a 12 day climbing and collecting trip to Washington and Oregon, a 12 day collecting trip to New York, a trip to the Celestite producing quarry at Maybee, Michigan, 4 trips to Rensselaer, Indiana, and a 4 day trip to Michigan's iron and copper country with the Mineralogy class.

Tom Hendrix

My outside professional activities for the past two years have been centered on the NAGT-USGS Cooperative Summer Field Training Program. As Executive Secretary of this national program, I line up summer field interns for the U.S.G.S. from the best graduates of geology summer field camps. Four states - Illinois, Maryland, Oregon and Pennsylvania - joined the program in 1992 when a total of 78 student interns were placed.

The chairmanship has put my Montana research on hold, but next year I hope to get back to problems of duplex formation in the SW Montana structural salient.

Grandchild #4 (Christopher Austin) arrived in late September so I find myself thinking about progeny as much as orogeny.

Dick Lefebvre

This fall was a milestone for me at Grand Valley -- 25 years!! It seems impossible to believe, but it also means some of you are also a lot older since you were here at GV, especially those of you who were here in the early years! For this grand accomplishment I received a medallion; they hang it around your neck and if you don't fall over they let you teach for a few more years.

Last summer, to celebrate my seniority, I attended two short courses in Hawaii, one on Hawaiian volcanism and the other on submarine volcanism. I was able to spend some time with Guy Waggoner ('76) who showed me the Oahu geology not covered in the classes; it enhanced my understanding of the Oahu geology which went unnoticed on my first trip to Hawaii when my attention was concentrated on the Big Island. Thanks, Guy!

Also last summer, I collaborated with Larry Fegel ('73) to organize a "ROCKCYCLING" tour of the geology between Sudbury, Ontario, and Copper Harbor, Michigan, for Grand Rapids Public School teachers. Mountain bikes were used to take geological excursions along the edge of the Canadian Shield. Least you think I've found the Fountain of Youth, I must tell you that we used a U-Haul truck between the universities where we lodged.

As for the rest of the Lefebvre's, Lauryl is now with WW here in Grand Rapids and Sandy is in her third year at Michigan's Department of Social Services. Jeff just completed his PhD in Industrial Engineering at Northwestern University and has returned to Arthur Anderson Consulting in Chicago. Curt has about one year completed in a doctoral program in Electrical Engineering at the University of Florida.

Bill Neal

The call for faculty news since fall 1990 is a reminder of how time flies and the increasing memory blur that accompanies such swift passage. The 90-91 school year was sabbatical time, and the fall was devoted to gathering information on Lake Michigan for the "Living with the Lake Michigan Shore" volume. The freedom of time to go to the field and enjoy the out-of-doors certainly was too short. Winter semester '91 was spent at Duke University in an effort to "hole up" and write. Progress was good, but the writing was not completed, and focus on classes since then has left little time to complete the project. My return to teaching Historical Geology is rewarding, and I'm more comfortable in the "Living with the Great Lakes" general education course, now in its fifth season. Sed-Strat, Oceanography, and Paleontology support my rock/fossil addiction, although Pat Videtich will take a turn at Oceanography next fall.

While we suffer the usual time/space frustrations, I relish reaching a twenty-year goal since coming here in 1971, namely to reach a minimum "critical mass" in geology faculty at 6 full-time, tenure track positions. Most importantly, the growth has been through the addition of highly qualified individuals in Kevin Cole and Pat Videtich who share the commitment to quality undergraduate instruction. Unfortunately, such gains have come through rapid enrollment growth, resulting in larger and larger general education sections that detract from this institution's past record of personalized attention. If Johnny Lucke looks down on us, I know he's disappointed. Nevertheless, we keep improving internally, and I believe our department's graduates continue to be well qualified for both graduate work and entry into industry.

On the family front, Mary and I now have 5 grandchildren scattered over the country. We've made a few trips to California to visit family (2 daughters, 3 grandkids) and wish they could all live closer to home (a la 1 daughter, 2 grandkids). Mary continues to work in the GVSU Alumni Office, and always appreciates news, address updates, and those of you who have participated in alumni work.

My travels have taken me back to Portugal, Colombia, and stops along the way. Over the last 2 years I've also been in touch with several alumni, including those of you who visit the department. (I won't attempt a list for fear of leaving someone out.) It's always nice to visit, swap stories, and catch up on your progress in life. Come and see us when you're in town, and don't forget the annual Christmas gathering. Note well that the department's invitation is equally extended to one and all -to those who've chosen careers outside of the geosciences as well as the traditionalists. We need to be mutually supportive -- after all, we've shared life, time and earth!

Norm Ten Brink

If your experience is anything like mine, I'll bet neither of us has ever read faculty "news" in an alumni newsletter that was either really news, or even interesting. Well, I was determined at first to make this note a high-interest zinger, but then I thought who wants to set such a dangerous precedent anyway?

Actually, there have been three exciting "geologic" events in my life in the last two years. (The rest continues to be the standard GVSU faculty hassle; i.e., over-loaded, over-crowded, and under-funded.) One very special event is that my son, Andy, began his university education this fall, majoring in geology! Can you believe anybody that had to listen to me talk about geology for their entire life would still be interested in geology! Wonders never cease. Andy is at Western Michigan University, where he won a very nice scholarship, and so far he greatly enjoys the school, his profs, and the social life. I hope to catch up on his life during the opener of the deer season at our cottage.

The other two "exciting" events have been the two field trips to the Rockies that I led in 1991 and 1992. The first year 12 students, my family, Larry and Mary Austin, and I spent two weeks geo-tripping in Glacier National Park. What a magnificent outdoor laboratory for a glacial geologist! (Yes, we did do the structure and stratigraphy too.) Then, this past summer 14 students and my family, plus Sue Squire from GVSU Public Relations, spent ten days hiking out the geology of Rocky Mountain National Park. We all learned a lot on that trip, both geologically and personally. With experiences like Rocky and Glacier in his heart our "artist" son, Ryan, also has a strong leaning toward a career in environmental science. Since he finishes high school in two years, I'll report his career choice in the next newsletter.

Until then, I'd sure like to get a personal career up-date from some of you "geo sons and daughters". Drop me a note if you get a chance. After 20 years at GVSU, the "old man" needs encouragement!

Patty Videtich

I arrived in Michigan from North Dakota June 10, just in time to attend the "Council on Undergraduate Research" meeting at Hope College June 11-13. After that I scurried around to get ready for my physical geology course that started June 29. That class ended August 10 and my first fall semester class began August 31. Sometime in there I closed on a house and moved into my house as well as my office. (Okay, judging from the boxes still all over my office, I haven't quite completed the move yet.) This fall I'm teaching environmental geology and physical labs, and I just completed writing an NSF proposal to try to obtain some equipment for geochemistry and geohydrology classes. Needless to say, my first few months back at GVSU have flown by! But it's good to be back and I'm having a good time. If someone had told me 20 years ago that someday 115 Loutit would be my office, with Bill and Dick on either side, I would have figured that they were ready for a rubber room, but here I am. And happy to be here!

Just a little about my background for those who don't know me or what I've been up to for the past "few" years...After graduating from Grand Valley in 1976, I went to Brown University in Providence, Rhode Island. In 1981 I joined Conoco's research lab in Ponca City, Oklahoma. In 1988 I went to the University of North Dakota in Grand Forks as an assistant professor.

And from there, I came here, much to the joy of my family who still all live in this area.

I was very fortunate to find a place to live that I really like - a house in the trees just three miles from school! After 11 years of living on the plains, I really appreciate the trees. (I have to keep saying that because after this fall's leaf-raking season I'm beginning to wonder about all those trees!) Anyway, my house is on Fillmore on the curves in the woods as you go toward Jenison from GV - some of you probably remember the spot. It's a fun place to go home to. (Of course, It's a little hard to see it after those Monday, Tuesday, and Wednesday night classes, but that's beside the point, I know those trees are out there somewhere!)

I hope to see ya'll at the Christmas party or whenever you are in the area. Drop by, day or evening, Loutit is always open for business, or for reminiscing.

STAFF

Tom Bee

I still live in Grand Haven (since 1958). Two of my three siblings and my parents (both in their 80's) also live in Grand Haven. I have an active life, collecting minerals with my long time collecting buddy, Loyal Suntken ('73). We also are involved in acquiring antiquarian books sold through my company (Topaz-Mineral Exploration). Both Loyal and I are amassing large collections of rare books (I have over 500) on midwestern geology and Michigan minerals. The true joy is "collecting" the material and knowing that some day it will end up at an educational institution. No publications as yet, but I am forever working on the mineralogy of Michigan, and over the last few years have found minerals never before described from Michigan, or minerals new for a particular site in Michigan. I'm "stuck" in a research mode, not wanting to become an author. The "biggest" finds to date are the first locality in Michigan for Japanese twin quartz crystals (unpublished) and the first authenticated site for topaz in Michigan.

Greg Wilson

The last couple of years have been very eventful ones for myself and my family. Most important was the birth of our second son, Luke James (4/3/92). Luke's older brother, Cooper, has plunged into the world of academia (he started preschool) where he has begun studying for a career as an artist-dancer-policeman-teacher. Becky has "retired" so that I may pursue teaching full-time. I am keeping busy by teaching part-time at both Grand Valley and Grand Rapids Community College. At the community college I have been teaching a course called PC101 - Physical Science. It includes a little of everything, chemistry, physics, astronomy, meteorology, and as much geology as I can fit in. I also have been teaching two summer field courses through GRCC. One trip is to the Northern Rockies (Badlands, Yellowstone, Tetons, and Glacier N.P.). The other trip (which I'm repeating this summer) is to the Southern Rockies and Colorado Plateau.

News from Former Faculty

Jack Henderson

I have been pretty busy because there is so much great country to map here. Mariette (she's in GSC Mineral Resources Division), Tom Wright (US NSF Structure and Tectonics Division), and I have been mapping in the Arctic mainly, but we also have had an ongoing interest in gold-quartz veins, cleavage and folding in the Meguma terrane of Nova Scotia (In September we hosted a field trip there for the Penrose Conference on applications of strain; 73 participants, including John Ramsay, inspected "our" rocks). From June to August we mapped in the High Lake greenstone belt near Coronation Gulf between Coppermine and Bathurst Inlet for the first of a 3-season project. We also are dabbling in the "Golden Triangle" of the Coast Mountains, NW British Columbia with Rod Kirkham, a colleague in Mineral Resources Division (yes, that's me on the August '92 Geotimes cover).

So that's it for now. Let's keep in touch. Ed and Rose Tremba are coming to visit in about 2 weeks; we generally visit them in Manassas at Easter. I won't make it to Cincinnati, because of a conflict with the Canadian Tectonics Group meeting in the Canadian Rockies; I wish that I could make it because I expect that a lot of you Flatlanders will attend. Where has Guy Waggoner gone? (Better answer him, Guy! The editor)

Jack Henderson, Geological Survey of Canada, Continental Geoscience Division, 601 Booth Street, Ottawa, Ontario K1A 0E8

Gary Jacobs

I have been at Oak Ridge National Lab for 9 years. I work in the Environmental Sciences Division where we perform research in water resources, global change, environmental restoration, environmental assessment, and energy and natural resources. Our goal is to use research in the earth, life, physical, and social sciences to promote the use of the earth in an environmentally sound and sustainable manner. My recent research has emphasized testing various methods to stabilize soils contaminated with radioactive materials, hazardous metals, and organic compounds. In situ vitrification, which uses electricity to melt soils into an obsidian-like material, is one such method. The contaminated soils, which are permeable, porous, and easily leached of contaminants, are converted into a mass of "rock" that has low permeability, low porosity, and is resistant to leaching by groundwater. While doing the applied research, we also try to include some basic geoscience research. In this case, we study igneous processes in these artificial magmas. The melting process works great for some sites, but is not the solution for all sites. Others in my division are studying other methods including in situ grouting, biotechnology, soil venting for organics, in situ heating, biosorption, etc. The objective is to find an effective technology for each type of contaminated site.

We have many opportunities for visiting research programs for undergraduate students, graduate students, postdocs, and faculty. I will be glad to provide information on these programs to anyone interested. I will be at Fall 1992 AGU and am almost always at GSA. I would love to see some of the faculty and students from my short tenure at Grand Valley, or others from Grand Valley who I have not met.

Gary Jacobs, Oak Ridge Nat'l. Lab, P.O. Box 2008, Oakridge, TN 37831

Carolyn Rutland

After 1980 (when I taught two quarters at GVSU) I enrolled at MSU and received my Ph.D. in 1985. I studied the geochemistry of the Elkhorn Mountains Volcanics in southwestern Montana. I taught geology at WMU (1986, 1987) and then took a job with Science Applications International Corporation (SAIC) in Las Vegas, NV. I worked as a geochemist for SAIC on its technical and management support contract with the Department of Energy for the Yucca Mountain Project - the characterization of the proposed high-level nuclear waste disposal site (I ran into Gary Jacobs a few times there). In 1990 I returned to Kalamazoo and started my current job for American Hydrogeology Corporation.

Chris still teaches at Western. This year he is on sabbatical. He's spending the fall at Cornell University in preparation for six months in Argentina in 1993. We have two boys, Charlie, 10, and Gene, 4. The boys and I will be in Argentina with Chris for three months. We're all looking forward to this adventure. Hello to all of you!

Carolyn Rutland, 1112 Merrill Street, Kalamazoo, MI 49008

Jeff Sutherland

I am Director of Quality Assurance and Quality Control for the Environmental Sciences Unit of WW Engineering and Science. I am very happy that my daughter is enrolled as a freshman at GVSU in the biomedical sciences program.

After a very long glacial-groundwater hiatus, I was introduced to "rocks" again this year during a 4-day rafting trip with others at WWES through Dinosaur National Monument.

Jeff Sutherland, 1248 Breton, SE, Grand Rapids, MI 49506

Ed Tremba

The life of Ed Tremba from 1984 till present. In 1984 I decided to change jobs, leaving the University of New Mexico Engineering Research Institute and joining S-CUBED (not an acronym) in Albuquerque. There I continued working on understanding the large nuclear craters of the Pacific Proving Grounds. The two craters we focused on were OAK and KOA. In fact, I had the "honor" of being the DNA (Defense Nuclear Agency) representative responsible for the first boreholes drilled in a nuclear crater from a commercial drill ship, the Knut Constructor. USGS employees were responsible for doing the hard core (not always so hard, some were pretty soft) geology and the geophysics in the PEACE (Pacific Enewetak Atoll Cratering Experiment) Program (overwater geophysics in 1984, overwater drilling in 1985). Two of the best with the USGS were Bruce Wardlaw and Woody (Tom) Henry. The bottom line of the multi-year study was we were able to obtain data to define a crater history (development in stages defined by "geologic" and "geophysical" zones) that reconciled the earlier differences between the calculated craters and the measured craters.

Meanwhile, my oldest son Christopher began college, second oldest Todd struggled with his identity, and two youngest, Brett and Jason played their musical instruments. Wife Rose began to get interested in quilts in about this timeframe, and has continued to make quilts as well as to teach quilting at several quilt shops ever since.

During the early part of 1988, the DNA contractual dollars for supporting PPG crater studies headed for zero fast. (The rewards of answering a long-standing question are not always good.) A job search revealed that my best opportunity for future employment was at DNA headquarters in Alexandria, VA. My worst fears for high population density (including overcrowded highways and byways), wet weather, and housing costs were quickly exceeded. I've got a one hour plus or minus 15 minutes (one standard deviation from the mean with 90 percent confidence) commute to and from work traveling 23 miles in our automobile. On the other hand, my job appreciation is more than expected. Not sure what job description I can put in print, but I do like being a program manager and working with geologists on some aspects of my job.

Our in-house family size has shrunk to Rose, Jason (our youngest, now a senior in high school), and myself. We do not even have an official household pet (just a few critters that crawl along the woodwork).

We've kept in fairly close contact with Jack and Mariette Henderson. They tend to visit the Washington D.C. area in the spring, and we tend to visit the Ottawa area in the fall. Still try to do as much fishing as possible.

Still keep the warmest regards for the Geology Department (students, faculty and staff) at Grand Valley. I've still got some of that spirit flowing within my mind. Hope at least a little of it continues to be generated within the new geology students.

Edward Tremba, 13720 Santa Rose Ct., Manassas, VA 22111

1992 Geological Society of America Meeting
Cincinnati, Ohio, October 25-29, 1992

Once again Grand Valley's Geocommunity was well represented at the national G.S.A. and affiliated societies meeting. The department was well represented by faculty and spouses including Tom and Nina Hendrix, Dick Lefebvre, and Bill and Mary Neal, plus a contingent of seven students. This colorful latter group was led by Greg "Pop" Davis (Did he ever attend any papers?), seniors Warren "free books" Bates, Chris Miller, and Pat Wieske, and their understudies Eric Chatterson, Jason "the hat" Hunter, and Dave LaBrecque.

Alumni attendance was a near carbon copy of the 1991 meeting including Ann Bykerk-Kauffman ('80), Lauryl Lefebvre ('86), "Buck" Sharpton ('79), Ron Sheets ('82), and Al Werner ('79). (We missed you Dave Tuck et al..) Some of the faculty and students took the opportunities to visit with these alums at dinner on Monday evening and breakfast Wednesday morning. (Thanks, Tom, for inviting us all up to the Neal's room for drinks -- we waited and waited for you to arrive with the beer!)

Everyone agreed that this was an excellent meeting from the displays to the excellent breadth and quality of papers presented including the following alumni contributions:

- Dr. Ann Bykerk-Kauffman, Chico State University, California
"Geoworld: A Plate Tectonics Exercise for Historical Geology" (NAGT Geology Education Section)
- Dr. Virgil Sharpton, Lunar and Planetary Institute, Houston, Texas
"Fresh Crater Depth and Evidence for Crater Degradation on Venus"
(GSA Technical Session 15: Magellan, Galileo, and Planetary Frontiers)
- Dr. Ronald Sheets, Southern Illinois University, Carbondale, Illinois
"Characterization of Electrum at the Morning Star Deposit, California: Evidence for Gold Enrichment and Isochemical Remobilization in the Same Deposit". (Society of Economic Geology: Economic Geology)
- Dr. Al Werner, Mount Holyoke College, South Hadley, Massachusetts
"Using Darcy Flow Tubes to Teach Concepts of Ground Water Geology" co-authored with Steve Roof (U. Mass.) (NAGT Poster Session: Enhancing Geoscience Education)

An outstanding set of presentations, and great role models for students! Yes, there is life after Seminar, and continued improvement.

GEOLOGY CLUB NEWS

The GVSU Geology Club has sponsored many activities during the last year under the presidency of Adam Wygant. A club trip to Indiana brought back almost a ton of geodes which were cleaned and sold at the GVSU Christmas sale to raise money for more activities. Besides club parties, activities included sponsored trips to explore Indiana caves, collect minerals in the quarry at Rensselaer, Indiana, visit the Field Museum in Chicago, attend GSA in Cincinnati, and collect minerals in the UP.



GVSU STUDENTS AMIDST THE MAJESTY OF GLACIER NATIONAL PARK

GLACIER NATIONAL PARK FIELD TRIP, AUGUST 9-25, 1991

Pictured from left to right: Sharon Lucas, Pat Wieske, Chris Hackbardt, Adam Wygant, Ryan Ten Brink, Amy Hitesman, Warren Bates, Barb VanderLip, Jason Anglin, Pete Barton, and Eric Kimber. Also on the trip, but not pictured, were alumni Larry Austin ('74), his wife, Mary, and daughter, Stephanie, and students Cheryl Nelson, Melisa Christopher, Mike Rodgers, and Rich Holmberg. Norm Ten Brink was also accompanied by his wife, Shirley, and his son, Andy.

The following account of the Glacier Park trip was written by Melisa Christopher, a public relations major, who took only Norm's physical geology class, but was an enthusiastic and quick-learning field geologist. Melisa kept a journal of the trip, and submitted the following article to a local paper. Since the paper didn't print it, the Newsletter seems to be an appropriate place to reward her efforts.

GVSU's GLACIAL EXPEDITION
By: Melisa Christopher

Unlike many classes where students learn second-hand through textbooks and lectures, several GVSU geology students experienced their subject matter first-hand, by traveling to Glacier National Park in Montana. From August 9 to 25, 14 GVSU students and their professor, Norman Ten Brink, visited Glacier National Park, Mt. Rushmore, the Bad Lands, Devils Tower, and Waterton, Canada.

The expedition was part of a course, Regional Field Geology (GEO 280). Another 16 week course prepared the students for the August trip (Geology 399). Prior to the trip, each student researched everything about Glacier National Park including its history, climate, and land formations, resulting in a student-written field guidebook. During their research, the students saw pictures, read articles, and formed ideas of what the park would be like. Despite the research, reality exceeded everyone's expectations.

"There are no words to describe the majestic scenery that you see in the park. When you look at this place, you know there has to be a God, because no one could have made such a beautiful place", said Cheryl Nelson.

The environment of Montana is vastly different from what is found in Michigan. The most obvious differences are the mountains, glaciers, rock, strata, and glacial erosion. During the stay at the park, the students walked on Grinnell Glacier, which spans over 250 acres and is approximately 150 feet thick. Also, the students were able to see crevasses in the glacier caused by movement of the ice.

In addition to visiting Grinnell Glacier, other activities included a 14-mile hike, a 10-hour horseback ride in Waterton, Canada, a white water raft trip, and the study of roadside geology. At one observation site, the students saw a black bear and her three cubs. Other wildlife seen on the trip included buffalo, mule deer, mountain goats, and marmots.

While staying at the park, the students camped in tents and cooked outdoors. This is not the first trip of its kind to be sponsored by the Geology Department, and there will be more in the future. The entire cost of the trip for each student was \$250.



GVSU GEO-TRIPPERS AT BEAR LAKE TRAIL HEAD, ROCKY MT., N.P.

ROCKY MOUNTAIN NATIONAL PARK FIELD TRIP, AUGUST 9-18, 1992

Field trip participants are, from left to right, Norm Ten Brink, Bryan Keizer, Jon Mull, Jon Hofstra, Greg Davis, Chris Miller (front), Todd Feenstra (back), John Davis, Eric Chatterson, Suzanne Schmidt, Amy Hitesman, Dave LaBrecque, Angela Strong, and Jeff Totten. Mike Rodgers was also a participant, but is not pictured.

After packing the vans and trailers on August 8th, we finally headed west at 6 a.m. on August 9th in true "Rocky Mountain High" spirits. Our departure followed several months of planning and study, including individual research papers by each student, and the compilation of a "professional quality" (193p.) guidebook. Enthusiasm and anticipation were at a peak when we left, but two days of record high temperatures, with inside-van temperatures over 100, quickly tested our enthusiasm (and tempers). Whoever designed "15-passenger vans" didn't test drive them (or test the air conditioner) with 15 geology students and lots of gear packed into every square inch of space!

High expectations and spirits quickly returned once we actually reached Colorado. (Well, after setting up camp in the dark at 10:00 p.m., not everybody was yet in the best mood.) In any case, the Estes Park Campground, a private camp at the end of the road past the YMCA Camp, proved to be a very pleasant Rocky Mountain home.

GVSU Geology Mourns the Passing of James Zumberge

The geology faculty, staff, students, and alumni are saddened by the death of Grand Valley's first president, James H. Zumberge, a geologist of international prominence. As recently as 1991, Zumberge retired as president of the University of Southern California only to succumb to an illness on April 15, 1991 at the age of 68.

While at Grand Valley he recruited Johnny Lucke from the chairmanship of the University of Connecticut's geology department to start our department. Jim Zumberge also held a position in the geology department at Grand Valley and, when he was in Loutit, occupied Bill Neal's office. He was not able to spend much time teaching because of the major task that faced him to start a new college. After he left Grand Valley, the Zumberge Library, which houses many of his books on Polar Geology, was named in his honor.

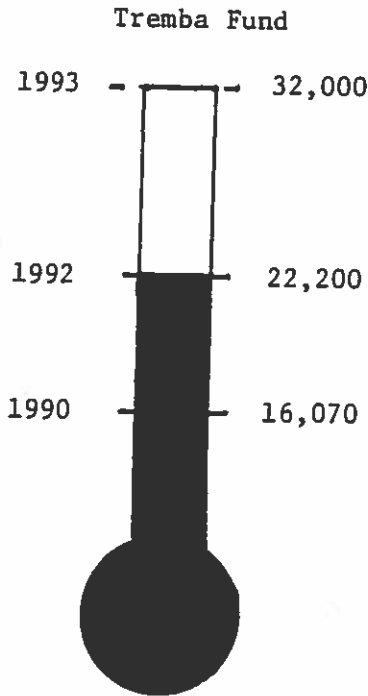
A fitting tribute to Jim Zumberge's memory would be if Grand Valley's Geology Department can live up to the mandate Jim gave Johnny when he brought him here to "build the best undergraduate geology department in the Midwest". Let's do it!

Science and Mathematics Centennial Lecture Series

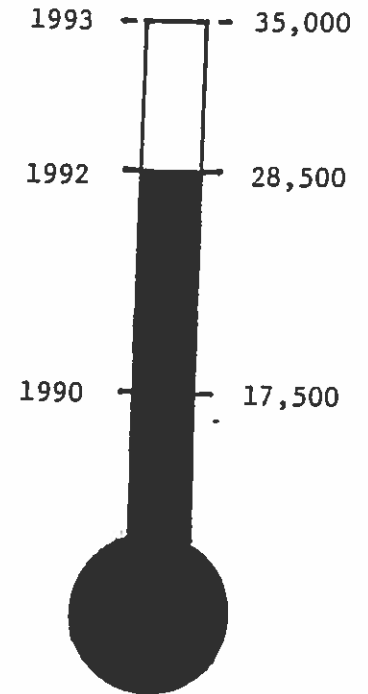
Tom Hendrix kicked off the first of a series of lectures given by professors in the Science and Mathematics Division with a talk entitled "Commotion About the Notion of Motion in the Ocean (Continental Drift - Plate Tectonic Revolution in the Geosciences)". Dean P. Douglas Kindschi initiated this lecture series with one lecture to be given each year as we approach the 21st Century. Each lecture will review the most significant development in a particular field of science over the past century. So what better way to start off than with a lecture on plate tectonics! So following dinner in the Kirkoff Center on October 19, Tom very nicely summarized the series of events that led to the development of the theory of plate tectonics. Tom did a great job, and all agreed that next year's lecturer has a tough act to follow!

GEOLOGY FUNDS

In 1990 when I began my present term as chairman, I reported that the Geology Development Fund had a balance of \$17,500, and the Tremba Scholarship Fund stood at \$16,070. I also set a 1993 goal of \$35,000 for the Development Fund and \$32,000 for the Tremba Fund.



1993 is almost here so it is appropriate to see how well we have done and how far we have yet to go. The "thermometers" show that the current (1992) balances are \$28,500 and \$22,200 for the Development and Tremba Funds, respectively. To reach our 1993 goals we need to raise \$6,500 for the Development Fund and \$9,800 for the Tremba Fund. This latter fund has been providing scholarships for geology students for 10 years. In that time over \$8,000 has been allotted to 21 students. The Development Fund will yield its first interest payment in 1993, and thereafter will provide money for equipment, supplies and travel related to faculty and student research.



I know that these are not the best of times economically, but if we all give a little, our 1993 goals can be reached. Won't you help?

Recent Contributors to the Department

Dan Abbott
Lawrence Austin
Mary Austin
Rhoda Banta
Jeffrey Bart
Mark Bishop
Jock Bliss
Archie Blood
Robert Brown
Thomas Butcher
Kevin Cole
John Dombrowski
John Freeland
Geos Consultants
Frank Goettman
Janice Graham

Ronald Green
Roger Haskins
Tom Hendrix
Monica Lack
Lauryl Lefebvre
Richard Lefebvre
Marlene Leistico
Nancy Mackiewicz
Susie Matthews
Muskegon Cty. Rock & Min. Club
William Neal
Suzanne Pearce
Angela Plainte
Monique Postmaa
Resource Mgt. Group
Thomas Seykora

Ronald Skrunch
Richard Stolarz
Mary Stuart
Gregg Swayze
Robert Tondu
Bruce Tweddale
John Tweddale
Lori VanderKam
Ingrid Verhagen
Dan VerWoert
Patty Videtich
Guy Waggoner
James Walters
Gregory Wilson
Allen Wygant
Janice Zilko

Other Contributions to the Department

Occasionally the Geology Department is a recipient of gifts from local individuals. These gifts are in the form of specimens, books, journals, and/or monetary contributions. Our thanks to all of these people and others who have made such donations over the years. These donations not only enhance the educational experience for our present students, but will be appreciated by students in generations to come.

Mr. & Mrs. Robert Beauvais
Lyndon Bell
Frank Goettman
Harry Hardenberg

Toren Klinge
Ethel O'Leary
Adna Underhill
Thomas Witherspoon

Our thanks to all of these people and others who have made such donations over the years. These donations not only enhance the educational experience for our present students, but will be appreciated by students in generations to come.



DON'T FORGET

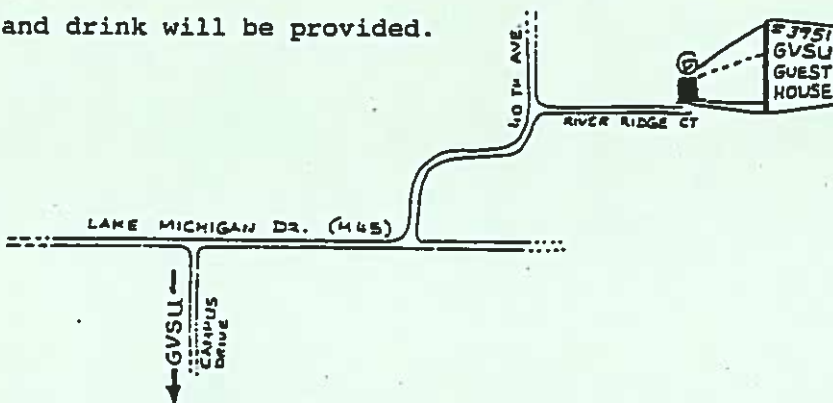
GVSU GEOLOGY CHRISTMAS PARTY

Saturday, December 26, 1992

7 - 12 midnight

University Guest House (Condo)

Come and share holiday cheer with old classmates, other GVSU Geology alums, faculty and students. Food and drink will be provided.



(Tear off & return to Bette Weerstra, Geology Department,
GVSU, Allendale, MI 49401

____ I will be coming to the GVSU Geology Christmas party

persons _____

____ Sorry, I can't make it to the GVSU Geology Christmas party.

Name: _____

Address: _____

ALUM NEWS

Larry Austin '74

2021 Valentine, NE, Grand Rapids, MI 49505

The Field Methods class visited Larry's field demonstration area this fall, and Larry provided input for an equipment grant proposal prepared by Professors Videtich and Cole. We continue to rely on Larry and AquaTech as an informal source for advice in the area of geohydrology.

Pat Bartnik '82

1847 Chester, Royal Oak, MI 48073

At last report, Pat's working in the Detroit area.

Tom Bee '73 (see Faculty/Staff Activities)

Steven E. Benton '88

2485 Fox Run, SW, Apt. 5, Wyoming, MI 49509

Working as hydrogeologist at Groundwater Technology, Inc. in Grand Rapids. Got Masters in Geology, August 1991 from WMU.

Mark Bishop '74

1092 White Pine Dr., SW, Grand Rapids, MI 49504

Mark and Jeanne continue to be active in GVSU alumni activities (Jeanne is on the Alumni Board). Bill Neal enjoyed a visit with Mark to look at a coastal property in Ottawa County with respect to coastal hazards.

Ann Bykerk-Kauffman '80

254 E. 7th Avenue, Chico, CA 95926

I'm still alive and kicking in my teaching position at California State University in Chico, having survived two major rounds of budget cuts. Teaching is continuing to be very rewarding, and I'm even starting to get good at it. I'm using cooperative learning and other hot new techniques, and having a ball. Mark is half way through his bachelor's degree in computer science; he's in the honors program and has been nominated to just about every honor society around. Best of all, he's really enjoying the chance to learn and grow. Alan is three years old now, and the light of our lives. He takes such delight in everything, he's a joy to be with. Right now he's obsessed with Batman, jigsaw puzzles, numbers (5 is his all-time favorite), climbing, playing catch, and writing his name.

My most recent publication is "How Faults Shape the Earth", which was published in the November issue of Earth magazine.

We are looking to fill a tenure-track position with an interdisciplinary geoscientist whose research interests include some aspect of environmental science. Ph.D. required; 12-unit teaching load (12-17 hours in the classroom per week). Join 11 other faculty in our department which encompasses a wide range of geosciences including geology, geophysics, atmospheric sciences, hydrology, and astronomy.

Chris Byle '77

608 St. Catherine, Ludington, MI 49431

I have recently opened my own office in partnership with Bob Shulz and others. While other environmental companies seem to be struggling, we keep increasing in clients and growing. It looks like 1994 will see the second generation of Byles entering Grand Valley as my daughter nears graduation and intends to seek education leading to a career in environmental law.

Blaine Campbell '86

24102 Schrivener Ln., Katy, TX 77493

Geophysicist with Arco Oil & Gas Company in Houston

Blaine is currently working Miocene trend exploitation in the offshore Gulf of Mexico. He is working as a member within an "asset management" team in co-owned fields with Arco, Texaco, Conoco and Oxy, which gives him plenty of opportunity to meet people outside of Arco and plenty of travel. He writes they "had a new addition to my family this summer. We now have 2 beautiful girls: Alexandria (4 years) and Victoria (4 months). Camille and I are doing great and may attend the Christmas party! I see "meathead" (Will Armstrong) and his family every so often. He comes to Arco to screen farmouts and we 'do lunch'."

Joe Chase '81

P.O. Box 247, South Haven, MI 49090

Joe is still single and works as an Investment Rep. for Edward D. Jones & Company in South Haven. He is quite active in the South Haven Maritime Museum.

Eric Christrup '74

5734 Lake Michigan Drive, Allendale, MI 49401

Eric and family attended the annual fall geology picnic at Tom and Nina Hendrix's. He has moved to Allendale (but avoids his neighbors---the Neal's), and continues to teach Earth Science at Coopersville.

Sally Coveyeau (Markley) '73

6 Brasch Blvd., Middletown, NJ 07748

My roommate from Grand Valley, Mary Clouse Malicki, came for a visit at our new home near the ocean in New Jersey. We hiked the dunes at Sandy Hook National Recreation Area and took the train to NYC for a Broadway musical. It was great reminiscing about Grand Valley, and we are wondering if anyone has the recipe for Bevis burgers?

Mark H. DeKruyter '83

12985 Roughy Drive, Wayland, MI 49348

In April of 1991 I left Fishbeck, Thompson, Carr & Huber, the engineering-based consulting firm located in Ada, for Envirollogic Technologies, a young, vibrant, state-of-the-art, up-and-coming environmental consulting firm located in Kalamazoo and Jackson. In the year and a half since the move, we've grown from 11 to 29 employees, expanded our office space twice and have taken on some very interesting clientele including Pepsi, Upjohn, Laidlaw, Harvard, and First of America Bank. Just last month we bought a drilling company, making ourselves a true full-service consulting firm. Yes, I have my own office, computer and two windows with a pretty good view of the local geese population. After a few months of commuting from GR to K-Zoo, I got bored and had to make a move. However, because I still have a lot of friends, family and roots in Grand Rapids, I decided to split the difference between GR and K-Zoo and move to beautiful Gun Lake. Although my first winter renting a house on the lake was a bit drab, the summer was fantastic. My neighbors (and friends), bought a very fast 260 hp speed boat so we spent much of the summer water skiing, knee-boarding, jet-skiing, swimming, fishing, motorcycle riding and resting at party island, the local handout for the upscale boating community. I also managed a few trips this year, including a spring Atlantic salmon fly fishing trip to New Brunswick, Canada, another salmon and bass fishing trip to eastern Lake Ontario, and a business/pleasure trip to Las Vegas, Nevada. I recently began the fall

hunting season with a four-day excursion to Munuscong Bay (Upper Peninsula) for the diving-duck opener.

Pam Dewey (Snyder) '89

9425 120th, Sand Lake, MI 49343

Pam is working as a geologist for Superior Environmental Corporation in Marne. Says "my ambition in life was to clean the world of its pollutants. To my dismay I discovered the extent of the problem. So I've been doing my part for the last 3-1/3 years. My first child was one in September and I am expecting the second one in April 1993. Until then I continue with my work on LUST sites. Recently I discovered one of them burned down! I would like to extend a big Hello, how ya been to my old classmates Molly H., Karen Y., Dave T., and Suzy V."

Jim Dexter '77

6506 Welch Lake Road, Grass Lake, MI 49240

Jim visited the department in mid-October and presented a seminar. He is senior hydrogeologist with Braithwaite Consultants. Jim reports that Dave Zeider ('77) is in Puerto Rico - the assumption is that he's working there.

John Dombrowski '73

34 Dove Street, New Orleans, LA 70124

I wish I had something really positive to tell everyone...but the fact of the matter is that the oil industry is facing some pretty tough times - at least domestically! Our industry continues to constrict. Congress has shut us out of the most prospective areas for exploration (west coast, east coast, Alaska, etc.), and more and more of our focus is overseas. The ramifications of this is that we continue to lose oil and gas related jobs. In the past 10 years it's estimated that 500,000 oil-related jobs have been lost here in the United States! Texaco has been mirroring the trend with layoffs in 1989, and now again in 1992. I don't mean for this to sound like I'm on my soapbox, but this not only affects those of us still left in the industry, but our economy as a whole.

On a brighter note - we're still alive and kicking in New Orleans, and have had great success here in the Gulf of Mexico. That is - until Hurricane Andrew swept through and paid a visit. New Orleans was extremely lucky. The eye passed about 70 miles west of the city and averted what could have been an even worse disaster than in southern Florida. There was a great deal of damage to platforms and facilities in the Gulf. Texaco was not as hard hit as some companies...but some of our production won't be back on line until the end of the year.

"Nawlins' is still a great town to visit, and I'm extending an open invitation to any Grand Valley types to come visit..we'll "pass a good time".

Larry Fegel '73

10601 Friske, Rockford, MI 49341

My family is growing rapidly (in height not in number). Mary Kay and I have four children: Matthew, 14; Kristina, 12; Michael, 10; and Jonathan, 6 going on 16. I was really happy that Matthew could go on the "Rock Cycling" trip that Dick Lefebvre and I offered this past August. That trip was the highlight of my summer. We had 19 people studying geology form mountain bikes across the U.P. I also spent a good share of the summer adding a garage, breezeway, and porch to the house. I think my

epitaph will be "He is finally finished working on his house." My job is progressing well, coordinating the K-12 science curriculum and conducting inservice training for math and science teachers. See you at the Christmas party.

Al Feyen '72

Al visited the department in August and plans to expand his activities into the environmental business realm. His real estate business led him to purchase a country home in the Jamestown area where the Feyen family now resides.

Ken Ford '90

5386 Henry Street, Muskegon, MI 49441

Ken is finishing (has finished?) his Master's degree at MSU in vertebrate paleontology. He presented the results of his thesis in a GVSU seminar last spring (a Pleistocene amphibian/reptilian fauna, Nebraska).

John Freeland '82

1410 7th Street, N., Fargo, ND 58102 Thanks for the letter. I am happy the GVSU Geology Department added a geochemist, even though we've lost one from North Dakota. I'm currently working on a Ph.D. at NDSU's Department of Soil Science. My dissertation involves a contract we have with the U.S. Fish & Wildlife Service. I'm studying soil genesis and sedimentation rates in prairie pothole wetlands.

'92 has been a busy year. After finishing my Masters at the University of New Hampshire, I started at NDSU in January. Had a big field season over the summer, flew back to New Hampshire in August to get married, and my wife, Leslie, and I are expecting our first child next May. Have a healthy, prosperous New Year.

Dennis Gebbin '69

9932 Perry Street, Zeeland, MI 49464

The geology faculty extends a public "thanks" to Dennis for serving as a representative on the department's Faculty Selection Committee.

Steven R. Grodecki '75

Rt. 3, Box 110, Chickasha, OK 73018

Petroleum geologist is still on my letterhead, but its H & R Block that's providing my livelihood. My wife, Sandra, and I own the Chickasha franchise and business is growing so much that I've been ignoring the oil field lately. I try to keep fairly current thru AAPG and OCGS, and of course, the Geonewsletter. Lapidary is my new hobby this year - if I can't describe rocks for oil companies, I'll at least polish 'em up and make them pretty. The seasonal nature of our business allows us to spend a lot of time with our daughters, Melanie, 8 and Elissa, 3. Our latest field trip was to Virginia Beach last summer to observe shoreline processes, and to search for garnets, amythest and amazonite at the Morefield Mine, Amelia, Virginia. I don't anticipate publishing the results of the trip, but a great time was had by all.

Roger Haskins and Sue Markus '73

2235 Armstrong Lane, Reno, NV 89509 3821

Here's an update on the Haskins/Marcus household. Since last fall, Genny has reached the age of three years and 3 months physically and emotionally. Intellectually, she is approaching 4-1/2, and we are the

recipients of that intellectual aspect. Its fascinating, and occasionally, frightening. But, we will persevere.

Sue is still the Minerals Information Officer in Reno the USGS. Life has been hectic for her, with the communication liners beginning in Reston, VA with USGS Headquarters, going through Menlo Park, CA (her administrative support route?), and ending in Reno, NV. Its been frustrating for her, but she will survive, or make Reston a beneficiary to her office.

In May of this year, I returned to my previous Headquarters position in the Bureau's Mining Law Administration program. I have National level oversight and policy lead on Mining Claim Recordation (mining claim processing and titles), mineral patent adjudication (legal beagle title verification for patent), mineral examination of mining claims (does this claim have an economically extractable mineral deposit in today's market), and reclamation bonding policy (is your letter of credit worth the paper its written on?). This year was a year for travel, both official and vacation. The Bureau maintains its National Training Center in Phoenix, AZ. I am a frequently requested instructor for mining law, mineral adjudication, and the case law of the Federal Courts and the Administrative Course of the Interior Department. Interior, due to its special status as overseer of all public land and mineral matters, has had judicial authority from Congress since 1812, when the General Land Office was created (which later became the Bureau).

I co-author a legal column in the California Mining Journal (a middle class publication for the average working minor or claim holder) with Chuck Weller, a local attorney. It's been fun. Chuck writes on matters of deep legal import. I write on how to proceed with various actions with the Bureau, where the Department has been administratively in its interpretation of the public land laws and regulations, and how to get the most mileage out of a particular form of permit or application.

To pacify Susan, we had travelled to Tahiti (in April), and twice to Hawaii since we have been here. Plus side trips to Oregon and California as weather in the high Sierra's permits. We will see Larry Austin ('74) when he comes out for the AIPG national meeting at lake Tahoe (I am the Nevada AIPG section treasurer this year, so I get to pay all the bills!)

Stop in anytime, the door is open for GVSC Geology compatriots.

Greg Kimball '78

1716 121st Ave., N.E., Blaine, MN 55449
Project Manager/Hydrogeologist for Delta Environmental Consultants, Inc.,
St. Paul.

All is well, work is busy, the kids (3) are growing. Laurie (wife) is chasing our two year old around all day which keeps her in shape. I have my hands full at work with a project that just after finishing the investigation, and building a four recovery well remediation system, lost 175,000 gallons of new petroleum product! Just another one of life's little challenges. Sometimes I wish I was back in school, off on one of the GVSU Geology field trips.

Lauryl Lefebvre '86

3316 Pine Meadow Dr. S.E., #303, Kentwood, MI 49512 3032

I moved back to the Grand Rapids area last spring to work for WW Engineering and Science as Project Hydrogeologist. Several of my colleagues at WWES include GV alumni Lori VanderKam, Mike Potter, Jeff Sutherland, Julie Beaton, Dennis Gebben, Craig VandenBerge, to name a few. I'm enjoying the work and being close to family and Lake Michigan. I look forward to reading the forthcoming newsletter to discover the whereabouts of other wandering geo-soul mates.

Nancy Mackiewicz '80

2113 Westview Dr., Springfield, IL 62704

Hello everyone! Life just keeps plodding on. Big news is that Roger and I married this summer. We decided a seven year courtship was long enough. It was said it will be a wedding remembered. It was outdoors and unfortunately, the day was the hottest and muggiest of the year. Fortunately, the unexpected torrential downpour cooled it off very nicely. Unfortunately, the rain came when I was 100 feet from the limo and everyone was standing, yes, outside in the park, far from their cars. I ran (as best as a bride can in a fitting dress) and dove sideways into the limo. Fortunately, unknown to me as I became hysterical thinking everyone was getting soaked, they all squeezed under an overhang and no one (including me) got wet. Afterward, we had a rainbow! Despite all the warnings, Roger and I agree married life seems no different. Besides that, I am still working for the same company, going on my 4th year. They keep growing, and we moved into new offices mid-October. They are very nice and very comfortable. I work mostly on LUST (leaking tanks). At times I think I'd like to work on different projects, however, I enjoy them, and I handle our largest client and our major sites. After working for the State, I like being focused.

It was a kick to read an article in Science this summer where they interviewed Buck for his expert opinion on..oh, I think it was a new twist on the big bang theory. And I thought, "Is this the same guy that chased Linda Martin and me around the lab in a black raincoat and rubber gloves?"

AnnMarie Mackinnon '90

2628 Maple Creek, Byron Center, MI 49315

AnnMarie is Sanitarian for Allegan County Health Department.

"I've started to dig some roots here in West Michigan - I'm a homeowner in Byron Center and working for the Allegan County Health Department in the Environmental Health Division."

Lynn (Wolfe '79) and Dale ('80) Mason

2333 No. 31st Place, Phoenix, AZ 85008

Lynette is a hydrologist for the U.S. Forest Service working in the Tonto National Forest. She is working on various projects involving the Tonto National Forest watershed. Major projects include the rehabilitation of the Dude Forest fire area and completing instream flow applications for forest streams.

Dale is a hydrologist with the Modeling Section, Arizona Department of Water Resources working on several groundwater modeling projects (Yuma area and Tucson) as well as maintaining data bases used in modeling and other projects under development.

Lynn and Dale have two children: Kristin, 10 and Aaron, 5-1/2.

Michael Matthews '70

P.O. Box 354, Hixson, TN 37343

Environmental Engineer/Geohydrologist, Signal Environmental Services, Inc.
419 N. Market, Suite 200, Chattanooga, TN 37405

As of January, 1992, I am part owner of Signal Environmental Services, Inc. We are hazardous waste remediation contractors specializing in removal actions and site remediations. We have 13 employees and still growing. I am now an Adjunct Professor at the University of Tennessee (Chattanooga), and at Chattanooga State Technical Community College teaching pollutant transport and waste management.

Dick Page '71

#98 RR #2, Gormanville Rd., North Bay, Ontario P1B 8G3, Canada

Currently working in Ontario and Quebec, but major upcoming (1993) reorientation of exploration funds will likely involve transfer to Central or South America. Should be something altogether new and exciting! Spouse (Chris) will likely cross the Andes from Chile to look for early Mesozoic dinosaurs in Argentina. Hopefully this will not start a border war. More news soon. (Dick and Chris visited the department in November.)

Ginny Peterson '80

1248 Summerville Avenue, Ottawa, Ontario Canada K1Z 8G5

Our big news is that my husband, Jon Burr, and I have both completed our Ph.D.'s and we are both employed in Ottawa. With no small amount of help and encouragement from Jack and Mariette (Henderson), I have a post-doctoral fellowship at the Geological Survey of Canada and Jon at Carleton University. We feel very fortunate, not only to be employed in good positions, but also to be in the same place. I am working with Eva Zaleski, from the GSC, on a high-grade mineralized greenstone belt in the vicinity of Manitouwadge, northwestern Ontario, a small mining town about 100 km north of Lake Superior. Our focus is detailed mapping, structure, and petrology. We had a great camp setup. We were able to rent the local ski lodge for an office and then set up tents outside for sleeping (the hardest part was finding a flat spot for a tent on the ski hill!). A mother bear and her 3 cubs took a liking to our camp and provided a bit of excitement, but fortunately no problems. I was in the field from early June until mid-September at which time Jon and I moved our belongings to Ottawa. Two weeks later I had to lead or co-lead three field trips in Amherst as part of the New England Intercollegiate Geologic Conference (NEIGC), so I am just beginning to get settled here. Jon is starting a project in the Bancroft area, a few hours west of Ottawa, looking at a major shear zone boundary in Grenville-age rocks. He will be doing structural analysis and geochronology with Sharon Carr. He started field work in late summer and will keep it up until the snow makes it impossible (which could be soon!). We are actually looking forward to a good snowy winter and lots of cross country skiing. My office looks north toward the Gatineau hills with many miles of great ski trails.

James W. Schulz '77

315 N. Fifth Street, Grand Haven, MI 49417

I continue enjoying the variety of work I do with the U.S. Army Corps of Engineers. Last year I was involved in projects ranging from dredging and beach nourishment to the rehabilitation of breakwaters in Holland and the construction of a fishing platform in Charlevoix. Our office is gearing up to clean up of some of Michigan's top superfund sites located in Muskegon. I will be working on building a groundwater treatment plant

this fall and a landfill next spring. I am currently building an addition on my 100 year old home, and continue being very involved in antique cars, bicycles and toys.

Robert L. Schulz '75

315 N. 5th Street, Grand Haven, MI 49417

I became an owner (Vice President/Senior Geologist) of Westshore Engineering and Surveying, Inc. 1-1/2 years ago, and I'm the manager of the Environmental Department, supervising 14 employees (including Chris Byle ('77) and Judy Sorvori ('82)). We provide hydrogeological and remedial action services for landfills, oil well companies, UST sites, etc. The big news is I'm getting married! Wedding set for Feb. 20, 1993 to Barb Dahlstrom of Grand Haven. I'm very happy, finally found the right girl. Any grads can contact me for job interviews.

Greg Smith '76

2971 34th, Allegan, MI 49010

I am starting my third year in my current position (Assistant High School Principal). My wife, Deborah, and I have recently built a home on 18 acres adjacent to the Allegan Forest. We have two children: Lauren, 5 and Nolan, 2, and expecting the arrival of number 3 in March.

Rick Stolarz '80

2050 Oak Shores Drive, Kingwood, TX 77339

Rick and family visited the department this past year. He continues to work Gulf prospects for Oryx Energy.

Molly Stuart (Holden) '85

9819 Walnut #J-204, Dallas, TX 75243

(Letter received 12/91) My big event this year was my marriage (Sept. 7) to Jeb Stuart - yes, same family of the Confederate general; and no, I haven't turned traitor - I'm still loyal to the Union (my great-grandfather's second cousin was Ulysses S. Grant - no kidding!). We honeymooned on Mackinac Island - all my years in Michigan and I had never been there! What a great place for a quiet vacation (post-tourist season, of course!)

I'm still with CH₂M Hill learning the ropes of the consulting biz. Kind of a rough year for our office, but we're looking forward to some exciting work next year. And, I've got some travel planned to some of our other offices (possibly Anchorage this summer) for a little variety!

Loyal Suntken '75

P.O. Box 670, Brighton, MI 48116

As most everyone knows, the oil business as far as exploration in North America goes is basically kaput. I have come full circle in some respects. My first job after graduation in 1975 was working in the environmental field on an environmental impact statement (EIS) in NW New Mexico (paleontology survey with Guy Waggoner '76). My second job was also on an EIS in NW New Mexico and then for three summers I was an assistant instructor at UNLV's Geological Field Camp. In 1977 I began working in oil and gas exploration (with a leave-of-absence in summer of 1978 to work at UNLV) based out of Texas. I worked 9-10 years with the same company before it moth-balled its equipment, then worked for approximately 3 years in data processing (seismic) for POI (Texas). Finally wised up to the near death of the oil business and attended a graduate credit program at Oklahoma State in groundwater hydrology and

contamination in summer of 1990. (I should have gone on for an MS but I had to make a living). I completed the circle by ending up back in Michigan and working for an environmental company (Plug - Superior Environmental Corporation) in the fall of 1990. My advice to ambitious geology students - study biology, chemistry and environmental courses in addition to geohydrology, geochemistry and the basics. Remediation of contaminated areas is a good field to be involved in now and for the future. Since returning to Michigan I have become more deeply involved in antiquing, with some great times with the Neals and Tom Bee ('73). Tom and I have been more active in seeking out interesting mineral specimens and great old books in mineralogy/exploration, etc. for our own personal collections and of course, for resale. Tom's many years in the business has given him a sharp eye for hot items (good deals).

Greg Swayze '82

24 S. Holman Way #4A, Golden, CO 80401

Finally was hired as a permanent employee to the USGS this summer, of course only after I filed a formal grievance. Seven years as a full time temporary was enough. The administration is making it tough to do science at the USGS, but as long as I can stand it I will continue. Post divorce blues are over and life is sweet once again with many exciting trips throughout the southwest and a new romance. About another year and a half before my doctorate, can't wait to spend my weekends hiking without a worry!!

Publications on scapolite lead to a new discovery of spectro-geothermometry using alunite and multi-spectral imaging. Keeping fingers crossed for a successful Mars observer launch and data return from the TES mid-IR spectrometer. I'm going to look for mineral deposits (yes, I'm still an environmentalist.) Also am working on global change programs (EOS) and cryptobiotic crusts in cooperation with Canyonlands National Park.

Kurt Thompson '89

1507 Carlton NE, Grand Rapids, MI 49505

Some of us see Kurt regularly on our visits to Grand Valley's Water Resources Institute. Kurt is the "answer man" for ground water resources in West Michigan.

Wendy Thompson (Bierlein) '77

10305 Maple Drive, Pasco, WA 99301

My husband, Phil, and I have two boys, Caleb, 11 and Jordan, 5. We live in the Tri-Cities which is currently a "boom-town". Phil builds houses and I'm working in the environmental characterization and cleanup activities at the Hanford Site. DOE has changed the mission of the site (560 sq. miles) from weapons production to environmental restoration. As a result of past practices, the site has over 1500 waste disposal sites predominantly "mixed" waste problems. Our group is involved in RI/FS, ERA, IRA and RCM studies. We just completed a characterization project of a soil disposal site with collection of 300 MR/hr samples.

I've been doing a lot of interviewing lately for hiring personnel into our group. We are always looking for additions to the group.

Dave Tuck '86

305 Colleton, Aiken, South Carolina 29801

Dave finished his Ph.D. at Princeton University and has moved to Aiken, South Carolina. We're confident that Dave will solve the ground water contamination problem for that area!

John B. Tweddale '85

1125 Pleasant Run #803, Wheeling, IL 60090

Greetings to all faculty, alumni, students and friends of the GVSU Geology Department. I regret that I will not be able to attend the holiday party this December, especially since I've had little contact with alums this year. Fortunately, Tom Hendrix and Larry Austin have kept me informed! ERM-North Central recently celebrated its 10th year, and we have been fortunate to remain extremely busy during the economic downturn. This year I finally managed to get a brow-bag luncheon seminar series off the ground to share the training and experience of our technical staff.

I've pretty much adjusted to suburban Chicago life, but Jenina has yet to convince me that "the city" is a suitable (or sane) place to reside. Especially after vacationing in Montana/Wyoming/Alberta and New Mexico/Arizona! I would welcome calls from anyone interested in coming to this side of the lake. Although ERM tends to hire persons with a Masters degree and some experience, I may know of some other leads.

Lori VanderKam '86

4427 9th Street, Wayland, MI

In April, 1992 I went to work for WW Engineering and Science after working for Aqua-Tech Consultants for almost six years. My husband, Jeff, is recuperating nicely. He was in a motorcycle accident in June. Luckily he came out of it with only a broken leg.

Renee Varin Potratz '84

7241 W. Alder Avenue, Littleton, CO 80123

Married Ron Potratz in 1988. Now working as Administrative Contracting Officer, DCMAO Denver (DLA), in Englewood, Colorado.

Ingrid Verhagen '82

1251 Juliet Avenue, Saint Paul, MN 55105

Hydrogeologist, Minnesota Pollution Control Agency, Ground Water and Solid Waste Division.

I got married in March, 1992, to Robert Wojcicki, a medical technologist supervisor who works for the Red Cross. In September we traveled to the Netherlands and Western Scotland. We bicycled in Western Scotland and saw some incredible outcrops along single track roads. Very inspiring and brought back memories of some of my undergrad geology trips. In November we plan to spend some time in San Francisco so I hope the big one doesn't decide to hit.

Patty Videtich '76 (see Faculty/Staff Activities)

Guy Waggoner '76

1646 Clark Street #201, Honolulu, HI 96822

My research endeavors in the Mesozoic Pacific continue to provide surprises. The oceanic crust beneath the Hawaiian Islands proved to be 25 Ma older than the "best guesses". The role of catastrophic landslides in sedimentation processes in the Pacific Basin has proven to be of a much greater scale than I would have expected (i.e., up to 1500 Km). I will

follow up on my current work on seamounts at 18°S on the East Pacific Rise, with another oceanographic expedition next spring. Exploration of the other Hawaiian Islands continues to occupy my vacations.

Dick Lefebvre's visit to Hawaii was a great opportunity to catch up on what has been happening in the Geology Department over the past 16 years (wow!!). Sorry we weren't able to find more mantle xenoliths at Salt Lake Crater.

Mark Wallinga '84

172 27th Avenue, N., St. Petersburg, FL 33704

Mark visited the department in October. He works for Delta Environmental Consultants, Inc.

Jim Walters '70

Dept. of Earth Science, University of Northern Iowa, Cedar Falls, ID 50614
Spent the summer in Alaska working on permafrost features in the Tangle lakes region along the Denali Hwy. Also spent some time working on a project started in 1989 on the hydrology of the Tanana Flats south of Fairbanks. In between these 2 projects, my wife and kids came up and we spent 2 weeks vacationing.

Al Werner '79

2 Silver Street, South Hadley, MA 01075

The past few years have left me spinning. After moving here in 1988 we had a child (Bjorn, now 4 years old) and two years later a divorce (divorce was much more difficult!). I won't bore you with the details. Bjorn is a great kid and as a single parent, my respect for single mothers increases exponentially!!! Life has also dealt me a few gems including a couple of research grants - one from the NSF to continue work that I did with Norm way back when. As I tell my obnoxious brother-in-law, "I get \$93K to get some mud from Alaska, and look at it" I think about those late night study sessions in 118 from time to time, and wonder how the gang is doing. Bravo Patty for making it back!

Greg Wilson '83 (see Faculty/Staff Activities)

Rolf Woerns '70

61 Windy Ridge Drive, Kitchener, Ont. N2P 1N7

Received a short note from Rolf last year.

It has been quite some time since my last communication with you. I have been living in the Kitchener-Waterloo area (Ontario, Canada) for the past 18 years. I am married with 2 daughters aged 11 and 8, both with a keen interest in rocks. After graduating in 1970 I have lost touch with my fellow geology graduates. I am a public school teacher but still keep up with the latest geology news and through courses at the University of Waterloo. It's great to hear the whereabouts of some of the 1970 alumni through the fall '90 Geonewsletter. Wow, how Grand Valley has changed. Many fond memories.

Jim Zylstra '92

Jim moved across campus to the laboratories of the Water Resources Institute.



Piecing the bones together

Grand Valley State University Prof. Norman TenBrink takes a photograph while Adam Wygant and assembles bones found in Hart and fellow GSVU student Brian Barton of Hart, looks on. The bones turned out to be from horses.
Daily News/
CHUCK STAFFORD

HOW MANY THINGS
ARE WRONG WITH
THIS ARTICLE?

'Ancient animal' bones belonged to a horse

**By CHUCK STAFFORD
Daily News Staff Writer**

HART - A discovery of bones had people here thinking maybe the remains of an ancient animal had been found, but the final determination turned out to be a horse of a different color, or more accurately bones of horses of undetermined colors.

Dunn's Home Improvement Center employees of Hart, Paul Weirich and

Mike Morningstar, were loading dirt behind the high school around noon Monday when a dirt bank gave way exposing several large bones.

The pair gathered up a half dozen boxes of the bones, took them back to the store and notified the archeological department at Grand Valley State University.

Several large pieces appeared to be leg bones, some measuring three inches in diameter. Also found were ribs,

hoofs, and parts of a jaw bone that measured nearly 15 inches long with teeth at least one inch in height.

Professors Norman TenBrink, William Neal, Thomas Hendrix along with Assistant Professor Patricia Vidulich and a group of geology students from Grand Valley State University went to the site and dug up several more bones to help identify the animal.

After working it for some time, they determined that the bones were from

large horses. Further investigation revealed that the area was a former site of a farm where silver fox were raised.

Ralph Fenton, of Mears, recalled the former fox farm and said it belonged to a Doris Meyers and that Meyers raised silver fox there more than 30 or 40 years ago.

"I don't know about the bones," Fenton said, "but they could buy horses in those days for as little as \$5 or \$10 and feed the meat to the fox."