

WHEATON GEOLOGY

CONTACT

A blessed holiday season to you all! At present there is plenty of news to keep two issues a year coming to your mailboxes. Things are changing so quickly that it is difficult to describe our condition in any complete way. Most of the news is encouraging, but we must continue to ask for your prayers and other support for Wheaton Geology.

There are many challenges that come along with revitalization. Now that we serve a sizable and growing "family" of geology majors as well as an abundance of gen. ed. students, the need for a third full-time faculty member is at its greatest. Although I initially thought that more faculty would be essential in recruiting majors, it is more apparent now that an adequate geology faculty is necessary to cover the demands of a healthy program. ~~It is now also apparent that for all these years Geology has functioned within obviously inferior (relative to the other science programs) facilities. This too should change in time.~~ *We will face additional facility needs as the program expands.*

The greatest alteration to third floor Breyer Hall is in the occupation of an office by our new brother and comrade, Dr. Stephen Moshier. Below Steve introduces himself fairly well, but in order to evade his humility, I must give a biographical preface. After only his first Wheaton semester, it is already obvious that Geology's blessings are multiplied. Steve has shown himself as skilled instructor, clever scientist, good friend, devoted husband and father, and man after God's own heart. He has even improved the appearance of our little sanctuary with some house cleaning and reorganization of the geo-clutter. As you will read below, Steve and I have some developing plans for major curriculum change. Our plans for the near future include contributions (if the dean allows) from Jerry Haddock and the continuation of a visiting instructor for our introductory labs.

Continue on and you will not only meet Steve, but also learn about the other changes, various program activities and the impressive cadre of Geology and interdisciplinary majors at Wheaton.

FACULTY NEWS

THE STORY OF MY LIFE.. PART I.

Stephen O. Moshier

HOMETOWN: Corning, New York

EDUCATION:

B.S., Geology ('77), Virginia Polytechnic Institute and State University

M.A., Geology ('80), S U N Y - Binghamton (Paul Enos, advisor)

Ph.D., Geology ('87), L S U, University Alumni Fellow (Clyde Moore, advisor)

PREVIOUS WORK:

Petroleum geologist ('79-'82), Mobil Oil Corporation, Dallas, Houston

Assistant Professor of Geology ('86-'91), University of Kentucky, Lexington

FAMILY:

Carol Campbell Moshier: loving wife, an RN, BSN by profession, currently at home.

Joshua Campbell Moshier: 5 1/2 yrs., loves to draw, watch Duck Tales on TV.

Zachary Stephen Moshier: 1 1/2 yrs., can say NO, EAT, COOKIE, MAAMAA and DAADEE.

God has done some wonderful things along the winding road to Wheaton College. God has used opportunities in my educational and professional experience to reveal himself and "grow me up" in the faith. Indeed, the beginnings of my life as a Christian and a geologist reach back to almost the same point in time, when I was a college sophomore with a mountain of questions about what it meant to be a "born-again Christian."

In the spring of my senior year of high school, my father died after several months of battling cancer. Before his death, my parents had become part of a prayer group and had made several trips to faith-healing crusades in another state. It was my first exposure to "born again" faith. I remember my Dad telling me that he had never really believed in God before, and how important his new relationship with Christ was to him. For a year I watched these things and "pondered them in my heart."

I went off to VPI to become a geologist and someday, hopefully, study....moon rocks. On the very first day I met my first Christian friends (considering the size of the dormitory swarming with "pagans," this was no accident). They encouraged me to read my Bible and took me to some "campus Christian" meetings. Many of those students seemed so emotional, like the good folks that prayed with my parents. I guess I was afraid of what I might become if I joined them...that I might lose control...that I might feel different...forever. Besides, nothing was more important to me than becoming a geologist. So, for another year I watched these things and "pondered them in my heart."

I also had questions about what these Christians believed about science and geology. Back home, one of the "praying friends" had given me a book that absolutely floored me. The Remarkable Birth of the Planet Earth by the creationist Henry Morris boldly called true believers everywhere to reject everything I was learning and wanted to devote my life to study. I was quite unconvinced by his arguments and angry over his insistence that "secular" geology was evil and atheistic.

In my sophomore year I learned that my mineralogy professor was a believer. There was no questioning his credibility as a scientist, either. I figured that he could straighten out this creationism dilemma for me. Professor Paul Ribbe urged me not to worry so much about what some Christians believed (or insisted) about geology. He was, however, very interested to learn about my experience in faith and whether I had a personal relationship with Jesus Christ. He invited me to attend his church the very next Sunday. Over the next several weeks I was finally presented with a coherent gospel message. Much of what I had been "pondering in my heart" began to make sense. Furthermore, I was convinced that I could not succeed in my major in my own strength. One Sunday afternoon I prayed to receive Christ at Dr. Ribbe's home. As I got to know Paul Ribbe, I learned that he received his undergraduate education at Wheaton College.

I wish I could say that I was immediately transformed, but that was not the case. I was too much "walking in two worlds." Geology and personal relationships came first. At SUNY Binghamton, I finally committed myself to group Bible study and prayer within InterVarsity Christian Fellowship. In late '79, after completing my thesis on Cambrian carbonates in southeastern Pennsylvania, I moved to Texas to work for Mobil Oil (I had given up on the moon rock idea long before). A Christian at work invited me to the Southern Baptist Church that I soon joined, where I enjoyed the benefits of good teaching and the fellowship of lots of other young and single professionals. I continue to cherish the lasting friendships forged there with a few Christian men. I started reading the works of C.S. Lewis, John Stott and Francis Schaeffer.

Those were the oil boom days and big companies were lavish in their training of new "explorationists." I was sent to North Sumatra, Indonesia for 3 months to "sit wells" offshore and help with lease evaluations. I met two missionary families with Overseas Missionary Fellowship, who demonstrated to me what it means to be dependent upon God and trust in his promises. I joined another great SBC church when I moved to Houston. One highlight there was participating as a counselor in a Billy Graham Crusade at Rice Stadium, my first experience in personal evangelism.

Another Houston highlight was meeting my wife. Carol and I were fellow officers in our Sunday school class. After weeks of effort her friends finally convinced her to go out with me! We were beginning to date when I made the decision to return to school for a Ph.D. I wanted to develop more expertise in carbonate diagenesis and reservoir properties, so essential in Enhanced Oil Recovery. She must have been crazy to get involved with someone who was about to leave town and a great job! But after my first semester at LSU, we were married and she joined me in Baton Rouge.

My dissertation topic was microporosity in micritic limestones, with special attention to reservoirs in the Mideast and Indonesia. At LSU, I frequently met with Christian faculty, and was introduced to the American Scientific Affiliation. I was delighted to learn of, and

subsequently join, this group of evangelicals who were dedicated to constructive dialog between faith and science. That's also when I started reading Christianity Today. This is significant because it would be hard to miss the frequent references to Wheaton College in ASA literature and CT.

Near graduation, the oil company wanted to know when I was coming back. This was interesting, since they were laying off so many geologists! My original intent was to return to the oil patch for a few more years and then teach, but times (and the economy) had changed. There were also several tempting advertisements for academic positions. The importance of Christian faculty in secular higher education was very clear to me, and so seemed God's leading in that direction.

I accepted a tenure-track position at the University of Kentucky in Lexington. It is one of the nicest places we have ever lived, and we found great friends at our church. I enjoyed working with many of the geology faculty. Opportunities to minister to college students included teaching Sunday school and association with the Baptist Student Union as faculty advisor. Professionally, I came to find it less satisfying. It is sufficient to say that I left a struggling department. In the summer of '90 I attended the annual ASA meeting. It was my first opportunity to meet faculty from Christian schools, including geologists. It was a tremendous experience. On the drive back to Kentucky, I told Carol that if a place like Wheaton College had an opening, I would apply for it.

Within a month, Geotimes carried the Wheaton announcement for a new geologist, to which I eagerly replied. What a blessing to be here, where students and faculty honor our Creator, uplift one another in prayer and actions, and seek to use our scholarship to advance His kingdom.

My goal is to join Jeff in making this an exceptional undergraduate geoscience program. We already have exceptional students. We do need some better equipment and facilities, but there is enough here to get the job started (actually more than what I had expected!). With more emphasis on analytical methods, computer applications and good-old-fashioned field experience, we will continue to send forth geoscientists and educators with Christian hearts and minds.

Dr. Haddock--

I really like the work schedule that comes with being "in retirement." If anything, I'm even busier than before. Among the ventures going are a volunteer job as Financial Secretary for College Church which is well into a seven million dollar building program, and a venture collaborating on a sizable genealogical work for the Haddock family. Just for variety, I got to go elk hunting in Oregon with my three brothers and some of their families in November. We have meat

in the freezer. It was the first time in thirty years we've all been together on a hunt.

Maybe retirement isn't quite the word for it. I'm making plans for a spring break field trip to the Southern Appalachians. There are plans afoot for me to teach a couple of weeks in the Black Hills this summer, then a Mineralogy course next fall. Somewhere along the way I want to organize the materials in the attic so Jeff and Steve will have some idea of department material resources.

I feel my coming to Wheaton was at the Lord's calling. I was all set to finalize going to the University of Peshawar in Pakistan under the exchange program they had with Washington State College. On the day I was going to the exchange office to finish the arrangements I stopped by the post office for mail. The letter from Don Boardman asking me to come to Wheaton was in my mail box. I was overwhelmed by a sense that this was what the Lord wanted me to do. When our Lord performs miracles it is often a matter of critical timing.

My first year at Wheaton College was as a one-year replacement for Don Boardman while he took a Fulbright Scholarship to Pakistan. Then Doug Block went to North Dakota to finish his Ph.D. At long last my "year" was up, so I retired at age 62. Looking back, I'm still convinced that this is where the Lord wanted me to be. I'm happy to say the department is in capable, younger, more energetic hands. The future looks good.

Thirty years have seen a number of up and down cycles in the oil patch and in the number of geology majors. Today there is a major change in job opportunities with much more emphasis on environmental issues. Jeff Greenberg will be telling you of some of the course changes and modifications this calls for.

Paul Wright, former chairman of the combined Chemistry and Geology Departments, has volunteered to put together a directory of Wheaton Geology majors. He'll be in touch with all of you soon asking for a lot of information, so get your resumes ready.

Even as I contemplate what comes next there is a flood of memories of each of you. Most of them seem to involve field experiences on spring field trips or in the Black Hills. These thirty years at Wheaton have been a rich experience, and the best is yet to come.

Dr. Greenberg--

An amazing amount of time and emotional/spiritual energy went into the process of hiring a new colleague. Some other notable events have occurred since reporting in last Spring's "CONTACT." The summer's work at the Science Station was made even more wonderful than usual by a close-knit spiritually-motivated group of students in my Geo 101 class for non-majors. My wife and I continue to meet with seven of them for prayer on Sunday evenings. The Black Hills also allowed us to strengthen friendships with other students and faculty.

Student interest in the Science Station has expanded greatly over the last two years. This coming summer will likely be the largest program for many years. Part of the excitement includes our decision to again offer the Geology majors' track of field courses. Jerry will teach the first two weeks of field methods and I will guide the next six weeks of project work. We anticipate that at least eight Wheaton students and perhaps an outsider will be registered. If you know any students needing a good field course, send them our way. Steve will teach the four-week intro class for non-majors. Come on out to Hisega and visit with us for a while.

In August the college sponsored the fiftieth anniversary meeting of the American Scientific Affiliation. I presented a talk entitled "Operation Hot Potato: Bible-Science Attitudes Among Evangelical Undergraduates." This was based on surveys from my introductory geology classes. If you would like to see the data and know the conclusions, please write. The study will probably be reported in an article sometime next year. Jerry Haddock and I (mostly Jerry) organized an A.S.A. field trip to the Mazon Creek fossil area south of Wheaton. Some success was had in fossil collection, but much more can be attributed to fellowship among members of the A.C.G. (Affiliation of Christian Geologists) and friends. **Jack Leedy** didn't attend the meeting, but he and his son joined us for the field trip. **Rich Arndt** was at the meeting and shared his wisdom and friendship.

I spent the early part of August refining the text of my materials submitted to fulfill the faculty requirement in the integration of faith and learning. The text and accompanying documents (articles, reviews, etc.) bear the title of "Key Concerns for the Teaching of Geology at a Christian College." At present my application for tenure and promotion to full professor are before those in authority. My status should be decided fairly early into the spring semester. All the attention to classes, faculty committees, student advising and recruitment, faculty search, and facilities management have really left little time beyond family concerns for adequate research efforts. It may take a sabbatical leave before I can get some academic writing done. This was never much of a problem at the University of Wisconsin. My heart's desire is that Steve can make the transition from university to Wheaton treadmill with only a minimal loss of academic prowess.

My professional ego suffered a bit of deflation when an abstract for a Geological Society of America poster was rejected. This was a new experience (and perhaps a valuable one) for me. I was still able to attend the annual G.S.A. meeting in San Diego in order to hear some important talks and participate in certain events. For a second year the Affiliation of Christian Geologists hosted a forum to demonstrate a Christian perspective on crucial issues. Twenty-five or so people heard geophysicist Phil Carpenter from Northern Illinois University frame an environmental ethic in the context of his own case studies. After three days indoors, I caught a painful case of "meeting fever." This forced me to go along on a field trip to Torrey Pines Park (on the

beach!) led by the Institute of Creation Research. My fears that basic disagreements might sour the excursion were unfounded. Everyone enjoyed the geology, the view and each other as friends. Controversies were carefully avoided. There was also meeting time to be with Wheaton alumnae friends **Charlotte Derksen, Frank Karner, Leon Long, and Paul Ribbe**. Charlotte's daughter, Kathy, was one of the great people in my geology class last summer. Unfortunately, I just missed **Dawn Wright** on her brief visit to San Diego.

UNEXPECTED FRIENDS

...is the name of the current Sandi Patti hit, and it has been our experience this fall. We were visited by two Wheaton Dads (but not alums) who are geologists: Harold Metz, visiting his daughter Sharon, is a petroleum geologist in Dallas, and Andrew Bowler, visiting his daughter Carolyn Anne, is a coal geologist out of Hudson, Ohio. They both expressed great pleasure and interest upon learning about our Geology Program at Wheaton.

PRESENT AND FUTURE ACTIVITIES

~~Our dean, Patricia Ward, has been helpful in freeing up the complete allotment of Geology's equipment budget. Over the previous two years we were required to take part of our equipment funds to pay the salary of our intro-lab instructor. Salary savings from Jerry's retirement are covering that expense now and have made it possible for us to use that equipment money to obtain excellent videos, slide sets, and computer goodies, both abundant software and some additional hardware. We may even add a new petrographic microscope by school year's end. All of this upgrading is a necessary response to the current student influx. A more major equipment request is pending relating to Steve Moshier's research.~~

Our standard budget is being used ← budget is being used

A more major equipment request is pending relating to Steve Moshier's research.

Not until this year has Geology's tiny square footage become a concern for us new guys. Jerry Haddock tells of the (scarce) days of old when more than fifteen majors were enrolled in upper division geo classes. Some of you probably have memories of being sardined into the advanced lab room. We are now regularly serving over ten students in our majors' courses. Twenty-five or more non-majors are crammed into the intro-lab room. The space crunch is even more acute with the unwelcome environmental conditions of third-floor Breyer. The heating-cooling situation is awful. On any given day, regardless of seasons, rooms can vary from sub-50 to over 85 degrees fahrenheit. The labs and small lecture room have no windows and a miserable lack of ventilation. It's difficult enough to keep some students awake during lectures with ideal conditions! ~~The final insult~~ is a ceiling that leaks badly whenever the cooling system is in operation. Ceiling tiles and maps have been destroyed and a computer printer was damaged. Growing pains are real for us, but should hopefully be dealt with as we continue to expand our functions.

There is also

delete

We have requested ~~and anticipate approval~~ that Geology be allocated significant basement space beneath the Armerding Lecture Hall. This new area would be configured to provide us with lab space for a large multi-purpose sedimentation flume, sample examination, preparation and storage, and some room for further expansion.

The next two to five years could bring unprecedented change for Wheaton Geology. Please forgive the trite ~~political~~ sound of this assertion, but current events bring the coincidence of student increase and faculty change with a major general-education revision (campus wide) and the ten-year review of the Geology Program. President Chase has mandated a new cap of 60 hours for the gen. ed. requirement. This is a reduction of up to eleven hours and will only be accomplished with a whopping modification of our present system. One (fortunately) rejected attempt at revision last year included a loss of two hours from the Natural Science requirement. ~~At the same time, some "sacred cows" such as philosophy, art and music, and foreign language were left completely intact.~~ In our world we can hardly afford to reduce our scientific literacy, ~~even further relative to humanities.~~ Our hope is that any new proposal will ~~be more equitable~~ *recognize* ~~with a recognition~~ that math and science probably need added emphasis, not less. Regardless of the exact changes, it will be necessary for Geology to offer elective courses that are both effective and attractive. Each department will find that it must compete for the additional hours freed up by the gen. ed. revision. The entire scenario has the potential to ~~injure~~ *redefine* programs, but we should also see it as an opportunity to fine tune our curricula.

redefine →

In light of the above mandate, Steve and I will work a long while with our courses to meet the future head on. Some of the modifications may include interdisciplinary cooperation with the Bible Department (science and theology topics) and others for an environmental emphasis (environmental ethics, natural resource management). We are also considering something on timely earth-science interests, such as "Dinosaurs and Disasters." We have so many people taking the Physical Geology course now that it may have to be split into different sections. This is our bread and butter offering where the vast majority of majors are recruited. For majors, we want to offer new elective lab courses that fill current needs and also take advantage of Steve's talents. A geomorphology course with up to a third devoted to hydrologic principles is one strong possibility. Steve has also had a brilliant inspiration to make the renewed spring-break field trip into an elective course on regional geology. Surely there are many other good additions or modifications that would be successful. We ask YOU to send any suggestions you may ~~have~~ *select*. YOUR input is always greatly appreciated.

The Geology ten-year review begins officially next fall. We will have to produce vast amounts of paperwork in an evaluation of our abilities to get the job of education done. A team of four reviewers, two internal and two "experts" from beyond will generate a report of their evaluation. All the effort should help specify our strengths and weaknesses at a crucial time of flux. God willing, we will receive adequate institutional support to attain key recommendations for improvement. Your prayers are solicited.

This semester and next we will salt the program with guest speakers and field trips. Both activities are essential to our vitality. Dr. Wes Clayton, emeritus professor from the University of Arizona spoke on three occasions about toxicity and environmental issues. One presentation focused on a hydrogeology case study. During the spring, we intend to hear from our own grad, **Dave Heidlauf**, on what it is like to work in the world of environmental geologists and hydrogeologists. Phil Carpenter will repeat his environmental-ethics case study presentation for our students. Two science and theology seminars will feature popular authors. Law professor Phillip Johnson will lead an open discussion of his critique of evolutionism, Darwin on Trial. Astrophysicist Hugh Ross is scheduled to be the prime attraction of the 1992 Science Symposium. Ross is known for his use of science in apologetics and for convincing James Dobson to change his mind and affirm an old-earth position. More technical presentations on academic subjects will continue to be available for our classes at Northern Illinois, Northwestern and Illinois-Chicago Circle Universities.

The curse (or at least one curse) of living in Wheaton is our distance from the more spectacular wonders of geology. We are blessed with ever better video "field trips in a box." However, nothing beats a great field experience to wow students into declaring a Geology major. Apart from our regular class trips to the Illinois River and Baraboo, we want to add two or more per year. A regular spring break trip will greatly enhance our situation. Jerry Haddock and Steve Moshier will take a good group of majors on a traverse across the southern Appalachians. Next fall we will have a go at the early Precambrian crystalline rocks of central and northern Wisconsin. I know that Steve is also eager to share the charms of Paleozoic carbonates with our young friends. The students, as a Geology Club function, conducted their own visit to the Field Museum.

STUDENTS

This current fall promised to be a time of fulfilled optimism and, for the most part, it has been. Some disappointments have come with the loss of two sophomore majors in addition to a total lack of arriving freshmen selecting a geo major. The sophomores changed their minds after a summer of parental pressure in one case and cold feet

about science in the other. Geo ignorance continues to haunt us. In my five previous years at Wheaton, we always had at least one freshman entering with a mind to pursue Geology. This year should have been better, if anything. After this initial letdown, however, we have had at least three excellent freshmen join us from the Physical Geology class. Three other unexpected majors, two in Earth Science Education, have materialized in the last few weeks. If circumstances run true to form, we should gain a few more constituents from next semester's intro. courses, field trips, and our not-too-subtle publicity campaign in the weekly "Broadcaster" news sheet. Regardless of our recruitment efforts, it will probably always be a challenge for Geology at Wheaton. We start with an institution that has an excellent tradition in the health professions, ~~but otherwise is not an attractor of strong science students.~~ Add to this the fact that those at Wheaton who are interested in science generally know only biology, chemistry, physics or engineering. ~~There is a large handicap for the Geology Program right from the start.~~ New recruitment ideas are always welcome.

*Geology must
strive for proper
recognition*

The following is a division by year of the strong group of majors currently enrolled. This year we will graduate six Geology majors and the first interdisciplinary Natural Resource Policy major, Talmage Payne from Nigeria. Talmage finished a remarkable summer working with World Vision on environmental projects in Cambodia. He would like to join an environmental management program at the London School of Economics. Our seniors include Judith Berlund from Dallas, TX; David Caldwell from Paoli, PA; David Curtiss from Graz, Austria; Matt DeCoursey from Indianapolis, IN; Andy Fulton from Hingham, MA; and Megan Mundt from Minneapolis, MN. Megan (formerly Tewinkel) recently married David Mundt and has been taking some classes at Northern Illinois University. Andy Fulton was honored as the best student in Boston University's summer field course. He was awarded a prestigious N.A.G.T.-U.S.G.S. field assistantship.

We have nine juniors: Kyle Arney from Orland Park, IL; Andy Gascho (Environmental Science) from Wheaton; Garth Harms from Carlinville, IL; Doug Peterson from Andover, KS; Chad Smith from Huntington Station, NY; Bret Swigle from Littleton, CO; Wendy Teskey from Fridley, MN; Rob Wayner from Washington, IL; and Christopher Williams from Portland, OR.

At present there are thirteen sophomores in the program: Janet Ahlborn (Earth Science Ed.) from Hockessin, DE; Steve Anthony from Scotch Plains, NJ; Glen Bell from Mechanicsville, PA; Larissa Bell from Columbia, SC; Nate Biletnikoff from Erie, Pa; Kyle Cawood from Mesa, AZ; Ashley Inselman (Natural Resources) from Kuna, ID; Hope Jacobsen from Verona, WI; Mike Lowe (Environmental Science) from

Salt Lake City, UT; Andy Newell from Columbus, IN; Nancy Palm from Collegeville, PA; Rachel Reese (Environmental Science) from Conway, AR; and Dwight Schuster (Environmental Science) from Granite Springs, NY.

The current group of freshmen are Missy Angelo (Earth Science Ed.) from Springfield, IL; Tim Benedict from Sioux Falls, SD; Chloe Couch from South Hadley, MA; Christopher Haugen (son of Geology alum **Richard Haugen**) from Chelsea, MI; and Craig Gordon from Waynesboro, VA.

Friends, you should be as encouraged by the above listing as we are. All but one of the seniors are applying for graduate school and should have their pick of assistantships and fellowships. YOU can help these people and the underclassmen by some alumni generosity. No, we are not passing the hat for financial donations (they are accepted for scholarships, of course). We would really like to have you send us letters or notes of enlightenment to the majors. They would love to hear how your geology education has contributed to careers and ministry. If you could share advice on course work, summer employment, grad schools, etc., it will be a great help. We will put your letters into a binder for the students' Geology Club.

Please let us hear from you. We do need to update the mailing list and need to know if you are receiving your copy.

Happy holidays from all of us here at Wheaton College Geology.

PHOTOGRAPH

Jerry Haddock, Steve Moshier, Kathy Schmisser, Dennis Bebel, Jeff Greenberg