

HISTORY OF GEOLOGY AT CALVIN COLLEGE
A Lecture by Clarence Menninga, presented 10 April 2001

This talk was presented as one event in the year-long celebration of the 125th Anniversary of the founding of the institution that would eventually become Calvin College. Initially established as a place for training ministers, the students in the preparatory school were taught some “liberal arts” courses as part of the program. The preparatory school was separated from the seminary training in 1894, and John Calvin Junior College was established in 1909 as a two-year institution. Calvin College became a four-year, degree-granting institution in 1920, and granted Bachelor of Arts degrees beginning in 1921. Understandably, the early strengths of Calvin's four-year curriculum were in the literary arts and humanities. By 1925 the curriculum included significant programs in mathematics, chemistry, and organic science (biology), courses in Physics to satisfy the requirements of the pre-med and pre-engineering programs, a course in Astronomy (dropped from the curriculum soon after 1925), but no Geology. The College began offering a full-scale major in Chemistry by 1940, in Biology by 1945, in Physics by 1952. Mathematics had a minimal major by 1945, augmented and expanded significantly by 1956, but still no Geology.

In this talk I want to review some highlights of the events that have led to establishing a program of study in Geology at Calvin College, and then reflect briefly on some of the attitudes and undercurrents that provide the context in which those events took place.

The organized study of rocks called Geology had its beginnings in the late 1700's, probably aided by its usefulness in the search for metal ores for the Industrial Revolution, and later in the search for fossil fuels to power industrial development. Geology as an academic discipline was developed in the early 1800's, and was soon incorporated into the programs of universities in western Europe and North America. Geology as a major field of study was not incorporated into the programs of most four-year liberal arts colleges until much later. A survey conducted in 1956 found that none of the MIAA schools offered geology in their programs at that time.

The earliest efforts to encourage Calvin College to introduce courses in geology that I was able to find were spearheaded by Rev. Tymen Hofman, now a retired minister of the Christian Reformed Church (and translated to glory in 2006). While pursuing study in Agricultural Science at University of Alberta, Canada, Ty had learned something about the history of rocks and fossils, and he experienced the conflict that many of us have experienced upon finding out that the Christian perspective which was our legacy in the Christian Reformed Church did not incorporate recognition of the long history of rocks and fossils that has been revealed through geological study. Ty was not able to resolve his conflict at that time. Eventually he prayed that he might be able to hold onto his Christian faith, by God's grace, and he dedicated his life to God while he continued his efforts to fit the results of geological study into his Christian perspective. He earned the B.Sc. degree from the University of Alberta in 1946, and entered Calvin College to prepare for the ministry. At Calvin he got acquainted with Dr. John De Vries, and he found the resolution to many of his questions and conflicts upon reading “Doc” De Vries's book *Beyond the Atom*, published in 1948. At various times while at the College, Ty

urged then President Henry Schultze, Chemistry Prof “Doc” De Vries, and others to introduce Geology into the College curriculum so that those topics could be taught in Christian perspective.

Ty completed his studies at Calvin College in 1948, and entered Seminary. In 1950 he and many of his fellow Seminarians signed a letter to the Calvin Board of Trustees, urging the introduction of a course of study in Geology at Calvin College. The letter is acknowledged in the Minutes of the meeting of the Board in May 1950, in these words: "A number of Seminary students request the Board to do something to encourage some one to specialize in the important study of geology and thus become an authority on the subject from a Christian point of view." The request was referred to the Board Executive Committee. The matter appears again in the Minutes of the Educational Policy Committee of June 28, 1950 as follows: "The request for a Geology course was referred to the Science Division."

The Science Division Proceedings of October 3, 1950 acknowledge receiving the referred matter of geology as follows: "The Educational Policy Committee refers to the Science Division for study a request, originating from the Seminary students, that a course in Geology be introduced in the college curriculum." After discussion, the Division went on record as favoring "... the introduction of such courses as Geology, Paleontology, and Anthropology as soon as qualified personnel can be secured to teach those courses."

Ty Hofman and his fellow Seminary students had been urging “Doc” De Vries to become qualified to teach geology, and “Doc” had said that he would do so if he were granted paid leave for that purpose. After the Science Division meeting of October 3, 1950, the Division or its Executive Committee apparently made “Doc” De Vries responsible for recommending someone, presumably a current Faculty member, to whom the College should assign the task of becoming qualified to teach geology. “Doc” then came to the Seminary students who had written the letter to the Board in May, and informed them that their letter had been given to him. He said, "I cannot, in good conscience, recommend myself." And there, apparently, the matter died for the time being.

The suggestion that geology be taught at Calvin College came to the Science Division meeting again in 1956 when Prof. Wassink, representing the Physics Department, suggested the re-introduction of an Astronomy course into the curriculum. The ensuing discussion included the suggestion that it would be desirable to introduce Geology, also. The Science Division then appointed a committee to investigate the advisability of introducing courses in both Astronomy and Geology; Profs. Wassink, J. Tuls, and E.Y. Monsma were appointed to the Committee. A note in a later Science Division document states that "The E.P. Committee did not look with favor on the introduction of courses in Astronomy and Geology at that time [1956] largely due to the fact that neither we nor they knew where teaching personnel was available for these courses."

The matter was not entirely forgotten by everyone. Ty Hofman served as a member of the Calvin Board of Trustees from 1957-1962, and he continued urging the College to introduce Geology into the curriculum. He sent a letter to the Board in 1958, suggesting the name of a person who might be able to teach Geology and Physics; I found no record whether or not that

was pursued. The Board Minutes of February 1962 note that Ty again urged the introduction of Geology courses at Calvin College in his farewell remarks to the Board after he had accepted a call to minister to a church in another Classis, a move requiring him to resign from the Board.

The next mention of geology in the archives appears in the Science Division Minutes of February 14, 1964, in these words: "The Chairman conveys to the Division from the Educational Policy Committee a 'request to the Science Division for recommendation as to the desirability of eventually including Geology in the curriculum ...' " The Division was reminded of its action of eight years earlier, mentioned above. The Chairman, T. Dirkse, reactivated the Committee that had been appointed in 1956, and asked them to report to the Science Division as soon as possible. This Committee gathered some additional information, and submitted a Report for consideration at the Science Division meeting held February 19, 1965. The Committee recommended that: "a) A course in basic Geology be introduced in the curriculum, and b) An instructor be engaged who is not committed to the Uniformitarian Theory." A motion to accept these recommendations was placed on the floor for discussion, with the following results: recommendation b) was deleted, and, after some discussion, recommendation a) was tabled until a later date. Later in that meeting a motion prevailed to recommit the matter of both Astronomy and Geology to the Committee for further study.

A year and a half later, in September 1965, Vice President John Vanden Berg, Chairman of the EP Committee, requested an official communication from the Science Division indicating the disposition of the EP Committee's request of Feb 14, 1964 that the Science Division consider the desirability of including Geology (and/or Astronomy) in the curriculum at Calvin College. The Secretary of the Science Division reported the actions (and inactions) noted in the paragraph above, and also reported that two of the three Committee members (Wassink and Monsma) had retired.

The following month, at the EP Committee meeting of October 12, 1965, V.P. Vanden Berg reviewed the ten-year history of the Science Division Committee on Geology and Astronomy, noted the retirement of two of its members, and declared the Committee defunct. The EP Committee then decided: 1) That Geology and Astronomy be considered separately for purposes of further study, and 2) that V.P. Vanden Berg a) review EP Committee documents on Geography to ascertain their implications regarding Geology, and b) appoint a new study committee on Astronomy.

Three days later, at a meeting on October 15, the Science Division Chairman reported that V.P. Vanden Berg had judged the Committee on Geology and Astronomy to be defunct, and that he [Vanden Berg] was proceeding to investigate possible course offerings in Geography-Geology combinations. The Science Division decided by motion to continue its committee studying the introduction of Geology and Astronomy into the curriculum, and the Chairman appointed a new committee consisting of Roger Griffioen, Herm Broene, and Carl Sinke. Four days later, on October 19, 1965, the EP Committee noted that this Committee had been appointed, and agreed that this action satisfied the desires of the EP Committee expressed in their Minutes of October 12, 1965.

The new Geology-Astronomy Committee reported to the Science Division on April 1, 1966, and on May 11, 1966 the Science Division recommended to the EP Committee that a department of Earth Sciences and Geology be established, and that an additional staff member be hired to begin implementation of this move. A "Newsletter" from the Chairman of the Science Division to the Division staff members dated October 14, 1966 reported that the Division had recommended to the EP Committee "that an additional staff member be acquired to a) teach the course "Physical Geography," b) teach Physical Science if the need arises, and c) coordinate our efforts in developing a Geology department."

I entered the picture in the spring of 1967. I was working as a radiochemist at the Lawrence Radiation Laboratory in Livermore, California, but I wanted to return to the academic environment I had enjoyed during five years as a high school teacher and in the congenial fellowship of graduate school. I did not think that I would like the big university scene, so I wrote letters to Calvin and some other four-year liberal arts colleges inquiring about possible faculty openings. I received a response from Carl Sinke, Chairman of the Science Division, saying that Calvin really did not have a need for an additional faculty member in chemistry, the area of my graduate study. However, he noted a comment in my letter that I had initiated some research investigation into the geochemistry of meteorites, and he inquired whether that indicated an interest in Geology, and would I be interested in a position with responsibility to develop a Geology program at Calvin. I responded that it sounded very interesting, but I had not had any formal training in Geology. I suggested that, if appointed, I would be willing to return to part time study to prepare myself to teach Earth Science and Geology. Sinke replied that Calvin would arrange my teaching schedule so that I could pursue that part time study, and would relieve me of any committee duties while I became more qualified in Geology. On that basis I accepted the invitation to come to Calvin for an interview with the EP Committee and the Board of Trustees. I was offered an appointment in a letter from Pres. Spoelhof which included these words: "Our primary interest in you is in your interest in developing course offerings in Earth Science." I gladly accepted the appointment, and began teaching at Calvin College in September 1967, with initial teaching assignment in Physical Science. I promptly enrolled in Geology courses, first at undergraduate level and later at graduate level. I attended Western Michigan University part time for one semester, and thereafter I enrolled at Michigan State, attending class and doing laboratory assignments one day each week, while teaching at Calvin the other four days. I continued doing that every quarter for five years, and then again a couple of years later for just one quarter to get further training in Paleontology.

Occasionally I tell someone, somewhat facetiously, that Calvin had not succeeded in finding a geologist whom they could convert to the Christian Reformed Church, so they found a member of the CRC willing to be converted to a geologist. More seriously, my wife Irene and I learned many years ago to depend on God to lead us into those areas of service where He wants us to be working for him. It's easier to see his guiding hand in retrospect than day by day, but we have made it a practice through those many years to seek his guiding hand through prayer, through pursuing those activities that we are qualified for and find interesting and challenging, and through the circumstances that God brings our way. I was convinced that coming to teach at Calvin College is what God had prepared me for, and this is what he wanted me to do. I have been blessed with joy in the work, and a feeling of satisfaction of having accomplished the goal

he placed before me.

So here is brief chronology of events in developing the program in Geology:

1967 - appointment of Clarence Menninga.

Fall 1968 - introduction of the course in Earth Science, taught every semester for several years, and now offered once per year.

Spring 1969 - introduction of the Physical Geology course, now named Introductory Geology, taught every Fall semester thereafter.

Spring 1970 - introduction of the Historical Geology course, taught every Spring semester thereafter.

1970-77 - introduction of a course called "Independent Study in Geology," and a course in Mineralogy, courses taken by students who wanted to get further training in Geology. Many of those students transferred from Calvin after two or three years to complete a major in Geology at some other institution.

1976 - EP Committee approval of developing a Minor concentration in geology.

1978 - appointment of Davis A. Young to the Faculty. Davis came to us with a B.S. in Geology from Princeton, M.S. in Geology from Penn State, and Ph.D. in Geology from Brown, and with ten years of university teaching experience, five at New York University and five at University of North Carolina at Charlotte. In Fall 1978 Davis composed a philosophical/religious apologetic for teaching Geology at Calvin in a document entitled "The Earth is the Lord's." From that time forward, Davis spearheaded further development of the Geology program.

1980-84 - planning for an addition to the Science Building, including laboratory facilities designed specifically to serve the Geology program.

1982 - appointment of James A. Clark to the Faculty, and introduction of additional courses to complete a Major in Geology.

1983 – graduation of 9 students with B.A. or B.S. in Geology.

- establishment of the Department of Geology, Geography, and Environmental Studies.

1986 – dedication of North Hall.

1983-2000 – graduation of 95 students with a Major in Geology; an average of 5+ per year.

- Graduation of a number of students with interdisciplinary Majors with a Geology component.

- Many hundreds of students served with one or more Geology courses.

We should note here that I was placed in the Physics Department upon my appointment to Calvin College in 1967 since I was initially assigned to teach Physical Science, and the responsibility for developing the program in Earth Science and Geology was placed under the administrative umbrella of the Physics Department. We owe a huge debt of gratitude to the Physics Department, especially the two members who served as Chairman of the Department during those years, Roger Griffioen and Vern Ehlers, for the encouragement and help we have received in bringing the Geology program to the goal of establishing a Major in the discipline. We also benefited from the consistent encouragement and support of the Administration of the College in reaching that goal.

We should also note that this development of the Geology program took place along with continuing discussion of the place of Geography in the curriculum at Calvin. In 1967 the EP

Committee placed the Geography program, too, under the administrative umbrella of the Physics Department. In 1982 Henk Aay was appointed to the Faculty at Calvin to develop the programs in Geography and Environmental Studies at Calvin, and in 1983 the programs in Geology, Geography, and Environmental Studies were bundled together in a separate Department in the Science Division. But that is another story, worthy of being told on some other occasion.

Well, that's the story of the development of the program in Geology at Calvin. But the bare facts which have been recited here leave us with some questions about attitudes and events underlying some aspects of that history, so I would like to reflect on that a bit.

It takes a fair investment of faculty and resources to offer a major in any discipline. Early on, I think, Calvin simply did not have a sufficient number of students to justify a major in Geology, nor the financial resources to launch such a program. But why did Calvin not have even one course in Geology? It seems that it would have been entirely possible to do so, just as there were one or two courses in some other disciplines, and it seems that it would have been beneficial for students' well-rounded education to have some study in Geology. That's what the Seminary students were lobbying for in 1950; why did it take another 18 or so years to get it started? The College student body had already grown to substantial numbers by 1950.

I'd like to tell a couple of stories that are related to development of the Geology program at Calvin, and especially to the background of that history.

The events of the first story took place in 1950. In April of that year a letter came to Pres. Henry Schultze at Calvin College from Mr. Edward Schoo on the letterhead of the Prosper Mining Co. at Milford, Utah. Following some personal reminiscing about their school days together at Calvin in the 1920's, Mr. Schoo expressed the desire to have his son Henry and daughter Wilma attend Calvin College, wanting them to be trained in Calvinistic principles and Christian perspective. He expressed appreciation for the attitude of "the Professor of chemistry [very likely "Doc" De Vries] that we must not be afraid of science." Then he added, "I believe there is a great work for us in reconciling science and Biblical revelation. I don't mind saying that it took me years to see that the contradictions were in the human mind, and not elsewhere. Sometimes we are so blinded by environment, and prejudiced by past instruction that the truth can not penetrate." Later, "We need to seek truth in a God-fearing manner. ... That is why we want our children to go to Calvin." Mr. Schoo said that his son Henry wanted to pursue study in mining and mineralogy, and noted that Calvin did not list any courses in Geology or Mineralogy in their catalog. President Schultze responded that he thought Calvin could offer Mineralogy if there were sufficient demand. Mr. and Mrs. Schoo traveled to Michigan in Fall 1950 to enroll Henry and Wilma in Calvin College, and to visit family in Prosper, Michigan.

We note that this correspondence took place at about the same time that Ty Hofman and other Seminary students were urging the College to introduce courses in Geology into the curriculum, and we note further that this experience of the Office of the President had no apparent effect on the development of a program in Geology at Calvin.

NOTE: A letter to "Doc" De Vries from Edward Schoo, written a couple of years later, is

appended to this transcript.

The second story is about Mr. James C. Veen, who was an avid amateur astronomer, and whose interest and activities in Astronomy have been honored by the local Amateur Astronomers Club in naming their observatory on Kissing Rock Road the “James C. Veen Observatory.” Over a period of several decades Mr. Veen engaged in conversation and discussion with preachers and theologians in the Christian Reformed Church about the relationship of the Christian faith and the results of scientific study in Astronomy. To a very large extent, Mr. Veen found representatives of the CRC to be unreceptive to the results of astronomical study. He was sharply disappointed in the failure of the church's representatives to address the issues of science and Christian faith in an honest and straightforward manner, and, as a result, he declined to become a professing member of the church until late in life, although he had always been committed to Jesus Christ as Savior and Lord. His son John, who told me this story, was quite profoundly affected by his father's experience with the Christian Reformed Church. (John, also, has now been translated to glory.) Although a professing member of the CRC, and married to a Calvin alumna, he decided that none of his children would be permitted to attend a college that did not offer Geology courses in the curriculum. Fortunately, Calvin had begun to introduce its program in Geology before his six children were of college age, and all of them have attended Calvin. So I guess the Geology program can be credited with attracting some tuition money to the College.

I think that part of the reason that Calvin did not have any Geology courses in the curriculum at an earlier time is that there was some suspicion and fear on the part of an appreciably large segment of the Christian Reformed Denomination, which owns and supports Calvin College, that the study of geology is dangerous to Christian faith. Even though we Calvinists affirm that this is God’s world, and that Christians should be engaged in faithful study of every aspect of God’s creation, we as a Denomination still are slow to become informed about the well-attested results of scientific study, and slow to incorporate those scientific results into our thinking in our theology, our philosophical musings, etc. Even during my tenure at Calvin, the College has come under pressure from a substantial number of constituents who wanted to suppress the teaching of some of the results of geological study of God’s world here at Calvin College. This pressure was sufficiently strong to prompt the Board of Trustees to appoint a committee in 1987 to investigate and evaluate the teaching and writings of three Calvin Professors, Clarence Menninga (Geology), Howard Van Till (Astronomy), and Davis A. Young (Geology), to ascertain whether they were consistent with the teachings of Scripture as understood through reformed exegesis.

That fear is not new among Christians. I have a copy of a letter from John Ruskin, an art and architecture critic of the mid-19th Century and a devout Christian, to his friend, Henry Aclund, written in 1851. John Ruskin was commenting on the weakness of his Christian faith, and he wrote, “If only the Geologists would let me alone, I could do very well, but those dreadful Hammers! I hear the clink of them at the end of every cadence of the Bible verses.” I have had conversations and correspondence with some of our contemporaries who think exactly the same way as John Ruskin did.

I smile a little at Ruskin’s comment, because I am one of the guys with a hammer, but I

also cry a little, deploring that attitude toward the study of God's world of rocks and fossils.

But that fear is not justified. As John Calvin wrote in his Commentary on Genesis Chapter 1, the study of God's world reveals God's handiwork to us. So I strive to live by the same principles that characterized Dr. John De Vries, my teacher and friend. The bronze plaque that is mounted in the entrance lobby of De Vries Hall describes "Doc" as one "who spoke boldly on the compatibility of science and Christian faith." All of us who teach in the Geology program at Calvin also strive to speak boldly on the compatibility of Christian faith and the geological study of God's world. To God be the glory!

Milford, Utah
Jan. 14 , 1952

Dr. J. De Vries
Calvin College
Grand Rapids, Michigan.

Dear Dr. De Vries:

It has been some time since I have sent you any rock specimens. I have been a little hesitant about sending these, I don't want to start any mental struggles. Please do not misunderstand me, Dr., I have a copy of your book "Beyond The Atom". so I know that you know the problems rocks like these put into our minds.

Ofcourse, these isolated rocks, as such, do not tell much. Therefor it is necessary for me to tell you a little more. The specimens originated in or from some limestone mountains known locally as "The House Range". They are arid and isolated, and situated in the western part of Millard County, Utah: at an elevation of about 7000 feet above sea level. Some of the lower strata as exposed are made up of shale, grading into shaley limestone, limestone, sandy limestone, and sandstone, in that order going up in elevation. The fossil strata are a composite of that rock, locally a couple hundred feet thick. The fossils are so plentyfull that it is hard to find a piece of rock without them. They are all marine fossils.

By corollation it is evident that the formation is older than the salt beds that underly a large part of Michigan and that in places aggregate 1600 feet in thickness. Perhaps I have said enough about that. In any case if we let our mind dwell on it, we see an unbelievable picture.

I wish Calvin had a course in Historical Geology, not that I think a solution could be taught that would explain away the apparent contradictions between geologic facts and Biblical Revelation, but the hidden doubts, that are often present within each of us in spite of ourselves are not overcome by ignoring the cause of those doubts, but by facing them and formulating an approach of faith.

I am sending these specimens to you, Dr., to do with as you please. As I said the fossil formation is in an isolated area, I have only been there two times, and I don't know much about it yet. I found it this past summer. It is hardly known by anyone. I am going to make an attempt to put in a lot of time studying, so I may be able to send you more specimens if you wish them.

Our son is attending the Montana School of Mines this year and as he says he enjoys the studies, he is thinking of majoring in geology. Kindest personal regards,

Very truly yours,

Edward Schoo