Conference on the History of Geologic Pioneers, August 2–5, 2000

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Following in the footsteps of geologic pioneers, the History of Geology Division of GSA welcomed this meeting on the history of geology in the Northeastern Science Foundation, affiliated with Brooklyn College and Graduate School of the City University of New York, in Troy, New York.

Along with sessions on theme-oriented and volunteered papers, the meeting included field trips to the field locations, work stations, and graves of Amos Eaton (1776–1842), James Hall (1811–1898), Ebenezer Emmons (1800–1863), and Henry B. Nason (1831–1895). The visiting geologists honored these pioneers with bronze plaques placed next to their headstones. Grateful thanks are extended to the GSA Foundation for funding these memorial plaques.

President Terry Page of the Oakwood Cemetery, the second largest rural cemetery in the United States, received the geologists and inspired them with its history. During the early nineteenth century, the Capital District of New York, and Troy in particular, had the distinction of being the birthplace of the study of geological science in America. The understanding of geology was in its infancy at that time. It was largely through the work of Eaton, founder and first professor of the Rensselaer School in 1824, that the study of geological science in America took a giant leap forward. Eaton was so influential during these early years that in American geology, 1818–1836 is known as the Eatonian era.

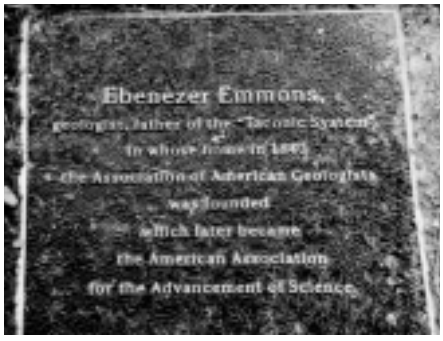
Among the most influential students of Eaton was Hall, State Geologist of New York, who was known as the father of the geosyncline. In 1857 (published in 1859), Hall observed that, where the Paleozoic marine strata are thin (a few hundred or a few thousand meters thick), they are flat lying. In contrast, within the Appalachians, thicknesses of equivalent age strata amount to tens of thousands of meters, and the strata are not horizontal. Hall hypothesized that the subsidence of the strata within a trough, where they would be extra thick, provided the mechanism for folding them (Friedman and Sanders, 1978, p. 435). Hall became known as father of American stratigraphy and similarly, father of American paleontology. Probably no other single person exerted a more influential role in the development of paleontology in North America. Hall became the first president of GSA as well as of the International Geological Congress.

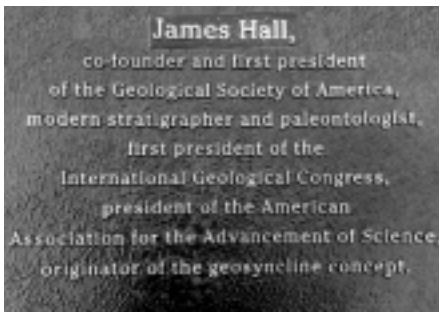
Emmons served as junior professor under Eaton at the Rensselaer School (Rensselaer Polytechnic Institute, or RPI) in 1830, a position he held for 10 years. Schneer (1969) notes that Emmons was principally responsible for the transformation in American geology; through him, New York became the model standard for the stratigraphic surveys of much of the rest of the United States. With Emmons, Hall was cofounder of the American Association of Geologists, the predecessor of the American Association for the Advancement of Science.

Edgerton was one of the geologists Eaton and Emmons had trained. He was born in Burlington, Vermont, and was 21 years old (1825), when he entered RPI. In 1826, he became adjunct to Eaton and remained in this position until after graduation (fall 1828; Nason, 1887). After leaving RPI, he became professor of natural science at the Utica Gymnasium, where James D. Dana (1813–1895) became his student.

Edgerton's title almost matched Dana's choice of a profession: He wanted to pursue his interest in natural history (Dana, 1835; Newell, 1997). Following Eaton's methods and Emmons' textbook, Edgerton not only stimulated Dana's interest in geology, but also provided "his first role model of what it meant to be a scientist" (Prendergast, 1978; Pirsson, 1919; Champlin, 1994). Edgerton's enthusiasm affected Dana, who may be considered Eaton's and Emmons' "grand student." Edgerton died at 29 on April 18, 1832. No pictures of him seem to exist. As a student of Eaton and Emmons, and as the professor who kindled Dana's interest in geology and mineralogy, he joins the rank of the effective early pioneers of our science (Friedman, 1998).

Nason, cofounder of GSA, became one of America's influential geologists (Friedman, 1979). The nestor of American geology, Thomas C. Chamberlain





Bronze memorial plaques attached to the graves of geologic pioneers and GSA founders Henry B. Nason (Oakwood Cemetery, Troy, New York), Ebenezer Emmons, and James Hall (both at Albany Rural Cemetery, Albany, New York). The GSA Foundation funded the cost of the plaques.

(1843–1928), became a geologist as a student of Nason. Chamberlain's father was a Methodist Episcopal minister and, despite theologic and religious prejudice, Chamberlain came under Nason's spell in Nason's geology course. Chamberlain became one of the great original thinkers in geology.

Nason was the de facto curator of the vast mineral collection of RPI, acquiring specimens and, with Hall, arranging and labeling them. Maintaining the tradition of fieldwork, he led extremely popular extended geological field trips. His interest in mineralogy had a profound influence on the scientific advance of mineralogy. Washington A. Roebling (1837–1926) took Nason's course at RPI. Inspired by Nason, he embarked on a study of systematic mineralogy. The Roebling collection was donated to the National Museum of the Smithsonian Institution. In 1877, President P. Hayes appointed Nason juror for the U.S. government at the Paris Exposition in the Department of Mineralogy. Nason's impact was such that he received honorary degrees from Amherst College, Union College, and Beloit College. Nason's dedication to RPI is memorialized by his private collection of 5,000 minerals, which he donated to the institute in 1883.

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