

MEMORIAL OF FLORENCE BASCOM

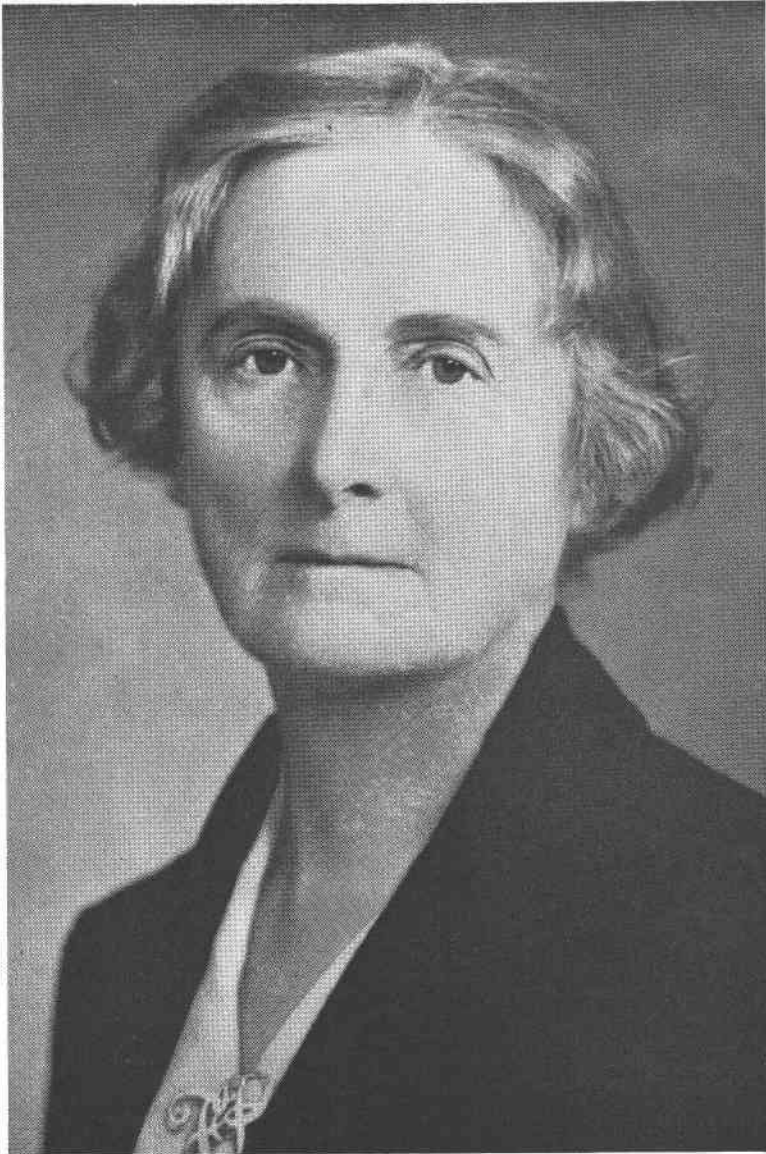
ELEANORA BLISS KNOPF, *New Haven, Connecticut.*

When I think of a long line of revered New England scholars, there comes uppermost in my mind the cultured and upright, albeit slightly austere, personality of Dr. John Bascom, one time President of the University of Wisconsin.

In his early days at Williams College, Massachusetts, there was born to Professor Bascom and his wife, Emma Curtis, on July 14, 1862, a daughter Florence, who was destined to become the pioneer woman geologist on the North American continent. This daughter was indeed destined to be the pioneer in many things. She began her long and distinguished career by being the first woman to receive the degree of doctor of philosophy from The Johns Hopkins University. To Miss Bascom's students her early years were little known, but the strong influence of her father was always manifest in her frequent allusions to him. The ethics and ideology of the quiet but forceful exponent of philosophy in the halls of Wisconsin University and of Williams College was clearly also her approach to the problems of life.

During her father's regime at the University of Wisconsin Florence Bascom graduated there in 1882 with the degrees of A.B. and B.L. Her tendencies toward a scientific career were becoming evident when she acquired the B.S. in 1884 and the A.M. in 1887. As her uncompromising and rigid adherence to high moral standards and her ethical integrity were clearly inculcated by the strong character of her father, so were her scientific training and viewpoint obviously the results of the strong and inspiring influence of her great teacher Van Hise who, in her early years, was one of the master minds of American geology.

Her love of the budding science of petrology had already asserted itself and from Wisconsin she went to The Johns Hopkins University to carry on her advanced research under the father of American petrography, George Huntington Williams, whose brilliant work on the intrusive and volcanic rocks of Maryland has stood the test of time, undimmed and unimpaired. Undeterred by the fact that in those days a field training in geology was not considered part of a ladylike curriculum, Miss Bascom made numerous trips with Professor Williams into the fascinating and complicated terrane underlain by the Precambrian basement rocks of Pennsylvania and Maryland, and when he handed over to her investigation the well-nigh unrecognizable, ancient volcanic flows of South Mountain she turned out, in 1893, a brilliant doctoral dissertation, which placed her at once among the foremost of American petrographers.



FLORENCE BASCOM
1862-1945

Upon completion of her work at The Johns Hopkins she became instructor for two years at Ohio State University. In 1895 when President M. Carey Thomas, with her peculiar flair for recognizing young and budding genius, was scouring the United States for promising young instructors, later to become Presidents of the United States, National Academicians, and occupants of honored chairs in the foremost institutions of learning in this country, she prevailed upon the young Florence Bascom to come to Bryn Mawr College to establish a Department of Geology for women,—a somewhat bold experiment, as the feminine skirt still trailed the ground and only the women cyclists were blazing the way in the eastern United States to an outdoor life for women.

The success of Miss Bascom's efforts at Bryn Mawr is shown by the number of her students who later attained prominent positions in University teaching, in State and Federal Surveys, and during World War II in confidential work of avowed military importance in the Military Geology Unit of the United States Geological Survey.

In 1896 Miss Bascom again broke tradition by becoming the first woman assistant on the United States Geological Survey. The field of operation assigned to her by the Survey was the study of the crystalline schists in an area of one square degree, embracing the eastern part of Pennsylvania and Maryland, and a small area in northwestern Delaware. To this was added the crystalline schists in the area of the Trenton folio in New Jersey. Thus for many years she combined with her teaching program, active and energetic field and laboratory work for the Survey, resulting in a series of comprehensive reports comprised in geologic folios and bulletins of the United States Geological Survey.

In 1907 her dominant interest in petrography and mineralogy led her to spend a leave from Bryn Mawr studying advanced crystallography in the laboratory of Victor Goldschmidt at Heidelberg,—a year delightful to her in its opportunity for undisturbed research. However the broad scope of her teaching program effectually saved her from any possible temptation to overspecialistic research and those students who were fortunate enough to enjoy her elementary course in physical geology will testify to her breadth of interpretation of the earth sciences.

Geomorphology was to her a fascinating subject and particularly in later years she contributed much valuable material to the somewhat heated controversy as to the origin of the Eastern Appalachian erosion surfaces. Her writing was always exceptionally vigorous and incisive. She had little patience with pedantic phrases either in conversation, in oratory, or in writing, and her own conversation was forceful and clear cut, even at times somewhat caustic. An untiring, if at times tired, and conscientious worker, she belonged to a rapidly vanishing time when a young

field geologist on an assignment for the United States Geological Survey was expected to be in the field by seven in the morning, not to return under ordinary circumstances until six o'clock at night, subsequently to devote the evening to drafting and map work. Well do I remember the vigorous negation when, as a youngster covering the Reading Hills on foot to map the igneous geology, I suggested to Miss Bascom that by starting in the morning as late as half past seven I and my coworker could get a substantial breakfast in our hotel at seven o'clock instead of picking up a poor snack in an overnight hash-house at six thirty! That was not the way that field geology was handled, and I have many times since been grateful for the vigor of my early training that took long hours as a matter of course.

In 1932 Miss Bascom retired from her professorial position at Bryn Mawr and moved to Washington, D. C. where she spent several years in the preparation of final Survey reports. In 1924 she was elected to the Council of the Geological Society of America, the only woman who has ever sat upon this governing board. In 1930 she was further honored by being elected Vice President of that organization. In the late thirties failing health compelled her to remain all year in Williamstown, Massachusetts, close to her beloved summer home on Hoosac Mountain, which had been for many years a haven of refuge to her as well as to her much loved animal companions, her horses and her collie dog.

Her life passed out in Williamstown on June 18, 1945, leaving to her colleagues, her students, and her friends the inspiring memory of a scholarly and brilliant mind combined with a forceful and vigorous personality.

BIBLIOGRAPHY

- The structures, origin, and nomenclature of the acid volcanic rocks of South Mountain: *Jour. Geol.*, **1**, 813-832 (1893).
- The ancient volcanic rocks of South Mountain, Pennsylvania: *U. S. Geol. Survey, Bull.* **136**, 124 pp. (1896).
- A pre-Tertiary nepheline-bearing rock: *Jour. Geol.*, **4**, 160-165 (1896).
- Perido-steatite and diabase: (abst.) *Acad. Nat. Sci. Phila. Proc.*, 220 (1896).
- The relation of the streams in the neighborhood of Philadelphia to the Bryn Mawr gravel: *Am. Geol.*, **19**, 50-57 (1897).
- Aporhyolite of South Mountain, Pennsylvania: *Geol. Soc. Am., Bull.* **8**, 393-396 (1897).
 Abst., *Sci., N.S.*, **5**, 95 (1897).
- On some dikes in the vicinity of Johns Bay, Maine: *Am. Geol.*, **23**, 275-280 (1899).
 (With Dale, T. N.). Note on the dike rocks in the slate belt of eastern New York and western Vermont: *U. S. Geol. Survey, Ann. Rept.*, **19**, pt. 3, 223-226 (1899).
- Volcanics of Neponset Valley, Massachusetts: *Geol. Soc. Am., Bull.* **11**, 115-126 (1900).
- The geology of the crystalline rocks of Cecil County: *Maryland Geol. Sur., Cecil Co. Rept.*, 83-148 (1902).
- Water resources of the Philadelphia district: *U. S. Geol. Sur., Water supply Paper* **106**, 75 pp. (1904).

- Piedmont district of Pennsylvania: *Geol. Soc. Am., Bull.* **16**, 289–328 (1905).
(With Goldschmidt, Victor). Anhydrite twin from Aussee: *Am. Jour. Sci.*, **24**, 487–490 (1907).
- The pre-Cambrian gneisses of the Pennsylvania Piedmont Plateau: (abst.) *Sci., N.S.*, **30**, 415 (1909).
- (With Clark, W. B., Darton, N. H., Kümmel, H. B., Salisbury, R. D., Miller, B. L., and Knapp, G. N.). Description of the Philadelphia district: *U. S. Geol. Survey Atlas, Folio 162*, 23 pp. (1909).
- (With Darton, N. H., Kümmel, H. B., Clark, W. B., Miller, B. L., and Salisbury, R. D.). Description of the Trenton Quadrangle: *U. S. Geol. Survey Atlas, Folio 167*, 24 pp. (1909).
- The petrographic province of Neponset Valley, Massachusetts: *Acad. Nat. Sci. Phila., Jour.* (2) **15**, 129–161 (1912).
- Pre-Cambrian igneous rocks of the Pennsylvania Piedmont: (abst.) *Geol. Soc. Am., Bull.* **26**, 81–82 (1915).
- Magmatic assimilation: (abst.) *Geol. Soc. Am., Bull.* **26**, 82 (1915).
- A correction: *Am. Jour. Sci.*, (4) **41**, 300–301 (1916).
- The physiography of Mount Desert: *Geog. Soc. Phila., Bull.* **17** (4), 117–130, (1919).
(With Miller, B. L.). Description of the Elkton and Wilmington quadrangles: *U. S. Geol. Survey Atlas, Folio 211*, 22 pp. (1920).
- The use of the two-circle contact goniometer in teaching crystallography: *Am. Mineral.*, **5**, 45–50 (1920).
- Cycles of erosion in the Piedmont province of Pennsylvania: *Jour. Geol.*, **29**, 540–559 (1921).
- The resuscitation of the term Bryn Mawr gravel: *U. S. Geol. Sur., Prof. Paper 132*, 117–119 (1924).
- Structural and physiographic features of the Piedmont province of Pennsylvania: (abst.) *Geol. Soc. Am., Bull.* **38**, 211 (1927).
- Fifty years of progress in petrography and petrology: 1876–1926. *The Johns Hopkins Univ. Studies in Geology*, no. **8**, 33–82, (1927).
(With Stose, G. W.). Description of the Fairfield and Gettysburg quadrangles: *U. S. Geol. Survey Atlas, Folio 225*, 22 pp. (1929).
- (With Wherry, E. T., Stose, G. W., and Jonas, A. I.). Geology and mineral resources of the Quakertown-Doylestown district: *U. S. Geol. Survey, Bull.* **828**, 62 pp. (1931).
- Geomorphic nomenclature, *Sci., N.S.*, **74**, 172–173 (1931).
(With Stose, G. W.). Description of the Coatesville and West Chester quadrangles: *U. S. Geol. Survey Atlas, Folio 223*, 15 pp. (1932).
- (With Johnson, D. W. and Sharp, H. S.). Geomorphology of the central Appalachians: *16th Internat. Geol. Congress (1933). Guide book of Excursion A-7*, 50 pp. (1932).
- (With Campbell, M. R.). Origin and structure of the Pensauken gravel: *Am. Jour. Sci.*, 5th ser., **26**, 300–318 (1933).
- Igneous complex of Pennsylvania-Maryland Blue Ridge-Piedmont provinces: (abst.), *Geol. Soc. Am., Proc.* 1934, 440 (1935).
- The pre-Cambrian igneous rocks of eastern Pennsylvania and Maryland: *Am. Geophys. Un., Trans. 16h Ann. Mtg., Pt. 1*, 328–350 (1935).
- (With Stose, G. W.). Geology and mineral resources of the Honeybrook and Phoenixville quadrangles, Pennsylvania: *U. S. Geol. Survey, Bull.* **891**, 145 pp. (1938).