

MEMORIAL OF ALBERT BECKER PECK

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The news of the sudden death of Albert Becker Peck on Saturday, February 13, 1943, came as a distinct shock to his associates and numerous friends and acquaintances. He began the spring term with his usual teaching assignment and there was no indication that he was not in normal health. Saturday morning he performed his usual laboratory duties and spent the evening with a small group of intimate friends. Almost immediately upon his return home he was stricken with a heart attack and passed away before medical aid could be summoned. Professor Peck was fifty years of age.

Albert Becker Peck was born September 19, 1892, at Syracuse, New York, the son of Professor Henry Allen and Kitty Becker Peck. His entire life was spent in an academic environment, as his father was for many years Professor of astronomy and Dean of the Liberal Arts College of Syracuse University, and had also served as Vice-Chancellor of the University. After receiving the degree of Bachelor of Arts at Syracuse in 1914, he came to the University of Michigan for his graduate studies. In 1915 the University of Michigan conferred upon him the degree of Master of Arts and in 1925 that of Doctor of Philosophy.

His teaching assignment began as an assistant in mineralogy in 1914. In 1916 he was promoted to an instructorship. He temporarily severed his connection with the University in 1917 to accept the position of assistant physicist in charge of petrographic investigations in the Division of Ceramics of the United States Bureau of Standards in Pittsburgh, Pa., and Washington, D. C. His work with the Bureau was so satisfactory that at the end of two years he was advanced to the rank of associate physicist. While at the Bureau his duties were essentially of a research nature and related to investigations pertaining to changes in the microstructure of portland cement, porcelains and various refractories.

In 1920 Professor Peck returned to the University of Michigan with the rank of Assistant Professor of mineralogy. His productive scholarship and excellence as a teacher were recognized by advancement to Associate Professor in 1927 and to Professor in 1942.

Professor Peck was a charter fellow of the Mineralogical Society of America and an active member of the American Ceramic Society. He held responsible positions in both of these organizations. In the latter he was affiliated with the white wares and refractories divisions and was



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chairman of the Detroit local section from 1924–1926. He was elected the first treasurer of the Mineralogical Society of America when that organization was founded in 1919 and held this office for four years. Again in 1929 he served as treasurer of the Society and in 1933 as secretary. He attended the annual meetings of both societies quite regularly and always took an active part in the discussion of the papers. He also held membership in Sigma Xi, Michigan Academy of Science, Arts, and Letters, and the University Research Club.

Professor Peck was a very capable teacher, especially in the more advanced courses where he could utilize to best advantage the experience acquired in various industrial contacts. He served for many years as a consulting petrographer in ceramic investigations for the Champion Spark Plug Co., Detroit, Michigan; the Libbey-Owens Sheet Glass Co. and Libbey Glass Co., Toledo, Ohio; and for the Sterling Grinding Wheel Co., Tiffin, Ohio. In his capacity as a consultant his duties pertained mainly to the development of special porcelains and refractories, the elimination of causes of glass stones, and the determination of the mineralogical constitution and microstructure of grinding-wheel bonds.

He was an exceedingly conscientious worker, moving about quietly, yet effectively, and shunned all forms of publicity. During twenty-four years of his University service he asked for only one sabbatical leave. That semester and the following summer were spent in study at the University of Arizona and at Harvard University, followed by travel in Europe where he visited mineralogical research laboratories and industries. Upon his return a new course was offered in the department which embodied the technique he acquired while on leave. His duties and reports on committee assignments reveal the same painstaking consideration and evaluation of the factors involved that characterized all his undertakings.

Professor Peck's list of publications shows twenty-one papers, exclusive of numerous reviews and abstracts of American and foreign books and papers on mineralogical and geological subjects. While his publications are somewhat varied in character, they might be grouped under three main headings: (1) Morphological and thermo-optical studies of minerals and short articles of general mineralogical interest. (2) Papers representing the result of a continuous cooperative program of research on the application of uncommon or hitherto unused minerals to new commercial uses for special high duty porcelains and refractories. (3) Papers dealing with general phases of ceramics, especially those involving the use of the petrographic microscope. In this field Professor Peck was a recognized authority.

Beginning in 1917 at the Bureau of Standards and since 1920 at the University of Michigan he had been continuously in touch with the development of new commercial uses for minerals and synthetic products in the field of ceramics. In the paper on "Changes in the constitution and microstructure of andalusite, cyanite, and sillimanite at high temperatures and their significance in industrial practice," Professor Peck recorded the first detailed study and correlation of the firing properties and changes in microstructure of these minerals under conditions of industrial practice. Since certain types of equipment for such investigations are lacking at the University of Michigan, much of this work necessarily had to be of a cooperative nature with private industrial research laboratories, such as the Champion Spark Plug Company of Detroit. While some publication of these studies is possible, much cannot be released at present because of its strictly confidential character.

It is also of considerable interest to note the discovery by Professor Peck and determination of the composition of an unknown glass stone, later confirmed by work of the Geophysical Laboratory on the system $\text{Na}_2\text{SiO}_3\text{-CaSiO}_3\text{-SiO}_2$. The identification of the nature of glass stones is of the utmost importance in correcting defects in glass manufacture.

The Department of Mineralogy and the Mineralogical Society have lost an able, independent investigator and effective teacher. His quiet manner, his ability to present the essentials of a difficult subject in a systematic, well organized manner and his insistence on a high grade of student performance are attributes we all admire and strive to attain.

On December 22, 1917, Professor Peck married Mildred Wood of Syracuse, New York. Professor Peck is survived by his wife and son, Robert Allen Peck, formerly a student in Princeton University who has recently completed the Army meteorological training course at Haverford, Pennsylvania.

BIBLIOGRAPHY

- Ueber Anglesit von dem Tinticdistrikt, Utah (with E. H. Kraus): *Neues Jahrb. Mineral.* etc., II, 17-30 (1916).
- Some new thermo-optical observations on gypsum and glauberite (with E. H. Kraus): *19th Annual Rept., Mich. Acad. Sci.*, 95-100 (1917).
- Mirabilite from the Isle Royale Copper Mine, Houghton, Michigan: *Am. Mineral.*, 2, 62-64 (1917).
- A possible cause for the dielectric failure of porcelains which are apparently free from mechanical defects (discussion with Chester Treischel): *Jour. Am. Cer. Soc.*, 2, 96-101 (1919).
- The effect of time and temperature on the microstructure of porcelain: *Jour. Am. Cer. Soc.*, 2, 175-194 (1919).
- Applications of the polarizing microscope in ceramics: *Jour. Am. Cer. Soc.*, 2, 695-707 (1919).

- A new type of monochromatic light source: *Am. Mineral.*, **7**, 104-107 (1922).
- Note on andalusite from California: A new use and some thermal properties: *Am. Mineral.*, **9**, 123-129 (1924); also *Quart. Jour. Calif. State Mining Bur.*, **20**, 149-154 (1924).
- Some fundamental principles governing the corrosion of a fire clay refractory by a glass (discussion of paper by Robert B. Sosman): *Jour. Am. Cer. Soc.*, **8**, 203-204 (1925).
- A fulgurite from South Amboy, New Jersey (with W. M. Myers): *Am. Mineral.*, **10**, 152-155 (1925).
- Changes in the constitution and microstructure of andalusite, cyanite, and sillimanite at high temperature and their significance in industrial practice: *Jour. Am. Cer. Soc.*, **8**, 407-429 (1925); also *Am. Mineral.*, **10**, 253-280 (1925).
- A new glass stone: $\text{Na}_2\text{O} \cdot 3\text{CaO} \cdot 6\text{SiO}_2$: *Jour. Am. Cer. Soc.*, **9**, 351-353 (1926).
- Dumortierite as a commercial mineral: *Am. Mineral.*, **11**, 96-101 (1926).
- An eighteen months' high temperature test on refractory test specimens (with F. H. Riddle): *Jour. Am. Cer. Soc.*, **9**, 1-22 (1926).
- The time factor in the formation of some artificial minerals: *Jour. Geology*, **34**, 65-70 (1926).
- The role of the ceramic petrographer: *Bull. Am. Cer. Soc.*, **6**, 298-305 (1927).
- Behavior of the unstable or monotropic forms in the system alumina-silica and related systems: *Jour. Am. Cer. Soc.*, **16**, 68-75 (1933).
- High temperature preparation and optical properties of sodium aluminate (with K. Kammermeyer): *Jour. Am. Cer. Soc.*, **16**, 363-367 (1933).
- The effect of repeated firing upon the specific gravity and microstructure of some aluminum silicate minerals (with F. H. Riddle): *Jour. Am. Cer. Soc.*, **18**, 193-198 (1935).
- The determination of the refractive indices of minerals by the immersion method (with C. B. Slawson): *Am. Mineral.*, **21**, 523-528 (1936).
- Refractive indices of some glasses in the ternary system $\text{K}_2\text{O} \cdot 4\text{SiO}_2 - \text{Fe}_2\text{O}_3 - \text{SiO}_2$ (with G. T. Faust): *Jour. Am. Cer. Soc.*, **21**, 320-324 (1938).