

Memorial of Horace Winchell 1915–1993

BRIAN J. SKINNER

Department of Geology and Geophysics, Yale University, New Haven, Connecticut 06511-8130, U.S.A.

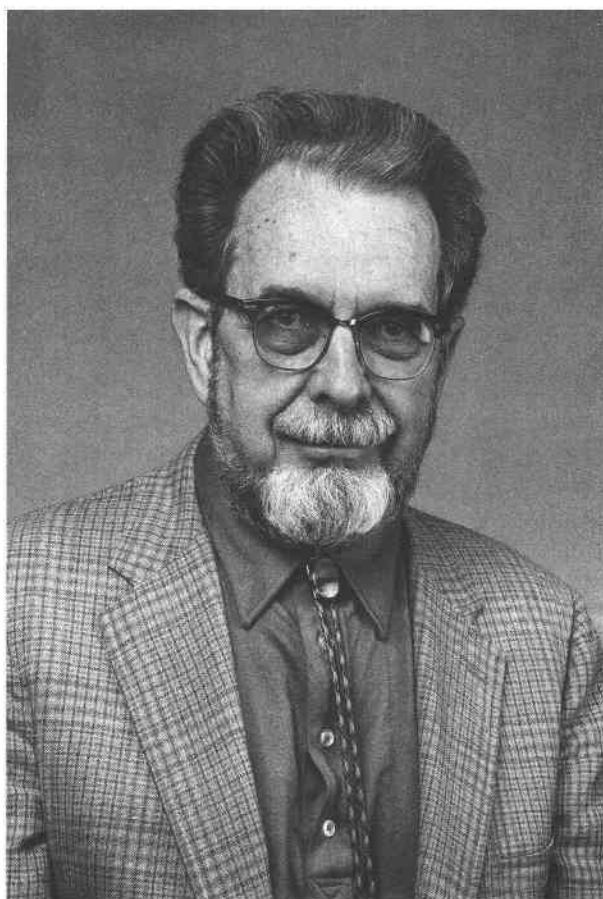
Horace Winchell, professor emeritus of the Department of Geology and Geophysics, Yale University, and scion of a distinguished scientific family, died in New Haven, Connecticut, on Tuesday, July 20, 1993.

Professor Winchell was born on New Year's Day, 1915, in Madison, Wisconsin. He was descended from Robert Winchell, an emigrant from Britain, who resided in Windsor, Connecticut, from 1635 to 1669. Some of Robert Winchell's descendants moved from Connecticut to eastern New York and then, in the 19th century, from New York to Minnesota and Michigan. Among the Winchells who moved west from Dutchess County, New York, was Newton Horace Winchell (1839–1914), grandfather of Horace, who became a distinguished geologist. His son, Alexander Newton Winchell (1874–1959), who was the father of Horace, was also an excellent geologist.

Horace followed the trail blazed by his forebears, completing B.A. and M.A. degrees in mineralogy and geology at the University of Wisconsin in 1936, another M.A. at Harvard University in 1937, and his Ph.D. in crystallography and mineralogy, also at Harvard, in 1941. From 1938 to 1940 Horace worked for the Board of Water Supply, Honolulu, Hawaii. His doctoral thesis on the volcanic rocks of Oahu, Hawaii, was a product of this period, as was his life-long interest in the systematics of the compositionally complex minerals found in volcanic rocks, especially the pyroxenes. From 1941 to 1946, Horace was employed as a research crystallographer by the Hamilton Watch Company, Lancaster, Pennsylvania, where he improved the efficiency of diamond dies used to draw hair-spring wires, developed ways to grade diamond powder, and pioneered in the use of sapphire bearings for ship chronometers.

In 1945 Horace moved to Yale University. When one considers his lineage and his research interests, the move to Yale was hardly surprising. His first appointment was as instructor in mineralogy (1945–1946) in the Department of Geology (subsequently the Department of Geology and Geophysics). He spent the rest of his professional career in that department, advancing from assistant to associate professor in 1951, and from associate to professor in 1983. Horace retired from the faculty in 1985. Beginning in 1951, he was not only a faculty member at Yale but also the curator of mineralogy in the Peabody Museum and curator of the Brush Mineral Collection.

Horace's many talents and interests are manifested in the papers and books he published. Among these are the classic volumes on the properties of minerals, a series of



volumes started by his grandfather and subsequently carried on by his father and finally by Horace and his father together. Horace was a skilled and patient worker with complex laboratory equipment. He was among the first to use computers for mineralogical problems, and, as computers became more and more accessible, he delighted in writing programs to solve the problems that had presented barriers to research in earlier years.

Horace Winchell was a Fellow of the Geological Society of America, a Life Fellow of the Mineralogical Society of America, a Life Fellow of the Society of Economic Geologists, a member of the Mineralogical Association of Canada, and a member of the American Association for the Advancement of Science. He served as associate editor of the *American Journal of Science* from 1951 to 1988.

Horace and his wife, Jean (whom he married in 1937), did not have children of their own, but they invested so much time, care, and love in their interactions with students, particularly foreign students, that they built a close family network that brought joy to all included. Horace was a mild, gentle, fair, and always concerned man. Those fortunate enough to know him have lost a gracious friend.

SELECTED BIBLIOGRAPHY OF HORACE WINCHELL¹

New method of interpretation of petrofabric diagrams. *Am. Mineral.*, 22, 15-36 (1937).
Orientation of synthetic corundum for jewel bearings. *Am. Mineral.*, 29, 399-414 (1944).
The Knoop microhardness tester as a mineralogical tool. *Am. Mineral.*, 30, 583-595 (1945).

¹ A copy of the complete bibliography of Horace Winchell can be obtained by ordering Document AM-94-561 from the Business Office, Mineralogical Society of America, 1130 Seventeenth Street NW, Suite 330, Washington, DC 20036, U.S.A. Please remit \$5.00 in advance for the microfiche.

Navigation in crystallography. *Geol. Soc. Am. Bull.*, 57, 295-308 (1946).
Honolulu series, Oahu, Hawaii. *Geol. Soc. Am. Bull.*, 58, 1-48 (1947).
Alignment chart for calculation of specific gravity. *Am. Mineral.*, 33, 353-359 (1948).
(With A.N. Winchell) Elements of optical mineralogy. II. Descriptions of minerals (4th edition), 551 p. Wiley, New York (1951) (Russian edition, Moscow, 1953).
Unit cells of calcite. *Am. J. Sci.*, 254, 65-70 (1956).
The composition and physical properties of garnet. *Am. Mineral.*, 43, 595-600 (1958).
(With R. Tilling) Regressions of physical properties on the compositions of clinopyroxenes. I. Lattice constants. *Am. J. Sci.*, 258, 529-547 (1960).
Regressions of physical properties on the compositions of clinopyroxenes. II. Optical properties and specific gravity. *Am. J. Sci.*, 259, 295-319 (1961).
A computer program for handling chemical analyses of amphiboles and other minerals. *Am. Mineral.*, 47, 411-413 (1962).
Regressions of physical properties on the composition of clinopyroxenes. III. The common soda-free alumina-free clinopyroxenes. IV. The effects of particular cation substitutions on physical constants. V. Alternative functions of refractive index. *Am. J. Sci.*, 261, 168-185 (1963).
(With A.N. Winchell) The microscopical properties of artificial inorganic solids, 439 p. Academic, New York (1964).
Optical properties of minerals, 92 p. Academic, New York (1965).
Report of subcommittee on nomenclature of amphiboles. *Am. Mineral.*, 63, 1023-1052 (1978); *Bull. Mineral.*, 101, 453-467 (1978); *Canadian Mineral.*, 16, 501-520 (1978).