Memorial to Ralph W. Marsden

1911–1986

P. K. Sims

U.S. Geological Survey, MS 905, Federal Center, Denver, CO 80225

Ralph W. Marsden, a premier expert on iron ores, died in his sleep on November 10, 1986, in San Antonio, Texas, while attending the annual meeting of the Geological Society of America and affiliated societies. During the preceding day he had participated in an all-day Council meeting of the Society of Economic Geologists, and he left the meeting in fine spirits. His unexpected death was a shock to his family, colleagues, and friends.

Ralph was born April 11, 1911, in Sumner Township, Jefferson County, Wisconsin, to Walter and Inger Evanson Marsden. His parents were of English and Norwegian ancestry, respectively; they farmed southern Wisconsin's productive soil.

Following graduation from high school, Ralph worked on the family farm; however, he soon decided he didn't want to be a farmer all his life. The next year he entered the University of Wisconsin at Madison, where he received the Bachelor's degree in 1932, the Master's degree in 1933, and the Ph.D. in 1939. While at Wisconsin, he had the good fortune to study under the well-known and respected C. K. Leith, a long-time authority on Precambrian geology, particularly of the Lake Superior region. Most important, though, was the professional and personal association with Stanley A. Tyler begun during Ralph's years at the university. He and Tyler (with F. F. Grout and G. A. Thiel) carried out pioneering attempts to determine—through studies of accessory minerals, principally zircon—the stratigraphic order of the complex Precambrian rocks in the Lake Superior region. The results proved to be of limited value for correlation purposes, but they helped provide a stratigraphic framework that subsequently was tested, and later modified, by the early geochronologic studies by S. S. Goldich and colleagues at the University of Minnesota.

Ralph's first position after finishing his studies at the University of Wisconsin was as a geologist with the Philippine Bureau of Mines, Geological Survey Division. He became chief of the division in 1941, directing geological work throughout the Philippines, with emphasis on manganese resources. He was a civilian internee of the Japanese from 1942 to 1945, together with fellow geologists Graham Nelson and Nelson Harshman, and Harshman's wife Anita; he subsequently remained close friends with all three. While he was interned, he taught high school-level chemistry; the experience stimulated an interest in teaching that he retained throughout his career.

After World War II, Ralph began a career in the domestic mining industry that was to span some 30 years. His main involvement was with the discovery and extraction of Precambrian iron ores, principally in the Lake Superior region. He began in 1945 as geologist for Jones and Laughlin Steel Corporation, and except for a year as associate professor of geology at the University of Oklahoma (1946–1947), he remained with the company until 1951. In that year, he joined Oliver Iron Mining Division of the U.S. Steel Corporation (now USX Corporation); from 1953 to 1964 he managed its geologic investigations unit, headquartered in Duluth. In 1957 and 1958, he also served as director of exploration for Quebec Cartier Mining Company, a subsidiary of U.S. Steel in eastern Canada. In 1964, he accepted the position of Manager of Geologic Investigations, Iron Ore, for the corporation, which required him to move to company headquarters in Pittsburgh.
As a consequence of his perception and insight into the geology of iron ores, Ralph attained worldwide recognition as a leading authority on them, particularly for the Great Lakes area. His expertise, advice, and counsel were sought in the United States, as well as by several foreign governments and numerous mining companies. In recognition of his many contributions, in 1980 he was elected a Distinguished Member of the American Institute of Mining, Metallurgical and Petroleum Engineers.

In 1967, Ralph terminated his long association with U.S. Steel and accepted the position of professor and head of the geology department at the University of Minnesota, Duluth. Undoubtedly this abrupt change in the direction of his career was a consequence of his longing to return to the "north country" he and his family so dearly loved, as well as a desire to return to an academic environment. Ralph resigned as department head in 1974, but continued as professor of economic geology until 1980, when he formally retired from the university. During his tenure at Duluth, the department experienced substantial growth and remarkable success in its Bachelor's and Master's programs. The geology program at Duluth placed great emphasis on field-oriented studies and prepared its students for meaningful careers in industry, or for further—more theoretical—graduate studies at other institutions. Ralph thoroughly enjoyed contacts with students and the stimulating atmosphere in academia; however, he also continued his ties with industry during this period through consulting work.

Like many in industry, Ralph did not publish much in the formal literature. However, his 1955 and 1956 papers on correlations were classics. On the basis of geological observations, he recognized that the post-Huronian/pre-Keweenawan unconformity was associated with a marked discordance in structure, metamorphism, and erosion. Thus, he anticipated S. S. Goldich's "Penodean orogeny" (1961) and the "new stratigraphic divisions of the Precambrian" that Goldich championed. In addition, his 1978 and 1979 papers on iron ore reserves of the Mesabi range were important contributions to economic geology.

From 1976 until his death, Ralph ably served the Society of Economic Geologists as Treasurer of SEG, of the SEG Foundation, and of the Economic Geology Publishing Company. He successfully managed the Society's financial affairs during a period of growth in both SEG membership and Economic Geology subscriptions, and he provided inspiration, motivation, and stability to the SEG Council as one of its continuing members. It is fitting that the Society has recognized his many contributions by establishing a new medal, the Ralph W. Marsden Medal, in his honor. It will be awarded annually for outstanding service to SEG and the profession.

In addition to his active membership in the Society of Economic Geologists, Ralph was a Fellow of the Geological Society of America and a member of the American Institute of Mining, Metallurgical and Petroleum Engineers (AIME), the Association of Professional Geological Scientists, the Mining and Metallurgical Society of America, and the American Association for the Advancement of Science. He was director of the Society of Mining Engineers of AIME (1964–1968), a director of AIME (1966–1969), and a vice-president of AIME in 1969. He was treasurer of the Minnesota section of AIME from 1964 to 1984.

Ralph was one of the founders, in 1954, of the remarkably successful Institute on Lake Superior Geology. He remained closely associated with the organization, and in 1980 it dedicated its proceedings volume to him; this was the only time in the institute's 33 years that a volume has been so dedicated. Two years later, Ralph received the institute's S. S. Goldich medal.

Ralph will be remembered as an eminently successful economic geologist with a keen insight into the geology of iron ores, as an educator who had a remarkable rapport with both students and colleagues, and as a warm and personable, highly respected, modest gentleman of vast human dimensions. He will be missed by his many friends, but he left a legacy for all to respect.

Ralph Marsden is survived by his wife Ellen, of Duluth, Minnesota, whom he married on
August 31, 1957; and by two daughters, Katherine Ellen and Jean Inger; and four brothers and a sister, of the Edgerton, Wisconsin, area.

Contributions in his memory may be made to the Society of Economic Geologists Foundation (P.O. Box 926, DeKalb, IL 60115) or to the Ralph W. Marsden Fund (Department of Geology, University of Minnesota, Duluth, MN 55812).

SELECTED BIBLIOGRAPHY OF R. W. MARSDEN


