

Memorial of Thure Georg Sahama October 14, 1910–March 8, 1983

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Academician Thure Georg Sahama, an internationally recognized authority in mineralogy and geochemistry, and professor emeritus of the University of Helsinki, passed away on March 8, 1983. Dr. Sahama's work in the fields of geology and mineralogy resulted in achievements in several sectors to which few others can lay claim. His life's work is of such a magnitude that it will long bear fruit in the future, too, and at the same time reflect honor upon scientific research in Finland.

Thure Georg Sahama was born in Viipuri (Vyborg), Karelia, on October 14, 1910. His father was a lawyer, and the family took an active part in cultural life. After matriculating in 1929, he had no problem choosing a career. Already as a schoolboy, he had developed a passionate interest in rocks and minerals, and this passion stayed with him to the end. As a young boy, Thure Sahlstein—he Finnicized his name in 1936—was a frequently seen visitor at the Department of Geology of the University of Helsinki, and he became the proud owner of a petrographic microscope already before graduating from secondary school. In 1930, a year after matriculating, he published two mineralogic–petrological studies, done in collaboration with his teacher Pentti Eskola, in the *Bulletin of the Geological Society of Finland*. Upon attaining his degree of Master of Science in 1934, Sahama already had to his credit a number of papers published in international scientific periodicals, a sojourn in Austria for study, and participation in Lauge Koch's expedition to eastern Greenland. His doctoral thesis appeared in 1936, two years later he was appointed docent of petrology and geochemistry in the University of Helsinki. He served as a state geologist with the Geological Survey from 1940 to 1946. In the latter year, Sahama was appointed Extraordinary Personal Professor Geochemistry, from which office he retired as emeritus in 1977. He was awarded the title of Academician in 1972.

Characteristic of Sahama's work was his concentration on matters of international interest and his ability to apply effectively new research methods for the solution of problems. Areal geological survey did not interest him very much. During his long career, he took a place at the forefront research in structural geology, geochemistry, vol-



canology and mineralogy. The groundwork for exceptional accomplishments was laid by the combination of native endowments, unusual energy, admirable organizational skill and orderly habits. A striving for exactness is a consistent feature of Sahama's work. This is reflected also by the central role played by up-to-date laboratory equipment in his research. Sahama's academic thesis and many of his other early studies deal with structural geology; he applied the fabric analysis developed by Bruno Sander in Austria to the rocks of the granulite area of Lapland. These studies still hold significant place in the sphere of structural geology.

The rapid progress made in the development of sensitive physical measuring instruments in the early decades of the century laid the basis for closer analysis of the trace elements contained in rocks and minerals. This led to the emergence of a new branch of science, geochemistry, with V. M. Goldschmidt as the leading exponent. Sahama took part in the development of this branch with enthusiasm as early as the 1930s. The studies he published on the geochemistry of Finnish bedrock in that and the following decade are still referred to. The year 1947 saw the ap-

¹ To receive a copy of the complete bibliography, order document AM-85-262 from the Business Office, Mineralogical Society of America, 2000 Florida Avenue, N.W., Washington, D. C. 20009. Please remit \$5.00 in advance for the microfiche.

pearance of his textbook *Geokemia* in the Finnish language and 1950 that of the textbook *Geochemistry*, written in English in collaboration with Kalervo Rankama. This work became a great success: several printings came out in a short time, and it has been translated into several languages. The book has undoubtedly made an important contribution to the strong advances made by geochemical research since the 1950s. A senior American geologist once pointed out to me that it was largely Sahama and Rankama who through their personal visits and their textbook helped to revitalize geochemical research in the United States.

In the late 1940s, Sahama worked in the Carnegie Institution of Washington's Geophysical Laboratory, doing research on the thermochemistry and stabilities of minerals. These studies have also had a stimulating influence on research in this field.

In the 1950s, Sahama, accompanied by his research assistants, journeyed several times to Africa on research projects. A particular objective was the Virunga volcanic field in the East African rift zone. The spotlight in these studies was focussed on Mt. Nyiragongo with its extra alkaline lavas, which Sahama thereby made known all over the world.

Mineralogical research was always close to Sahama's heart, and it was this line of inquiry that claimed his particular attention for the last quarter century and more of his life. His research material consisted mainly of the mineral and rock samples he had collected on his many expeditions abroad. Of central interest to him were the minerals of the nephelinites and leucitites of Nyiragongo and the minerals contained in African pegmatites, but he by no means neglected the mineral occurrences of his native Finland. With his associates, Sahama discovered and described nearly twenty new mineral species.

One problem to the solution of which Sahama devoted much time in his last years was the origin of the precious stones found in placer deposits of Sri Lanka. It was to that distant island that he made his last journey, from which he returned at the end of January 1983, a sick man. In a short time, an insidious disease took the life of the till then indefatigable scientist, who had sustained his zeal and creative spirit to the end.

Over a period of decades, Sahama assembled a magnificent private collection of minerals. This collection will form a valuable and central part of the Mineralogical Museum of the University of Helsinki.

The high esteem in which Sahama was held internationally is demonstrated by the fact that he was an honorary member of the mineralogical societies of Great Britain and Ireland, America, Brazil and the U.S.S.R., a foreign member of Det Norske Videnskapsakademi (Norway), a corresponding member of the Académie Royale des Sciences d'Outre-Mer of Brussels, a corresponding member of the Edinburgh Geological Society, and recipient of the degree of Doctor honoris causa from Université Libre de Bruxelles. The Geological Society of

Finland, of which he was an honorary member, awarded him its gold Eskola Medal in 1980.

As a teacher, Sahama was known for his lucid and logical lectures, which were eagerly attended by students. Many licentiate and doctoral theses were produced under his guidance.

As a person, Sahama had the reputation of a "Great Loner". This in spite of his modesty, sociableness and amiable wit. He was always ready to support new research projects. His presence at sessions following meetings of mineralogical and geological societies had the effect of imbuing them with a certain warm, genial atmosphere marked by a sense of learning and controlled humor. Associates in position to observe him close-up know that he had pressures to cope with, but outwardly Sahama was always calm and collected.

Sahama brilliantly upheld the high international standards achieved by his predecessors among Finnish geologists and mineralogists, men like A. E. Nordenskiöld, Wilhelm Ramsay, J. J. Sederholm and Pentti Eskola. One cannot escape the feeling that with his passing an era ended in Finnish mineralogy. Thure Georg Sahama left us a rich legacy—in the fields of geochemistry and mineralogy, above all—, a legacy the fostering and advancement of which present a mighty challenge to the geologists of Finland.

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