American Mineralogist, Volume 60, pages 497–498, 1975

Presentation of the Roebling Medal of the Mineralogical Society of America for 1974 to Ralph E. Grim

HAYDN H. MURRAY

Department of Geology, Indiana University, Bloomington, Indiana 47401

Mr. President, Fellows and Members of the Mineralogical Society of America, and Guests:

It is a privilege and an honor and a great personal satisfaction to introduce for the highest award of the Mineralogical Society of America, the Roebling Medal, my former professor, research supervisor, personal advisor, consultant, and friend R. E. Grim.

Dr. Grim is known as the "father of Clay Mineralogy" and this remarkably versatile individual certainly deserves this parental title. He has worked in pure and applied research on the clay minerals for some forty-five years. His two books titled *Clay Mineralogy* and *Applied Clay Mineralogy* are found on the library shelves of most every person who studies clay minerals or is economically associated with clays in any country in the world. I have personally seen these books on shelves in Europe, South Africa, Indonesia, Japan, New Zealand, Australia, Mexico, and Brazil.

Dr. Grim's career has included positions on State Geological Surveys, Universities, government committees, and as consultant to foreign governments and advisor to industry. He is a fellow or member of many societies including a fellow of the Geological Society of America, the Mineralogical Society of America, the American Ceramic Society, a member of The Society of Economic Geologists, the American Association of Petroleum Geologists, American Geophysical Union, the British Ceramic Society, and the Association International pour l'Etude des Argiles. He is a distinguished member of the Clay Minerals Society, an honorary member of the British Clay Minerals Society, honorary member of the Mineralogical Society of Great Britain, a foreign member of the India Academy of Science and an honorary member of the Ceramic Society of Brazil. In recognition of his distinguished research and administrative ability he has served as President of the American Mineralogical Society, Vice President of the American Ceramic Society, President of the Association International pour l'Etude des Argiles, Chairman of the National Research Council committees on Diagenesis, Sedimentation, and Clay Minerals. This latter committee was the sponsor of the Clay Minerals Conferences that eventually led to the formation of the thriving Clay Minerals Society and Dr. Grim was a prime mover in the Annual Clay Conferences and in the formation of the society. In addition he has received the Legion of Merit Medal of the Republic of The Ivory Coast government for establishing a government organization for mineral resource development and a Gold Medal for outstanding contributions from the Clay Minerals Society of Spain. This is the only medal they have awarded. It is obvious that Dr. Grim is an outstanding teacher, research scientist, and organizer and it is for all these achievements that we honor him today and specifically for his many contributions to clay mineralogy.

R. E. Grim was born in Reading, Pennsylvania on Feb. 25, 1902. He received his Bachelor's degree in Geology from Yale University in 1924 and his Ph.D. from the University of Iowa in 1931. In 1926, he went to work as an assistant professor of Geology at the University of Mississippi and assistant state Geologist of Mississippi and it was here that his first geologic field work included the bentonites of northeastern Mississippi and resulted in Bulletin 30 of the Mississippi State Geological Survey entitled The Eocene Sediments of Mississippi.

His work on the clays and clay minerals got in high gear when in 1931 he accepted a position as petrographer with the Illinois State Geological Survey. It was here that the famous duo of Grim and Bradley became associated. Dr. Grim's research during these productive years included work on diagenesis, soil mechanics, differential thermal analysis, dehydration and rehydration of clay minerals, effect of heat on the clay minerals, clay-water properties of the clay minerals, the

bonding action of clays in foundry molding sands, clay mineral composition of recent sediments, relation of composition to the properties of clays, clay minerals in soils and their significance, reactions of clay minerals with some organic cations, petrology of underclays, ceramic properties of clays and shales, ion exchange in relation to some properties of soil-water systems, the amenability of various types of clay minerals to alumina extraction, and the detailed study of the clay mineral micas which resulted in the name illite.

In 1948, he joined the faculty at the University of Illinois Department of Geology as a research professor. This move enabled Dr. Grim to share his vast knowledge of the clay minerals and their applications with a multitude of graduate students. Dr. Grim supervised 40 Ph.D. theses in his years at Illinois and had numerous scientists from around the world come to his laboratories for study and consultation. Dr. Grim is, in addition to being an outstanding scientist and superb teacher, a complete person. He is patient, kind, and compassionate. He was never too busy to talk to his students and advise and direct them scientifically and personally. He considers his former graduate students as his children and follows their careers very closely. He enjoys athletics and is an avid golfer. He loves to travel and has seen or is familiar with almost all the good clay deposits in the world.

Dr. Grim retired from active teaching at the University of Illinois in 1967 but this has not slowed him down one iota. He is working on a book on bentonites and is adjunct professor of Geology at Texas Tech in Lubbock, and is a consultant for many companies in the clay business and continues to work in foreign countries evaluating mineral resources. He has given lectures on Clay Mineralogy in Algeria, Argentina, Australia, Brazil, England, France, Hong Kong, India, Ireland, Israel, Italy, Japan, Mexico, New Zealand, Philippines, Russia, Scotland, South Africa, Sweden, Taiwan, and Venezuela. He maintains an office at the department of Geology at the University of Illinois and keeps abreast of the work being done on clays at the University.

In his many years of association with the clay minerals he has probably acquired more knowledge about this broad area which includes geology, engineering, chemistry, mineralogy, soil science, and ceramics than any other person.

Mr. President, it is a great pleasure to present to you the Roebling Medalist for 1974, Dr. Ralph E. Grim.

American Mineralogist, Volume 60, pages 498–500, 1975

Acceptance of the Roebling Medal of the Mineralogical Society of America for 1974

RALPH E. GRIM

Turtle Creek Village, Concourse Drive, Building 12C
Jupiter-Tequesta, Florida 33458

The award of the Roebling Medal is a very great honor, and I am deeply grateful for the receipt of this award. I am proud to be in the company of the distinguished mineralogists who have received the Roebling Medal in the past, particularly those who have also worked in clay mineralogy—Ross, Pauling, Gruner, and Brindley.

I feel a deep sense of gratitude to Clarence Ross. When I was getting started in clay mineralogy, forty years ago, I spent days in his laboratory in Washington, and we spent hours together studying his collection of clay mineral specimens and discussing all phases of clay mineralogy. In later years, we did not always agree—for example, in the use of the term 'illite'—but our friendship never wavered.

When I joined the Illinois Geological Survey in 1931, Victor Allen of St. Louis University had spent several summers on a petrographic study of some clays and shales in the state. A little earlier Ross and his colleagues had, by extremely refined microscopic techniques, revealed that clay