

PRESENTATION OF THE ROEBLING MEDAL OF THE
MINERALOGICAL SOCIETY OF AMERICA TO ARTHUR
F. BUDDINGTON

H. H. HESS *Princeton University, Princeton, New Jersey*

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

I am happy to introduce Arthur F. Buddington to you as Roebbling medallist. In awarding this medal the Society honors the recipient, it honors the memory of Colonel Roebbling and I believe it does credit to itself in reaffirming its stand that it represents mineralogy in the broadest sense.

This is the 15th time the Society has awarded the medal. It is the third time that both the Roebbling medal of the Mineralogical Society and the Penrose medal of the Geological Society have been won by the same man, the other two being Esper S. Larsen, Jr. and Norman L. Bowen. These are certainly men in whose company Buddington would feel comfortable. It was Buddington who introduced Bowen when he was medallist six years ago. This was the occasion when Bowen, in reply to Buddington, referred to himself as the "Canadian goose," in a speech characterized by his usual delightful sense of humor.

I have known Buddington for 30 years, first as a student and then as a colleague. For 20 years we have occupied adjacent offices with open doors between them. From my desk I can see him working at his table. The day rarely passes that we do not debate some current problem. On the lighter side Jene Buddington and I have played hundreds of rubbers of bridge against Annette Hess and Arthur Buddington. I know exactly how Budd overbids his hands and never cease to be surprised when he gets away with it. So I think I can speak with more than usual authority on Budd's achievements.

Buddington is unique in that he has made important contributions in so many such diverse fields. His earliest work was on the Precambrian of Newfoundland. Following service as a sergeant 1st class in World War I, he went to the Geophysical Laboratory. Here he became familiar with experimental and theoretical phase rule chemistry, and produced with Ferguson the akermanite-gehlenite diagram. He has had probably the longest and certainly the most distinguished WAE career on the U. S. Geological Survey extending over 37 years. Well known are his geological and mineral deposits studies on South Eastern Alaska, the Cascade Range in Oregon, the Adirondacks and northern New Jersey.

He is an expert on Rosiwal analysis of rocks, on polished section



ARTHUR F. BUDDINGTON
Recipient of the Roebling medal of the Mineralogical Society of America.

study of ore minerals, on structural petrology in the field, on the distinction between metasomatic and magmatic granites, and on the anorthosite problem. He has written excellent papers ranging from such details as the nickel minerals in a deposit in Alaska to broad philosophical concepts such as his presidential address to this society. This dealt with his ideas on the interior of the Earth based on petrological inference and the evidence from seismology.

In the last decade much of his research work has been related to the system $\text{Fe}_2\text{O}_3\text{—FeO—TiO}_2$ and remanent magnetism of rocks containing minerals in this system. Though perhaps not yet fully recognized he has made a very great contribution by bringing together experience in subsolidus exsolution relations, petrologic concepts on thermal history and magnetic properties of the minerals. There is probably no other living scientist who could cover all three of these fields expertly. As a result an understanding of the phenomena is rapidly being developed which, without Buddington's part in it, might well have been delayed many years.

Finally, perhaps his greatest achievement and the one on which he has worked hardest for the last 36 years, is that of an outstanding and inspiring teacher of petrology.

Mr. President it is an honor to present Arthur F. Buddington as the recipient of the Washington A. Roebling Medal of the Mineralogical Society of America.