

PRESENTATION OF THE 1959 MINERALOGICAL
SOCIETY OF AMERICA AWARD
TO HARRY F. W. TAYLOR*

LLOYD W. STAPLES, *Department of Geology, University of
Oregon, Eugene, Oregon.*

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

This is the ninth consecutive year that the Mineralogical Society of America has chosen a recipient for its Award. The task of selection is not easy, as it requires not only that the recipient be a young man, but that the search be world-wide in scope.

It is my very great pleasure to present to you a person who more than adequately fills the stringent Award requirements. Dr. Harry F. W. Taylor, born in Nottingham, comes to us from the University of Aberdeen. It is interesting that the second recipient of the Mineralogical Society of America Award, Dr. Fred H. Stewart, also originally came from Aberdeen, although at the time of the award he was at Durham University in England.

Doctor Taylor's work provides a good example of the interdependence of the sciences. He graduated in chemistry from Nottingham University and did research on the hydrothermal synthesis of aluminosilicates under Professor Barrer. Later he held a post-doctoral fellowship at Birkbeck College in physics under Professor Bernal, where his work on the hydrated calcium silicates started. Moving to Aberdeen, he continued his work on the calcium silicates and became increasingly more interested in the mechanisms of thermal and hydrothermal transformations of silicates.

It is difficult to determine exactly when Doctor Taylor became interested in mineralogy and crystallography, because the development of his interest was dictated by a steadily increasing need in his physicochemical studies. His work on silicates pointed out the advantage of following his studies of synthetic materials with comparative studies of natural materials, which often were better crystallized and, consequently, permitted single crystal x -ray studies. However, in order to make full use of these

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natural materials, it was necessary to have a clear picture of their structure, and quite often a satisfactory structural study was not available. He solved this problem by making his own crystallographic studies.

It was in 1953, after publishing some 14 papers, mostly in the *Journal*

of the *Chemical Society*, that Doctor Taylor presented his first paper to the *Mineralogical Magazine*. In the short time since 1953, he, with some of his colleagues, has described three new minerals and one heretofore unknown mineral analogue. Although the discovery and description of new minerals is always fascinating and rewarding, I consider an even more important contribution to be his clarification of the relations and status of a host of other minerals whose structures he has carefully determined. In ten papers, he has described the structure and relations of many of the hydrous or basic calcium silicates, such as gyrolite, crestmoreite, riversideite, truscottite, jurupaite, xonotlite, afwillite, tobermorite, zeophyllite, and foshagite, indicating identities in certain cases such as between jurupaite and xonotlite. The state of confusion existing with respect to these minerals was as formidable as their names. His sweeping out of ambiguities is a most excellent type of mineralogical housekeeping. Many of his observations were recorded in a monograph published in 1956, with Heller as co-author, and titled: "Crystallographic Data for the Calcium Silicates." This is a valuable contribution which Doctor Taylor is attempting to make obsolete through his subsequent work.

President Grim, in recognition of his outstanding contributions toward an understanding of the calcium silicates, I present Dr. Harry F. W. Taylor to you to receive the Award of the Mineralogical Society of America.