Robert Edgar Allardice.

ROBERT EDGAR ALLARDICE, son of John and Isabella Edgar (Laing) Allardice, was born in Edinburgh on 2nd March 1862.

He entered Edinburgh University (Faculty of Arts) in 1879-80, and took 7th place (equal) in the class of "Junior" Mathematics. Next year he came strongly to the front, and was First Medallist in the "Senior Class," and first in the Senior Summer Class. In 1881-82 he was Medallist in the Advanced (Honours) Class, and graduated M.A. with First Class Hons. Maths. in the same year. After nearly two years of post-graduate study he became assistant to the late Prof. Chrystal (1883-4) in succession to William (now Principal Sir William) Thomson, who had been translated to the Chair in the Cape University, Cape Colony. Allardice held this appointment till 1892, when he was called to fill the Chair of Mathematics in the (Leland) Stanford (Jr.) University, California. He was succeeded in Edinburgh by Charles Tweedie.

It seems a long way back to the eighties of last century, especially in view of the recent great expansion of the Scottish Universities. In those days the Lecturer was almost non-existent. In the Department of Mathematics the Professor with one assistant conducted all the teaching and the classwork of the session. The summer classes were preparatory, and were taught by the assistant. As Chrystal devoted himself chiefly to the analytical side of the subject, the geometrical treatment fell to Allardice. This gave him a bias in favour of geometry which lasted all his life.

His earlier papers appeared in the *Proceedings of the Edinburgh Mathematical Society*, and one of the first of these was reprinted with slight modifications as "A Synopsis of Spherical Geometry" and used as a text-book for his University classes (2nd ed., Thin, Edinburgh, 1886).

Allardice took an active part in the doings of the Edinburgh Mathematical Society, and was on the committee from its inception. He was Vice-President in 1889-90, President in 1890-91, and Editor of *Proceedings*, 1891-92. Between 1884 and 1892 he contributed some twenty papers to the *Proceedings of the Edinburgh Mathematical Society*. These were chiefly geometrical, but included also such subjects as Stirling's approximation to $n!$ (n large), symmetric functions, theory of numbers, permutations, solution of equations, and the barycentric calculus.

After 1892, when he was settled in California, he could no longer

maintain his close association with Edinburgh, though he paid various visits from time to time. He published many papers, mostly geometrical. These appeared chiefly in the pages of the *American Mathematical Society* (*Bulletin* and *Transactions*), and in the *Annals of Mathematics*. Though so far away, he still continued to send contributions to the *Proceedings of the Edinburgh Mathematical Society*. Allardice was also the author of various biographical articles in the *Encyclopædia Britannica*. He was a good linguist and a man of wide culture. When at San Francisco he experienced the shock of the great earthquake, and had an alarming experience, the effect of which was lasting.

When he became Emeritus-Professor he continued to reside in his adopted country, and died at Palo Alto, California, on 6th May 1928. He was 66 years of age, and unmarried.

He was a Fellow of the Royal Society of Edinburgh, member and ex-President of the Edinburgh Mathematical Society, and member of the American Mathematical Society.

When in Edinburgh, Allardice used to play tennis, and was at one time Hon. Treasurer of the Newington Club. To the Edinburgh student of the early eighties there will ever be a vivid picture of Allardice, seated, while Chrystal lectured, in his chair on the platform at the end of the blackboard, as was then the custom, and turning daily from black to grey during the lecture hour, under the unceasing deluge of Chrystal's chalk-dust. And another impression is that of the spare, black-coated figure, inclined slightly forward, daily crossing the Old Quadrangle, and slowly oscillating a preternaturally long walking-stick. Professor Chrystal and Principal Thomson described him as the best examination student they had ever known.

E. M. H.