

Monday, February 17, 1851.

Dr CHRISTISON, Vice-President, in the Chair.

The following Communications were read :—

1. Biographical Notice of the late Robert Stevenson, Esq., Civil Engineer. By his Son, Alan Stevenson, L.L.B. Communicated by Dr T. S. Traill.

This memoir commences by stating that Mr Stevenson was born at Glasgow on the 5th May 1772, and that he died at Edinburgh, in the seventy-ninth year of his age, on the 12th July 1850. The writer then notices the disadvantages under which Mr Stevenson laboured in infancy and youth, owing to the death of his father, who was a partner in a West India House in Glasgow, and died in the Island of St Christophers soon after the birth of his only child. In spite of these, and by the prudence and energy of his mother, Robert Stevenson had the benefit of a tolerably full course of training both in science and literature, first at the Andersonian Institution in Glasgow, and afterwards at the University of Edinburgh; and so great was his zeal in the pursuit of knowledge, that, while acting during the summer as a superintendent of works, under Mr Smith, the engineer of the Lighthouse Board, his future father-in-law, he regularly devoted the winter months to the study of mathematics, natural philosophy, chemistry, and architectural drawing. Some pretty long extracts from some MSS. memoranda, left by Mr Stevenson himself, and from his "Account of the Bell Rock Lighthouse," next follows; and in them an interesting view is given of his early designs for the Bell Rock Lighthouse, and of the difficulties with which he had to contend, and the encouragements he met with in reference to his great enterprise. The writer then goes on very briefly to notice his father's long service of about forty years as engineer to the Commissioners of the Northern Lighthouses, in which office he succeeded his father-in-law, Mr Smith, in 1806. During that period, he was the architect of no fewer than

twenty-three lighthouses, including that of the Bell Rock; and through his indefatigable zeal and patient skill, the catoptric system of lighthouse illumination was in Scotland brought to a state of perfection which has not elsewhere been equalled. Many of those improvements he was the means of extending to the lighthouses of Ireland and of some of the colonies. He also invented two valuable additions to the mode of distinguishing lights on a coast, known as the *intermittent* and *flashing* lights, the latter of which, in particular, has been generally approved by seamen; and so much was the late King of the Netherlands pleased with the arrangement and effect of this distinction, of which he had read an account, that he sent to Mr Stevenson a gold medal as a mark of his approbation. The memoir next notices Mr Stevenson's career as a practitioner in his profession of a civil engineer, in the course of which it is not perhaps generally known that he designed and executed the eastern approach to Edinburgh by the Calton Hill; and, after alluding to several of his works in bridges and harbours, it mentions his improvements in the construction of timber and suspension bridges, and notices his connection with the first introduction of the railway system into Great Britain, and his contributions to various scientific journals, and to literature of his own profession. In conclusion, the writer briefly touches upon the private character of his father, and the esteem in which he was held by all who knew him, and more especially by the Commissioners of the Northern Lighthouses, who, in 1824, ordered his bust to be placed in the Bell Rock Lighthouse, and, on the occasion of his death, recorded in the Minutes of the Board their respect for his talents as a public officer and his virtues as a man.

2. Historical Notice of the Progress of the Ordnance Survey in Scotland. By Alexander Keith Johnston, Esq.

There are few places on the earth's surface which, within such a limited area, combine so many of the requisite elements for cartographic delineation as are met with in Scotland. With mountains rising almost to the limit of the snow-line, and an extensive sea-