but was carried out personally by this busy business man in his limited leisure. The success which he achieved in his experimental work showed that had he elected to become a professional scientist he would have been as eminent as he was in his chosen profession.

Dr. Macaulay contributed generously to numerous causes both in Canada and Great Britain. In memory of his forebears he gave many thousands of pounds for educational, hospital, welfare and other purposes in Lewis and in Fraserburgh, but his benefactions were national as well as local. He was interested in genetics and in research on the endocrine glands, and contributed large sums to the Animal Breeding Research Department of the University of Edinburgh. Probably he will be remembered best as the founder of the Soil Research Institute at Aberdeen which bears his name. The buildings and equipment, including a demonstration farm on peatland in Lewis, were provided by Dr. Macaulay on the understanding that the Government would meet the cost of maintenance. He possessed tireless energy and unbounded enthusiasm. One of his ambitions was to bring about an improvement of the poorer classes of land in Scotland and during his visits to the country much of his time was spent in furthering this object. His influence with the crofters in Lewis was very great and he succeeded in bringing about many improvements where others had failed. The results of peat reclamation experiments carried out in Lewis were later applied by the Macaulay Institute in the successful reclamation of peatland in Lanarkshire on behalf of the Commissioner for the Special Areas.

It was my privilege to become one of Dr. Macaulay's friends and to stay with him several times in Canada, where I saw something of his happy home circle and of his scientific pursuits. He was a man of great sincerity and strength of character, kindly and always anxious to help his fellows. He lived simply and gave generously.

It was a source of great satisfaction to him during his last visit to Great Britain four years ago to stay at the Institute which he was instrumental in founding and to see the realization of some of his cherished ambitions.

W. G. OGG.

Mr. F. J. Selby, C.B.E.

MR. FRANCIS JAMES SELBY, C.B.E., one of the small band of workers who formed the staff of the National Physical Laboratory in its early days and helped to develop it from small beginnings to an institution of world-wide renown, died on March 5. He joined the staff in 1903 to take charge of the prediction of tides which the Laboratory was about to carry out for the Indian Government, and to establish a Division for Optics to supplement the work of the Observatory Department at Kew. Selby was also secretary to the Director, an office which, if the range of his activities were considered, would have been better described as secretary of the Laboratory. In this position, which he made one of great importance in the Laboratory organization, he took a large share of administrative responsibility. His sympathy with the policy of Sir Richard Glazebrook particularly fitted him for this work, and those who knew the Laboratory well realized that it was no less fortunate in its secretary than in its first director. Everyone trusted him and valued his judgment and advice.

In 1909 Glazebrook was appointed chairman of the newly formed Advisory Committee for Aeronautics; Selby was chosen and continued as secretary until 1919, when the committee was replaced by the Aeronautical Research Committee. His services were recognized by the award of the C.B.E.

In 1918, shortly before the Government accepted financial responsibility for the Laboratory in place of the Royal Society, the office of Secretary of the Laboratory was formally established, with Selby as the first holder. In the following year Sir Joseph Petavel became director, and Selby continued to give most loyal service. He retired in 1932 on reaching the age of sixty-five.

Selby's special training was in mathematics, first at University College, London, where he greatly appreciated the teaching of Karl Pearson, and afterwards at Trinity College, Cambridge. He graduated as sixth wrangler in 1891 and later became mathematical master first at Bristol Grammar School and then at Repton. At the Laboratory, Selby retained a keen interest both in mathematics and in education. There was probably no important paper on relativity or the quantum theory that he did not read critically. He took an active interest in the further education of junior members of the Laboratory staff.

On his retirement, Selby intended to write a history of the early days of the National Physical Laboratory, a task for which he had unique qualifications. Unfortunately, little more than two years after his retirement, when the work was only partly done, he had a stroke and his memory was affected to an extent which made the completion of the history impossible.

Selby was twice married, and is survived by a daughter.

T. SMITH.

Mr. C. Oldham

CHARLES OLDHAM was born at Lincoln on April 16, 1865, but at the age of six the family went to live at Sale in Cheshire. It was at the preparatory school there that began the life-long friendship with T. A. Coward that was later to bear fruit in the classical account of the "Birds of Cheshire".

Until his retirement in 1927, the claims of his professional duties as assistant manager of the Manchester office and later of the London office of the Commercial Union Insurance Company, permitted him little leisure to pursue his scientific studies. Despite this temporal handicap, he became an acknowledged authority on British malacology and ornithology. He it was who contributed the field notes for the first edition of Witherby's "Handbook of British Birds", and he made notable contributions to the study of British land and freshwater Mollusca and especially in the critical genus of the Pisidia, his specimens of which are now in the national collection. It is at once a tribute to his characteristic thoroughness and physical endurance that, in the course of the study of this group, he examined almost all the very large number of tarns in North Wales.

Oldham was a field naturalist of the best type, outstanding alike in the accuracy of his observations and the breadth of his knowledge, and by no means the least valuable of his services was his influence upon those with whom he came in contact. For ten years Oldham was one of the honorary secretaries of the Hertfordshire Natural History Society and its president in 1920. His annual reports on the birds