

in his native city, especially the Royal Infirmary, in which, by the way, he had served for many years as surgeon and physician, and in which he introduced many improvements.

Down to the period of his last fatal attack of typhoid fever, by which he was cut off on the 2d of October 1879 after a brief illness, Dr Fleming continued to perform with wonted energy and ability his duties, professional and otherwise, and may truly be said to have died in harness. His loss was greatly regretted by a large circle of patients, by whom he was regarded with esteem and affection, and by the public of Glasgow generally. In conclusion, it may be truly said that the history of Dr Fleming is that of a career modest and uneventful, but useful, honourable, and successful to the last.

ARTHUR HAY, MARQUIS OF TWEEDDALE.

By Robert Gray, Esq.

ARTHUR HAY, 9th Marquis of Tweeddale, F.R.S., and president of the Zoological Society of London, was born on the 9th November 1824. He was the second son of his father, the 8th Marquis, who was a distinguished soldier, and the first agriculturalist of his time. Having in his eighteenth year obtained a commission in the Grenadier Guards, Lord Arthur Hay, as he was then called, on attaining the rank of Captain about a year afterwards, went out to India as A.D.C. to his father, who was Commander-in-Chief at Madras. At the end of a few years service in this capacity he was appointed A.D.C. to the Governor-General Lord Hardinge, and served under him in the Sutlej campaign of 1845–46. He was present at the decisive battle of Sobraon, and on the conclusion of the Treaty, by which the British became possessors of the hill territory west of the Sutlej and Cashmere, he, with several of his brother officers, visited this part of the Himalayas—a journey which afforded him ample opportunities for prosecuting his favourite study, and making a large collection of the birds of the country.

During his residence in India, Lord Arthur Hay formed the acquaintance of the late Dr Jerdon, a distinguished Eastern naturalist, who was in the early part of his life Assistant-Surgeon at Fort St George. Subsequently he was on terms of intimacy with other eminent naturalists; but he does not appear to have published more

than two scientific papers previous to 1866. These two appeared in the *Madras Journal*, one in 1844–45 entitled “Descriptions of some supposed new or imperfectly described species of Birds,” the other in 1847 entitled “Notice of the Habits of the Large Indian Boa or Rock Snake.”

In 1862 Lord Arthur Hay assumed the title of Lord Walden on the death of his elder brother Lord Gifford, and for the next four years of his life was almost entirely occupied with his military and other duties, as indeed he had been for many years previously. He was present with his regiment at the various battles fought during the Crimean war, and passed through the whole of that memorable campaign with distinction. He took part in the siege of Sebastopol, and received, among other honours, the medal and clasp for the war, the Sardinian medal of valour, the Turkish war medal, and the fifth class of the order of the Medjidie. He was ultimately promoted in 1860 to a Colonelcy in the Grenadier Guards, but was placed on half pay in 1863. In 1866, after becoming a Lieutenant-Colonel of the 17th Lancers, he finally retired from the army, and betook himself to scientific pursuits. For the next ten years he resided at Chislehurst, during which period he contributed a most important series of ornithological papers to the “Proceedings and Transactions of the Zoological Society,” the “Annals of Natural History,” “Rowley’s Ornithological Miscellany,” “The Ibis,” and other periodical magazines—many of these papers specially referring to the birds of India and the Eastern Archipelago.

Upon the death of Sir George Clerk in 1868, Lord Walden was elected President of the Zoological Society of London—an office in which he discharged his duties in the most efficient manner until his death.

Lord Walden succeeded to the peerage and estates on the death of his father in 1876; and at that time, having taken up his residence at the family seat, Yester, in Haddingtonshire, he entered upon the investigation of the avi-fauna of the Philippine Islands, at which subject he worked with extraordinary zeal, the result being a most valuable series of papers, thirteen in number, which appeared in the “Proceedings of the Zoological Society,” the last of which was finished but a day or two before the author’s death.

The papers of greatest value written by Lord Tweeddale appeared

between 1867 and 1878. These relate almost exclusively to descriptions, with figures, of new species of birds from various parts of the world, and are looked upon as the most important contributions to ornithological science that have been published during the same period in this or any other country. No one, indeed, can look upon the masterly work of Lord Tweeddale without feeling that by his sudden and premature death an irreparable loss has fallen upon the science to which he was devoted, and that many years must pass before ornithologists cease to deplore his untimely removal.

In 1877 Lord Tweeddale published fifteen separate papers on ornithological subjects, and in the following year about the same number—the fourteenth and last having, as already mentioned, been finished only a few days before his death. His loss, therefore, came upon the scientific world at a time when his writings were being regarded with a peculiar interest, and when he himself was everywhere being recognised as the most able ornithologist of his day.

Lord Tweeddale died at Walden Cottage, Chislehurst, on the 29th December 1878. His collections of birds, which are of great value, being the repository of a large number of type species described in the papers referred to, together with his valuable library of scientific works, are bequeathed to his nephew, Mr R. Wardlaw Ramsay, himself an ornithologist of considerable note.

DR JAMES M'BAIN. By Robert Gray, Esq.

DR JAMES M'BAIN was born at Logie, in Forfarshire, in November 1807. After having spent some years at the parish school of Kirriemuir, and about three years as an apprentice to a local surgeon, he entered upon the study of medicine at the University of Edinburgh in 1823. Three years later, namely, in March 1826, he passed his examination at Surgeons' Hall, and received his diploma when little more than nineteen years of age. About this time he removed to St Andrews, where he spent upwards of twelve months; and in the autumn of 1827 he was appointed assistant-surgeon to H.M.S. "Undaunted," just then commissioned to proceed to India with the newly-appointed governor, Lord William Bentinck. During this and a subsequent voyage in the same ship in 1829, to the Azores and Cape de Verde Islands, Dr M'Bain had but