

ings were apt to be interrupted and the whole audience would stand up and give three cheers for "good old Bryce." Among themselves the Americans to the last habitually called him "our Mr. Bryce." American citizens of all classes believed in his thorough goodwill towards their country, and he thus achieved what seemed almost the impossible in inducing them to bear kindly with criticism they felt to be both honest and friendly. For if Lord Bryce knew no better form of government than democracy, he was, as his recent work has shown, keenly alive to its imperfections and crudities both in the States and in Australia.

Politics, historical and literary studies, and travel were the main occupation of Lord Bryce's life. His career in the two former branches of activity has been fully dealt with in the general Press. Here we may more appropriately confine ourselves to the last. Lord Bryce, without being in any strict sense a man of science, though he was elected a fellow of the Royal Society, under the special rule, in 1893, took the keenest interest in several branches of natural science. His father had been a geologist, and he himself was apt to record the geological features of the countries he passed through. In botany he was an eager student, with a keen eye for rarities. In his walks near his home at Ashdown Forest he would frequently stop to recognise some relatively rare growth, and so long ago as 1859 he wrote a manual on "The Flora of the Island of Arran."

When he visited Peking the attachés at the British Legation, who were prepared to give information on Chinese politics, were dismayed to find themselves called on to answer questions as to the local flora. In his "Impressions of South Africa" he discusses at some length the vegetation of the country, and records that he brought home fifty-four plant specimens, eleven of which were pronounced at Kew to be new to science. Wherever he went he was as keenly interested in the natural aspects and features of the country visited as in its inhabitants and their politics, and he delighted to trace the interaction between the two. His descriptive talent was exceptional, and was aided by the almost unique opportunities for comparison given him by the extent of his travels. Take at hazard this vivid sketch of Lake Titicaca:—

"The blue of Titicaca is peculiar, not deep and dark, as that of the tropical ocean, nor opaque, like the blue-green of Lake Lemana, nor like that warm purple of the Ægean which Homer compares to dark red wine, but a clear, cold, crystalline blue, even as is that of the cold sky vaulted over it. Even in this blazing sunlight it had that sort of chilly glitter one sees in the crevasses of a glacier; and the wavelets sparkled like diamonds."

The shortest way to indicate the extent of Lord Bryce's travels might possibly be to give a list of the regions he had *not* visited. During the three years (1899-1901) when he was president of the Alpine Club it was noted that whatever distant range might be under discussion the ubiquitous chairman was sure to begin his remarks with, "When I was out there." I believe "The Mountains of the

Moon" was one of the few places where the author of the paper had the advantage of him.

Of these many years' wanderings and holidays in a busy life (continued until last spring by a trip to Morocco) the public have had the results in three solid works. Of these, the first, "Transcaucasia and Ararat" (1877) was in the main not a mountaineering record, but a study of the Caucasian isthmus and its peoples, as seen by a passing visitor. But the account of an ascent of Mount Ararat, in which Lord Bryce reached the top without his companions, fixed public attention and had some singular consequences. In a rash moment he wrote of a piece of wood he picked up near the top, a relic of a previous Russian ascent, that he was not able to state it might not be gopherwood. When in the United States he had frequent applications from out-of-the-way local museums for the smallest fragment of this invaluable relic of Noah's Ark!

Lord Bryce's two solid volumes on South Africa and South America are, apart from their political importance, admirable pictures of the regions described. In their pages he unites the power of observation which makes a good traveller with that of generalisation which is called for in a geographer. And he carries his readers on from one topic to another by a lively style which reflects the quickness and versatility of the author's mind. Lord Bryce was engaged at the time of his death in a collection of "Memories of Travel," which we trust will be found in a state sufficiently advanced to admit of publication.

It must be added that if Lord Bryce had one hobby, or taste, stronger than another, it was for mountains and mountain climbing. He habitually found time to attend the meetings of the Alpine Club, and to take a share in its discussions. He followed the doings of its members with the keenest interest. The chief ornament of a study which was usually a chaos of proofs, letters, and presentation volumes, was a photograph of the most beautiful of snowpeaks, the Himalayan Siniolchum.

DOUGLAS W. FRESHFIELD.

SIR JOHN KIRK, G.C.M.G., K.C.B., F.R.S.

By the death of Sir John Kirk at the advanced age of ninety, the world has lost the last survivor of the heroic pioneers of African exploration, the founder of the British position in Eastern Equatorial Africa, and a botanist whose contributions to African natural history were of first-rate importance.

Sir John Kirk was born in the Manse of Barry, near Arbroath, in 1832. He entered Edinburgh University at the age of fifteen, and obtained the degree of M.D. in 1854. In 1855 he went to Turkey with the Volunteer Medical Corps in connection with the Crimean War and served in a hospital on the Dardanelles. In 1857 he was recommended by "Woody Fibre" Balfour as physician and naturalist to Livingstone's second expedition, in which he served from 1858 until he was invalided home in 1863. On that expedition, which was the least successful of Livingstone's three, Kirk gained a higher reputation than any other of its members. His unflinching good humour, tact, and great gift of

sympathy must have been invaluable, and in spite of internal dissensions in that expedition, Livingstone afterwards wrote that he had never had any difference with Kirk. Livingstone has borne warm testimony to Kirk's untiring zeal, energy, and courage. He collected 4000 species of plants, in addition to zoological specimens, making careful studies of the economic products. In gratitude for his help Livingstone named the western wall of the Rift Valley along the Shire River and Lake Nyasa, the Kirk Range.

Kirk returned to East Africa in 1866 as physician to the Consulate at Zanzibar. He was fortunately soon entrusted with political work, and became Vice-Consul in 1867 and Consul in 1873. In 1870 Said Barghash succeeded to the Sultanate, and the general impression of his character is summed up in Kipling's "from Said Barghash in a tantrum," but he was never in that condition with Kirk. Both men had a keen sense of humour, and Kirk soon gained an immense influence over Said Barghash, who was a loyal friend. When the Sultan was visiting this country in 1875 he threatened to return at once because he felt that Kirk had been treated rudely by the Duke of Cambridge. In 1873 the combined influence of Sir Bartle Frere's mission and of Sir John Kirk secured the abolition of the slave trade in the Dominion of Zanzibar. Sir Frederick Lugard has testified to the efficiency with which Kirk ensured the enforcement of that edict by the Slave Court at Zanzibar, while insisting on the missionaries taking no illegal premature steps in reference to domestic slavery. In 1877 the Sultan offered a British syndicate a lease of his dominion on the mainland; but the British Government would not accept the offer, and it was not until after Germany had secured the southern part of those territories that a concession of the rest was accepted, and the British East Africa Company founded to administer them. Kirk was one of the founders and original directors to whom the Royal Charter of that company was awarded. Its ultimate failure was one of his most bitter disappointments. The company was incorporated in 1888, and Sir John Kirk thenceforward lived in England. He served for many years as foreign secretary of the Geographical Society, which gave him its Patron's Medal in 1882. He was elected fellow of the Royal Society in 1887; he was also a D.C.L. of Oxford and Sc.D. of Cambridge.

Kirk's scientific work was mainly botanical. He was a most indefatigable collector; he described some of his new plants, and wrote many articles for the *Kew Bulletin* and other scientific journals. His collections have greatly enriched the Kew Herbarium, and have been described as amongst the most important materials for its "Flora of Tropical Africa." His main interest was in economic botany. He established at his own expense at Mbweni, near Zanzibar, an experimental plantation of which the results were of the highest value, and introduced many trees and plants, and some of the extensive eucalyptus plantations in East Africa came from seeds raised from his trees. He wrote reports on

olive culture and on fibres, one of the valuable local supplies of which comes from *Sansevieria Kirkii*.

Kirk founded the East African trade in wild rubber, the best of which came from *Landolphia Kirkii*, and his name is also commemorated in many other important East African plants. He introduced through Kew a considerable series of new plants to British gardens.

After his return to this country he was regarded, until blindness lessened his usefulness, as one of the most trustworthy referees from the Foreign Office on African questions. In 1889-90 he was a plenipotentiary to the Brussels Conference, and for his services there was made K.C.B. His K.C.M.G. was awarded in 1881, and his G.C.M.G. in 1886. He was Vice-Chairman of the Uganda Railway Committee, and was sent to Nigeria to inquire into the famous case of sacrificial cannibalism when forty prisoners were eaten at Akassa.

The beautiful little antelope, "Kirk's Gazelle" (*Madoqua Kirkii*), will help to preserve his memory among settlers in the lands he secured to the Empire. To the explorers of that area Kirk was a friend who will always be remembered with most sincere affection and respect.

PROF. J. H. COTTERILL, F.R.S.

ON January 8 Prof. James Henry Cotterill died at Parkstone, near Bournemouth. Prof. Cotterill was the youngest son of the Rev. Joseph Cotterill, of Blakeney, Norfolk. Educated at Brighton College, he was afterwards apprenticed in the works of Sir William Fairbairn, at Manchester. Later he went to St. John's College, Cambridge, and took a fair place in the mathematical tripos. In 1866 he became lecturer and in 1870 vice-principal at the Royal School of Naval Architecture and Marine Engineering at South Kensington. In 1873 the school was moved to Greenwich, and became part of the Royal Naval College, in which Prof. Cotterill was professor of applied mathematics until his retirement in 1897. He was elected hon. vice-president of the Institution of Naval Architects in 1905.

In 1806 a commission had recorded the opinion that the highest officers then responsible for the design and construction of vessels of the Royal Navy were sadly ignorant of the theory of naval architecture, and, in fact, in the early nineteenth century the best ships in the Navy were those captured or copied from the French. In 1811 the first Admiralty School of Naval Architecture was opened at Portsmouth for training expert advisers, under Dr. Inman. It lasted twenty years, but trained only forty students, some of whom, like Isaac Watts, chief constructor, attained distinction. In 1848 a second school was opened at Portsmouth, under the principalship of the Rev. Dr. Woolley, and entry from the dockyard schools was made dependent on merit. It lasted only five years. Mr. E. J. Reed (chief constructor) and Mr. Barnaby (chief naval architect) were among its students on whom devolved the responsibility of the transition to ironclad construction. Chiefly at the instance of the Institution of Naval Architects, the third Admiralty school was