

valley wall a racing stream is usually to be seen, which erodes both ice and rock. The stream cannot meander away from the valley-wall, for owing to the movement of the glacier the ice is renewed as fast as or faster than it disappears, while the spurs of the hills are open to the continuous attack of the water thus trained against them. No doubt this enhanced action of the water has given rise to the seemingly contradictory conclusion (p. 431) "that glaciers have the power of cutting back spurs which is greater than that of water".

H. T. FERRAR,

Geologist to the *Discovery* Antarctic Expedition.

February 23, 1914.

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OBITUARY.

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SIR JOHN MURRAY, K.C.B., F.R.S., LL.D., D.Sc., Ph.D.

BORN MARCH 3, 1841.

DIED MARCH 16, 1914.

A FEELING of profound regret was shared by all naturalists and men of science generally at the announcement on March 17 of the sudden death by a motor accident of Sir John Murray, whose name is so intimately associated with the famous *Challenger* explorations, and to whose untiring energy and devotion we are indebted for the carrying out of the results of the work, a task which, owing to the illness of Sir Wyville Thomson, fell almost entirely to Sir John Murray. The *Challenger* sailed in December, 1872, and returned in May, 1876, bringing back innumerable pelagic and other organisms new to science. Writers of eminence in the several departments were engaged, whose labours occupied from 1880 to 1895, resulting in the production of fifty large quarto volumes admirably illustrated by maps, plates, and text-figures. This fine series of "*Challenger Reports*", thanks to the efforts of Sir John Murray and the generosity of the British Government, may now be seen and consulted in all the principal libraries and scientific institutions of the world.

Born at Coburg, Ontario, Canada (March 3, 1841), John Murray was the second son of Robert Murray and his wife Isabel, daughter of the late Thomas Henderson, ship-owner. He was educated at a public school in Canada, then in 1858 at the High School of Stirling, Scotland, and later at Edinburgh University, where he came under the influence of Lord Kelvin, Clerk Maxwell, and Professor Tait.

Sir John Murray, in addition to his administrative and editorial duties, took an active part in the "*Challenger Reports*", and contributed two large volumes summarizing the scientific results of the expedition, which occupied twenty-three years of his life. Nor was Sir John Murray's work confined to the famous *Challenger* expedition, for in 1880 and 1882 he took part in the exploration of the Farøe Channel in H.M.S. *Knight Errant* and H.M.S. *Triton*. He also established marine laboratories on the shores of the Forth at Granton and on the Clyde at Millport, Cumbrae. With his steam yacht *Medusa*, fitted with all suitable appliances, he made soundings and exploration of numberless locks and straits on the coast of Scotland. (See also his and Mr. Pullar's Bathymetrical Survey of the Scottish Freshwater Locks, 6 vols., 8vo, Edinburgh, 1910.)

In addition to his writings on the *Challenger*, Sir John Murray published in *The Depths of the Ocean* valuable contributions on oceanic life in its relation to geology; the condition of our planet in past ages; on the origin of coral reefs; on geography, oceanography, and marine biology. Sir John Murray married, in 1889, Isabel, only daughter of the late Mr. Thomas Henderson, ship-owner, of Glasgow. He leaves two sons and three daughters.

He was made a Knight of the Prussian Order pour le Mérite in 1898. He received numerous medals, and was an honorary member of a great number of British and foreign scientific societies.

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### JAMES McMURTRIE, F.G.S.

BORN 1840.

DIED FEBRUARY, 1914.

WE regret to record the death of another excellent geologist, and valued friend, Mr. James McMurtrie, F.G.S., of 5 Belvedere Road, Durdham Park, Bristol, who passed away on February 2, in his 74th year.

Mr. McMurtrie was for forty years connected with the estates of the Waldegrave family, and was manager of their collieries at Radstock until 1902. It was from this coal-field that many of the ferns figured by Brongniart in his *Histoire des Végétaux Fossiles*, 4to, 1828, were obtained.

Mr. McMurtrie was elected a Fellow of the Geological Society of London in 1873. He was a typical Scotchman and served as President of the Bristol Caledonian Society in 1906.

Born at Dalquahrran, in the parish of Dalry, Ayrshire, McMurtrie began life under his father, who was manager of the collieries at that place. He entered for a short time upon commercial life in Liverpool, but soon removed to Newcastle-on-Tyne, becoming a mining pupil at the Towneley Collieries at Ryton, where he was articled to Mr. Robert Simpson. Having completed his articles McMurtrie (in 1862) at the age of 22 went to Radstock, Somerset. During his forty years' residence he carefully studied and mapped the coal-seams of that difficult area and collected some very fine and characteristic coal-plants which he subsequently presented to the Geological Department of the British Museum, Natural History, Cromwell Road, London.

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### HENRY POTONIÉ.

BORN NOVEMBER 16, 1857.

DIED OCTOBER 28, 1913.

WE regret to record the death of this distinguished palæobotanist. Born in Berlin he was educated in that city and in Paris, and at the age of 21 gave special attention to the study of botany. In 1880 he was appointed an assistant in the Botanic Garden at Berlin; five years later he became Palæobotanist to the Geological Survey of Prussia; in 1891 he was appointed Professor of Palæobotany in the School of Mines, and in 1901 occupied a similar post in the University at Berlin. His *Lehrbuch der Pflanzenpaläontologie* was published during the years 1897–9, and a second edition was in preparation. He was author also of other books on recent and fossil botany, and of many important papers on fossil plants.