

News and Views

Christopher Borrus

It is a tradition of the Society of Jesus that St. Ignatius, its founder, was wont to watch the heavens in order that his heart might be inflamed with the love of God from the consideration of the wonders of His work; and from almost its earliest days the Society has included men who have devoted themselves to astronomy and other sciences. Clavius, Scheiner, Grimaldi, Hell, Mayer, Boscovich, Secchi, and Perry are but a few of the men of science who have belonged to the Society. One of the first, however, was Christopher Borrus, who was born in Milan in 1583, joined the Society in 1601, and died on May 24, 1632, three hundred years ago. Like Fathers Trigault, Rhò, and Schall, he was sent as a missionary to the Far East, and wrote a valuable account of Cochin China. He made observations on the variation of the compass, and, according to Kircher, drew up the first charts of the Atlantic and Indian Oceans, showing the spots where the magnetic needle makes the same angles with the meridian. He was thus a forerunner of Halley. His explanation of the chart is contained in a manuscript which belongs to the Royal Academy of Lisbon. He also made suggestions as to a new method for determining longitude at sea. After some years spent in the East, he returned to Europe, and taught mathematics at Coimbra. His death took place at Rome shortly after he had entered the order of Cistercians.

The Varley Brothers

In an interesting address on the brothers Varley, who did much valuable pioneering work in telegraphy and electrical engineering, Col. Lee, of the Post Office, in a lecture on May 5 to the Institution of Electrical Engineers, pointed out that the whole progress of telegraphy during the constructive period up to the laying of the Atlantic cable was largely the history of Cromwell and Samuel Alfred Varley. This year is the hundredth anniversary of the birth of S. A. Varley. Cornelius Varley, the father of the two brothers, was a well-known scientific worker, and delivered the fourth Friday evening discourse at the Royal Institution. He was a descendant of Oliver Cromwell. The first attempts to lay an Atlantic cable having failed, Cromwell Varley served on a committee appointed by the cable company which issued a most valuable report. Later on, Cromwell Varley and Sir William Thomson (Lord Kelvin) entered into partnership as consulting engineers, being joined later by Fleming Jenkin. Cromwell Varley wrote many scientific papers, one of them published by the Royal Society describing experiments on luminous phenomena which came very near to discovering the electron. Samuel Alfred Varley did much valuable work in telegraphy. During the Crimean War, he laid the first field telegraph in 1854. His greatest invention was the self-exciting dynamo, on which he had been experimenting since he was seventeen years of age. On technical

grounds the priority of this invention is generally attributed to others. At the International Inventions Exhibition in 1885, he was awarded a gold medal for inventing a self-exciting dynamo. He championed the cause of the electrical industry against the Brush patent for the compound wound dynamo. Varley's precedence in the invention was upheld after an appeal to the House of Lords and the Brush patent was declared invalid. Both the brothers Varley and the late Earl of Crawford played a leading part in founding the Institution of Electrical Engineers. Among the seventy-one founder members were four of the Varley family.

Life and Work of Dr. James Murie

DR. JAMES MURIE, well known for his work on the Thames fisheries, was born on March 30, 1832, and he died in 1925. To commemorate the centenary, Mr. A. Lawrence Wells gives an interesting account of his life and work in the *Southend Standard* of March 31 last. Murie is chiefly remembered for his later work at Leigh, where he lived and did valuable service in connexion with the local fisheries, but his early career was full of adventure. Educated for the medical profession at the University of Glasgow and specialising in zoology, he first worked at the Royal Infirmary, Glasgow, proceeding to the Royal College of Surgeons in London as assistant in the Museum, where, under Prof. J. E. Queckett, he worked at comparative anatomy, especially aquatic mammals. After two years at the Museum, he travelled through Europe and made several voyages as ship's surgeon, finally joining the expedition to the White Nile under John Petherick, who was meeting Capts. Speke and Grant for exploration of the western tributaries of the White Nile. The expedition, disastrous as it proved to be as regards Petherick's party, was yet productive of much valuable zoological material, and the fish collection was declared by Dr. Gunther to be the finest ever received from that part of Africa.

ON his return to England, Murie again worked at the Royal College of Surgeons, arranging and cataloguing the collection of slides left by Prof. Queckett; then becoming prosector for the Zoological Society, and later sub-editor of the Linnean Society's publications. It was whilst working for the Linnean Society that he rented a cottage at Leigh and so began his interest in the Thames fisheries. These various employments no doubt helped in his later work, which he made peculiarly his own. Besides his practical help and constant sea-going with the fishermen, he reported on the fisheries for the Kent and Essex Sea Fisheries Committee, which required much original research. The first part of this valuable report on the Fisheries of the Thames Estuary has been published, the second part, as has been already noticed in *NATURE* (May 14, 1927, March 5, 1932), is partly in proof and partly in manuscript, and the whole is now in the Southend Library.