

without which local money probably would not have been forthcoming, I may mention that on a visit to the section last August, with Professor Garwood (whose excellent conjoint paper with Miss Good-year, read at the Geological Society on June 6, and published in abstract in the Proceedings on June 13, 1917, has been overlooked by Mr. Cantrill in his account of work on the district), we learnt from an old quarryman, whose memory reached back many years, that it had been the custom in slack times to cart coal from the Clee Hills for lime-burning. In order to preserve the coal it was necessary to bury it, often in considerable quantities. Relics of these hoards are occasionally met with, and, as their history has been generally forgotten, it is very likely that these chance finds gave rise to the idea that coal-bearing beds exist in the locality.

W. W. WATTS.

HILLSIDE, LANGLEY PARK,  
SUTTON, SURREY.  
November 12, 1917.

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OBITUARY.

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PROFESSOR EDWARD HULL, F.R.S.

(WITH A PORTRAIT, PLATE XXXV.)

BORN MAY 21, 1829.

DIED OCTOBER 18, 1917.

By the death of Edward Hull, in the 89th year of his age, another of the links has been broken which connect the geologists of to-day with those of the earlier half of last century. He was born in Antrim, and came of a stock that had been settled in Ireland for at least four generations. Educated at Trinity College, Dublin, he took his degree in Arts there. It was there, also, that he was inspired with a strong bent towards geology by the prelections of Professor Thomas Oldham. That eminent man gave him a letter of recommendation to Sir Henry De la Beche, Director-General of the Geological Survey, who without loss of time found a place for him in 1850 on his staff. From the time when Hull began field-work by running sections in North Wales under J. B. Jukes, he continued for seventeen years to be employed in England, first mapping tracts in Gloucestershire and the upper parts of the Thames Valley, and then in the coal-fields of Cheshire and Lancashire. During the winter months, when the members of the staff, quitting the field, repaired to London for indoor work in the office, Hull gained the good-will of his colleagues by his imperturbable good-nature, which, in sport, they would sometimes tax to its utmost limit. But he seemed never to bear any of them a grudge, taking it all as part of the routine of Survey life. They came to recognize that beneath his foibles of manner there lay a kindly heart, ever ready to respond to kindness.

In 1867, on the separation of the Geological Survey of Scotland as a special branch, Hull's good service was rewarded by his being

appointed District Surveyor and second in command on the Scottish branch. Stationed at Glasgow, he was entrusted with the mapping of the Clyde coal-field. But he had not been more than two years in this new sphere when he received further promotion by being appointed to succeed Jukes as Director of the Geological Survey of Ireland—a post which he continued to fill until he retired from official life, after a service of forty years.

The Irish Directorship was by no means a bed of roses. The staff included at least one fiery member, who, with characteristic Irish contempt for the ruling power, began opposition before the newly appointed official had set foot in Ireland, demanding that the appointment should be cancelled. When this demand was rejected, he commenced the same system of petty insubordination and opposition which had reduced poor Jukes to despair. Hull, however, as an Irishman, was probably not wholly unaccustomed to such tactics. He never succeeded in permanently silencing the malcontent, and made many an appeal to his chief in Jermyn Street for support. Indeed, no small part of his official correspondence with headquarters consisted in reports of fresh and unexpected devices of opposition. But his equanimity seemed never to be seriously ruffled. No higher testimony to his essential good-nature could be desired than the fact that he bore the perpetual worry for two and twenty years without losing either his wits or his temper. During his reign in Ireland he had the opportunity of seeing the geology of every part of the island. This wide experience gave him material for the preparation of a convenient new general geological map of the country on the scale of 8 miles to an inch. While discharging his duties in the Survey he also held the Professorship of Geology in the Royal College of Science in Dublin.

In 1891 Hull retired from official life. He was then little more than 60 years of age, and still in full possession of health and vigour. He determined to come to London and settle there in the expectation that he might find congenial employment as a practical geologist or geological engineer, especially in connexion with such matters as coal-mining and water-supply, in which he had often been consulted during his life on the Survey. He never allowed his pen to rust. The list of his memoirs, papers, and separate books is a monument of his industry. He was a voluminous writer on English geology from the beginning of his life in the Survey onwards. Some of his early papers are marked by a suggestiveness in the discussion of more or less theoretical questions which gave promise of distinction that was hardly fulfilled in his later work. His best known volume, *The Coal-fields of Great Britain*, is a useful compendium of the subject of which it treats, and has passed through five editions. Reference should also be made to his contributions to our knowledge of the geology of Palestine. He was sent to that country in 1883 by the Palestine Exploration Society, as leader of an expedition which included the future Lord Kitchener as one of its staff, the object of research being to report on the region of Mount Seir, Sinai, and Western Palestine. In later years he devoted much time to tracing on Admiralty and other charts the

submarine continuations of the river-valleys of Western Europe and Western Africa.

In 1910 the retired Professor published a thin autobiographical volume, entitled *Reminiscences of a Strenuous Life*. His career, like that of many other public servants, was quiet, uneventful, and not unsuccessful. It included sufficient leisure for such work as he chose to undertake, outside the sphere of his official duties, and of this leisure he diligently availed himself in the preparation of his contributions to the scientific literature of the time. Though much of his writing may not be enduring, it must be admitted that he has left his mark on the records of English geology.

Those who knew Edward Hull best will always remember him as a leal-hearted friend, who through a long life maintained the honour of a gentleman and carried with him cheerfulness and good will wherever he went.

A. G.

NOTE.—On June 1, 1914, Professor Hull was one of those friends who wrote and congratulated the Editor on the completion of fifty years of the *Geological Magazine*, and was indeed one of the four famous geologists, then surviving, who had contributed to the 1864 volume of that journal, viz., the Rev. O. Fisher, M.A., F.G.S.; Sir Archibald Geikie, O.M., K.C.B., P.Pres.R.S., etc.; Professor W. Boyd Dawkins, M.A., D.Sc., F.R.S.; and Professor Hull, M.A., LL.D., F.R.S., etc., Professor Hull himself having during the fifty years made 119 communications to this Magazine. We had prepared a complete list of the titles of Hull's books and papers, amounting in all to over 250. As a selected series had already been published by Professor Hull at the end of his *Reminiscences of a Strenuous Life* in 1910, and the full list would have occupied more than ten pages, we could not devote so large a space in this number, and the intention had therefore reluctantly to be abandoned.—EDITOR *GEOL. MAG.*

### GEORGE CHARLES CRICK.

BORN OCTOBER 9, 1856.

DIED OCTOBER 18, 1917.

BORN at Bedford on October 9, 1856, the son of Dr. F. W. Crick of that town, George Charles Crick was educated at the Modern School there. Subsequently he passed through a course of studies at the Royal School of Mines, South Kensington, from 1875 to 1881. His career there was noteworthy, for he successively passed 1st Class in Physics (1875-6), 1st Class in Biology (1876-7), 2nd Class in Chemistry (1877-8), 1st Class in Geology (1878-9), 1st Class in Mechanics, 2nd Class in Mineralogy, 2nd Class in Palæontology (1879-80), and 1st Class in Mechanical Drawing (1880-1), thus winning the Associateship.

For some short time he acted as one of the curators to a notorious private collector, but on January 1, 1881, he entered on duty as Clerk and Assistant Secretary to "H.M. Commission to enquire into Accidents in Mines etc" of which Sir Warington W. Smith was



Yours very truly  
Edward Hull