

Mr. Moulton most courteously sends me a drawing, here reproduced, of the specimen mentioned by him as "*Agelacrinus*" in 1881. It is not the "astérie" of Professor Malaise; it is not a *Protaster Decheni*, or any kin thereto; but it is a fine specimen of an Edrioasteroid, as large as, and more perfect than, the British Museum specimen E 7581, with actinal and abactinal surfaces clearly shown; and it belongs incontestably to *Dinocystis Barroisi*. F. A. BATHER.

BRITISH MUSEUM (NATURAL HISTORY).

February 5, 1899.

OBITUARY.

WILLIAM COLCHESTER, J.P., F.G.S.

BORN JULY 21, 1813.

DIED NOVEMBER 15, 1898.

AMONGST geologists and agriculturists the name of William Colchester will always be associated with the Suffolk Crag and the Cambridge Greensand, and the exploitation of these deposits as sources of artificial manure for the farmers, and which have so largely added to the fertility of the soils, not only at home but in all parts of the civilized world. Coming of a Gloucestershire family, William Colchester was the eldest son of the late Mr. Benjamin Colchester, and spent his early life at Dedham, near Colchester, Essex. Like the late Sir Joseph Prestwich, he was educated at University College, London, and it was originally intended that he should follow the profession of an architect. In early life he travelled much in Italy, studying classic and mediæval architecture. He afterwards visited Russia, chiefly in order to learn the Slavonic language. On his return to England Mr. Colchester became identified with the late Mr. John Chevalier Cobbold, formerly M.P. for Ipswich, in connection with the importation of timber. In course of time Mr. Colchester associated himself with the ports of Ipswich and London in the carrying trade, and became a large shipowner. This led to the development of an extensive ship- and barge-building industry at the Cliff, Ipswich, which he carried on in conjunction with his other business for many years.

Some idea of the extent of this shipping business may be gathered from the fact that the fleet of vessels belonging to the firm at that time numbered more than thirty; whilst the fleet of shrimpers built and equipped by him fifty years ago which sail from Harwich are still known as 'Colchester's Fleet.' They were originally used for dredging up *septaria* from the London Clay off the port of Harwich.

The concretions known as 'septaria' form the raw material from which Roman or Portland cement was manufactured, an industry extensively carried on by Mr. Colchester fifty years ago. These dredging operations were also of great importance in deepening the channel at the mouth of the River Orwell, which, owing to the set of the tides, was liable to be obstructed by the formation of a bar across its estuary.

In 1843, after an excursion in the Crag district in the neighbourhood around Ipswich in company with his friends Colchester and

Prestwich, the Rev. Professor Henslow called the attention of the Geological Society of London to the great beds of shingle at Felixstowe, where the pebbles contained so large a proportion of phosphate of lime that he was "convinced they must all be considered as of *coprolitic origin*," and amongst which he found the fossil tympanic bones of several kinds of whales. The practical mind of William Colchester soon enabled him to turn this to account, and, after consultation with Mr., now Sir, John Lawes, a company was formed known as Lawes's Chemical Manure Company, of which Mr. Colchester was Chairman for many years.

The first area worked by this Company for obtaining the raw material for the production of artificial phosphates for agricultural purposes was in the Suffolk Crag, and extended from Felixstowe through Melton, Bawdsey, Orford Castle, to Sutton Haugh.

It was fortunate that Mr. Colchester was a geologist in addition to being a keen man of business, otherwise the wholesale destruction of the Suffolk Crag over this large area, in the search for artificial manure, would have resulted in an irreparable loss to geological science; but during the whole period the diggings were being carried on, the workmen were encouraged to collect and preserve the more interesting specimens of teeth and bones of mammalia and fishes, which form no inconsiderable part of the Crag nodules, and of which the museums of Ipswich and York, the British Museum, and many others contain abundant examples. The Crag deposits of Suffolk and Norfolk yield numerous remains of Pliocene Vertebrata mingled with derivative fossils from earlier Miocene and Eocene strata.

Since the opening of the phosphate diggings, large collections have been made by the late Mr. Edward Charlesworth, F.G.S., Messrs. Jas. Baker and W. Whincopp, of Woodbridge, Sir Joseph Prestwich, the Rev. F. Canham, and others. Mr. Colchester's own collection was lately given to the Ipswich Museum, where Mr. Canham's collection (purchased for the town by the late Sir Richard Wallace) is also preserved. The other collections are now mostly acquired by the British Museum, and, through the liberality of Mr. William Reed, F.G.S., for the York Museum.

Large works were erected at Ipswich for the crushing and grinding to fine powder of the raw coprolite, and it was no uncommon thing in those days for frequent special trains to be running laden with thousands of tons of the newly discovered mineral. In the experience of the late manager, we are told that sometimes as many as fourteen vessels, steamers, etc., have been waiting their turn to load at Mr. Colchester's works, in the Cliff Bight, Ipswich.

Mr. Colchester also acquired large chemical works at Rainham, and at his death was still a proprietor of land around that place. He was also the originator of the "Manganese Bronze Company," and was the inventor and manufacturer of steam-ship propellers for the motive-power of our great ocean-going liners.

After the cessation of the Suffolk Crag Coprolite Works Mr. Colchester became interested in the Cambridge Greensand Coprolite Diggings, and joined Mr. T. T. Ball in the Burwell Works. Some

twelve years ago he restored the old mansion of Burwell Hall, and rebuilt it much on the lines of Springfield House, Ipswich, his then residence, and thereafter he made his home at Burwell.

He was elected a Fellow of the Geological Society of London in 1857 (but did not communicate any papers to the Society); he was also elected a Member of the Geological Club in December, 1882.

Mr. Colchester married in 1840 Miss Kate Bright, a daughter of the well-known Maldon family of that name, and in 1890 celebrated his golden wedding, with all his numerous family around him. The surviving four sons and four daughters were present at his funeral with several of his grandchildren.

During Mr. Colchester's long life of 85 years he retained his mental and bodily activity almost to the last, and whilst carrying on an enormous amount of business engagements he found time to form numerous pleasant and lifelong friendships with eminent geologists, and to attend the meetings of the Societies in London and those of the British Association for many years.

PROF. H. A. NICHOLSON, M.D., D.Sc., F.R.S., F.L.S., F.G.S.

BORN SEPTEMBER 11, 1844.

DIED JANUARY 19, 1899.

(WITH A PORTRAIT, PLATE IV.)¹

HENRY ALLEYNE NICHOLSON was born at Penrith; his father, Dr. John Nicholson, was a well-known Oriental scholar, and his grandfather was President of Codrington College, Barbados. He received his early education under Francis Newman and at Appleby Grammar School, and then went to the University of Göttingen, where he worked under Professor Keferstein, the distinguished zoologist. From 1862 to 1867 he studied medicine at the University of Edinburgh, and graduated in this latter year as Bachelor of Medicine and Master of Surgery, taking first-class honours in all subjects, and obtaining the University Gold Medal for his graduation thesis, "On the Geology of Cumberland and Westmoreland"; this was subsequently published, with a dedication to his friend and teacher, Professor Harkness, of Queen's College, Cork, in whose company in the field Nicholson worked out the geology of the districts in question. In addition to the more strictly medical studies of the University he worked earnestly at the Natural Sciences under the teaching of Goodsir, Allman, and Balfour, and graduated as Bachelor of Science in 1866, receiving the Baxter Scholarship in the Natural Sciences, and in the following year he took the degree of Doctor of Science. In 1869 he proceeded to the degree of Doctor of Medicine, and was awarded at the same time the Ettles Medical Scholarship of the University, as the most distinguished student of his year in medicine.

The first position occupied by Professor Nicholson after the conclusion of his brilliant student career was that of Lecturer on

¹ For permission to reproduce this excellent portrait of our lost friend we are indebted to the editors of "Alma Mater," and to its publishers, Messrs. W. & W. Lindsay, Aberdeen.—EDIT. GEOL. MAG.