

Whether it is desirable to introduce the term Aptian into English nomenclature is another question, into which I forbear from entering. The suggestion that some part of the Folkestone sands may be equivalent to the basal part of the Gault made by my friend Mr. Strahan in the Geological Survey Memoir on the Isle of Wight, second edition, 1889. It will no doubt be decided by future investigations, but I must be allowed to point out that it stands on very different ground from the equivalency of the Upper Gault and Upper Greensand. That has been established by palæontological evidence, the other has not.

One more word as a caution, and this is that the numerous zones into which the Folkestone Gault has been divided cannot all be recognized elsewhere: I do not think the Lower Gault generally can be divided into more than *two* zones, those of *Ammonites interruptus* and *Amm. lautus*.
A. J. JUKES-BROWNE.

OBITUARY.

JOHN WHITAKER HULKE, F.R.S.,

President of the Royal College of Surgeons of England; Foreign Secretary
of the Geological Society of London.

BORN NOVEMBER 6TH, 1830.

DIED FEBRUARY 19TH, 1895.

GEOLOGISTS, both at home and abroad, indeed, men of science generally, will have learned with deep concern of the death of Mr. J. W. Hulke, the Foreign Secretary of the Geological Society, the President of the Royal College of Surgeons of England, and Senior Surgeon to the Middlesex Hospital.

Viewed as a surgeon, Mr. Hulke had a career of singular distinction as well as of wide range. But he was also a most accomplished geologist and palæontologist. He was a learned Shakespearian; also an excellent linguist, and while keeping up a more than ordinary acquaintance with the classics, he was a fluent and accurate French and German scholar, and possessed also a knowledge of Italian. He was a first-rate botanist, both in the lecture-room and the field, as may be seen from the opening half of the Hunterian Oration this year, which illness prevented him from delivering. He was an excellent diagrammatic artist, painted in water-colours, and was not unskilled in modelling.

John Whitaker Hulke was born on November 6th, 1830, being the elder son of a well-known and widely respected general practitioner at Deal. The original family name was Hulcher, his ancestors being Dutch by origin, who had escaped from Holland during the Spanish persecutions under Philip II. and Ferdinand, Duke of Alva, and settled on the Kentish coast. There for some two hundred years they have followed the vocation of medicine. He was educated at King's College School, and at Neuwied, in Germany, and at the age of nineteen entered the medical school of King's College, where he was a dresser to Mr. (afterwards Sir) William Bowman, and house surgeon to Sir William Fergusson.

It was while he occupied this position that he attended the Duke of Wellington in his last illness, his father being the Duke's regular medical attendant and obtaining leave to avail himself of his son's services as assistant. In 1854, when the Crimean War broke out, he was early to volunteer, and at the beginning of 1855 was appointed assistant surgeon to the British Civil Hospital at Smyrna.



J. WHITAKER HULKE, F.R.S., For. Sec. Geol. Soc. Lond.¹

Thence he was sent to Sebastopol, and in that awful campaign of irremediable sickness, gross mismanagement, and gallantry as often as not ineffective, bore himself, in the opinion of everyone, with patient courage as a brave soldier. On his return from the East he became medical tutor of King's College Hospital, and having previously been elected a Fellow of the Royal College of Surgeons of England, was appointed in 1858 assistant surgeon to Moorfields Hospital. He had previously been elected assistant surgeon to King's College Hospital, where, having duly served his allotted period, he was appointed, together with Dr. Charles Murchison, a colleague at King's, to the Middlesex Hospital, of which institution he was the senior surgeon at the time of his death.

Mr. Hulke's earliest mark was made in Ophthalmology. He obtained the Jacksonian Prize of the Royal College of Surgeons of England for an Essay on the Morbid Changes of the Retina; his Treatise on the Use of the Ophthalmoscope (1861) formed an excellent introduction for most of the profession to the new system of intra-ocular examination; his Arris and Gale Lectures delivered before the Royal College of Surgeons of England, and subsequently published, dealt with the Minute Anatomy of the Eye. Mr. Hulke was made a Fellow of the Royal Society in 1867, in recognition of the value of his papers on the Anatomy of the Retina in Amphibia and Reptiles. But although so highly and widely recognized as an authority on the eye, Mr. Hulke was no less esteemed by the profession as a general surgeon, and the record of his work in the wards of Middlesex Hospital remains a monument to

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his skill and patience. He was a pioneer in cerebral surgery, though all the teaching of his masters must have biassed him to look upon interference with the brain as a very serious matter. As an operator he was admirably careful, and his intimate anatomical knowledge counted for something in the marked caution of his procedure. As a clinical teacher he had few, if any, equals in London. He was lucid, learned, and simple. Where a point required exposition he was certain to know everything that could be said, but he was never tempted into needless display of erudition, and never talked for talking's sake.

We have briefly referred to Mr. Hulke's knowledge of botany, but his position as a geologist merits more extended mention here. He was one of the first authorities on vertebrate palæontology. Out of about fifty papers which he contributed to scientific societies thirty-three relate to fossil Reptilia. Of these the most important are on *Ilypsilophodon Foxii*, from the Wealden of the Isle of Wight (Quart. Journ. Geol. Soc. 1873-74, and Phil. Trans. 1882-83); *Polacanthus Foxii*, Hulke (Phil. Trans. 1881-82); on *Ornithopsis Seeleyi* (Quart. Journ. Geol. Soc. 1879, 1882); on Dinosaurian remains from the Kimeridge Clay of Northamptonshire (Quart. Journ. Geol. Soc. 1887); on a maxilla of young *Iguanodon* (Quart. Journ. Geol. Soc. 1886); the shoulder-girdle of Ichthyosauria and Plesiosauria and Recent contributions to the skeletal anatomy of the Dinosaurs (Presidential Addresses Geol. Soc. 1883-84). From 1882 to 1884 he was President of the Geological Society; in 1887 he received the Wollaston gold medal, the highest award which is in the power of the Society to bestow; and from 1890 to his death he was the Society's Foreign Secretary. He has left behind him a large collection of specimens, mostly obtained with his own hands from the Undercliff in the Isle of Wight. His collection has just been presented to the British Museum (Nat. Hist.) by Mrs. Hulke, in memory of her husband.

Few men have held more official posts than Mr. Hulke. At the time of his death he was President of the Clinical Society of London. It may not be out of place to repeat here the words of the retiring President, Sir Dyce Duckworth, when inducting his successor: "You have elected to-night as my successor one whom we all respect and acknowledge as a master of the surgical art, one whose modesty, rectitude, and fearlessness are only equalled by his skill and kindness of heart. Mr. Hulke, will, I feel sure, add lustre to the post he comes to fill." From 1886 to 1887 he was President of the Ophthalmological Society, and he had also been President of the Pathological Society of London, and had been for many years, and was, at the time of his death, librarian to the Royal Medical and Chirurgical Society. He was elected President of the Royal College of Surgeons, England, in 1893, in succession to Mr. Bryant, having been a Vice-President from 1888. He was a member of the Court of Examiners for ten years from 1880. His greatest work in connection with the Royal College of Surgeons was, undoubtedly, the formation of the Research Laboratory of the Conjoint Board. The

scheme for this was Mr. Hulke's, and he was Chairman of the Joint Laboratories Committee from its foundation. The work that has been done and is now doing there speaks sufficiently for the wisdom of the scheme. At the Royal Society, of which he was elected a Fellow in 1867, he served on the Council during 1879, 1880, 1888, and 1889; and was also a member of the Scientific Relief Committee. His communications to the Transactions of the Society were numerous, and the last of them was read before the Society on May 12th, 1892—"On the Shoulder-girdle in Ichthyosauria and Sauropterygia."

His strict devotion to duty was no doubt answerable for his death. He took no holiday during the past year, his time being too occupied to permit him to do so, and the incessant and acute strain was telling upon him at Christmas. This much he admitted. On the night of Thursday, Feb. 7th, a terribly bitter night, he was summoned to the hospital to operate upon a case of strangulated hernia, from which he did not return until 3.30 a.m. On the following day he had a little bronchitis, but did not keep his bed. Indeed, he operated on Saturday at the Middlesex Hospital on a case of cerebral abscess, and went to the wards again on Sunday (Feb. 10th) and Monday (Feb. 11th). But later in the day he had to recognize that he was seriously ill, and the bronchitis increasing, pneumonia supervened, and he died on Tuesday, Feb. 19th, about noon.

"His life was gentle; and the elements
So mix'd in him, that Nature might stand up
And say to all the world, This was a man!"

Shakespeare.

JAMES ADEY BIRDS, B.A., F.G.S.

BORN NOVEMBER 9TH, 1831.

DIED DECEMBER 15TH, 1894.

JAMES ADEY BIRDS was descended from an old Derbyshire family, the Birds of Locko, Stanton Hall, and Bakewell, Derbyshire. He was the son of the Rev. W. T. Birds, and was born November 9th, 1831, at Preston Rectory, Salop. He was educated at Rugby, and graduated at Christ Church, Oxford. He took a deep interest in geology, was a careful observer of geological facts, and communicated several papers to the *GEOLOGICAL MAGAZINE* between 1866 and 1881, notably on "A bed of Chalk-flints near Spa, Belgium" (1866), on the "Post-Pliocene formations of the Isle of Man" (1875), on the "Geology of the Channel Islands" (1878), "'Beekite' in the Channel Islands" (1879), "Foreign Pebbles on our South Coast" (1881), etc.

Mr. Birds was elected a Fellow of the Geological Society in 1878. He was a good classical scholar and linguist, and prepared an English rendering of Goethe's "Faust" (published by Longmans in two volumes in 1880).

He formed an excellent geological collection, which he bequeathed to the borough of Derby, the chief town of the county where his ancestors had so long resided. He died at West Bournemouth, on December 15th, 1894, in his 64th year.