number of the GEOL. MAG., will not succeed in converting Mr. Judd to their views, as they have omitted to notice one point, if not *the* point, which prevents him from giving any recognition to that agency.

On p. 15 he states that only by those who ignore altogether the action of subterranean forces "the necessity is felt of assuming that *rivers of ice* possess a power, which is on all hands admitted does not belong to *rivers of water* (the italics are Mr. Judd's)—that of excavating great basin-shaped depressions in their course." But, surely, rivers of water do often scoop out basin-shaped depressions. As a good example may be mentioned the Atbara, so well described by Sir Samuel Baker in "The Nile Tributaries of Abyssinia," which, except in the rainy season, is simply a dry bed, with here and there, in its course, pools of considerable size abounding in fish, crocodiles, and hippopotami. So that we have only to suppose a river of ice endowed with similar excavating power, and its capability of producing lakes in its course, and the probability that it will do so, are evident.

T. V. HOLMES,
H.M. Geol. Survey Eng. and Wales.

WIGTON, CUMBERLAND,
March 10*th*, 1876.

NOTE ON AN ANNELID BED IN THE GAULT OF KENT.

SIR,—I have been much interested in reading the note on the above subject by Prof. Rupert Jones in the March Number of the GEOLOGICAL MAGAZINE. I take this opportunity of stating that I am well acquainted with the narrow hard band he mentions, as occurring in the Lower Gault of Folkestone, which is probably similar, if not identical, with that found at Westwell Leacon, near Charing.

Although I did not actually note the occurrence of this hard band as bored by Annelids, still, if my paper on the Gault of Folkestone (Quart. Journ. Geol. Soc., 1874, vol. xxx. p. 347) be referred to, it will there be seen that in describing Bed III. I have mentioned the occurrence of tabular masses of ironstone, as being met with in this bed, being of the same light fawn colour as the clay. It might almost be said to be red externally, especially when slightly weathered. Upon breaking open a fragment of this hard seam, it was seen to be completely riddled with Annelid borings, which were filled up with blue clay. Finding that these masses were far heavier than the clay from any of the beds, I asked Mr. Hudleston to give me an analysis of it—the result being, it was found to contain as much as 30·40 of metallic iron.

Large tabular slabs of this seam may be found lying on the beach in Eastwear Bay, being washed out of Bed III. I have a fragment in my cabinet which is one inch in thickness, but I do not think the seam is ever found thicker than 1½ inches at Folkestone. Yet, as Prof. Rupert Jones has met with this seam near Charing, about two inches in thickness, it is an additional evidence of the Gault thickening out gradually towards the north-west, as at Burham the Gault has a total thickness of about 200 feet.

With regard to the Foraminifera, I am aware that they are plentiful in the Gault, particularly in the lower beds; but as I had never studied them in detail, I omitted to include them in my list of fossils, as I did all that either John Griffiths or myself did not actually find in situ; as my object was merely to notice what the fauna was in each bed Many forms I omitted from the list on account of being unacquainted with their horizon.

Had my intention been otherwise, I should have recorded the list of Foraminifera that appeared in Morris's Catalogue; Mr. Topley's more ample list not being published at the time my paper was read.

Mr. De Rance found *Rotalina umbilicata* in his Bed V., which is the same as Bed VII. in my table. F. G. HILTON PRICE.

OBITUARY.

COLONEL GEORGE GREENWOOD.

BORN JUNE, 1799; DIED 3RD NOVEMBER, 1875.

ALBEIT it is long after date, we cannot omit to pay our tribute of respect to an English gentleman, who, had he fallen amongst Geologists in early life, instead of amongst "thoroughbreds," would doubtless have occupied a leading place among men of science. Col. George Greenwood, who was the son of Mr. Greenwood, of Brookwood Park, Alresford, Hants, was educated at Eton, and entered the Army as a cornet and sub-lieutenant in the 2nd Life Guards in 1817, just after the memorable period of Waterloo. He rose rapidly in his profession, although he was never called upon active service. Lieut.-Col. in 1831, and Colonel in 1838. He was highly esteemed as an officer, and was a celebrated athlete, and the finest horseman of his day. Among the useful reforms which he introduced into the Household Cavalry, it is still gratefully remembered that he reduced the weight of the helmet from 8lbs. to 3lbs.! He was highly esteemed for his horsemanship by William IV., and received marked distinction from the young Queen Victoria; but in 1840, owing to an affection of the heart, his physician (Dr. Chambers) advised his retirement from the Army. Living thenceforward the life of a country gentleman in Hampshire, planting and transplanting trees, he devoted much time to reading. In 1844 he published the first edition of "The Tree Lifter," and in 1853 a second and larger edition, in which some of his geological observations were incorporated. In 1857 Col. Greenwood published the first edition of "Rain and Rivers," in which he showed great powers of observation and shrewd reasoning on the influence of meteoric agents in shaping the form of the ground, especially in reference to the atmospheric origin of all river valleys. His trenchant and original style of thought attracted the attention of Professors Ramsay and Jukes, and his book having been highly commended, he issued a second edition in 1866. He was a voluminous writer, and his letters were always appearing in the columns of the *Athenæum*, in *Nature*, and in this MAGAZINE. He also wrote occasional articles on Valleys and their mode of formation.

Just as in the hunting field he rode hard, so in his letters and book he strove to outride all opposition, and having found by observation a *vera causa* for the formation of valleys, he believed it to be THE