

SUBSIDENCES AT BLACKHEATH.

SIR,—I shall be glad if you can afford space for a few remarks on the letter of the Rev. Osmond Fisher in the current Number of the **GEOLOGICAL MAGAZINE.**

Mr. Fisher asks, in the first place, if these subsidences are a new feature at Blackheath. In reply I have to state that, in addition to the three subsidences mentioned in the Report of the Subsidence Committee, three others (at least) are known to have occurred within the memory of persons now living, though I am unable to give precise dates. But as two of the three were just outside the limits of the open space at Blackheath, and the third, though on the heath, appeared in the corner of a large and irregularly-worked gravel-pit, about forty-five years ago, none of them excited much attention. The three later subsidences, on the other hand, having all been on the surface of what is practically a great open playground both for children and adults, their appearance caused general alarm. Again, in Charlton Park, little more than a mile E. of Blackheath, and exactly like it in geology and physical geography, subsidences have appeared from time to time. But as Charlton is a private park, they remained quite unknown till Mr. F. C. J. Spurrell read his paper on "Danes' Holes" at the Archæological Institute last April. It is thus evident that only those subsidences that from their public importance have excited public interest have become generally known.

I do not think the Blackheath pits have any affinity to the Dorset pits mentioned by Mr. Fisher; the latter seem to me—judging from his letter—rather to resemble those at Whitlingham, near Norwich. At Blackheath there is nothing in the appearance of the surface to suggest the operation of any general natural cause. A large portion of its surface is smooth and flat. The rougher ground is occupied either by large disused gravel-pits or by patches of small, shallow, irregular hollows, due apparently to primitive diggings for gravel. Hasted, in his *History of Kent*, vol. i. (1778), speaks of the high reputation of the Blackheath gravel, which caused it to be sent to great distances. He also remarks that when the rebels under Lord Audley were defeated on Blackheath in 1497, 2000 bodies were buried there, and that their graves are now visible. Pre-existing gravel-pits were doubtless used as graves, and the slow dissolution of the corpses beneath a thin gravel covering might give rise to such hollows.

Mr. Fisher's paper on the Lexden Pit was pointed out to me a year ago by Mr. F. Rutley, who has given an alternative explanation in the same Vol. (1865) of this **MAGAZINE.** (By a strange oversight I only noticed a day or two ago the note referring to the paper on the Dorset pits.) But after carefully reading both explanations of the Lexden pit, the result was—to my mind—to show the difficulties in the way of any purely geological explanation; while, at the same time, no other view seems to have suggested itself either to Mr. Fisher or to Mr. Rutley, who yet differ fundamentally from each other. It was impossible, therefore, for me to have any opinion on the Lexden pit and its bearing—if any—on those at Blackheath.

It may be well to conclude by summing up briefly the grounds for coming to an archæological conclusion at Blackheath.

They are:—1st. The great improbability of any cavity in the chalk under Blackheath in consequence of the very small quantity of chalk there above the permanent water-level. This point was especially dwelt upon by Prof. Prestwich in his letter to Mr. J. K. Laughton, Chairman of the Blackheath Subsidence Committee.

2ndly. The additional improbability of any cavity in consequence of the presence of the clayey beds (10 or 12 ft.) of the Woolwich Series below the Blackheath pebble beds which form the surface.

Lastly. We were more fortunate at Blackheath than Messrs. Fisher and Rutley at Lexden, not only in having much more geological evidence, but also an amount of archæological evidence, in the pits popularly known as “Danes’ Holes,” which would suffice to turn the scale against a geological explanation, even were the facts against one much less weighty than they are.

28, CROOMS HILL, GREENWICH,
Jan. 10th, 1882.

T. V. HOLMES.

ON THE STRATA OF COLWELL BAY, HEADON HILL, AND
HORDWELL CLIFF.

SIR,—I have lately read Prof. Blake’s article on the strata of Colwell Bay and Headon Hill, published in the Proceedings of the Geologists’ Association for October, 1881. Since I took a somewhat (I fear) over-prominent part in the discussion of Messrs. Keeping and Tawney’s paper to which it refers, I should wish to say a few words on the subject.

I cannot think it can be fairly asserted that Prof. Judd’s views “were attacked by Messrs. Tawney and Keeping in a spirit unjustifiable in any scientific controversy.” When we recollect that one of the authors was born in the Isle of Wight, and spent the best years of his life in professional work, chiefly in exploring and collecting from the Eocene beds of the district, some little amount of warmth was justifiable in defending, what were his own well-matured views, as well as those of the Surveyors, against an attack, which, however learned, was apparently based upon work in the library and museum.

Palæontological evidence is a powerful assistant to stratigraphy, but it must yield precedence to results clearly made out in the field. My own investigation of the section certainly supports the views of the Surveyors, as reasserted by Messrs. Keeping and Tawney. Indeed, Mr. Blake appears to me to feel a difficulty in avoiding the same conclusion. But it is remarkable that he does not seem to have applied my crucial test, referred to in Messrs. Keeping and Tawney’s paper, of searching for (and finding) the “Venus” bed in the Totland’s brick-field, at the part where, though continuous inland, it has been denuded off the cliff, between Widdick and Weston Chines.

It is my own opinion that the relations of this somewhat complicated series, in the Isle of Wight, would be made clearer to