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, T. V. Holmes.
Jan. 10*th*, 1882.

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

students, who would compare it with the corresponding series on the coast of the mainland. I therefore send you, copied from a rough note-book, an ascending section made by myself in April, 1853. I do not vouch for the correctness of the genera named. The date of the observations must be taken as an excuse for *errors*.

Ascending section at Hordwell Cliff, going from Beacon Bunney eastward.

	ft.	in.
Barton Clay.		
1. Sandy blue clay, *Ancillaria*, *Oliva*, *Perna*, etc.		
2. White sand passing into greenish clay with lenticular masses of shales. (Searles Wood gives the following list:[1] *Oliva*, *Potamides*, *Ancillaria*, *Natica*, *Sanguinolaria* (? *Psammobia*), *Venericardia*, *Cytherea*, *Lucina*, *Potamomya*)	18	0
3. Lignite	0	4
4. Green sandy clay with *fuci*	0	8
5. Blue laminated clay abounding in *Corbula*, *Cyrena*, *Mytilus* (? *Dreissena*), and *Cerithium*	0	6
6. Carboniferous clay	1	10
Fresh-water.		
7. Greenish and bluish sands and clays with *Paludina*	8	0
8. Nodular marly rock	1	0
9. Greenish clay..... (say)	10	0
10. Brown sand with stems of *fuci*.....	3	6
11. White sand passing into clay	4	0
12. Grey sand	1	0
13. Band of *Potamomya*	0	6
14. White sand (*Crocodile bed*)	8	0
15. Ferruginous marly nodules	1	0
16. Grey clay	4	0
17. *Limnea* marlstone	0	6
18. Greenish clay (? *Dreissena*)	2	6
19. Band with small *Mytilus* and *Physa*	0	4
20. Greenish-white clay	7	0
21. Yellow sand, small spiral shells, *Gyrogonites* and *black seeds* ..	1	0
22. Carbonaceous clay	1	0
23. Grey sand	1	6
24. Greenish clay, blue in places, *Paludina*, *Unio*	2	0
25. Grey sandy clays abounding in vegetable stains	2	6
Marine.		
26. Sandy foxy clay (seen)	5	0
(This corresponds to the "Venus bed,' or Middle Headon.)		

It will be seen from the above section that the calcareous bands (17, etc.) of Hordwell, belonging as they do to the first fresh-water series above the Barton, must be correlated with the Lower Headon Limestones, of which the How Ledge Limestone is the top. They do not represent the Great Upper Headon Limestone. Any correlation of the beds of Hordwell Cliff with those of Colwell Bay will therefore be misleading; the former being below the horizon of the How Ledge Limestone, and the latter above it. The stratum on the mainland which does correspond with the Colwell Bay or Headon Hill "Venus bed," must be sought for at Hordwell above the fresh-water series; and it occurs at a place called Rook Cliff, about a mile to the east of Beacon Bunney, in a low cliff. It is usually

[1] Charlesworth's Geol. Journ. part 1, p. 4, 1846.

buried under a talus of gravel. I have never seen it exposed; but I once collected a considerable number of specimens from the spot, after Mr. Keeping had been digging there, and his spoil heaps had been washed by the rain. The specimens have usually a peculiar pinkish hue, by which they may be identified in a collection.

O. FISHER.

DR. STERRY HUNT.

SIR,—We have just said good-bye to a distinguished American geologist, whose visit to Europe deserves a passing notice in these pages. Dr. Sterry Hunt has been long well known among us by his numerous papers on Geology, Chemistry, and Physics. There is a freshness and vigour about him that makes him welcome at any scientific gathering, and a clearness of exposition and openness of communication that forces even those who do not agree with all his conclusions to admit that at any rate his work tends always to clear away error and suggest new directions and methods of search after truth.

Thomas Sterry Hunt was born in Norwich, Connecticut, New England, in 1826, and educated at Yale College, New Haven, where, under the late Professor Silliman, he devoted himself to Chemistry, Mineralogy, and Geology. In 1847 he became a member of the Geological Survey of Canada, on which he remained until he was called to Boston as Professor of Geology in 1872. This post he held till 1878, when he resigned his official duties, and returned to Montreal to devote himself more completely to professional and scientific work. During his former residence in Canada Dr. Hunt had successively occupied professorial chairs in the Laval University, Quebec, and that of McGill, at Montreal, and from these Universities had received the degrees of Doctor of Sciences and Doctor of Laws. He is also Master of Arts of Harvard University, Member of the National Academy of Sciences of the United States, and of the American Philosophical Society, and has been for more than twenty years a F.R.S. He is an officer of the French Legion of Honour, and has received many recognitions of his services from foreign Academies and Societies.

Dr. Hunt's work during twenty-five years has been in great part devoted to the Geology and Economic Mineralogy of Canada. During this period his published investigations into more purely scientific questions also have been numerous and important, at first in the direction of organic and theoretical chemistry, and later in mineralogy, lithology, and chemical geology; his aim being from the study of the chemistry of waters, sediments, and crystalline rocks, to construct a rational theory of the processes which have presided over the early growth and development of the earth's crust, a study which he designates *mineral physiology*. In this connexion he has made important contributions to cosmic chemistry and physics. We owe to him also in great part the advance which has been made in the grouping and classification on lithological and stratigraphical grounds of the crystalline bedded rocks which present in their succession a