The writer has found the following organic remains at the above localities :—

Sigillaria; Sweeney Mountain; rather rare.	Pecten; Sweeney Mountain; rare.
Strephodes; Sweeney Mountain; rather rare.	Edmondia sulcata; Sweeney Mountain.
Stems of Encrinites; Llangollen.	Sanguinolaria (?); Sweeney Mountain; rare.
Productus cora; Sweeney Mountain; very plentiful.	Schizodus; Sweeney Mountain; plentiful.
Spirifer; Sweeney Mountain.	Pleurotomaria decipiens; Sweeney; rare.
Lingula mytiloides; Sweeney Mountain; rare.	Bellerophon; very rare.
Rhynchonella pleurodon; Sweeney Mountain; plentiful.	Orthoceras giganteum (?); Sweeney; very rare.
Orthis resupinata; Llangollen.	Phillipsia; Sweeney; rare.

Savin's Quarry has yielded a splendid specimen of *Orthoceras*. In length it was four feet six inches; and its diameter at its ends were ten and five inches respectively. There can be little doubt that further search will be rewarded with many additional fossils; but the above is enough to fill up the supposed *hiatus* in the fauna of the Millstone-grit.

V. ON THE GEOLOGICAL STRUCTURE OF THE DISTRICT AROUND KINGSWOOD HILL, NEAR BRISTOL; WITH ESPECIAL REFERENCE TO THE SUPPOSED DEVELOPMENT OF MILLSTONE-GRIT IN THAT NEIGHBOURHOOD. By HANDEL COSSHAM, Esq., F.G.S.

(Read before the British Association, Sept. 1864.)

I HAVE for some years had serious doubts as to the correctness of the Map of the Geological Survey so far as it relates to the supposed presence of Millstone-grit in the northern portion of the Bristol Coal-field in the neighbourhood of Kingswood Hill; and in a foot-note to a most valuable lecture delivered by my friend Mr. Robert Etheridge, F.G.S. (of the Royal School of Mines) at the Bristol Mining School in 1857, and published in a volume of Lectures issued by that Institution, I had, so long ago as that year, expressed doubts as to the existence of Millstone-grit at the surface near Kingswood. Since then I have had much greater opportunities of investigating the matter, having taken, with my partners, a large tract of mineral property in that district; and the results of those investigations thoroughly confirm the doubts I had previously entertained, and in fact fully satisfy my mind that what is shown as Millstone-grit on the Government Geological Map, as also on the valuable map lately published by Mr. William Sanders, F.R.S., of Bristol, is really nothing more than one of the sandstones (the 'Holmes Rock') so common in the Coal-measures proper, and developed on a grand scale in the Pennant-grit dividing the Upper and Lower Coal-

series of all the South-western Coal-fields. I hope it will not be thought presumption in me thus to challenge the opinion of men so much superior to myself in science ; but believing, as I do, that it is by the constant development of facts only arrived at by the extension of mining operations in different districts, and by scientific knowledge being brought to bear upon these facts, that perfect accuracy in our geological plans and sections can be attained,—and thinking that it is a duty we owe to ourselves, our country, and to science, to give to the public the full benefit of any new observations we are enabled to make,—I venture to state the ground upon which I have been brought to the conclusion that the Millstone-grit is not present at Kingswood Hill.

1. By a reference to the accompanying section, from the River Avon to Stapleton, which I have had prepared from accurate survey, extending from the Avon, on the south, to the valley that divides the Parishes of St. George and Stapleton, on the north, a distance of 1 mile and 836 yards, I find there is a continuous and almost regular southerly dip, at an angle of from 30° to 40° , although this section crosses the *supposed anticlinal axis* formed by a supposed upheaval of the Millstone-grit. As it is impossible for there to be an upheaval of the grit from under the Coal-measures without an entire displacement of the superincumbent strata, I contend that the fact of there being no such displacement, but, on the contrary, a continuous dip to the south, as shown by my section, is proof positive that no such upheaval has taken place.

2. I further find that the various seams of coal in the district crop to the surface in regular order of succession as we go south from the northern boundary of St. George's Parish. These seams are very numerous ; there are no less than thirty-four* cropping out between the points named, in a distance of $1\frac{1}{2}$ miles. They are well-known seams throughout the district, and their position in relation to each other is pretty well ascertained and understood. I find that they always crop out in proper order, showing that, while there may be, and doubtless are, many faults in the district, there is no great displacement, but a regular arrangement of seams all in their proper order and relative position ; and this would, of course, be impossible, if the Grit had been forced up from below, as shown on the Geological Survey Map. This fact forms, therefore, another link in the chain of evidence as to the non-existence of the Millstone-grit in this locality.

3. Several branches or tunnels which I have lately driven to the south from the Kingswood Collieries have entered the ground coloured as 'Millstone-grit' on the maps alluded to ; but, instead of finding the Grit, we find the coal-beds in regular order ; and at present we are actually working coal, dipping to the south, in its proper position, in the place where the Grit is indicated on the map,

* Exclusive of seams less than a foot thick. The thirty-four seams make an aggregate of 71 ft. 4 inches of coal (see section and list, p. 111).

which, it is quite clear, must be corrected so far as relates to this point.

4. It must not be understood from the remarks I have made that I dispute the existence of an anticlinal axis running nearly east and west across the Kingswood Coal-field. I am quite aware that on the north of my section, in the Parish of Stapleton, there is a clear and well-defined anticlinal axis extending from Bristol, on the West, to Wick Rocks, on the East, and which, in fact, gives the geographical as well as the geological character to Kingswood Hill : but even on the apex of this anticlinal there is no appearance of the Grit ; nor is it anywhere brought within at least 400 or 500 yards of the surface. One of the main seams of the district—namely, the ‘Great Vein,’ marked No. 32 in the annexed list, and shown in my section—has been worked over the whole of Kingswood Hill, at the top of the anticlinal axis, at a depth varying from 30 to 60 fathoms, and from thence northward (at Soundwell) to a depth of 200 fathoms, and southwards (at St. George’s) to a similar depth ; but between this seam (which is, no doubt, identical with the Bedminster ‘Great Vein’) and the Millstone-grit, there is proved, at Ashton Vale, to be an interval of over 300 fathoms ; so that it is quite evident that the Millstone-grit cannot exist at the surface at Kingswood Hill.

Conclusion.—The band of sandstone called ‘Holmes Rock,’ belonging to the Lower Coal-measures, and shown on the accompanying section, is what has been hitherto mistaken for the Millstone-grit. The section also shows twenty-one known seams of coal, varying from one to four and a half feet in thickness, lying in regular order below it.

Commercially, then, as well as scientifically, the question as to the presence or absence of the Millstone-grit at Kingswood Hill is highly important ; for, instead of the bottom of the Coal-measures, which the Grit itself would mark, we have a considerable extent of valuable Coal-field open to us, which was thought to be barren for the future energy, skill, and enterprise of those to whose talent and perseverance this country is so largely indebted for its past growth and its present prosperity.

ABSTRACTS OF FOREIGN MEMOIRS.

CRETACEOUS ROCKS OF FRANCE AND ENGLAND.

- I. ETUDES SUR LE SYNCHRONISME ET LA DÉLIMITATION DES TERRAINS CRÉTACÉS DU SUD-EST DE LA FRANCE, par P. REYNÈS, M.D., &c. 8vo. pp. 116. Paris, 1861.—II. De L'ÉTAGE DANS LA FORMATION CRÉTACÉE. Par le Docteur REYNÈS. 8vo. pp. 16. Marseilles, 1864.

THE Cretaceous strata of the South-east and other parts of France have for some time specially engaged the attention of Geologists ; and their differences in petrographic and palæontological characters have been a continual source of controversy. Among the more important workers on this point are D'Archiac,