

That the statement "10 or 12 feet above high-water mark" is strictly corroborated by our estimate of "13 feet above the beach" is, I think, rather doubtful, as high-water mark is, excepting at high spring tides, a few feet below the top of the beach.

On page 3 of Mr. Wood's paper, he speaks of "that more purely freshwater formation both *above* and beneath the marine stratum," and he leaves the question of the beds exposed to the eastwards being Upper or Lower Headon an open one. Now we have shown clearly that there are no beds between the marine stratum and the gravel at Paddy's Gap, except one foot and a half of unfossiliferous white sand, which can hardly be referred to the freshwater Upper Headon series; and further that the Unio beds distinctly underlie the Middle Headon. Unless the supposed Upper Headon beds were portions of the Unio beds, what were they?

Is it not better to settle a discussion of this nature on the spot by an examination, and excavation where necessary made at the present day, than to have an argument on observations made many years ago.

All geologists recognize the great value of the work done here, as elsewhere, by the late Mr. Searles Wood; but surely his son writes somewhat unadvisedly in demanding apologies from Mr. Keeping.

OTTERBOURNE, near WINCHESTER,  
Dec. 21st, 1883.

JOHN W. ELWES.

#### THE MIDDLE HEADON MARINE BED.

SIR,—What could have induced Mr. Searles Wood to write a long article on the Long Mead End Upper Bagshot Sands (*GEOL. MAG.* Nov. 1883) I cannot conceive, seeing that the discussion was strictly on the position of the Middle Headon Marine bed. Was it that he was desirous of informing us that his father had discovered the Upper Bagshot Sands in July, 1843? Mr. Searles Wood seems, however, to have overlooked the fact that it had been mentioned by several previous writers—by Webster in 1824, Lyell in 1829, and D'Archiac in 1838.

I do not for a moment blame Mr. Searles Wood in looking after his father's interests; but this, it seems to me, is the reverse of what he is doing, for he implicates his father in several mistakes which he has himself made. Thus he states distinctly (*GEOL. MAG.* Nov. 1883, p. 496) that the Upper Headon does occur at Hordwell; the late Mr. Searles Wood was much more cautious, for he admits that he regarded it as Upper Freshwater "more from position than from its organic contents," thus leaving it an open question.

Our object has been to show that there is *no* Upper Headon at Hordwell, and this I believe we have succeeded in doing. I have myself worked at these cliffs more or less every year for the last 42 years, and we merely wished to add a few facts to what was already known.

Mr. J. W. Elwes having so well described (*GEOL. MAG.* Nov. 1883) the position of the beds in a pit we sank last September, I need hardly say more on this point, excepting that it is not likely that this Middle Headon Marine bed would ever have been found

had it not been for a small slip. I well remember the slipped mass sinking lower and lower until it reached the beach.

Prof. Judd says that the importance of the marine bed has been much overrated, as it is not a distinct formation, but only one of numerous local intercalations of brackish-water bands among the Oligocene strata.

To this I reply that although I have so constantly worked this area, I have never once met with any but this one zone, and have never until now heard of such.

I could say much more, but it really seems a waste of time, and of your valuable space, since one of my critics admits that he has not visited the neighbourhood since 1845, and the other writes as though he had never seen the place at all.

H. KEEPING.

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PIKRITE.

SIR,—I am glad to learn that Capt. John Plant has discovered the rock Pikrite (it is not a mineral, as twice stated in his letter) *in situ* in Anglesey. As I have specially studied the rock, and am aware of more than one variety of it which occurs in Anglesey, I shall be greatly indebted to him if, before he publishes his “map and explanation,” he will permit me to examine his specimens.

T. G. BONNEY.

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MISCELLANEOUS.

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PROFESSOR SIR RICHARD OWEN, K.C.B., M.D., D.C.L., LL.D., F.R.S., F.G.S., etc., etc., etc.—Professor Owen, who was appointed to the post of first Superintendent of the Natural History Departments in the British Museum in May, 1856, an office specially created for him, retired from official connection with the National Museum on the 31st December last, after 28 years' service. He had previously filled the office of Conservator of the Museum and Hunterian Professor at the Royal College of Surgeons, Lincoln's Inn Fields, for about 25 years. Although Professor Owen's labours as a Zoologist and Comparative Anatomist and Physiologist are so important and extensive, yet he will be more especially remembered for his great and original researches into the extinct forms of life which peopled our earth in the old times, and his British Fossil Mammalia, Fossil Reptilia, his Extinct Gigantic Edentata of South America, his Fossil Reptilia of South Africa, his Fossil Marsupialia of Australia, and his Fossil Wingless Birds of New Zealand, alone form a stupendous monument of patient and masterly labour. His Memoirs on the Pearly Nautilus, on *Spirula*, on *Linulus*, on Camerated Shells, etc., betray the same extensive powers of observation. His memoirs upon the fossil long-tailed bird, *Archæopteryx*, and those on the great horned lizard, *Megalania prisca*, from Australia, specially deserve to be mentioned. The title of K.C.B. conferred upon him by his Sovereign is a fitting recognition of his life-long scientific labours. Sir Richard Owen will complete his 80th year on the 20th July next.<sup>1</sup>

<sup>1</sup> We hope to give a full account of Professor Owen's life and work in a later Number, with a portrait of this distinguished Palæontologist.—EDIT. GEOL. MAG.