

## CORRESPONDENCE.

### SIDESTRAND CHALK BLUFF.

SIR,—By last December, when I was again able to visit the recently exposed bluff at the base of the cliff at Sidestrand, it had been cut back substantially, and the top had risen out of reach over the greater part, and the length exposed was much greater. I estimated it from pacing (256 paces) as at least 150 yards long, and that was by no means a maximum, as at the west end, where it was about 20 feet high, it gradually receded from high-water mark and disappeared into the cliff without any suggestion of having come to an end.

This great length of unbroken chalk, the whole of which appeared to be capped with Crag beds, seems strongly in favour of its being *in situ* rather than an erratic.

Further, in last December, the Till, which under the Overstrand Hotel seems to be well above high-water mark, could be seen quite clearly to come down to about high-water mark at a little east of the Hotel, and then rise in a huge flat arch which came down again to about high-water mark a little west of the chalk, from which point it seemed to twist sharply up and pass over the chalk and the crag in a high arch.

R. M. BRYDONE.

IVY FARM HOUSE,  
MUNDESLEY.  
*September, 1937.*

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### WEALDEN PEBBLES IN THE VALLEY OF THE RIVER DARENT.

SIR,—In the course of collecting pebbles of metamorphic and other ancient rocks in the Folkestone Sands of Surrey and West Kent, the petrological examination of which is in progress, new sections in the higher gravels of the valley of the River Darent were observed, overlying the Westwood sandpits of the Titsey Estate Co., near Westerham. It was discovered that the smaller constituents of these gravels contain a remarkable proportion of indubitable Wealden rocks. The gravels lie at an altitude of about 450–500 feet O.D., and are doubtless associated with the well-known gravel at about 500 feet O.D. on the present watershed of the Darent at Limpsfield.

The discovery of pebbles derived from Wealden beds was unexpected. Topley, in “The Geology of the Weald” (*Mem. Geol. Surv.*, 1875), makes several explicit statements to the contrary, which seem to have been generally accepted to this day. For example, on page 295 it is stated “The gravels of the Darent . . . are important

for this; that they, alone of the gravels of the Wealden rivers, nowhere contain a trace of material from the Weald Clay or Hastings Beds. . . . I mapped the gravels of this river with great care, and examined every section of gravel exposed—some of them repeatedly; but never succeeded in finding a single pebble of Wealden sandstone”. Topley’s certainty was evidently shared up to a much later date by Sir Joseph Prestwich, for in his classical paper, “On the Drift-Stages of the Valley of the Darent” (*Quart. Journ. Geol. Soc.*, 1891, p. 126), he wrote, “the drift is restricted to débris derived from its own drainage area,” which he points out, “is shut out by the range of the Lower Greensand from the Central Weald.”

Examination of other high-level gravels in the valley, which is not yet complete, has already shown that Wealden material is usually present in these deposits, as well as at Westwood. A search through the literature since 1891 has revealed nothing in conflict with the statements quoted above, beyond a sentence in Mr. Treacher’s report of an excursion of the Geologists’ Association to Limpsfield in 1908 (*Proc. Geol. Assoc.*, 1909, p. 61), which reads, “Mr. Benjamin Harrison, however, informs the writer that he has found Wealden pebbles here.” To this Mr. Treacher is not now able to add any further information. But through the kindness of Sir Edward Harrison, who has preserved his father’s specimens and notes, the present writer has been able to investigate the grounds for Mr. Harrison’s remark. He is satisfied that the small amount of Mr. Harrison’s material collected at Limpsfield in 1886 which has been preserved contains so large a proportion of Wealden pebbles as to justify a statement by Mr. Harrison that “I have been searching for and studying Wealden pebbles since 1881, and can vouch for my finds”.

The contribution of Wealden Beds to the Darent gravels has an important bearing on the history of the denudation of the Weald. It is therefore intended later to publish an account of this material and of the extent of its occurrence in the Darent gravels. It may be of interest also, from an historical point of view, to include therein such further particulars as are still available of Mr. Harrison’s communications of his finds to Topley and Sir J. Prestwich and of their eventual non-acceptance by those authorities.

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