

are thinning out, the Upper Series alone being continued in this direction, and thus transgressive, as is usual in an area undergoing continuous depression. He concluded by noticing the great resemblance of this peculiar rock to the Coralline, or, more properly, Bryozoan Crag of Suffolk, pointing out also the number of derivative shells, and suggesting that during its deposition portions of the Wealden area might have been still unsubmerged."

The last place visited was Boucher's, or the East pit—noteworthy fossils *Rhynchonella nuciformis*, *Trematopygus*, *Nautilus lævigatus*(?). The beds are composed chiefly of small pebbles mixed with ferruginous sand: the pebbles are mostly quartzose, with some lydites and green rock. There is less calcareous matter than in the other pit, and the upper part is less perforated by potholes: rounded masses of buff argillo-calcareous stone bored by a richly sculptured *Modiola*(?) are not unfrequent. The Sponge Gravel of the other pit may be seen in one corner at the base of this series.

The day's proceedings were brought to a close by a dinner at the Crown Hotel, in Faringdon, when the services of the Directors were duly acknowledged; after which the majority of the party returned to London, though a few remained behind with Professor Morris, for the purpose of further examining the Coral Rag and Lower Calcareous Grit of the district.

EXCURSION TO SANDGATE AND FOLKESTONE.

JUNE 19TH, 1876.

Director—F. G. HILTON PRICE, Esq., F.G.S., &c.

(*Report by MR. HILTON PRICE.*)

The party from London was met at the Shorncliffe Camp Station about 12 o'clock, by the Director and Dr. Charles Barrois, the eminent French Geologist of Lille.

The party proceeded at once along the Sandgate Road towards the shore, passing over the high ground above Sandgate, which is composed of the Folkestone-beds of the Upper Neocomian. No. 3 bed of Mr. Price's section, see paper on the "Lower Greensand and Gault of Folkestone," Proc. Geol. Assoc., Vol. iv., p. 139.

Arriving on the shore, the under-cliff was examined, where the junction between bed No. 3 and bed No. 2 were plainly seen, show-

ing the calcareous gritty beds reposing on the dark-greenish "hassocky" beds of No. 2 and No. 1. Proceeding onwards towards the turnpike on the Lower Sandgate Road, the Members had the opportunity of inspecting the Sandgate-beds of the Upper Neocomian, coming on gradually and just below the turnpike, and of examining the base-bed of the Sandgate series (the *Rhynchonella sulcata* zone), all of which beds dip N.N.E., therefore as the party walked eastwards they gradually came upon higher formations. Many pieces of pyritized wood were collected in bed No. 1 of the Sandgate series. The whole of the upper cliff from Sandgate to Folkestone Harbour is chiefly composed of the Third Division of the Folkstone-beds of the Upper Neocomian, thus the Members had ample opportunities of seeing this fine section, with the Gault coming on just above the harbour. The Director pointed out the position of the "Elephant-bed," at the Battery, at the eastern corner of the West Cliff, none of which is now visible, it having been mostly dug out when the Battery was constructed. The party becoming fatigued after their walk in the hot sun, were very willing to partake of luncheon at the Pavilion Hotel.

After luncheon the Director conducted the Members to the end of the Pier, in order to show them the fine cliff section of the Upper Neocomian series, with the Gault capping it. After giving a short explanation of the section, they walked down to the shore through the harbour to examine all the Folkestone-beds of the Upper Neocomian, which are so well shown at this point. Owing to the continued prevalence of westerly winds, the greater portion of the Sandgate-beds were buried in sand; but only the upper part of bed No. 4 of that series was seen *in situ*. At low spring tides the whole of the Sandgate-beds may be seen near the harbour, together with the zone of *Rhynchonella sulcata* (bed No. 1.), which bed receives its name in consequence of the abundance of that species which it contains. The whole of the Folkestone-beds, however, were well examined, and a few explanations were offered by the Director upon these beds, which gradually dip away as we approach Copt Point. Many of the Members collected each a few fossils, and had the chagrin of seeing many fine specimens of *Exogyra* and *Pseudodiadema* on the rocks, which they were unable to obtain, owing to the hard nature of these beds and the feebleness of their instruments. He pointed out the various zones, and showed the position of the *Ammonites mammil-*

laris zone in the cliff, the Junction-bed, between the Upper Neocomian and the Gault, with the sulphur-band of the zone of *Ammonites interruptus* resting upon it.* As Copt Point is turned, these beds are lost beneath the sea level, and the beds of the Lower and Upper Gault, which form the cliff at this point, become more accessible.

In East Weir Bay, these beds are no longer *in situ* as they were seen at Copt Point, for, owing to frequent landslips they have all been thrown down, and form the floor of the sea shore. It being low-water at the time of our visit, the Members were able to examine the lithological and palæontological characters of the various zones, which were explained by the Director. Mr. John Griffiths, the well-known fossil collector of Folkestone, being engaged for the day, disclosed with his pickaxe the richness of the formation, and many typical fossils were collected by Members.

Having passed over the Gault, Mr. Hilton-Price pointed out the junction between the Upper Gault and the so-called Upper Greensand, which rests conformably upon the Gault, with a few pipings of the dark-green marly sand passing down into the marly beds of the Upper Gault. This deposit is only about 14 feet in thickness here, and passes gradually into the Chalk Marl, the green grains continuing upwards for several feet—this formation is poor in organic remains. The Chalk Marl, on the contrary, is very fossiliferous, and is about 10 feet in thickness.

At this juncture the Members very reluctantly abandoned going on further, owing to want of time, and returned through the Warren to the South Eastern Railway Station, from which they proceeded to town by the evening train.

* The position of the large *Plesiosaurus*, which was found by Mr. Griffiths in the cliff near Copt Point, in Bed II. of the Gault, was pointed out to the party.
