

## III.—PALÆONTOGRAPHICAL SOCIETY.

The fifty-eighth annual general meeting of the Palæontographical Society was held at the Geological Society's apartments, Burlington House, on Friday, 16th June, Dr. Henry Woodward, F.R.S., President, in the chair. The annual report of the Council and the balance-sheet were submitted for the approval of the members, and they were adopted on the proposition of Sir Archibald Geikie, Sec. R.S. The report congratulated the Society on its continued prosperity, and alluded to the activity of its members in the promotion of research. The Council were still embarrassed by more offers of memoirs than they could accept for immediate publication, and they had again spent a large sum beyond their income on the volume for 1904. This volume contained an unusual amount of letterpress with expensive tables, and was devoted to continuations of the Monographs of Old Red Sandstone Fishes, Inferior Oolite Ammonites, Carboniferous and Cretaceous Lamellibranchs, Girvan Trilobites, and British Graptolites. The Council had carefully considered the financial position of the Society, and had decided to issue a comparatively small volume for the year 1905. They proposed in future to end the financial year on 31st December instead of 31st March, so that the year should correspond exactly with the period to which the annual guinea related. They also proposed that in future the price of the annual volume to non-subscribers should be twenty-five shillings net. Dr. Henry Woodward was re-elected President, and Mr. E. T. Newton a new Vice-President; Dr. G. J. Hinde and Dr. A. S. Woodward were re-elected Treasurer and Secretary respectively. Professor W. J. Sollas, Mr. F. W. Harmer, and Mr. P. Lake were elected new members of Council.

## CORRESPONDENCE.

## THE CORRELATION OF THE BOVEY LIGNITE BEDS.

SIR,—In the periodical discussions that take place on the Bovey Lignite Beds, it seems always taken for granted that the late William Pengelly believed them to be of Miocene age, and not connected with any other known British beds. In 1865 Pengelly published his paper "On the Correlation of the Lignite Formation of Bovey Tracey, Devonshire, with the Hempstead Beds of the Isle of Wight" (Trans. Dev. Assoc., vol. i, pt. 4, p. 90), and observed that "they are all Lower Miocene or all Upper Eocene; for they must certainly go together." He tells us that Mr. Keeping, who made the excavations at Bovey, collected for him plant-remains at Hempstead, and that, of ten species secured, four occurred at Bovey, two were new to science, and two were new to Hempstead. One of the Hempstead and Bovey plants was *Sequoia Couttsiæ*.

It will be seen that thirty years ago Pengelly linked the Bovey and Hempstead Beds together as what are now known as Oligocene; but Mr. Starkie Gardner has since then for weighty reasons referred

the Bovey Beds to the Bournemouth horizon as Eocene. My reason in writing on the subject is that Pengelly's Hempstead flora seems to have been overlooked. Indeed, in a recent text-book I cannot find either Hempstead or its beds, unless Hempstead has turned into Hamstead.<sup>1</sup> As the collection seems to have been specially made for Mr. Pengelly, and he recorded it in a paper of four pages in provincial transactions, its burial may have been too effective.

With regard to sands suspected to be of Dartmoor origin, the question can be readily settled by the character of the inclusions in the quartz. With respect to the Bovey clays, the presence of the kaolin at Bovey is exactly matched by its absence from its place on Dartmoor, where there is much evidence of the dissolution and removal of the felspar. This might be looked for with a semi-tropical vegetation and much consequent carbonic acid.

Referring to the Rev. Osmund Fisher's interesting note about the pink felspar crystals, which he suggests may have been derived from the English Channel area, he might be interested to examine the collection of rocks from the English Channel which were graciously accepted by the Woodwardian Professor, now many years ago. There was no evidence in the Channel of rocks likely to decompose and liberate pink felspar crystals. No. 2, with "large pale flesh-coloured orthoclase twins," is a hard rock. There is an abundance of red felspars on Dartmoor, ranging from a dark brick red; but these run in shades of red rather than pink, and are, so far as I am aware, not orthoclase. Moreover, if associated with quartz, they could be authoritatively distinguished from the Channel felspars, so far as those are known.

I feel an apology is due for my thus trespassing on your space on a subject which, except indirectly, is foreign to my own lines of inquiry. Of the Eocene and Miocene floras I am profoundly ignorant, but the discrimination of sands derived from the Channel and from Dartmoor is a simple matter in many cases. If sands contain chlorides we may be sure they were not derived from rocks known in the Channel; whereas if chlorides are entirely absent we may be equally sure they do not hail from Dartmoor.

The problem of the flora is as follows:—According to Pengelly and Keeping the Bovey Beds are equal to the Hempstead Beds, and are Tongrian. According to Mr. Starkie Gardner the Bovey Beds are equal to the Bournemouth Beds, and are Lutetian. Hence, according to Euclid, Tongrian must be equal to Lutetian, or Oligocene = Eocene, "which is absurd." The most obvious solution is that Euclid is a discredited text-book, and that things which are equal to the same things are not equal to one another. A plausible explanation would, however, assume that Pengelly misnamed his Hempstead fossil plants; but it is clear they were described by some expert specialist, as new species were detected. A. R. HUNT.

July 11th, 1905.

<sup>1</sup> [The original name for the locality in the Isle of Wight is Hamstead, which was changed by the Survey into Hempstead.—EDIT. GEOL. MAG.]