of succession of the strata, a rectification of the classification of the fluvio-marine series is rendered necessary, and it is proposed to divide them as follows:—

1. The Hempstead Series (marine and estuarine), 100 feet.
2. The Bembridge Group (estuarine), 300 feet.
3. The Brockenhurst Series (marine), 25 to 100 feet.
4. The Headon Group (estuarine), 400 feet.

By this new grouping the strata of the Hampshire Basin are brought into exact correlation with those of France, Belgium, North Germany, and Switzerland; and the whole series of fluvio-marine beds in the Isle of Wight, which are shown to have a thickness of between 800 and 900 feet, are proved to be the representatives of the Lower and Middle Oligocene of those countries. The use of the term Oligocene in this country is advocated on the ground that by its adoption only can we avoid the inconvenient course of dividing the fluvio-marine series between the Eocene and the Miocene.

CORRESPONDENCE.

PETROLOGICAL NOMENCLATURE.

Sir,—In a paper on the Rocks of Brazil Wood (Geol. Mag. 1879, Decade II. Vol. VI. p. 481), I described the so-called *peculiar gneiss*, and considering that it had been wrongly named, I called it a micaceous schist. As I strongly object to changes of names without sufficient reason, I wish to add a few words on the subject, more especially as it appears from a letter (see Geol. Mag. Jan. 1880, p. 47) that Prof. Bonney is not persuaded that I have improved matters by the change just mentioned. After carefully reviewing what I said on the subject, I venture to think that I rather understated my case, and that the objections to the old name are really fatal to its retention. The fact is, that the rock in question has neither the chemical composition, mineral constitution, internal structure, nor even the external appearance of gneiss—a rather formidable combination of objections. In the first place, a reference to Roth's tables of analyses will show that the amount of silica in micaceous gneiss is, on an average of sixty analyses, quite 70·00, whereas the quantity in the Charnwood rock is only 54·01. 2nd. There is a total absence of felspar from the mass of the rock, although there is a little in the narrow band at the actual junction, but even this may belong to the granite. There is also far less quartz than I have seen in any true gneiss—merely a few grains being scattered here and there through the mass. As regards structure, I said there was no foliation, but that the rock was rather fissile in one direction. I here used the term foliation in the sense attached to it by Darwin, and which I think it ought always to retain, namely, a separation into folia or layers of different mineral composition. It will of course be admitted that a rock may be more or less fissile, or schistose, without being either a slate, or a foliated schist; in fact, among the older rocks, and in some districts, such rocks are of common occurrence, whereas foliated rocks are

comparatively rare. Now, as we have to deal with rocks having three well-marked varieties of texture, we ought to have a corresponding number of terms for their designation; and I do not see why rocks which exhibit such varieties should not be described as slates, schists, and foliated schists.

However this may be, the term schist certainly ought not to imply or include foliation (or arrangement of two or more minerals in separate layers), as there is no necessary connexion between the two ideas. No doubt a foliated rock will nearly always be a *schist*, as it will *split* readily, but there are plenty of schistose rocks which are not foliated.

Now the texture of the Brazil Wood rock is precisely of this character, and as two micas are its chief constituents, I ventured to call it a micaceous schist; but not mica-schist, and only provisionally, for, as stated in my paper, I regard it as one of a group of rocks which have not yet received distinctive names; they are rocks of great interest, and I hope to have something more to say about them on a future occasion. It appears to me, therefore, that a new name which is fairly descriptive of the rock must be preferable to an old one which is altogether inappropriate. S. ALLPORT.

BIRMINGHAM, *January 12th*, 1880.

MR. H. B. WOODWARD'S ADDRESS TO THE NORWICH GEOL. SOC.

SIR,—The legend to the woodcut given on p. 75 of the February Number of the GEOL. MAG. having been accidentally omitted, the following explanatory statement is necessary:—

The lowest bed touched in the Subwealden Boring is the Oxford Clay, the succeeding beds (above the dotted line) traced northwards are Corallian, Kimmeridge Clay, Portland Beds, Purbeck Beds, Hastings Beds, Weald Clay, Lower Greensand, Gault and Upper Greensand (together), Chalk. The last two divisions continue as far as the boring at Wells. The uppermost beds at London and Harwich are the Eocene; those at Diss and further north are chiefly glacial deposits. The lowest bed passed through in the boring at Wells is the Lower Greensand, beneath which the Kimmeridge Clay (?) is just reached. Below the dotted line (on the section) three divisions of Palæozoic rocks are shown—the uppermost, distinguished by thick black lines, represents the Carboniferous rocks; the middle "dotted" division represents Devonian rocks and Old Red Sandstone; and the lower "jointed" division represents the Silurian rocks.

The Vertical Scale was 2000 feet to one inch.

H. B. WOODWARD.

ECCENTRICITY AND GLACIAL EPOCHS.

SIR,—In Mr. Hill's paper on "Eccentricity and Glacial Epochs," the following paragraph occurs in reference to Dr. Croll's contention that the accumulation of masses of snow and ice during the winter would tend to lower the summer temperature: "The First alleged reason," Mr. Hill says, "is the cold produced by masses of ice