CORRESPONDENCE.

CYCLOPHYLLUM FUNGITES, Flem. sp.

Sir,—In your report of the Meeting of the Geological Society of Glasgow, December 12, 1867 (Geol. Mag. Vol. V. No. 3, p. 142), I find that Mr. John Young is made to assert that "Dr. Duncan's figures reveal no new points in the structure of this coral which were not already known, etc., etc." Mr. Young also appears to have stated that David Ure was the original discoverer of the genus in question, and that Professor M'Coy had clearly delineated the various parts constituting the internal organization of the coral. To these statements I must give my most unqualified contradiction.

It can be readily seen in David Ure's good old book that he believed the curved horn-shaped coral in question was one of the "class *Coralloides*," or "sub-marine plants," and that it grew with its broad calicular end downwards. He called the coral *Fungites*, but gave neither a generic nor a specific name to it.

Fleming classified the coral in the genus *Turbinolia*, and gave it the specific name *fungites*. All subsequent generic names should be followed by Fleming's specific name.

M'Coy described the coral, and a drawing of its anatomy appeared with the description in Sedgwick and M'Coy, Brit. Pal. Foss. 1855, plate 3C, figs. 5 and 5*a*. He named it *Clisiophyllum prolapsum*. He was neither justified in his genus nor in his change of the specific name. M'Coy neither drew nor saw what is so evident in the scores of sections which Mr. Thomson has prepared of the species of coral in question. M'Coy's drawings of *Clisiophyllum* show a solid lamellar columella in the axis of the corals he properly described as belonging to that genus, but there is no such structure in his *Clisiophyllum prolapsum*.

There is a columella in the *Fungites* of Ure, the *Turbinolia fungites* of Fleming, the *Clisiophyllum prolapsum* of M'Coy,—it is not a solid lamella, but a series of ascending processes which pass from the base to the depression at the bottom of the calice, which is surrounded by the coronet of internal septa.

Milne Edwards and Jules Haime separated the "fungites" from the genus *Clisiophyllum*, and their specimens were not sufficiently well preserved or cut to enable them to discover the arrangement of *the septa and columellary processes within the* endothecal tissue which separates the coral into inner and outer portions.

Mr. Thomson and I claim these as new points, and considering that septal and columellary structures are of paramount importance in recent corals, we have a right to esteem them worthy of the consideration of all who have the slightest possible knowledge concerning the anatomy and physiology of the Zoantharia.

P. Martin Duncan.

Lee, S.E., *March* 13, 1868.

THE TRIAS OF CHARNWOOD FOREST.

Sir,—The paper in your last number, on Charnwood Forest, by the

late Professor Baden Powell, suggests my recording one or two facts relating to the disposition of the Red marls on the older rocks that I noticed when visiting the district with the British Association excursion in August, 1866.

Professor Powell observes, "that there are several localities where the New Red has undergone some disturbance since its deposition," and gives an engraving of the Swithland Slate Quarry in illustration, which does not, however, seem to support this view. In all the sections I examined, the dip appeared wholly independent of disturbance, and due to an irregular base line of deposit, an element which is often overlooked in estimating the extent of changes of inclination subsequent to deposition. The Red marls of Charnwood Forest dip away in every direction from the high ground of the older rocks towards the surrounding level plain; but I was much struck with the fact that the direction and amount of inclination seemed to be less related to the entire mass of the high ground than to its details of contour. In the section of Swithland Old Pit, given at page 119, the two masses of Red marls are represented dipping towards a gully intersecting the slate. A subsequent movement of the slate is not, however, required to account for this, and an examination of the beds *in situ* conclusively show that the details of inclination are directly related to the original surface-contour of the fundamental rock, a point which is faithfully represented in diagram No. 2 of Professor Jukes' memoir.[1] A similar arrangement is observable in a cutting of the Bristol and Exeter Railway near the Bourton Station,[2] where the Keuper beds rise and fall at considerable angles of inclination over some prominent bosses of Carboniferous Limestone, and had not the fundamental rock been visible, the sudden changes of dip might appear to have been the result of disturbance.

Another noticeable feature in Charnwood Forest is the relation of the areal outline of the Red marls to the surface contour of the older rocks rising above them; long winding tongues of the red beds running up into the ancient valleys of the high ground, the contour of the exposed portions of which is entirely in harmony with that of the bottoms of the valleys buried beneath the remnants of the later deposit. This affords a good illustration of the extreme antiquity of the surface contour and hill-and-valley system of the Palæozoic rocks; and whatever form of erosion may have determined this contour, it has evidently been very little modified by marine erosion during the submergences of the Trias and succeeding formations. In fact, the general surface contour of the high ground, and all the principal hills and valleys of Charnwood Forest were in existence before the period of the Trias, for remnants of the Red marls occupy the ancient lines of waterflow, and these do not appear to have been changed by subsequent disturbances.

GEORGE MAW.

BENTHALL HALL, BROSELEY, *March 6th*, 1868.

[1] In Potter's History and Antiquities of Charnwood Forest.

[2] See Section, Fig. 2, page 443, GEOLOGICAL MAGAZINE, Vol. III., October, 1866.