

laminae become thin-walled, though often very regular; and after about 100 laminae at most, the superficial portions become acervuline for an inch or so and then terminate. In some specimens only a few regular laminae are formed, succeeded by acervuline structures. A very fine and regular specimen in my collection has 100 laminae in a thickness of $3\frac{1}{2}$ inches, giving a little more than a thirtieth of an inch for the average height of each lamina of sarcodite and shell-wall.

In order to test the state of preservation of the canal system and nummuline layer, I treated a great number of specimens from different parts of the bed with a dilute acid. The result was, that in all the canal system could be detected in greater or less perfection in the thicker laminae near the base of the forms, and in some through a great number of the laminae. The structure of the nummuline layer was not so constantly preserved, its tubuli not being infiltrated in some parts, so that it appears as a structureless band, or fails altogether to be visible. In no instance could it be seen to pass into chrysotile, as recently affirmed by Messrs. Rowney and King*, although chrysotile veins often run very near to or across the walls. The nummuline layer is almost always distinctly limited by parallel surfaces, with its tubes at right angles, or nearly so, to these. The sort of chevron arrangement figured by Rowney and King in fig. 7 of their plate, in the number of the 'Annals of Natural History' for October 1874, I have never observed; and Mr. Weston, who has prepared and examined microscopically hundreds of specimens of *Eozoon*, was struck with the inaccuracy of the representations in this plate, and remarked on it the first time that I met him after he had seen the paper referred to. Figs. 2 and 3, Pl. X., relate to these points, and show the actual nature of the nummuline wall and its relation to the intermediate skeleton and chrysotile veins, as do also the figures recently published by Dr. Carpenter in his paper in the 'Annals'†.

By careful scrutiny of the beds we were enabled to detect two new forms of *Eozoon*, which may eventually prove to be distinct species, but which for the present may be regarded as varietal forms.

One of these, found *in situ* by Mr. Weston, is flat in form and very finely laminated, with thin walls except near the lower part, where there is some supplemental skeleton with finer and more curved canals than usual. The thin walls or laminae of the ordinary skeleton are connected by very frequent vertical pillars or partitions, and are as numerous as thirty in half an inch, while the whole thickness of the specimen does not exceed an inch. It thus very closely resembles some of the Devonian and Silurian *Stromatopora*, especially when seen on the weathered surface. It may be named in the mean time variety *minor*.

The second occurs in more or less oval patches a few inches in diameter, limited by a sort of frame or border of compact serpentine, and presenting under the microscope an aggregation of small acervuline chamberlets, having the proper wall filled with unusually

* Ann. & Mag. of Nat. Hist. May 1874.

† *Ibid.* June 1874.