

NOTES on the OCCURRENCE of *Eozoon* CANADENSE at CÔTE ST. PIERRE.

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[PLATE X.]

CÔTE ST. PIERRE, in the Seigniori of Petite Nation, on the river Ottawa, is the locality whence some of the most instructive specimens of *Eozoon* were obtained by the late Mr. Lowe, whose collections are referred to in papers presented to this Society by Sir W. E. Logan and the writer. Believing that a reexamination of this place would afford a good opportunity for collecting additional specimens, and for the study of the fossil *in situ*, as well as for testing the validity of objections recently raised to the animal nature of *Eozoon*, I made arrangements for visiting it in September last; and, through the kindness of Mr. Selwyn, Mr. T. C. Weston, of the Geological Survey, a skilful collector, and who has had much experience in preparing and examining specimens of *Eozoon*, was permitted to accompany me, and subsequently prepared slices and photographs of some of the specimens obtained.

The Lower Laurentian rocks of this region have been carefully mapped and described in the Reports of the Geological Survey, to which I may refer for their general description. The limestone, which has afforded *Eozoon* at Côte St. Pierre, is a thick bed belonging to the Grenville band of Sir W. E. Logan, and included between the two great belts of orthoclase gneiss (the third and fourth gneiss) which in this region constitute the upper beds of the Lower Laurentian. Its average thickness, according to the measurements of Sir William Logan, is 750 feet; but it varies from 1500 feet to 60 feet. Its outcrop has been traced in the country north of the Ottawa for at least 100 miles, along several anticlinal and synclinal folds*.

At Côte St. Pierre this limestone occurs on the flank of a hill of gneiss and stratified diorite, with a dip to the south-east at angles of 70° to 80°. The dip, however, is very inconstant, owing to the contortions of the beds.

The limestone is white and crystalline, and may be described as thin-bedded, since it presents a great number of layers of no great individual thickness, and differing in the coarseness of the crystallization and in the presence of dolomite, serpentine, and layers of gneissose matter in some of them. The specimens of *Eozoon* were found to be abundant in only one bed, not more than four feet in thickness, though occasional specimens and layers of fragments occur in other parts of the band. The exposures are in part natural weathered surfaces seen on a wooded bank, in part an opening made by Mr. Lowe to extract specimens of *Eozoon*, and a larger opening made, as we were informed, by parties in search of fibrous serpentine, or "rock-cotton," for economic purposes.

* See map in 'Geology of Canada,' 1863.

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