

prominent; plates arranged in four and perhaps five series; if so, the central row much smaller than the others. Ambulacral areas apparently three-eighths of an inch wide. Teeth large and strong, quite two-thirds of an inch in length.

Obs.—So far as I am aware, the existence of the interesting group of the Perischoëchinidæ has not hitherto been recognised in the Permian Carboniferous rocks of this Continent. The fine, although much maltreated, specimen now figured, was rescued from the *débris* of the Departmental Collection at the Garden Palace fire in 1882. Previous to this disaster a description of some utility might have been drawn up, but in the present state of the fossil this is hardly possible.

The portion remaining consists of rather less than the ventral half, with the "Lantern of Aristotle" *in situ*. The test was fully four and a half inches in diameter, and must have been that of a robust individual, but in its present state the approximate height cannot be arrived at. The positions of two of the ambulacra are indicated by faint impressions of the plates, and those of the others can be fixed by measurement. The two rows of plates appear to have been three-eighths of an inch wide, but all trace of the pores is quite lost.

The interambulacral plates were very large, fully half-an-inch in diameter, with prominent edges, and the surface between these and the miliary rings concave. There is, in relation to these plates, an obscure point, which I am not at present prepared to explain. The rows of plates in each inter-ambulacral area are certainly four; but in the middle line of the three best preserved areas, between the two contiguous rows of tubercle bearing plates, are smaller pieces devoid of tubercles. This central line of each inter-ambulacrum is also its most prominent position. The state of preservation is so indifferent that too much stress cannot be laid on this point, but from their appearance on three of the interambulacra one is led to regard this feature as a structural arrangement. In such a case it would have equal value with the somewhat analagous arrangement met with in *Perischodomus*, M'Coy,* and must be looked upon as of generic importance, and a new name coined for its reception. The characters of the interambulacral plates are, however, so manifestly those of *Archæocidaris* that the specimen is for the

* Ann. Mag. Nat. Hist., 1849, III, p. 253.