GENUS COLUMNARIA, (Goldfuss.)

A very abundant family of fossil corals have a honey-combed structure, consisting of a great number of angular tubes growing together, each tube being the cup or cell of a single polyp. The *Astræa* shewn in figure 2 is one of those composite forms, and when dead is covered with numerous star-like openings. The rays of the stars in each of those tubes of the *Astræa* correspond to the lamellæ of the genus *Streptelasma*. If we could imagine a number of these latter crowded together in one mass, they would constitute a star covered dome, something like the *Astræa*. In the Lower Silurian rocks one of the most common of the honey-combed corals is the *columnaria alveolata*. The following is a description of the genus compiled from several authors.

GENERIC CHARACTERS.—Corallum forming large masses, often of a hemispheric form, cells, polygonal, radiating lamellæ, rudimentary, or but little developed; transverse, diaphragms, horizontal, and numerous.

The generic name is from the Latin, (*Columna,*) a column having allusion to the numerous column-shaped tubes of which the masses of the coral are composed. The transverse diaphragms are the little plates or floors which extend across the tubes, dividing each into so many stories, one above the other. There is one species of this genus known in Canada, and it is very common in some localities of the Black River Limestone. It is the following:

COLUMNARIA ALVEOLATA, (Goldfuss.)

This species is thus described by Professor Hall:—"A hemispherical or irregularly massive coral, consisting of radiating parallel or diverging tubes; tubes hexagonal, (or varying from 5 to 7 sided,) striated longitudinally, crossed by dissepiments, (diaphragms,) with vertical radiating lamellæ; no communicating pores.

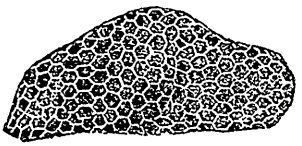

Fig. 9.

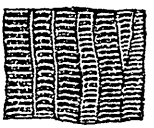

Fig. 10.

Fig. 9.—*Is a small mass of* (*Columnaria alveolata,*) *shewing the honey-combed appearance of the exterior of the fossil.*

Fig. 10.—*Shews the portion of the surface of a mass which has been split open in the direction of the length of the tubes. Each tube is seen to be divided into a number of chambers by the transverse diaphragms.*

When the tubes of this coral are well preserved and empty, the interior is seen to be striated the whole length of the tube, the elevated lines being the rudiments of radiating lamellæ. The coral is sometimes seen in masses three feet in diameter, and when these are split open in a direction from the top to the bottom, the tubes are seen to radiate from a narrow space in the