within, but more commonly it is furnished with a number of radiating plates or lamellæ. These, in some forms, are but slightly developed, or occur only in a rudimentary condition; whilst in others they extend far into the cell, and even unite there in a central column. A central column or "axis" sometimes, however, exists by itself, and may have radiating lamellæ of its own projecting towards the circumference of the cell; but this latter modification is not observed in any of the Palæozic types. Whether radiating lamellæ are present or not, the cell is very generally divided horizontally by a series of transverse plates or "diaphragms," either extending across the entire cell (Fig. 71, *a*, which shows three cells thus divided) or occupying the central



Fig. 71.

portion of this, whilst the sides are filled with small and more or less irregular plates, called "vesicular tissue," (Fig. 71, b) In the genus *Cystiphyllum*, again, the interior of the cell is entirely filled with these irregular vesicular plates (Fig. 71, c). Finally it may be mentioned that many corals possess an enveloping wall or sheath. This is termed an "epitheca."

The following are the more important or characteristic fossil species met with in Canadian rocks :

1. Stromatocerium rugosum, Fig. 72.— In this form, there are no apparent cells, but the corallum is made up of numerous concentric and wavy lamellæ. Lower Silurian : Trenton group*; more especially abundant at the lower part. This fossil is also known as stromatopora rugosa, and is sometimes classed as a sponge. A



closely related species, *Stromatopora concentrica*, occurs in the Niagara group of the Upper Silurian series, and passes in some districts into the Devonian rocks.

[•] The subordinate divisions of our Silurian and Devonian strata will be found described in full in Part V.