diaphragms in the small tubes slightly more or less than their diameter apart, two inter-diaphragmal spaces in the large tubes slightly exceeding the diameter.

So exactly does this resemble the *Palæopora interstincta* (Wahl. Sp.) (*Porites pyriformis* of Lonsdale, Silur. Syst.), that I have little doubt it has often been confounded with it, although an attentive examination will shew that the distinctly walled tubes are smooth within and perfectly destitute of lamellæ. I have seen this coral also in large masses in the Upper Silurian limestone of Gothland. It may be distinguished from the very nearly allied *Manon* (*Fistulipora*) *cribrosa* (Gold. Sp.) by the smaller size of the cell-tubes and their greater number in a given space, their *proportionate* distance being pretty nearly the same. In both the British and foreign specimens the cells are so beautifully distinct that it would be impossible to overlook the notches or rudimentary lamellæ if they existed.

Position and Locality.—Forming large masses, not uncommonly in the Wenlock limestone, near Aymestry, Herefordshire.

Explanation of Figures.—Plate 1. C. fig. 1. Portion of large mass natural size, from near Aymestry, exhibiting the surface above, and rough weathered section below, shewing the main tubes distinct from the capillary cœnenchyme.—Fig. 1 *a*. Horizontal section magnified six diameters, shewing the thick-walled non-lamelliferous circular main tubes, and the small polygonal intervening ones.—Fig. 1 *b*. Side view of weathered portion, shewing the diaphragms in both sorts of vertical tubes.

Genus. STROMATOPORA (*Gold.*)

Ref.—Gold. Pet. Germ. p. 21.

Gen. Char.—Corallum calcareous, forming large amorphous masses, composed of very thin, superposed layers of minute vesicular tissue, of the thickness of one cell each, occasionally marked on the upper surface with extremely obscure distant quincuncially arranged small pits.

The general impression that the *Stromatoporæ* are sponges, is, I think, manifestly incorrect, inasmuch as the vesicular tissue of the whole mass is composed of minute curved calcareous plates, forming an immovable corallum incapable of those systolic and diastolic motions, essential to the life of a sponge; on the other hand, there is an approximation to the structure between the cell-tubes of *Palæopora*, *Fistulipora*, &c.; and it seems to me that as the *Gonioporæ* differ from the deep-celled *Astræa* in having their polyps exserted, and consequently forming little or no cell-cup on the surface of the corallum, so the *Stromatoporæ* may be placed beside *Fistulipora* or *Palæopora*, the cell-tubes being supposed to be absent for the same reason as in the *Goniopora*; and this I think is rendered more likely by the existence of the small regularly-disposed obscure pits which I have noticed, and which are distant about as far from each other as the tubes of the above genera usually are; so faintly marked are they, however, that it is only by a favourable incidence of oblique light and using a lens of low power that they can in general be detected; as the specimens decompose by weathering, the depressions often become more marked, extending into the mass like holes, and perforating down through many layers, in the manner of the more strongly marked vermicular perforations of the *Caunopora placenta*. As neither *Stromatopora*, nor the subgenus *Caunopora*, have any radiating lamellæ, they should be most probably placed among the *Zoophytaria* in the family *Tubiporidæ* near *Fistulipora*. I have noted in the Devonian species of the subgenus *Caunopora*, that the tubes increase (in some instances at least) by lateral budding; the young, when still imperfectly separated, not indenting the circular wall of the parent, and being much smaller; thus agreeing with the *Madreporacea* rather than with the *Tubiporidæ*, strengthening the impression which I entertained of the transition between these groups by *Palæopora* on the one hand, and *Fistulipora* on the other.

Stromatopora striatella (*d'Orb.*)

Ref. and Syn—D'Orb. Prod. Pal. p. 51. *Stromatopora concentrica* (Lonsd. Sil. Syst. t. 15. f. 31., not of Gold.)

Sp. Ch.—Corallum forming hemispherical or flattened expansions from three to eighteen inches in diameter, composed of extremely thin regular concentric layers of small rounded cells; eleven or twelve layers in the