as long as thick), cylindrical, with rounded ends; the basal ray is sometimes rather longer than the lateral; some of them show an incipient fourth apical ray.

The sagittal triradiate spicules are on an average of the same size as the regular; their rays, compared with those of the latter, are more conical, although there is no want of intermediate stages. They are inconstant in their outlines. With some of them the irregularity consists only in their not being flat, the point of meeting of the rays not lying in the same plane as their ends, the basal ray being in this case either of the length of the lateral rays or rather longer; but such a form is comparatively rare. The greater part also show variation in their angles, the angle formed by the basal and each of the lateral rays varying from 120° to 92°; the length of the basal ray is in this case variable (0·12 to 0·25 mm.); it is either straight or undulating, the lateral rays being horn-shaped, and curved more or less one towards the other.

There exists also on the outer surface of the colony another constituent part of the dermal set, namely, large regular triradiate spicules, each ray attaining a length of 0·8 mm., and a diameter of 0·06 mm.; but these spicules are so extremely rare, that they are of no consequence for systematic purposes.

Colour.—Yellowish.

Habitat.—Station 186, September 8, 1874; lat. 10° 30′ S., long. 142° 18′ E.; Cape York, Australia; depth, 8 fathoms; coral sand.

Order HETEROCŒLA, Poléjaeff.

Calcarea with separate flagellated chambers lined with flagellated cells, the remaining parts of the inner surface being covered with pavement-epithelium.

Family Syconidæ (Sycones), Hæckel.

Heterocœla whose large cylindrical flagellated chambers (*tubi radiales*, auctorum), show a radial disposition with respect to the central cavity, communicating with it directly without the mediation of any exhalent canals.

Sycon, Risso.

Syconidæ with articulated tubar skeleton, with radial tubes either quite free or, if grown together, united in such a manner that the individuality of every tube may be easily discerned, owing to the absence of any independent cortex.