

the inner surface. Constant as to the thickness of their rays, only near the osculum exceeding 0.002 mm., the gastric quadriradiate spicules vary extremely with regard to the comparative length of the rays, as well as with regard to their form and their angles. The apical rays, which, in the tubar quadriradiates do not exceed the length of the facial rays, and are often still shorter, grow much longer in the gastric quadriradiate spicules, and near the oscular part of the tube attain 0.18 mm. in length, 0.005 mm. in diameter, the corresponding facial rays rarely exceeding the length of 0.06 mm., the lateral rays remaining of the same diameter (0.005 mm.), the basal ray growing rather thinner.

Skeleton of the cortex.—The triradiate and quadriradiate spicules of the cortex are regular, their rays sharp-pointed, more or less stout, the proportion between their length and thickness varying from 6 : 1 to 12 : 1. With respect to their dimensions, the quadriradiate are connected with the triradiate spicules by intermediate stages; the length of the rays of the quadriradiate reaching 1 mm., that of the rays of the triradiate not exceeding 0.6 mm. These spicules lie apart from the centripetally directed apical ray of the quadriradiate spicules, parallel to the outer surface, but the direction of their basal rays is variable.

Skeleton of the osculum.—The skeleton of the border of the oscular circle consists exclusively of rectangular sagittal triradiate spicules, marked out by their horn-shaped lateral rays, lying parallel to the line of the border. Their size is extremely inconstant, the length of the rays varying from 0.05 to 0.25 mm., and the proportion between the length and the thickness from 10 : 1 to 20 : 1. The comparative length of the basal ray is also variable; in most cases, however, this ray is shorter and rather thinner than the lateral.

Colour.—Yellowish-grey.

Habitat.—Station 36, April 23, 1873, off Bermudas; depth, 32 fathoms; mud. Station 186, September 8, 1874; lat. 10° 30' S., long. 142° 18' E.; Cape York, Australia; depth, 8 fathoms; coral sand.

Amphoriscus, Hæckel.

Syconidæ with non-articulated tubar skeleton, the supporting spicules of whose comparatively thin cortex are either triradiate or quadriradiate, or both triradiate and quadriradiate together.

Amphoriscus poculum, n. sp. (Pl. IV. fig. 4; Pl. V. figs. 2a-2f).

The single specimen representing this species in the Challenger collection is of tubular elongated form, 36 mm. long. 4 mm. broad in its middle and superior part; towards the closed end the tube becomes rather narrower. The individual is bare-mouthed; the outer and inner surfaces are slightly roughened by the cortical and gastric triradiate spicules respectively; the average thickness of the walls does not exceed 0.6 mm.