

good deal more prominent than the others. The lateral costæ are developed in the lower region of the corallum into aliform projections, which vary much in their width. In the specimen figured they are less developed than in any of the others procured; they are usually broader towards the base of the corallum. In some specimens their edges are more or less notched; their surfaces are covered by a series of ridges like those formed by the costæ near the apex of the corallum. The ridges are directed at right angles to the line of slope of the coral cup, and are parallel, but here and there irregular; in some places the costal ridges, where they abut on the lines of origin of the alæ, are seen to be bent outwards to join the ridges on them. The outline of the calicle is oval, the fossa is extremely deep, and the whole interior of the calicle open and hollow to the apex, not being filled up by any outgrowths of the septa or columella. The septa are all perfectly straight, with smooth surfaces dotted over with very minute rounded granules and showing curved accretion lines. The primary and secondary septa are equal. All the septa are exsert, the tertiary and quaternary according to their order. There are four cycles of septa and twelve primary and secondary septa, and evidently there must be in the young coral primarily six systems, but in all four specimens the two pairs of lateral chambers at the ends of the long axes of the calicles have developed two additional septa, a tertiary and a quaternary in each, so that there are four additional imperfect systems in each coral, which correspond exactly in all the specimens (see fig. 8a).

The columella is elongate in form, and remarkably slender and prominent, composed of four or five small columns of roughened calcareous matter partially fused together laterally. It projects up free from the bottom of the fossa formed by the excavated edges of the primary and secondary costæ for a height of 5 mm. At the bottom of the fossa these septa fuse with its base, and it is directly continued below as a narrow lamina perpendicular to the apex of the corallum, being free from any of the additional irregular calcareous outgrowth which is usually developed about the base of the columella and the inner ends of the septa in many other corals.

After comparing this coral with specimens of *Sphenotrochus crispus*, I conclude that it must necessarily be placed in the same genus. It differs from the other *Sphenotrochi* in the considerable exsertness of the septa, and in having four cycles of septa instead of three, also in the great depth of the fossa; but these differences are probably due to the large size of this recent species, in all essential particulars it is closely allied to *Sphenotrochus crispus*. That species differs from it mainly in its smaller size, in having its costæ much larger in proportion, in having its septa denticulate, and in possessing a much shallower fossa; in the peculiar form of its columella it closely corresponds with *Sphenotrochus rubescens*. *Sphenotrochus auritus* (Pourtalès¹) has a flat protuberance on either side of the base, but these flat expansions are very different from the aliform appendages of the present species.

¹ Hassler Expedition, *loc. cit.*, p. 37.