

as for example *Halcampa clavus*. We may gather from this how closely the Edwardsiæ are connected by transition forms with the other Actiniæ, and how advisable it is to discuss them along with the latter, and to separate them from the Alcyonaria. From this point of view the constitution of the tentacles is of great importance, as they in no way resemble the tentacles of the Alcyonaria.

Tribe V. ZOANTHÆ.

Actiniaria with numerous septa of two different kinds, smaller, imperfect, sterile microsepta, and larger perfect macrosepta furnished with reproductive organs and mesenteric filaments; the two kinds usually placed alternately, so that each pair is composed of a larger and a smaller septum; two pairs of directive septa at the ends of the sagittal axis, one pair containing only macrosepta, the other only microsepta; only one œsophageal groove, corresponding to the larger directive septa; animals usually forming colonies; wall usually traversed by ectodermal canals, and having the outside encrusted with foreign bodies.

Zoologists differ very much in their opinions as to the limits and the definition of the Zoanthæ. Milne-Edwards (Hist. des. Corall., tom. i. p. 298) includes in this division only colonial, sessile forms which increase by basal gemmation and have a leather-like sheath hardened by encrustation with sand granules (faux polypiéroïde); Gosse agrees with him (Actinologia Britannica, p. 295), but considers the encrustation with sand granules as a secondary character. Most zoologists keep to the definition given by Milne-Edwards and Gosse.

In 1856, Steenstrup described an Actinia under the name *Sphenopus marsupialis*, which closely resembles the Zoanthæ, but is distinguished from them by not forming colonies and not being sessile. (Overs. Kongelige danske Videnskab. Selskabs Forhand., p. 37, 1856). As Gray (Proc. Zool. Soc., p. 235, 1867) included this Actinia among the Zoanthæ, he set aside the characters used by Milne-Edwards, viz., the formation of colonies and the sessile mode of life, but without replacing them in the diagnosis by new characters, which would be at once common to all Zoanthæ, and distinctive from other Actiniaria. To what degree the sharp limitation of the Zoanthæ suffered from this may be seen from the fact that Gray included in this tribe the genera *Edwardsia*, *Halcampa*, &c.

The discovery of *Sphenopus* led to difficulties as to the limitation of the Zoanthæ which were also not obviated by the fact that Verrill considered *Sphenopus* to be related to the Edwardsiæ, to which it has certainly a strong external resemblance. But anatomically *Sphenopus* agrees so thoroughly with the Zoanthæ that it cannot be separated from them. A study of the arrangement of the septa is the only possible means of discovering distinctive characters for the division.