

Though Quatrefages, the discoverer of the Edwardsiæ (Mémoire sur les Edwardsies, nouveau genre de la famille des Actinies, Annales d. Sc. Nat. Zool., ser. ii. vol. xviii. p. 65, 1842), observed correctly that these Actiniæ have only eight septa, this important character has not been sufficiently taken into account by most of the more recent writers. Milne-Edwards and Gosse, who attach too much importance to the external characteristics of the animal, had the absence of the pedal disk principally in view, and united the Edwardsiæ with similar forms, *Ilyanthus*, *Cerianthus*, &c., into the group of "Actinies pivotantes," or the family of the Ilyanthidæ. Allman was the first to draw attention in a short notice (Quart. Jour. Microsc. Sci., new ser., vol. xii. p. 394, 1872) to the detached position of the Edwardsiæ, as he maintained them to be forms which, in the distribution of the septa, more closely resemble the Alcyonaria and the extinct Tetracorallia. My brother and I have shown more recently, from a thorough anatomical examination of the position of the septa (Actinien, pp. 124 and 137), that the Edwardsiæ occupy an intermediate position between the larvæ of the Actiniæ with eight septa and the Alcyonaria. In the Alcyonaria the septa are arranged in such a way, that reckoned from one end of the sagittal axis, all the eight septa (four left and four right) bear longitudinal muscles on the faces turned away from the starting point, whilst in the larvæ Actiniæ the first four only (two left and two right) have longitudinal muscles on the faces turned away, and the four following on the faces turned towards the starting point, so that we find the same relative arrangement, whichever end of the sagittal axis we start from. In the Edwardsiæ we meet with the number six and two, *i.e.*, considered from one fixed end of the sagittal axis the first six septa are constituted like those of the Alcyonaria, the last two like those of the Actiniæ. As in the Actiniæ the two pairs of septa placed one at each end of the oral fissure form the directive septa, two pairs of the directive septa are therefore likewise present in the Edwardsiæ.

The correctness of the view, briefly recapitulated above, has been further corroborated by a newly published work of Angelo Andres (Intorno all' Edwardsia Claparedii; Mittheil. der zoolog. Station zu Neapel, Bd. ii. p. 123); at the same time he pronounces in favour of Allman's view that the Edwardsiæ may bear the same relation to the Tetracorallia as the Actiniæ do to the skeleton-forming Hexacorallia. I do not agree with him on this point. Apart from the number of the calcareous septa, the formation of the skeleton is the same in the Hexacorallia and Tetracorallia, and it is therefore probable that similar relations have existed among the soft parts of the body, and that the paired arrangement of the septa was already developed in the Tetracorallia. As this is not the case in the Edwardsiæ, I am inclined to seek for points of connection with the Rugosa in such forms as *Sicyonis crassa*.

There was no true *Edwardsia* among the Challenger material; but I was long dubious as to whether it might not be expedient to include among them those forms in which the paired arrangement and the number twelve of the septa begin to be developed,