

by Andres must be comprehended in the four divisions, Edwardsiæ, Hexactiniæ, Zoantheæ, and Ceriantheæ, and accordingly hold to the systematic classification which I have published. The groups of Paractiniæ and Monauleæ are in all respects natural, and would also certainly be retained by Andres had representatives of them been known to him.

Even greater discordance than that of which I have hitherto spoken, between the classifications of Actiniæ followed by Andres and myself, presents itself when the determination and nomenclature of families and genera are regarded. Independently of each other, and from different standpoints, we have taken in hand a systematic revision of Actiniæ: Andres starting with the advantage of a richer material, and studying species with which earlier publications are especially concerned, and which he could command in a living condition; while my qualification for a systematic classification was that afforded by close anatomical investigation, namely, that I relied for systematic characteristics upon such weighty differences as the structure of the sphincter, the arrangement of the mesenteries, the structure of the musculature and of the oral disc, etc., points which Andres has, hitherto at any rate, entirely left out of consideration. Thus it has resulted that in the determination of families and genera, and also in the value assigned to existing names, we have in many cases taken up a totally different attitude; and as, in consequence of this, no inconsiderable confusion has arisen in the method of diagnosis, I hold it advisable to inquire critically what must be retained of the system of the Italian observer.

Of least importance are our differences of opinion relating to those Actiniæ which possess acontia. Andres has here adopted the separation, instituted by Verrill, into Sagartidæ and Phellidæ. Having regard to his wider acquaintance with the species, I agree with him in accepting as a distinctive character the chitinous covering extending over two-thirds of the body-wall; and for clearer characterisation of both families, the following marks not mentioned by Andres should be included in the diagnosis,—a mesodermal sphincter, and a differentiation of the mesenteries into sterile complete primary mesenteries, and incomplete secondary mesenteries provided with generative organs. Of the Challenger Actiniæ, there would belong to the Phellidæ only *Phellia pectinata*; to the Sagartidæ, *Sagartia* sp., *Cereus spinosus*, *Calliactis polypus*, *Bunodes minuta*. Of these, the two latter require an alteration of name; *Calliactis polypus* must be termed *Adamsia polypus*,¹ and *Bunodes minuta* be known as *Cylista minuta*, since it has been shown by Andres that the typical *Bunodes* possesses no acontia, and therefore cannot belong to the Sagartidæ.

Andres has incorrectly allowed the generic name *Cereus* (Oken) to drop, and has

¹ The specific name *Rondeletii* has been wantonly substituted by Andres for the older *polypus*, the former being used for the first time by delle Chiaje in 1825, while the latter was already instituted by Forskål in 1775. Milne-Edwards is therefore correct in calling the animal *Adamsia polypus*.