

septa is very irregular, and seems to proceed more quickly near the directive septa. I have found that septa of the sixth and seventh orders are present in the interseptal space contiguous to the directive septa, whilst septa even of the fifth order are wanting in other parts. This assertion must of course be accepted with reserve, as the septa are so irregularly constituted that it is difficult to determine to which order a septum belongs.

I have found the acontia only in transverse section; they are oval filaments, dotted with nematocysts, quite small, and by no means numerous. This confirms my view that the acontia have hitherto been overlooked in the other species of *Bunodes*.

#### Family, AMPHIANTHIDÆ, Hertwig.

Hexactiniæ, which are attached to the axial skeletons of Gorgonidæ with shortened sagittal and elongated transverse axis; transverse axis lying parallel to the axial skeleton of the *Gorgonia*; circular muscle mesodermal; the principal septa only perfect and sterile.

Under the names *Actinia abyssicola* and *Actinia gelatinosa*, Moseley described two Actiniæ from the Challenger material, which agree in being attached to the stems of *Gorgonia* which they clasp with their base. I was only able to examine the *Actinia abyssicola*, as *Actinia gelatinosa* was not among the spirit specimens sent to me; on the other hand, I found two other new forms among the specimens, which resemble the two species determined by Moseley both in their form and mode of life.

All these forms differ so decidedly from *Actinia mesembryanthemum* that I have not only separated them generically but united them into a new family, the Amphianthidæ. Closer examination shows that the mode in which they attach themselves has influenced their organization in a very important and uniform manner. All the Amphianthidæ are elongated, corresponding to the form of the body to which they are attached, and placed in such a way that their transverse axis is greatly prolonged and runs in the same direction as the longitudinal axis of the *Gorgonia*, whilst their sagittal axis is very much shortened, and crosses the skeletal axis at right angles. The œsophagus consequently differs from that of other Actiniæ, as it is either round or even fissure-shaped in a transverse direction (Pl. III. fig. 7, a), and its œsophageal grooves lie so near one another that they almost touch (Pl. II. fig. 13).

The internal anatomy recalls that of the Sagartidæ. The six pairs of principal septa are sterile and alone reach the œsophagus; their interlying interseptal spaces have been modified by the elongation of the form in such a way that the four spaces belonging to the broad sides are more extensive than those belonging to the narrow sides. I was not able to make out any acontia. The circular muscle is powerful and lies in the mesoderm.

Two species already described by other naturalists, *Actinia s. catherinæ* and *Gephyra dolrnni* probably belong to the family Amphianthidæ. The former, which was described and figured by Lesson (Voyage de la Coquille, Zool., tome ii. part ii.