

of disk much more raised than the edges. Disk greater in diameter than the pillar of the body. Tentacles long, moderately slender, generally horizontal to the disk, mostly marginal, their tips constantly curled back.

Actinia clavata.

HELIACTIS, mihi.

The glandular warts placed only on the upper portion of the body. Tentacles very numerous, short, varying in length, crowded towards the edge of the disk, and of moderate thickness; oral disk much expanded.

Actinia bellis.

C. *Body without glandular warts, and with pores for the passage of thread-cells.*

ACTINILOBA, Blainv.

Skin soft; disk very large. Tentacles very numerous, short, varying but little in length, and forming a thick filamentous fringe; margin of disk lobed.

Actinia dianthus.

SAGARTIA, Gosse.

Skin coriaceous, occasionally wrinkled, firm to the touch. Tentacles numerous, not particularly long, retractile, having great power of elongation. Base broad and circular. Body cylindrical. Pores situated near the base, and varying in size. Parasitic.

Actinia parasitica.

ADAMSIA, Forbes.

Skin soft. Tentacles scarcely retractile, short. Base when young circular, afterwards expanding laterally until the extreme points meet, and form a circle. Disk circular or oblong according to the form of the base. Base secreting a horny membrane. Body much depressed, not cylindrical.

Adamsia palliata.

MISCELLANEOUS.

The Animals of Millepora are Hydroid Acalephs, and not Polyyps.

By Prof. AGASSIZ (from recent letters to J. D. DANA).

"I HAVE seen in the Tortugas something very unexpected. *Millepora* is not an Actinoid polyp, but a genuine Hydroid, closely allied to *Hydractinia*. This seems to carry the whole group of Favositidæ over to the Acalephs, and displays a beautiful array of this class from the Silurian to this day."

The drawings of Professor Agassiz which have been sent us for examination are so obviously *Hydractiniæ* in most of their characters, that no one can question the relation. With regard to the reference of *all* the Favositidæ (a group including *Favosites*, *Favistella*, *Pocil-*

lopora, &c., as well as the minuter *Millepora*, *Chætetes*, &c.) to the Acaleph class, direct evidence is not yet complete, as the animal of the *Pocillopora* has not been figured by any author on Zoophytes*. On this point Professor Agassiz states in a subsequent letter, after observing that the *Sideropora* obviously are polyps:—

“There are two types of radiating lamellæ, which are not homologous. In true Polyps (excluding Favositidæ as Hydroids) the lamellæ extend from the outer body-wall inward, along the whole height of that wall, and the transverse partitions reach only from one lamella to the other, so that there is no continuity between them, while the radiating lamellæ are continuous from top to bottom in each cell. In Milleporidæ the partitions are transverse and continuous across the cells, and so are they in *Pocillopora* and in all *Tabulata* and *Rugosa*; while the radiating lamellæ, where they exist, as in *Pocillopora* and many other Favositidæ, rise from these horizontal floors, and do not extend through the transverse partitions; indeed they are limited within the spaces of two successive floors, or to the upper surface of the last. A careful comparison of the corallum of *Millepora* and *Pocillopora* with that of *Hydractinia* has satisfied me that these radiating partitions of the Favositidæ, far from being productions of the body-wall, are foot-secretions, to be compared to the axis of the *Gorgonia*, *Corallium*, &c., and their seeming radiating lamellæ to the vertical grooves or keels upon the surface of the latter, which, reduced to a horizontal projection, would also make the impression of radiating lamellæ in the foot of the polyp. If this be so, you see at once that the apparent radiating lamellæ of the Favositidæ no longer indicate an affinity with the true Polyps, but simply a peculiar mode of growth of the corallum; and of these we have already several types,—that of Actinoids, that of Halcyonoids, that of Bryozoa, that of *Millepora* and other Corallines, to which we now add that of the Hydroids. Considering the subject in this light, is there any further objection to uniting all the Favositidæ with the Hydroids,—*Sideropora* and *Alveopora* being of course removed from the Favositidæ? It is of great importance in a geological point of view, and for years I have been anticipating some such result, as you may see by comparing my remarks in the ‘American Journal,’ May 1854, p. 315. If all the *Tabulata* and *Rugosa* are Hydroids, as I believe them to be, the class of Acalephs is no longer an exception to the simultaneous appearance of all the types of Radiata in the lowest fossiliferous formations, and the peculiar characters which these old Hydroid corals present appear in a new and very instructive aspect.”—*Silliman’s Journal*, July 1858.

* From the specimens of the species of this genus which I procured in the Pacific, I never obtained a clear view of the polyps, and hence made no figure. The brief description on page 523 of my Report may be reasonably doubted until confirmed by new researches. The much larger size of the cells in *Pocillopora*, *Favosites*, and *Favistella* than in *Millepora*, and the frequently distinct rays in these cells, are the characters I had mentioned to Prof. Agassiz as suggesting a doubt as to their being Acalephs, and to this what follows above relates.—J. D. D.



Agassiz, Louis. 1858. "The animals of Millepora are Hydroid Acalephs, and not polyps." *The Annals and magazine of natural history; zoology, botany, and geology* 2, 233–234.

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