

of the family of *Miliolina* the query, "An status juvenilis reliquorum?" M. S. Schultze makes of *Orbulina* a family among his Monothalamia, whilst *Globigerina* is included in a subfamily of the family of *Turbinoida* among the Polythalamia.

I think I am now able to show, by numerous preparations, that these two supposed genera are only different stages in the cyclical or alternate generation of the same species. Having had an opportunity of examining large numbers of well-preserved specimens obtained from the bottom beneath the Gulf Stream by the U.S. Coast Survey, and entrusted to me for examination by Prof. Bache, Superintendent, I have found in nearly one-half of the *Orbulinæ* examined, young *Globigerinæ* more or less developed, and attached to the inside of the *Orbulina* by numerous very slender spicules. Only one *Globigerina* is developed in an *Orbulina*, whose cavity it gradually fills up, and whose shell it finally bursts to make its escape. At that time the *Globigerina* has already nearly attained its full size, and I have counted as many as sixteen cells in a specimen having yet room for several more before filling up the parent *Orbulina*.

How the *Orbulina*-form is reproduced I have not yet traced out. None were noticed of very small size among those examined. Large individuals are frequently found containing a smaller one filling the cavity exactly; the old shell is finally cast off, and appears to remain attached in fragments to the young one for some time. I am unable to say as yet whether this is to be considered as an act of reproduction, or merely as a renewing of the shell. It is not rare to find *Orbulinæ* with this double shell containing already a young *Globigerina*.

I hope to be able to follow out the whole chain of development of these beings; but the above facts have appeared to me interesting enough to be at once communicated.—*Silliman's Journal*, July 1858.

On the Anatomy and Development of the genus Myzostoma, Leuckart.
By C. SEMPER.

The discovery of a new species of *Myzostoma*, living, like the three others already known, parasitically upon *Comatulæ*, has afforded M. Semper opportunity for renewed studies on the affinities of this singular genus. The systematic position of the *Myzostomæ* remains as problematical as before. These parasites remind us, by their suckers, of the Entozoa, Annelida, and Crustacea; their feet are formed like the rudimentary extremities of the setigerous Annelida; their digestive apparatus allies them either to the Entozoa and the Annelida, or to the Arachnida; and their hermaphroditism has its analogue among the Entozoa, Annelida, Arachnida (*Tardigrada*), and Crustacea. As to their nervous system, it is unlike that of any other animals. The form of very young individuals has some similarity to that of the *Tardigrada*.—*Zeitschr. für wiss. Zoologie*, ix. p. 48, 1857.



Semper, C. 1858. "On the anatomy and development of the genus *Myzostoma*, Leuckart." *The Annals and magazine of natural history; zoology, botany, and geology* 2, 236–236.

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