

Dr. Albert Kölliker has recently investigated this interesting subject much more completely, both among *Pennatulacea* and *Acyonacea*, and has already published a short notice,* preliminary to a more extended memoir upon it. For these reasons it will be passed over in the following pages with only such descriptions of the external appearance of the two forms of polyps as may be useful for the determination of the genera and species.

***Renilla amethystina* Verrill.**

Bulletin of the Museum of Comp. Zool., p. 29, Jan. 1864; Proceedings Boston Soc. Nat. History, 1866, p. 326.

Plate V, figure 1.

Frond large, rather thin, broad reniform, broader than long, proportion of breadth to length about as 1·3 : 1; sinus extending more than one third across the length of the frond, about equal to one third of its breadth; the posterior lobes broad and rounded, meeting behind. Peduncle placed at about its own diameter from the end of the sinus; length, in contraction, equal to about a third of the breadth of the frond. Lower surface and peduncle rough with spicula, which are arranged somewhat in radiating lines, upper surface slightly convex, covered with very numerous, rather closely set, small polyps, which are surrounded at base by slightly projecting, rigid calicles, strengthened by numerous spicula, which rise up in angular clusters. Thickly scattered between the ordinary polyps are those of the second or rudimentary kind, which form, in the contracted state, much smaller verrucæ, surrounded by a lower border of spicula, and consisting of clusters of from eight to thirty, small, round papillæ, each with a dark point in the centre.

According to Mr. Bradley's observations upon the living polyps, these are mostly .25 of an inch long, and about .12 across the expanded tentacles, the bodies of the polyps being about .06. "They are transparent, with an opaque stomach, the eight radiating lamellæ showing through the walls; around the small mouth, which is edged with white, are eight radiating white points, corresponding to the intervals between the tentacles; around the base of the tentacles is a brown ring, which runs down in points opposite the spaces between them. Opposite the base of each polyp are two (rarely four or five) bunches of little white rays. The frond is nearly transparent, but highly colored by very numerous purple spicula, evenly distributed on the

* Verhandlungen der physik-medizin Gesellschaft in Würzburg, Déc., 1867. Also, Annals and Mag. Nat. Hist., March, 1868.