and its external appearance presented so little that was characteristic, that I gave up the idea of determining the species more closely, and only decided to give a description of it in order that the important genus might not be left unrepresented.

The animal was so strongly contracted that its body formed a cone, nearly flattened into a disk, the base of which measured 4 cm., whilst its height measured little more than 0·5 cm. The surface of the animal is extremely smooth; it is whitish at the base, then assumes a yellowish-reddish colour, which again passes gradually into white. The coloured part appears longitudinally striated, because the red and yellow alternately predominate in the ground-tint.

The wall is on the whole thin-membraned, and becomes about six times as thick only at the upper margin. This very unusual increase in bulk is explained partly by the high degree of contraction, partly by the great strength of the mesodermal circular muscle. The latter occupies nearly the entire thickness of the wall, and is only separated from the ectoderm by a very thin layer of connective substance, whilst a rather broader layer separates it from the endoderm. Its contour corresponds to the form of the wall, so that it is broad above and drawn out to a point below. We rarely find such beautiful primitive bundles in transverse section as in our *Sagartia;* they are formed of strong fibrillæ, are regularly oval or rounded circularly, and of medium size. On the other hand, the way in which they run is remarkably irregular. In the same transverse section we find, side by side, bundles, some divided obliquely, and others divided perpendicularly, and we see in the thicker parts of the section how the bundles cross and become interwoven in their course.

Contrasted with the circular muscle, the radial muscular fibres of the oral disk and of the tentacles are only slightly developed, and form a very slightly pleated layer in the ectoderm. The tentacles are limited to the periphery of the oral disk, where they are arranged in five rows, and decrease a little in size from within outwards. They are of medium length, rather slender, and pointed at the end. I counted twenty-five in about an eighth of the animal, so that there are probably one hundred and ninety-six in all.

From transverse sections taken through the œsophagus I estimated the number of septa at forty-eight pairs, of which the six principal pairs only are perfect. There would probably be a much larger number at the base, as small septa reaching only a little way project there, in the angle between the pedal disk and the wall. There were reproductive organs (mature testes) on all the larger secondary septa. Finally, in transverse section, I could perceive wide openings in the septa near the wall.

Calliactis, Verrill.

Sagartidæ with smooth wall and numerous tentacles, with distinct cinclides which pierce the wall not far from the base in one or several transverse rows.