

radiate manner. The mouth is situated on a more or less prominent conical projection of the peristome, which may show a constriction at its base. There are five pairs of mesenteries in the oral cone and three below.

The cœnenchyma consists of the tissue uniting neighbouring zooids; it contains a system of canals which takes a direction chiefly at right angles to the axis of the stem, and communicates with the bases of the individual zooids.

### *Synopsis of Species.*

#### A. Spines all of one type.

1. Stem stout, straight, or slightly flexuose; spines short, conical, and close-set, not hooked, very small on one side of the axis, and gradually increasing in length towards the other, distributed in irregular longitudinal rows, . . . . . *propinqua*, n. sp.
2. Stem stout, straight, flexuose or contorted; spines conical, subequal, close-set, somewhat bent upwards, irregularly arranged, sometimes in transverse rows, . . . . . *anguina*, Dana.
3. Stem not usually so stout, twisted into subregular spirals; spines conical, arranged spirally, shorter on the inner than on the outer margin of the spiral axis, . . . . . *spiralis* (Linn.).
4. Stem light brown instead of black, with six longitudinal rows of distant short spines, . . . . . *paucispina*, n. sp.

#### B. Spines of two distinct types.

5. Stem very long, not spiral; large spines conical, elongate, pointed, and usually covered with small granulations; small spines very slender and relatively elongate, distributed irregularly between the larger ones, . . . . . *flagellum*, n. sp.
6. Stem spiral, as in *Cirripathes spiralis*; large spines stout, cylindrical, with a blunt apex, arranged spirally; the interval between the large spines is filled in with a number of very short triangular spines with a sharp apex, . . . . . *diversa*, n. sp.

*Cirripathes propinqua*, n. sp. (Pl. X. figs. 9-13; Pl. XII. fig. 14; Pl. XIV. fig. 7).

Axis straight or slightly flexuose, not spiral, clothed with short, conical, closely set spines, which are larger on one side of the stem than on the other.

The type of this species is in the British Museum collection, and was received through the Sydney Museum from Cape Moresby, New Guinea. The specimen consists of two portions of the axis, each about 30 cm. long, densely clothed with cœnenchyma, in which the polyps are imbedded. The soft parts are well preserved. The stem is about 3.75 to 4.25 mm. in diameter, somewhat irregular, but only slightly tapering in the parts preserved.

The spines are short, thick, and conical, with a blunt apex, and stand out at right angles to the stem; the apex is not curved upwards, as in *Cirripathes anguina*, and, unlike that species, the spines are here of different lengths (Pl. XII. fig. 14). On one side they are very short, and gradually become longer towards the opposite side. The longest are similar to the long spines of *Cirripathes spiralis*. From fourteen to sixteen rows may be counted from one aspect, but in the thicker portions of the stem the spines are