

apparently articulates with the second, a circumstance demonstrating that the second and third are fused into one more solidly in the *Macrura* generally, but the most singular feature is the peculiar form and proportion of the phymacerite (Pl. XVII. *c. o.p.* and Pl. XIX. *c. o.t.*). The first joint or coxa of the antennæ articulates freely with the metope, a circumstance that distinctly separates it from the *Palinuridea*, and from its inferior or ventral surface a hollow calcified tubercle springs, as is common in all the *Macrurous*

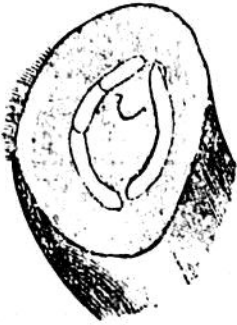


FIG. 13.—Phymacerite of *Stereomastis suhmi*.

types, but in this family this tubercle or phymacerite is produced to a considerable length, it is turned inwards and then curves upwards and presses its extremity strongly against the under surface of the first antenna, where it is received into a depression. The extremity of the phymacerite is closed by a membrane of delicate appearance, and there seems to be no free opening; but in a specimen of *Stereomastis suhmi* that I closely and carefully examined, there appears to be near the centre a crescentic line that may be a fissure, as shown in the accompanying illustration, although I could not demonstrate it to be so. Around this fissure, which was situated near to one extremity, there existed, parallel to the outer open margin of the tubercle, a band of more solid structure divided at the top and bottom. Whether this be a kind of sphincter muscle for the purpose of closing the crescentic orifice, I am not prepared to say. The margin is generally fringed with more or less conspicuous hairs.

The oral cavity is large and spacious, but capable of being entirely closed by membranous tissue which forms an anterior and a posterior fleshy protuberance; the former passes under the mandibles anteriorly, and apparently fulfils the functions

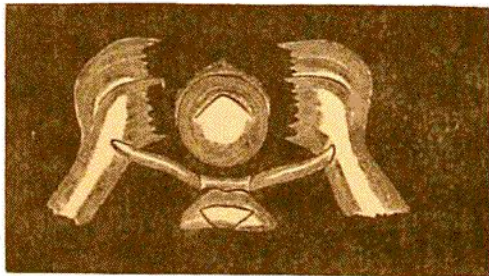


FIG. 14.—*Pentacheles enthrix*. "Mandibles, with anterior and posterior lips. Between them the oral aperture and two feeler-like appendages, mandibles without palpus. Enlarged four times." From a drawing and note by Willemoes-Suhm.

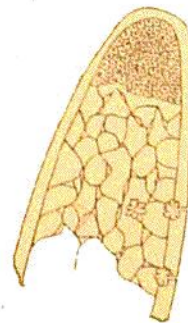


FIG. 15.—*Pentacheles enthrix*. "One of the points of the feeler-like appendages magnified $\frac{1}{4}$ th power. The chitin-layer is removed in order to show the reticular tissue which fills up the inner structure. Three small glandular masses are shown in the skin, of which no doubt others are to be found all over the organ." From a drawing and note by Willemoes-Suhm.

of a tongue and lip, and may be conveniently named the cheiloglossa, while from the hinder portion of the posterior lip a membranous base with a lateral process (Pl. XX. *d''*), the metastoma, is produced on each side; it is long, tapers to a blunt point, and clasps the mandibles closely round the constriction at the base of the psalisiform blade.