

very thin, smooth, turned upwards, and the anterior angle rounded, and fringed with hairs; the outer anterior angle is armed with a small tooth anterior to the auditory fissure.

The second pair of antennæ has the peduncle quite as long as that of the first, and the scaphocerite is narrow, lanceolate, scarcely reaching to the extremity of the peduncle.

The several organs of the mouth, so far as they could be observed, appear to have a close resemblance to those of *Polycheles helleri*; so also has the gnathopoda.

The first pair of pereopoda has the meros smooth to ordinary vision, but a low magnifying power shows several minute points on both the inner and the outer sides.

The fifth pair of pereopoda (fig. 2 *o*, ♀) is imperfectly chelate, induced by a short pollex; the posterior and distal angles of the propodos are produced to half the length of the dactylos; the dactylos is long, and curved in the same direction as the pollex, its convex or proximal side is smooth, the concave or outer side being hirsute, both forming an imperfect grasping claw. Somewhat similar is the condition of the three posterior pairs; that is, the dactylos and pollex curve in a direction parallel with each other, and impinge together so that they lie in the same direction instead of opposing each other as finger and thumb.

The first pair of pleopoda is that of a female, as this specimen undoubtedly is; and I was much inclined to believe it to be that of *Polycheles helleri*, but the finding of a specimen, which is evidently the female of *Polycheles helleri*, off Kermadec Island, has compelled me to hesitate as to the relationship of this specimen. I have, consequently, associated it with those species in which the form of the fifth pair of pereopoda more nearly resembles this.

The mastigobranchia attached to the coxa of the second pair of gnathopoda, and the well-developed character of those attached to the pereopoda, are similar to the same in *Pentacheles lævis*.

*Pentacheles lævis*, Spence Bate (Pl. XV. fig. 5).

*Pentacheles lævis*, Sp. B., Ann. and Mag. Nat. Hist., ser. 5, vol. ii. p. 278, 1878.

Dorsal surface of the carapace long-ovate, free from any armature on the surface except two small teeth equidistant and longitudinally placed on the median line anterior to the cervical fossa. Rostral margin bi-dentate; inner frontal angle of the orbital notch produced to a strong tooth, serrate on the outer margin. The lateral marginal denticulation is bold anteriorly, gradually decreasing posteriorly. The anterior division is but imperfectly defined from the median, and together they are armed with nine teeth, and the branchial or posterior with fifteen or sixteen. Dorsal median line of the pleon but slightly elevated and imperfectly dentate. The posterior pair of