

posterior margin of the carapace. There is no peltecleis attached to the carapace, but a tubercular process, different in form but fulfilling the same purpose, is attached to the pleura of the posterior somite of the pereion, just above the articulation of the last pair of pereopoda, and behind the base of the pleurobranchia, and may be called a pereicleis, as it serves to bolt down the carapace to the pereion, which it does very effectually by being inserted into a hollow formed in the internal surface of the carapace, which fits closely beneath the overhanging margin.

All the somites of the pleon articulate with each other by means of a lateral process produced from the anterior edge of one somite articulating into a cup or hollow situated in the latero-posterior margin of the preceding somite. The anterior half of each somite is smooth and adapted to be retracted beneath the preceding somite when the animal is extended, and the overlying margin of each is furnished with a small fine fringe of cilia that protects the sub-internal division from the introduction of any fragments of foreign and irritating matter.

The rhipidura or tail-fan is large and well developed, and the powerful muscles of the pleon evidently enable it to strike with considerable force, so as to allow the purblind creature to dart backwards with great rapidity on the most sudden alarm.

The eyes are carried on an ophthalmopod in *Polycheles* and *Pentacheles*, which is altered in character (Pl. XVI. fig. 3c, a) and rigidly attached to the cephalon on the inner side, while it is only closely compressed and covered by, but not fused with, the antero-lateral angle of the carapace on the outer side. The base of the ophthalmopod is lodged in an irregular orbit, which has a tendency to a slight degree of variation of form that is useful in assisting to determine species.

The first pair of antennæ (fig. 1c, b.) in the several genera is formed on the same type. The tendency to specific variation in this appendage is mostly limited to the alteration of the crest-like process that is formed by the broad and thin exterior of the inner margin of the first or coxal joint. In *Eryoneicus* it is reduced to a prominent tooth, whereas in other genera the extended surfaces of this joint meet in the median line, and by pressure against each other force themselves upwards and form a central crest-like ridge. This crest is variously fringed with teeth and hairs, and is sometimes pointed and sometimes rounded in front. In the interior of this joint is situated the acoustic apparatus (Pl. XIX. b. a.c.), which consists of a calcareous chamber connected by a calcified channel to the upper surface, where there is a long and narrow fissure guarded by strong teeth, which varies in number in different species, or they may be absent, as in the genus *Willemæsia*. The other two joints, as well as the flagella, appear to exhibit no great degree of variability, as the segments are always cylindrical, and the flagella unequal in length to a degree that is common to all the recent family.

The second antenna (Pl. XIX. c.) varies little from the general external character seen in the Macrurous type of Crustacea. But what variation there is appears to be peculiar to the group. There are only four joints forming the peduncle; the scaphocerite,