

angle of the antennal regions, and ventrally between the upper surface of the second antenna and the under surface of the antennal region (Pl. XIII. figs. *a b c*).

The dorso-lateral margin of the carapace forms an angular ridge, and is divided more or less distinctly into three portions in separate species. These divisions correspond to those seen in the Scyllaridæ, as exemplified most clearly in *Arctus orientalis* (Pl. IX. fig. 4); the anterior represents the line of the cervical fossa, while the posterior may be called the siagnotic fossa, as the space between the two is occupied by the siagnos, or mandible, and may well be termed the siagnotic region. This latter sulcus, although strongly defined in some species both in the Scyllaridæ and in the Eryonidæ, is in others less appreciable, and disappears in *Ibaccus*, and is determinable only by an analytic examination in the Astacidæ.

These several divisions of the carapace in the animals belonging to the Willemcesian group are defined by a series of sharply-pointed teeth that differ in number and vary in size and proportions in different species, and may safely be used as a convenient and fairly reliable sign of specific structural difference.

In the dorsal median line there is a longitudinal carina more or less important, culminating in strong teeth on each somite of the pleon, and taking the unusual direction of pointing forwards. It commences on the frontal margin of the carapace, and terminates in the anterior extremity of the telson. On the carapace it is scarcely more prominent than a small ridge that in some species is only granulated. It is generally armed with teeth on the posterior margin of the cervical sulcus, the gastric region, and the frontal margins, where one or more generally stand in an oblique position behind the edge, which is not produced to a point or rostrum as in *Astacus*, &c. These teeth correspond with those in the same position, and further resemble them in being sometimes double in *Arctus* and allied genera, but are more robust. One peculiar feature in the external structure of these animals is the manner in which the first somite of the pleon interlocks with the carapace. In *Polycheles* and *Pentacheles* a tubercular process (peltecleis) of the posterior margin of the carapace projects obliquely backwards (Pl. XVI. fig. 4), and overlaps the anterior margin of the first somite of the pleon, while the lateral extremity of the first somite, or that portion which is laterally external to the tubercular process of the carapace, is directed forwards, and overlaps the posterior marginal angle of the carapace.

In the genus *Willemcesia* the interlocking is different. There the peltecleis, instead of overlapping the anterior margin of the first somite of the pleon, projects into a hollow socket beneath the anterior margin of the same somite, and acts as a bolt and joint (Pl. XX. fig. 1). In the Scyllaridæ there is no peltecleis, but the anterior lateral margin of the first somite of the pleon overlaps the posterior lateral angles of the carapace, and so securely holds it down.

In the Palinuridæ a lateral process of the first somite of the pleon overlaps the