the structure of the tissue soft and membranous, but in others, where the structure is hard and rigid, the rostrum is long and slender, as in most of the species of *Aristeus*. The teeth on the rostrum, whether on the upper or the lower surface, exhibit a tendency to be constant, even in those genera where there is a considerable variation in the structure of more important organs.

In *Penæus* the teeth are generally numerous, but vary from seven or eight to twice the number, and in some species they appear on the lower margin, but more commonly they are absent from that position. In *Aristeus* three teeth are the almost constant armature of the upper surface of the rostrum, and we know of only one species that departs from this character. In *Aristeus rostridentatus* a number of small teeth arm the rostrum to the apex. In *Benthesicymus*, where the rostrum is very short, the crest is elevated, and most species carry two small teeth, but in *Gennadas* there is only one. Thus the number and arrangement of the teeth on the rostrum of the Penæidea may be considered as sufficiently constant and important to be accepted as a ready and convenient guide to the determination and classification of species.

In *Penæus* there is constantly a small tooth situated at the anterior extremity of the hepatic region, just behind the furrow that is formed by the remains of the cervical fossa. This tooth is absent in *Aristeus* in all species except *Aristeus rostridentatus*. It is present in *Benthesicymus*, and absent in *Gennadas*. In *Sicyonia* it appears as a formidable armature, and in *Solenocera* and its near allies, not only is it present, but there are others which are post-orbital and post-antennal, that appear to be constant and determining features. The frontal margin slightly recedes and has no distinct orbit, but a small tooth that overhangs the base of the first pair of antennæ defines the limit, whence the frontal margin recedes still more obliquely, and passes behind the base of the second pair of antennæ. Here is frequently situated a strong tooth that forms the anterior extremity of a strong ridge that runs backwards, and meets, without uniting with, another ridge that defines the limit between the cardiac and branchial regions. The frontal margin still recedes posteriorly until, at a short distance below, it forms another ridge that longitudinally traverses the branchial region to the posterior extremity of the carapace. This perhaps is the more constant ridge, and it is best seen in *Aristeus*, but it is reduced to a minimum in *Benthesicymus*. Although the structure of the carapace may be firm and rigid, as in *Aristeus*, the portion below the ridge is soft, flexible, and membranous; to such an extent does this exist in some species, as in *Hemipenæus semidentatus*, that the vascular ramifications may be seen in the tissues beneath.

In some species of *Penæus* very peculiar fissures may be seen traversing the carapace, one in a longitudinal direction from the orbital margin, in a slightly waved line to near the posterior margin, the other vertically, commencing near the centre of the infra-lateral margin, and passing up halfway through the branchial region. It cannot be taken