

are foliaceous and tipped with a thick fringe of hairs, a third that is sharply pointed and single, and a fourth that is broad and foliaceous, extending forwards beyond the apex of the previous one and posteriorly into the branchial chamber, and has the margin furnished with radiating cilia.

The first pair of gnathopoda is short and subpediform, consisting of six joints, of which the terminal is small and tipped with five or six spine-like hairs, similar to others that fringe the outer margin of the second joint; it carries no branch attached to the basal joint, and only the rudiment of a mastigobranchial plate.

The second pair of gnathopoda is long, slender, and pediform, and carries a long basephysis and a rudimentary mastigobranchial plate.

The first pair of pereopoda is slender and not very long, the chela is scarcely wider than the carpos, and the fingers are long, slender, and parallel, the inner margins being fringed with long and slender teeth, every third and fourth being longer than the others; the outer margin of the pollex is smooth, while that of the dactylos is armed with four or five equidistant solitary spines. The second pair resembles the first and corresponds in size. The three posterior pairs are shorter than the two first; they are slender and feeble, and carry a short basephysis fringed with hairs that are jointed and ciliated; the ischium is armed on the posterior under surface with a strong tooth nearly as long as the joint; the meros is slightly lobed on the inner side, and is furnished with two strong spines and five or six ciliated hairs; the carpos is nearly as long as the meros and lobed on the inner side anteriorly, the lobe being furnished with one small spine and several long and ciliated hairs; the propodos is shorter than the carpos, lobed on the inner side anteriorly, but less so than the carpos, the lobe being fringed with four or five ciliated hairs, but no spines; the dactylos is longer than the propodos, the margins are subparallel, increasing rather than decreasing in width until near the apex, where they approach and terminate in a slightly unguiculate point, the under margin being fringed with a few hairs.

The pleon is somewhat more slender than the carapace, and the sixth joint is abruptly narrower than the preceding, and possesses the indication of a lobe on the anterior dorsal extremity.

The telson is long, slender, tapering, and armed with three strong spines on each side, each spine being solitary and distant from the others.

*Leptochela gracilis*, Stimpson (Pl. CXXXIX. fig. 2).

*Leptochela gracilis*, Stimpson, Proc. Acad. Nat. Sci. Philad., p. 111, 1860.

Carapace cylindrical. Rostrum subequal with the ophthalmopod.

Pleon smooth; fifth somite posteriorly produced to a horizontal tooth; sixth somite furnished with a tubercle near the anterior dorsal extremity.