

ing, or is confluent with the margin. The second pair of antennæ has a long and wide scaphocerite, strengthened on the outer side by a ridge that terminates in a sharp tooth, near the distal extremity, and it carries a long and slender flagellum. The siagon or mandible carries a two-jointed synphipod that does not reach beyond the second joint of the peduncle of the second pair of antennæ.

The first pair of gnathopoda is subpediform and carries a long and slender basecephysis. The second pair is very long, slender, and carries a very long basecephysis.

The anterior three pairs of pereopoda are long and slender, and the dactyli are long. The posterior two pairs of pereopoda are slender, but not quite so long as the preceding.

The pleopoda are long, slender, and unequally branched.

In its external appearance this genus approximates to *Penæus*, but it may readily be distinguished by the character of the ophthalmopod, the rudimentary state of the pro-sartema, and the condition of the stylocerite of the first pair of antennæ, as well as by the difference in the character of the branchiæ. In this genus a podobranchial plume is attached to each of the five mastigobranchiæ, and two arthrobranchial plumes are attached to the antepenultimate pair of pereopoda.

In these two latter characters the branchial arrangement approximates to that of the genus *Benthesicymus*, from which it differs, first, in having no mastigobranchia attached to the penultimate pair of pereopoda, and, second, in a character that might be thought to possess only specific or even only varietal value, but which in reality is important: in *Benthesicymus* the mastigobranchial plates increase in size posteriorly, and the last is the longest, and is a very important appendage, and all the podobranchial plumes are large and well developed, and the pleurobranchiæ, although more important posteriorly than anteriorly, are all large and useful organs, whereas in *Hemipenæus* the pleurobranchiæ are all small and feeble organs, except the posterior pair, and the podobranchiæ are also small, those of the third pair of pereopoda being very feeble, and the mastigobranchiæ are absent from the last, and exist only as rudimentary lobes on the penultimate pair.

The arrangement may be tabulated in the following formula:—

Pleurobranchiæ,	.	.	.	...	...	1	1	1	1	1
Arthrobranchiæ,	.	.	.	2	2	2	2	2	2	...
Podobranchiæ,	.	.	.	1	1	1	1	1	...	...
Mastigobranchiæ,	.	.	.	1	1	1	1	1	...	...
				h	i	k	l	m	n	o

The structure of the branchiæ also differs from that of *Benthesicymus*, and corresponds more with that of *Penæus*, each plume consisting of a central stalk which carries a series of club-shaped filaments, each branch curling over so that the extremities of opposite branches approximate, and the whole plume forms an obliquely truncated or pen-shaped tube.