

In *Sergestes* and its congeners it is elongated and pediform, and if not the longest is certainly the most efficient appendage attached to the pereion.

The second pair of gnathopoda is long, pediform, and invariably supports a multi-articulate branch that springs from the basis or second joint, while the first or coxa carries a long mastigobranchial lash, that in *Penæus* is more or less divided in a fork-like manner; in some genera it is long and leaf-like, in others it is oval, but generally the body of the lash is supported by a stalk to which it is attached at an angle.

In many genera this lash supports a well-formed branchial plume, but it is absent in *Penæus*, *Sicyonia*, and *Artemesia*, whereas in *Haliporus* it is present in a reduced condition.

The first three pairs of pereiopoda are formed on the same typical plan; they gradually increase in length as they recede posteriorly, and also slightly decrease in diameter. One feature that distinguishes them from those of nearly all other forms is the great length of the carpos in relation to the propodos, and outside of this tribe, I only know of three genera, the recently found *Nematocarcinus*, belonging to the Trichobranchiata, and *Stenopus* and *Spongicola*—genera that belong to the Phyllobranchiata, and have long been supposed to be associated with the Penæidæ—that possess this feature, which they do in each pair of pereiopoda except the third, and here the great increase of development of the chela is the apparent cause of its absence. All the true Penæidæ carry a mastigobranchial plate, while the Sergestidæ have none except in those genera where a rudimentary plate is attached to the first pair of gnathopoda. In *Penæus* and its near congeners there is no podobranchial plume, while in *Benthicymus* there is one to each pair of appendages except the posterior pair. The two posterior pairs in this genus are simple, and terminate in a styliform dactylos. *Penæus* carries neither lash nor podobranchial plume, but a mastigobranchial lash appears in several other genera, but never a podobranchial plume.

In the Sergestidæ there is neither lash nor plumes attached to the legs, but the rudiments of both are sometimes attached to the first pair of gnathopoda.

The branchial arrangement in the several genera of the Penæidæ may best be appreciated by being shown in a tabulated form:—

Penæus.

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

Penæopsis.

No species in the collection.