

Crustacea, with which Milne-Edwards says the species of this genus establish a connection. Attached to the mastigobranchial plate is a well-developed but small podobranchial plume. Between this and the next somite, deep in the interstitial groove, is a small foliaceous plate of a low degree of structure; on the somite that carries the second pair of gnathopoda is a larger branchial plume, which has no connection with the gnathopod or its membranous articulation; this is followed by an interstitial foliaceous plate on the three following somites; on the last somite the foliaceous plate is wanting, but a second branchial plume is present besides the normal one, while the last somite has neither plate nor plume.

The arrangement,¹ as seen in *Sergestes japonicus*, is as follows:—

Pleurobranchiæ,	.	.	.	...	f1	f1	f1	f1	2	...
Arthrobranchiæ,	.	.	.	...	...	...	...	...	...	...
Podobranchiæ,	.	.	.	1	...	...	...	...	...	...
Mastigobranchiæ,	.	.	.	1	...	...	...	...	...	...
					h	i	k	l	m	n o

In *Sergestes kröyeri*, however, there are two branchiæ attached to the penultimate somite, two to the antepenultimate, an interstitial foliaceous plate between the next three somites, and one branchial plume but no interstitial leaf between the next. This may be better understood by the following tabular arrangement, by which it may be seen that one foliaceous plate has been replaced by a branchial plume.

Pleurobranchiæ,	.	.	.	...	f1	f1	f1	2	2	...
Arthrobranchiæ,	.	.	.	...	...	...	...	...	...	...
Podobranchiæ,	.	.	.	1	...	...	...	...	...	...
Mastigobranchiæ,	.	.	.	1	...	...	...	...	...	...
					h	i	k	l	m	n o

In *Sergestes prehensilis* this feature is carried a degree still further, inasmuch as the interstitial foliaceous plates exhibit signs of breaking up into branchial plumes, too unimportant to be pronounced plumes, and too much differentiated to be called foliaceous plates.

Thus it appears that these interstitial foliaceous plates are rudimentary branchial organs.

Geographical Distribution.—The species of this genus are chiefly oceanic, and have been taken all over the globe, in the Arctic as well as in the Tropical seas.

¹ Claus in his *Morphologie der Crustaceen* (p. 52) has tabulated the branchiæ of *Sergestes* in accordance with the table given on this page for *Sergestes japonicus*, with the exception that he makes the foliaceous plates in his diagram (Taf. iii. figs. 31, 2c, 3c, 4c, 5c), which he has figured as large as those in the genus *Petalidium*, as well as the antepenultimate (6c), and ultimate (7c) plumes, to correspond with the arthrobranchiæ, and the other branchial plumes (c') to homologise with the pleurobranchiæ; but, according to my observation, none of the branchiæ are attached to the membranous tissue that unites the coxæ of the pereopoda to the somites of the pereion.