

The somites of the pleon are deep and not strongly compressed; the three posterior somites rapidly narrow to the extremity of the telson, which is ovate, the lateral plates having a short diæresis, the outer angle of which is furnished with two strong spines.

The branchial apparatus corresponds with that of *Paralpheus* very nearly, and differs from that of *Alpheus* only in the absence of the rudiments of the mastigobranchiæ attached to the second pair of gnathopoda and all the pereiopoda in that genus, as shown in the following table:—

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

The aspect of the animal as a whole at once gives the idea of its distinctness from *Alpheus* and also from *Paralpheus*. The carina in the median line on the dorsal surface, the length of the smooth rostrum, and the production of the fronto-lateral angle of the carapace to a point, are suggestive of a separation from *Alpheus*, and the form of the mandibles and the absence of the mastigobranchiæ support this conclusion. But the separation from *Paralpheus*, although equally important is less conspicuous. The rostrum in both is remarkable for its length, but in *Paralpheus* it has a feeble tendency to denticulation on the upper surface. The stylocerite in *Paralpheus* is small, in *Synalpheus* it is large. There is only one tooth, and that remarkable for its length, attached to the base of the second pair of antennæ in *Paralpheus*, whereas there are two in *Synalpheus*.

The mandible in *Paralpheus* has a strong cylindrical molar process, a broad, flat, serrate psalistoma, and a short, spatuliform, uniarticulate synaphipod, while in *Synalpheus* the molar process is stout and cylindrical, the psalistoma is almost rudimentary, being little more than a large curved and pointed tooth, and the synaphipod is short and biarticulate. The first pair of gnathopoda carries a circular mastigobranchial plate in *Synalpheus* and a semicircular one in *Paralpheus*. The second pair of gnathopoda in *Paralpheus* is more robust, terminates in a point, and carries a slender uniarticulate basecphysis, while in *Synalpheus* this pair of appendages is less robust and has the distal two joints shorter than the preceding, terminates in a bifid apex, and carries a long, stout, uniarticulate basecphysis.

The first pair of pereiopoda is more asymmetrical in *Paralpheus* than in *Synalpheus*. The second pair corresponds in all respects, except in the numerical value of the articuli of the carpos. The third and fourth pairs are larger than the fifth in *Paralpheus*, whereas in *Synalpheus* they are correspondingly equal in form and power.

The rhipidura bears some general resemblance in the two genera, but differs in detail. In *Paralpheus* there is one large tooth at the outer angle of the basal joint of