

following pairs are similar to each other and not very long. The carpos is shorter than the propodos and the dactylos is small, slender, and armed; the posterior margin of these three pairs is generally fringed with sharp spine-like teeth.

The pleopoda have the basal joint long, broad, and obliquely compressed, the posterior distal angle being considerably produced, beyond which there are two long, narrow, subfoliaceous plates fringed with hairs, of which the inner is furnished with a compressed stylamblys but without cincinnuli. The first pair differs from the others in having the inner branch short and furnished with a very short stylamblys. The posterior pair helps to form the rhipidura, and it has the peduncle short and the branches long and foliaceous. The outer plate is strengthened on the outer side, and longitudinally fluted and furnished with a distinct diæresis, the outer angle of which is armed with a single tooth and spine.

Each pair of pereopoda except the posterior is furnished with a rudimentary mastigobranchia, and all the branchial plumes increase proportionately very much in size as they proceed backwards. The branchial arrangement is shown in the following table:—

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

Observations.—This genus has been recently established by A. Milne-Edwards for two specimens taken in the West Indies. Those in the Challenger collection are from the seas around the Philippine Archipelago, and two of them appear to correspond very closely with the occidental species.

In structural details they correspond very closely with the genus *Pandalus*, but differ considerably in external form, on which Milne-Edwards has apparently relied for the generic characters. "The carapace," he says, "is carinated above, and the pleon carries upon some of its somites a strong median carina that terminates posteriorly in a point, but the legs are destitute of palps" (basecephyses). Features of this kind are very liable to vary, as may be seen by our species *Heterocarpus gibbosus*, in which there is neither carina nor tooth on the dorsal surface of the pleon, and yet this species undoubtedly belongs to the same genus as *Heterocarpus ensifer*, A. Milne-Edwards.

Geographical Distribution.—The first specimen (*Heterocarpus ensifer*) of this genus was taken by the Challenger in 1874, near the Philippine Islands, and one very like, if not identical with it, was taken in the West Indies, near Barbados, by the American Expedition in 1878. About the latter time *Heterocarpus oryx*, A. Milne-Edwards, was taken in the Gulf of Orleans, and another almost identical, *Heterocarpus alphonsi*, was found by the Challenger near the Philippine Islands; a slender variety of the same