

The third and fourth pairs carry similar branchial plumes to the second; but the fifth pair is shorter than any of the preceding pereopoda, and has no branchia attached except a small pleurobranchial plume. The whole may be tabulated as follows:—

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

The first pair of pleopoda in this specimen, which is a female, is small and feeble. The second is biramose, and the inner branch carries a single stylamblys fringed with ciliated hairs, as do all the other pairs of pleopoda until the sixth, which forms part of the rhipidura.

Observations.—The first specimen of this species, which was not a very perfect one, was taken south-east of the Philippine Islands, at about seventeen degrees west and seven degrees north of where *Pentacheles obscura* was taken.

The second specimen was taken near Juan Fernandez, at three times the depth, on a similar bottom but at a temperature six degrees lower.

The two localities of this species, being more than ten thousand miles apart, induced me to compare the specimens with great care.

Pentacheles gracilis, n. sp. (Pl. XVI. figs. 1, 2).

Carapace long-ovate; anterior margin furnished with two sharp rostral teeth directed obliquely upwards; a similar strong, sharp tooth is directed forwards at the inner angle of the orbit. Outside the orbital notch is a similar tooth directed obliquely inwards, beyond which the lateral angle of the carapace projects anteriorly in the form of a strong, sharp tooth, passing obliquely upwards, outwards, and anteriorly beyond the extremity of the median or rostral teeth. The lateral margins of the carapace are evenly denticulate, and divided at the cervical and hepatic fissures. There are ten teeth on the anterior, three on the median or hepatic, and fourteen on the posterior or branchial margins. These last lessen in size as they proceed posteriorly. Between the several teeth are a few hairs. The median dorsal ridge is armed with a row of single teeth, gradually decreasing in size as they proceed posteriorly. The general surface is polished and sparsely covered by small granular points, from which spring short, curved hairs; the branchial region is clearly defined by a baccate or minutely denticulate line.