

entire length of the animal; the posterior pair of pereopoda is still very short, being only 4 mm. long as compared with 30 mm., the length of the first pair, which is the only one not broken, and which is generally but little more than half of the second and third. Up to this stage, the most advanced in the collection, the animal still retains its *Phyllosoma* condition, without the slightest sign of any branchial structure whatever. The nervous system gradually becomes more definite in character but as yet the pereionic ganglia are distinct from each other both longitudinally and laterally. The cerebral mass consists of three lobes, the frontal and two lateral. The former supplies the organs of vision, the latter send large branches to the antennæ, while one or two small branches there subdivide and go to the antennal gland, which in this larger specimen appears to consist of a number of thick-walled convoluted chambers or cavities.

From the cephalic ganglia two long slender nerves go directly back to the oral apparatus, which they pass, one on each side, and continue until they enter the pereion, where they enlarge and unite to form a long wavy mass, from which small lateral branches are given off apparently to join the gnathopoda and the anterior appendages which, as yet, are in an immature condition. Passing from this ganglionic mass, the neural cord divides and forms double ganglia, in three successive pairs, which go respectively to the three anterior pairs of pereopoda. The next supplies the fourth pair but differs from all the preceding in consisting of four ganglionic masses forming a quadrangle.

The fifth pair of pereopoda is as yet in a very immature condition, but whether from injury to the specimen in mounting or from some other cause, I can find no corresponding ganglionic centre. Whether the posterior or quadrangular group of ganglia supplies it I could not determine, although I am induced to believe it does, but the space between this and the next ganglion was obscure.

The next and following ganglia differ from the preceding in being spherical and in having no central division; they are close together, and each ganglion is nearly as large as the somite that it supplies is long; there are only five ganglia, and these correspond to the five anterior somites of the pleon; none were visible in the sixth joint and telson.

The next specimen is evidently the young of another species, and agrees closely with that which Milne-Edwards has described and figured under the name of *Phyllosoma stylicornis*,<sup>1</sup> but it has the cephalon narrower anteriorly and proportionally longer (Pl. XIIc. fig. 1). It is 30 mm. in length, and was taken off St. Thomas Island, West Indies, in the month of March, whereas that of Milne-Edwards is recorded from the Indian Ocean. Its most remarkable feature is, that although it is one of our largest specimens, the pleon is not more than 1 mm. in length, and none of the pleopoda are present except the posterior pair, and these are in a rudimentary stage. On the other hand all the pereopoda are as far advanced as those of the preceding specimens, and the posterior pair is very much more so, and stands at the extremity of the posterior angle of the

<sup>1</sup> Hist. des Crust., vol. ii. p. 483, pl. xxviii. figs. 1-7.