

There can, I think, be little doubt that the three specimens taken are merely different sexes of one and the same species. It is, however, curious, that during the expedition the only females should be taken off New Zealand, while the only male taken should have been four thousand miles distant.

#### Family ASTACIDÆ.

The genera of this family are all inhabitants of fresh water rivers, lakes, and ponds.

The podobranchiæ are invariably six, and well developed. The plumes are attached to the mastigobranchial plates in their entire length. Posterior to each of these a sublunate process tipped with hairs is articulated. The anterior three pairs of pereopoda are chelate. The first pair is largest.

The term *Potamobius* was first used by Dr. Leach, in 1819,<sup>1</sup> for the genus *Astacus*, and *Astacus*,<sup>2</sup> for the marine genus to which Milne-Edwards, in his *Histoire des Crustacés*, afterwards gave the name of *Homarus*, by which it has ever since been recognised.

At that time Milne-Edwards retained the name of *Astacus* for the terrestrial or fresh-water species, by which it has since been universally known; and although, as Dana<sup>3</sup> writes, "Leach has undoubted priority and exhibited his usual discrimination in proposing the subdivision of the old genus," yet to adopt now the name of *Potamobius* instead of *Astacus* would only create great confusion. It is to be regretted that to acknowledge Dr. Leach's claim would not only have this result, which he himself would deprecate, but would introduce terms not likely to be generally accepted.

The Astacidæ of the northern hemisphere have the first pair of pleopoda modified in the male for sexual purposes, and the dactylos of the first or large chelate pair of pereopoda has the outer margin straight or inflexed. They have never more than one pleurobranchial plume on each side fully developed.

There are two genera in this division, *Astacus*, in which a pleurobranchial plume is attached to the posterior somite of the pereion, and *Cambarus*, which has none. These are confined to the northern hemisphere, and may be found in Europe, Asia, and America.

Those that belong to the southern hemisphere have the first pair of pleopoda wanting, and the dactylos of the first or large chelate pair of pereopoda has the outer margin convex. There are always one or more pleurobranchial plumes on each side.

<sup>1</sup> *Potamobia fluviatilis*, Leach, Sam. Ent. u. Comp., p. 95, 1819. Mr. Walter Faxon, in his *Revision of the Astacidæ*, 1885, attributes this generic name to Sowerby in the continuation of Leach's *Malacostraca Podophthalmia Britannicæ*, No. 8, xviii., xix. Tab. xxxiv. fig. 1, 1875. Adam White in *Cat. Brit. Mus.*, 1850, uses it; and L. Agassiz in the *Nomenclatoris Zoologici, Index Universalis*, gives *Potamobia*, Leach, *Crust.*, 1818.

<sup>2</sup> *Astacus gammarus*, Leach, Sam. Ent. u. Comp., vol. vii. p. 398.

<sup>3</sup> Dana, *U.S. Explor. Exped.*, p. 532.