

branchial plate. The genera *Pontocypris* and *Macrocypris* also show intermediate characters in the structure of the second pair of maxillæ.

Of the twenty-three species of *Bairdia* noticed in this monograph, one only, *Bairdia villosa*, was taken alive. All the rest are represented merely by dead shells. In this condition it will be seen that the task of specific identification becomes very difficult, the only available characters being those of the shell, which in this genus does not show any very marked specific differences of surface-ornament; the shape and proportions of the shell thus become the only available diagnostic marks, and it is very probable that the further investigation of larger numbers of specimens, and above all, of living animals, may very much modify our view as to the validity of some of the characters here adopted as specific marks, but which may prove to be dependent upon sex or stages of growth. It need scarcely be said that many of the fossil forms described by authors under the generic name *Bairdia*, must of necessity be transferred to other genera, and the same observation holds good as regards *Cythere*, *Cytheridea*, *Cypridina*, and other names in use by palæontologists before our anatomical knowledge of the group had been much elaborated. But as important anatomical differences are constantly coincident with well-marked shell characters,¹ it is possible in most cases to refer even fossil species to their proper generic position, the difficulty being, indeed, no greater than constantly occurs with recent dredged specimens, in which the animal contents of the shell have entirely disappeared.

1. *Bairdia fusca*, G. S. Brady (Pl. VII. fig. 2, *a-d*).

Bairdia fusca, Brady, Trans. Zool. Soc. London, 1865, vol. v. p. 364, pl. lvii. fig. 9, *a-d*.

Carapace as seen from the side subtriangular, greatest height situated in the middle, and equal to about two-thirds of the length; extremities rounded, but more broadly in front than behind; ventral margin nearly straight; dorsal very boldly arched; seen from above, the outline is compressed, ovate, subacuminate behind, and rather more obtusely pointed in front; greatest width in the middle, scarcely equal to half the length; end view ovate, height much exceeding the width. Shell-surface smooth (slightly hairy when recent), and covered with closely set minute punctations. Length, 1-25th of an inch (1 mm.).

A few specimens of *Bairdia fusca* occurred in a dredging made in very shallow water (2 to 10 fathoms) at Port Jackson, Australia. The species was described by myself in 1865, from Australian specimens, which agree entirely with those brought home by the Challenger, except that these last, being only dead shells, are pale in colour and have lost all their hairs.

¹ So far as British Post-Tertiary species are concerned, these characters have been tabulated in Messrs Brady, Crosskey, and Robertson's Monograph of the Post-Tertiary Entomostraca, issued by the Palæontographical Society.