

first joint of the base in the third pair (fig. 10) has three small spines on the outer and a crescent-shaped row of six or eight similar spines towards the inner margin; the fourth pair is similarly armed as to the inner, but not as to the outer margin; the terminal spines of the feet are bent at the tips, as in *Undina vulgaris*, but are scarcely so slender, and the margins are not distinctly serrated. The right foot of the fifth pair in the *male* (fig. 11), is excessively long, the first two joints being nearly as long as the abdomen, and the extremity of the organ reaching as far as the very apices of the longest tail-setæ; the first basal joint—as also that of the left foot—has a serrated inner margin; the second joint gives attachment to a rudimentary, wedge-shaped inner branch, the smooth joint of the prehensile branch is produced externally into a very long slender and tortuous, immobile claw, which near the middle bears a small hook-like marginal process; the third joint is simple but has attached at its apex a large moveable appendix, shaped roughly like the letter E. The fifth foot of the *female* also has its first basal joint marginally serrated. The foot of the left side (fig. 12) is small, but otherwise does not much differ from the ordinary swimming feet, except in the absence of setæ on the outer branch. The *female* abdomen (fig. 14) has the distal borders of the first two joints more or less completely fringed with short setæ. The caudal stylets are as broad as long, and equal in length to the last abdominal segment; the fourth caudal seta is longer, and in the *female* much stouter than the rest—about once and a-half the length of the abdomen.

Length of the *female*, 1-10th of an inch (2.55 mm.), of the *male*, 1-12th of an inch (2.1 mm.).

*Habitat.*—Off Port Jackson, Australia; between Sydney and Wellington; between Api and Cape York; between Arrou and Banda; off the north of Papua; in several stations amongst the Philippine Islands; Pacific, north of the Sandwich Islands; lat. 36° 32' S., long. 132° 52' W. (Station 287); lat. 42° 43' S., long. 82° 11' W. (Station 302); lat. 36° 44' S., long. 46° 16' W. (Station 325); lat. 26° 21' N., long. 33° 37' W. (Station 353).

This is certainly one of the most remarkable as well as one of the most common of southern pelagic Entomostraca. Though not occurring amongst the Challenger gatherings quite so commonly as *Undina vulgaris*, its distribution seems to be pretty much the same, and in some of the bottles it was found very abundantly. The male is easily recognised, even with a simple hand lens, by the extraordinary length and grotesque form of the fifth foot. In all essential structural characters it agrees with the type-species, *Undina vulgaris*, and I have given drawings of its various parts as illustrating the generic characters. The amount of ciliation of the female abdominal segments, and the apical pectination of the swimming feet vary very much in different examples. The immensely long fifth foot of the male would appear to be used partly to convey spermatophores to the vulva of the female. I have never actually seen these bodies attached to the limb (as is frequently observed in *Euchæta*), but it is difficult to account in any other