

of feet." *Podocerus falcatus*, Montagu, *Podocerus pelagicus*, Leach, and *Podocerus pulchellus*, Leach, are given as three species, but with the statement that "the last two species may be varieties of *P. falcatus*. Figure 1 on Plate IV. is an outline of "*Protella phasma*, Dana (young)," of which Mr. Fowler observes that "none of the characteristic spines on the back are developed except that on the head; and the palm of the second cheliped is much simpler than that of the adult, exhibiting only one, not very strong, tooth."

1886. FOWLER, G. HERBERT.

The Zoological Record for 1885; being Volume the twenty-second of the Record of zoological literature. London, M.DCCC.LXXXVI. Crustacea by G. Herbert Fowler, B.A., Ph.D. 29 pages.

1886. GERSTAECKER, A.

Dr. H. G. Bronn's Klassen und Ordnungen des Thierreichs, wissenschaftlich dargestellt in Wort und Bild. Fortgesetzt von Dr. A. Gerstaecker. Fünfter Band. II. Abtheilung. Gliederfüssler; Arthropoda. 16. und 17. Lieferung. Leipzig und Heidelberg, 1886. pp. 417-512.

In this part is finished the discussion of the variety of colouring found among the Amphipoda, and mention made of the correspondence in some species between the colour of the animal and its surroundings. A section, number 3, follows on *habitat*, in which the remark is made that hitherto only a single species, *Orchestia cavimana*, Heller, has been proved (by Graeffe's experiments) to have entirely given up the water and become an air-breather like the terrestrial Isopods. It is further said that of the Gammarid group hitherto only a single species, *Pherusa fucicola*, Leach, has been observed as an inhabitant of the wrack thrown up by the sea. But surely the common Gammarid, *locusta* and *marinus*, are much more frequently found in such circumstances than *Pherusa fucicola*, which along with many other species, haunts the weeds between tide marks. Section 4 describes some of the contrivances by which Amphipoda provide themselves with dwellings, giving an account, among other matters, of the investigation by which P. Mayer discovered that *Phronima sedentaria* makes use of other animals for a residence besides *Pyrosoma*. In Section 5, on the means of boring, it is suggested that the large lower antennæ of *Chelura terebrans* may be of use in removing the gnawed-off particles of wood from the passages. Section 6 is on the period of appearance of some of the Amphipoda. Section 7, on motion, describes Gerstaecker's own observations on *Gammarus pulex*. This, he says, swims never on its side except when the shallowness of the water compels it, but otherwise almost always with the back uppermost, only occasionally and for a short time back downwards. It always swims straight forward, with the last three pairs of peræopods turned upwards, the first two pairs by their movements assisting the pleopods, the gnathopods held perfectly quiet, the antennæ for the most part kept in motion. In reference to "*Talitrus saltator*," Gerstaecker makes the suggestion that the second gnathopod may be employed in digging the hole in the sand for the creature to bury itself, though the small size and fineness of the integument of the hand of this limb are recognised as out of harmony with the suggestion. The first gnathopod would seem to be a more efficient instrument for the purpose in question. Gerstaecker suspects that the swimming movements of "*Lepidactylis (Sulcator) arenaria*" must be especially