latter case they have the whole under side closely set with long stiff hairs, arranged in two simple rows. These swimming-bristles are movably socketed, and on each joint increase in size from behind forwards. Their peculiar structure is described. The structure, positions and uses of various spines are investigated.

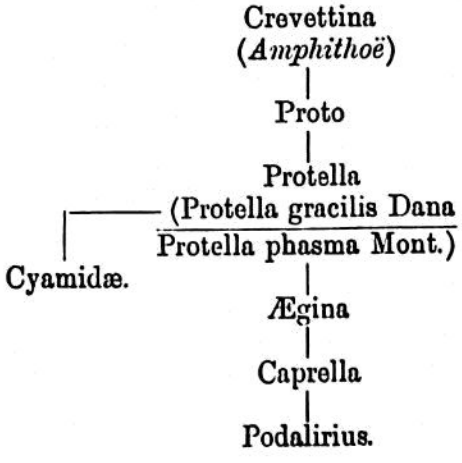
Sections of the work are devoted to the heart and circulation, the organs of reproduction, the apparatus of nutrition and glands of the intestine, a gland in the hand of the second gnathopod of some Caprellidæ (*e.g.*, *Caprella dohrnii* and *Protella phasma*), remarks on large connective-tissue cells in the bodies of the Caprellidæ, sexual differences, adaptability, mode of life, epizoic plants and animals, classification.

Proto pedata, Fleming, and "Proto Goodsiri," Spence Bate and Westwood, (Figs. 23–25), are given as distinct species, but the better opinion unites them under *Proto ventricosa*, O. F. Müller. *Proto brunneovittata*, n. s., is described and figured. Remarks are made on the genus *Protella*, Dana, and the species *Protella phasma* (Fig. 26). *Caprella*, Lamarck, is defined, and in "Subgenus I. Caprellen, deren unteres Fühlerpaar Ruderborsten trägt," he places 1. *Caprella æquilibra*; 2. *Caprella acutifrons*; 3. *Caprella liparotensis*, n. s. (Figs. 41, 42), which is described in detail; 4. "*Caprella Helleri*," n. s. (Fig. 43), which Mayer considers to be the young form of some *Caprella* which cannot be determined.

In "Subgenus II. Die unteren Antennen sind Sinnesorgane." Here are placed, 5. *Caprella linearis*; 6. "*Caprella Dohrnii*," n. s. (Fig. 44), which is given by Mayer as a synonym of his subsequently published *Caprella grandimana*; 7. *Caprella acanthifera*, Leach; 8. *Caprella elongata*, n. s. (Fig. 45), which Mayer considers to be a smooth variety of *Caprella acanthifera*.

Of *Podalirius*, Kröyer, two species are given, *Podalirius typicus*, Kröyer, and *Podalirius kröyeri*, n. s. (Figs. 46–49), both species being described in detail.

In the conclusion, Haller draws out the following genealogical tree of the Caprellidæ, which he regards as probably Crevettina metamorphosed by a parasitic mode of life.



1878-1879. HAYEK, GUSTAV VON.

Handbuch der Zoologie. Siebente, (des II. Bandes erste) Lieferung. Wien, 1878. Achte (des II. Bandes zweite) Lieferung. Wien, 1879.

Von Hayek divides the "Unterreich, *Arthropoda*, Gliederfüssler," into four classes, Crustacea, Arachnoidea, Myriopoda, Insecta. In the higher forms, he says, the body is clearly divided into three principal sections, constituting the head, thorax, and abdomen, but "bei den Krebsthieren, als den niederst organisirten Gliederfüsslern, ist eine derartig ausgesprochene Sonderung niemals zu bemerken, sondern eine mehr oder weniger weitgehende Verschmel-