

ON THE DISTINCTIVE CHARACTERS OF *ORCHESTIA*  
*MEDITERRANEA* DA COSTA AND *ORCHESTIA*  
*GAMMARELLA* (PALLAS).

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Although males of *Orchestia mediterranea* and *Orchestia gammarella* may be distinguished on the shape of the large sub-chelate second gnathopods (Chevreux and Fage, 1925), the females of the two species are practically indistinguishable using existing descriptions. Reid (1947) having compared them "almost spine by spine," states, "It is impossible to find one clear characteristic which will separate *O. mediterranea* from *O. gammarella* in the female." He describes a slight difference in the shape of the carpopodite of the second gnathopod in the two species, but admits that it is not a very good or reliable distinction. However, an observation that, when submerged, *O. mediterranea* swims much more, and with much greater efficiency than *O. gammarella*, led me to compare the pleopods of the two species, which I found to provide a clear distinguishing feature. In *O. mediterranea* the rami of each pleopod are as long as the peduncle, and the total length of each appendage is appreciably greater than in *O. gammarella*, where the rami are only half as long as the peduncle (Fig. 1). The pleopods are largely obscured from view in whole specimens, but this character may be seen by dissecting off the pleopods or, more conveniently, by removing the posterior peraeopods. The relative lengths of the peduncle and the rami of the pleopods are the same in both sexes, and remain appreciably unaltered from birth to maturity in *O. mediterranea* and from first moult to maturity in *O. gammarella*. Unmoulted specimens of *O. gammarella* have the rami almost as long as the peduncle, but the total length of each pleopod is much less than in *O. mediterranea* (Fig. 2). Apart from their size, unmoulted specimens of both species can be recognised by the fact that the rami of the first uropods bear terminal spines only, and none along their dorsal margin (Dahl, 1946).

I have found the pleopods to provide a satisfactory distinguishing character between the two species of *Orchestia* in specimens collected on the coasts of Northumberland, Fifeshire and the Isle of Man.

*References.*

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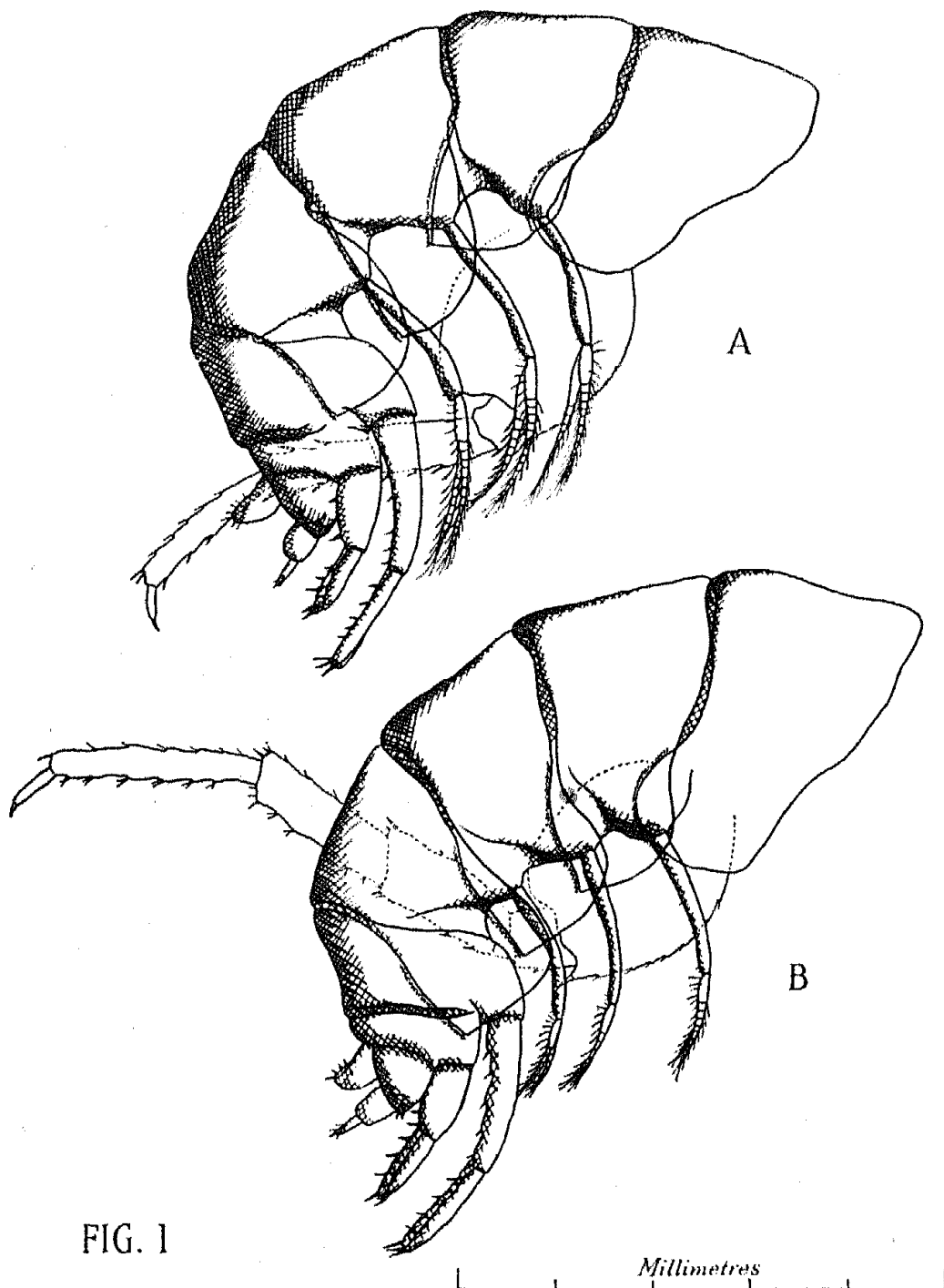


FIG. 1

FIG. 1. Abdomens of adult females of (A) *O. mediterranea* and  
(B) *O. gammarella*.

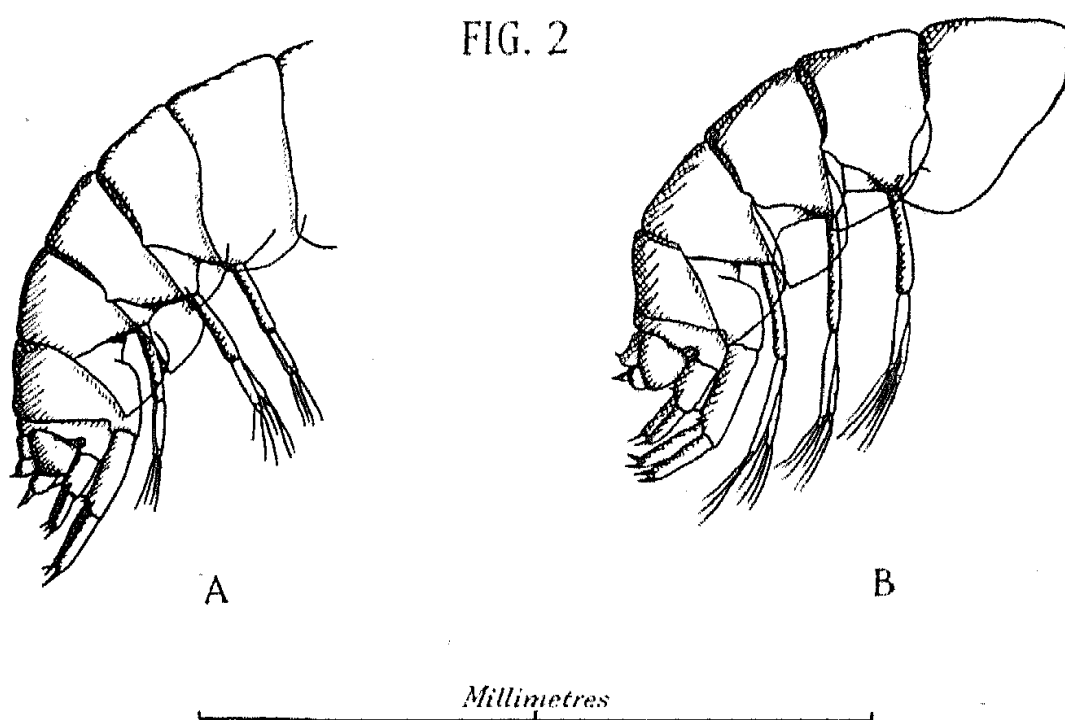


FIG. 2. Abdomens of first instar young of (A) *O. gammarella* and (B) *O. mediterranea*.