

Although the zoea of *C. rathbunae* has the general appearance of a pandalid larva, its appendages closely resemble those of larval Oplophoridae (c.f. Gurney, 1939, 1942; Gurney & Lebour, 1941). In the Oplophoridae, as in *C. rathbunae*, there is no exopod on the maxillule; the endites on the maxilla are developed to about the same extent in larvae of *Acantheephyra* A. Milne Edwards and *Campylonotus* Bate, and the palps of both the maxillule and maxilla are very similar in these two genera except that they are more completely segmented in the latter. The exopod of the maxilla has a stout proximal flagellum in the stage I zoea of the oplophorid genera *Systellaspis* Bate, *Oplophorus* H. Milne Edwards and *Hymenodora* M. Sars, as in *Campylonotus*. The presence in the zoea of well developed exopods on all peraeopods is a further important point of resemblance between *Campylonotus* and the Oplophoridae. It will thus be seen that larval characters give considerable support for grouping the Campylonotidae and the Oplophoridae in the same superfamily, as advocated by Borradaile (1907) and Balss (1957).

Holthuis (1955) grouped the Campylonotidae with the Palaemonidae and Gnathophyllidae in the superfamily Palaemonoidea. Features of larvae of the Palaemonidae (c.f. Gurney, 1938, 1942; Gurney & Lebour, 1941) are that the posterior margin of the telson is never deeply indented; the antennal endopod usually ends in a short spine and a seta in stage I; the maxillule is without trace of exopod; the maxilla bears only one coxal endite; the palps of the maxillule and maxilla bear few setae, show little trace of segmentation, and are often small; exopods are absent from the 5th, or 4th and 5th, peraeopods; in many species one or two pairs of posterior peraeopods are longer than the anterior pairs and are developed before them. No larvae of the Gnathophyllidae are known. The form of the telson and antennal endopod and the lack of an exopod on the maxillule may be regarded as linking the zoea of *C. rathbunae* with the Palaemonidae, although these characters of the telson and maxillule are also common in several other families of the Caridea. The larval mouthparts of *C. rathbunae* are, however, much more primitive and generally very different from those of the Palaemonidae and there is a gradual decrease in the size of the peraeopods from the 1st to the 5th, at least in stage I. These differences appear to preclude the possibility of close relationship between the Campylonotidae and the Palaemonidae.

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