

A REVISION OF THE FAMILY PODOCERIDAE (AMPHIPODA: GAMMARIDEA)

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SUMMARY

The podocerid genera *Cyrtophium*, *Icilius*, *Laetmatophilus*, *Leipsuropus*, and *Podocerus* have been investigated to elucidate their generic characters. Four of these genera are very closely related, with only minor differences between them; *Icilius* has proved to be non-corophioidean and is removed from Podoceridae. The family Iciliidae, and a new podocerid genus *Styloxenodice*, to accommodate *Xenodice macrophthalma*, are diagnosed. Four groups of genera are recognised within Podoceridae, and are given subfamilial status: Podocerinae, Xenodicinae, Neoxenodicinae, and Dulichiinae. It is suggested that Podoceridae is derived from a basic corophioidean *Gammaropsis*-type ancestor through an ancestral form that would have been similar to *Styloxenodice*.

INTRODUCTION

The gammaridean amphipod family Podoceridae is diagnosed as a corophioidean having a depressed urosome with the first urosomite more than twice as long as the second. As currently constituted the family contains eleven genera, all of which are marine. The relationships of the six cold water, slender bodied genera (*Dulichia*, *Dulichlopsis*, *Dyopedos*, *Neoxenodice*, *Paradulichia*, and *Xenodice*) were discussed recently by Laubitz (1977, 1979). At that time it was concluded that there was insufficient information available on the five flat-bodied, warm water genera (*Cyrtophium*, *Icilius*, *Laetmatophilus*, *Leipsuropus*, and *Podocerus*) to include them in the discussion.

I have recently had the opportunity to study specimens of all five of these warm water genera. The result of this investigation made it apparent that the whole family needed to be reassessed, and an attempt needed to be made to determine the relationships between the genera currently placed therein.

OBSERVATIONS

The five depressed-bodied genera (*Cyrtophium*, *Icilius*, *Laetmatophilus*, *Leipsuropus*, and *Podocerus*) classically assigned to the family Podoceridae are superficially very similar. However, study of specimens of these genera produced rather startling results. It quickly became apparent that the genus *Icilius* not only was not a podocerid, but also that it was not even a member of the superfamily Corophioidea. As a result of this discovery it seemed essential to reconsider the characters of all of the genera assigned to Podoceridae and to see whether they could be considered a unique group forming a single family unit, and could be linked together in a logical evolutionary sequence.

The characters of *Icilius* are such that this genus cannot be placed in any of the currently accepted gammaridean families, so that the family Iciliidae (Icilidae of Dana) must be reinstated. Characters that specifically bar the Iciliidae from being included in the Corophioidea are: antenna 1 with short peduncular articles; gnathopods slender, simple, and alike; coxal plate 4 excavate; coxal gill on pereopod 7; uropod 3 well developed, inner ramus much longer than outer; telson entire, not fleshy.