DISTRIBUTION AND TAXONOMY OF THE TROPICAL AMERICAN
MESOCYCLOPS G. O. SARS, 1914 (COPEPODA, CYCLOPOIDA)

BY
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ABSTRACT

The distributional and taxonomic status of the copepod genus Mesocyclops G. O. Sars, 1914, known from tropical America, is revised. Currently, the main characters to recognize species (i.e., presence/absence of a spine on the basipodite of the first trunk limb, the presence/absence of teeth-like projections on the intercoxal sclerite of the fourth trunk limb, and the shape of the seminal receptacle) have not been strong enough to make a clear, confident taxonomic border between morphologically similar species. This is most evident in species belonging to the M. thermocyclopoides, the M. meridianus-brasilianus, and the M. reidae-ellipticus groups. Although some species qualify as Pantropical, Neotropical, endemic, and transitional forms, it is necessary to increase collection efforts and evaluate other morphological features in order to establish the taxonomic limits within these intricate species groups as well as to determine the real distributional range of each.

RESUMEN

Se revisa el estado de conocimiento taxonómico y distribución de las especies de Mesocyclops G. O. Sars, 1914 conocidas en América tropical. Actualmente, las características morfológicas para diferenciar entre especies (v.g., presencia/ausencia de una espinosa sobre el basipodito de la primera pata torácica, presencia/ausencia de proyecciones de forma de diente sobre el esclerito intercoxal de la cuarta pata torácica y la forma del receptáculo seminal), no han sido suficientes para marcar un límite taxonómico confiable entre especies morfológicamente similares. Esto es más evidente en las especies que pertenecen a los grupos M. thermocyclopoides, M. meridianus-brasilianus y M. reidae-ellipticus. Por otro lado, aunque algunas especies son calificadas como formas Pantrópicas, Neotrópicas, endémicas y de transición, es necesario incrementar los esfuerzos de colecta y evaluar otras características morfológicas con el fin de establecer límites taxonómicos más claros dentro de los grupos de especies antes señalados, así como determinar los ámbitos reales de distribución de cada una.

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INTRODUCTION

Within the freshwater copepod genus *Mesocyclops* G. O. Sars, 1914, two main species groups can be recognized (Dussart, 1987). The first one is distinguished by the absence of a spine on the medial expansion of the basipodite of the first leg, whereas that spine is present in the second group. Two subgroups can be separated in the latter by the presence or absence of two teeth on the intercoxal sclerite of the fourth thoracic limb. These morphological characters (among others) have been used to compare the morphology and distribution of African (Van de Velde, 1984), North American (Reid, 1993), and European (Kiefer, 1981) species of *Mesocyclops*. Works dealing with these subjects in tropical America are sparse, and doubts remain about the real status of several neotropical species (Reid & Pinto-Coelho, 1994). As a first attempt to solve this problem we reviewed the current state of knowledge about the genus in the neotropics considering four main factors: the key morphological features, the known distribution of each species, their inclusion in taxonomic keys used for their identification in the Americas, and the possible synonymy of nominal species in each case.

RESULTS AND DISCUSSION

In terms of the criteria proposed by Dussart (1987), we divided the neotropical species of *Mesocyclops* recorded in the region into two subgroups, as follows:

Group A. — Spine on the internal margin of the basipodite on the first trunk limb absent; this group is known as the “leuckarti-group” the following species are considered to belong to this group:

*Mesocyclops pescei* Petkovski, 1986. — The original description was based on specimens from the Bahamas and was recorded as *M. aequatorialis americanus* Pesce, 1985. Because of homonymy with the Nearctic *M. americanus* Dussart, 1985, it was later on renamed as *M. aequatorialis pescei* by Petkovski (1986). The same name was used by Dussart (1987) in his key for the *Mesocyclops* from South America. A recent redescription and a new, specific status were published by Fiers et al. (2000) under the name *M. pescei*. The differential features to elevate this taxon to species rank are: the absence of hairs or spines on the fifth pediger and the length of the medial spine of the third endopod of the fourth thoracic limb, which is longer than the lateral one.

*Mesocyclops aspericornis* Daday, 1906. — A widely distributed species, recorded from Asia, the Pacific Islands (Dussart, 1984), the Caribbean, northern South America, Brazil (Reid & Saunders, III, 1986), Colombia (Suárez et al., 1984; Reid, 1987), Guadeloupe and Martinique (Dussart, 1982), Argentina (Reid &