

**LEPEOPHTHEIRUS KRISHNAI, A NEW PISCICOLOUS
COPEPOD FROM THE PULICAT LAKE**

M. KALIYAMURTHY

Central Inland Fisheries Research Centre, Pollachi – 642 001, Tamil Nadu

INTRODUCTION

While examining some fish species from the Pulicat Lake, as a part of a detailed study on their biology (Kaliyamurthy, 1982), a caligoid copepod was found parasitic on *Siganus canaliculatus* (Park). This copepod is described here as a new species.

DESCRIPTION OF THE SPECIES

Family CALIGIDAE

Genus *Lepeophtheirus* Nordmann

Lepeophtheirus krishnai sp. nov.

(Fig. A – L)

Material examined : Three females and two juveniles collected from the inner opercles of *Siganus canaliculatus* caught from the Pulicat Lake. Holotype, female, will be deposited in the Indian Museum, Calcutta.

Etymology : This species was named after Dr. N. Krishnā Pillai, Professor (Emeritus), Department of Aquatic Sciences, University of Kerala, Trivandrum, in honour of his contributions to the knowledge of copepods parasitic on Indian marine fishes.

Female : The carapace is longer than broad with the anterior part slightly narrowing (Fig. A). The posterior sinuses are narrow and shallow and the postero-median lobe is very broad. The frontal plates are of moderate size with narrow flange, and the membranous flange of carapace is relatively narrower. The genital segment is wider than long, and its posterior corners are broadly rounded and bulging backwards. The abdomen is short. The caudal ramus is more or less rectangular with three long and three short setae (Fig. L) and its inner margin at the posterior end is setose.

The basal segment of antennule is stout and triangular; the distal segment short (Fig. B). The third segment of antenna is sharply curved at the tip with a short seta (Fig. C). The claw of the maxillule is slightly curved. The first maxilla is bifid. Distal segment of the second maxilla is slender and long, with two setae, outer one long and winged; the short inner one pectinate (Fig. D). The basal segment of the maxilliped is not very stout, and the distal segment is slightly curved (Fig. E). The sternal fork has a broad base and a tapering distal part (Fig. F); rami apically narrow and diverging.

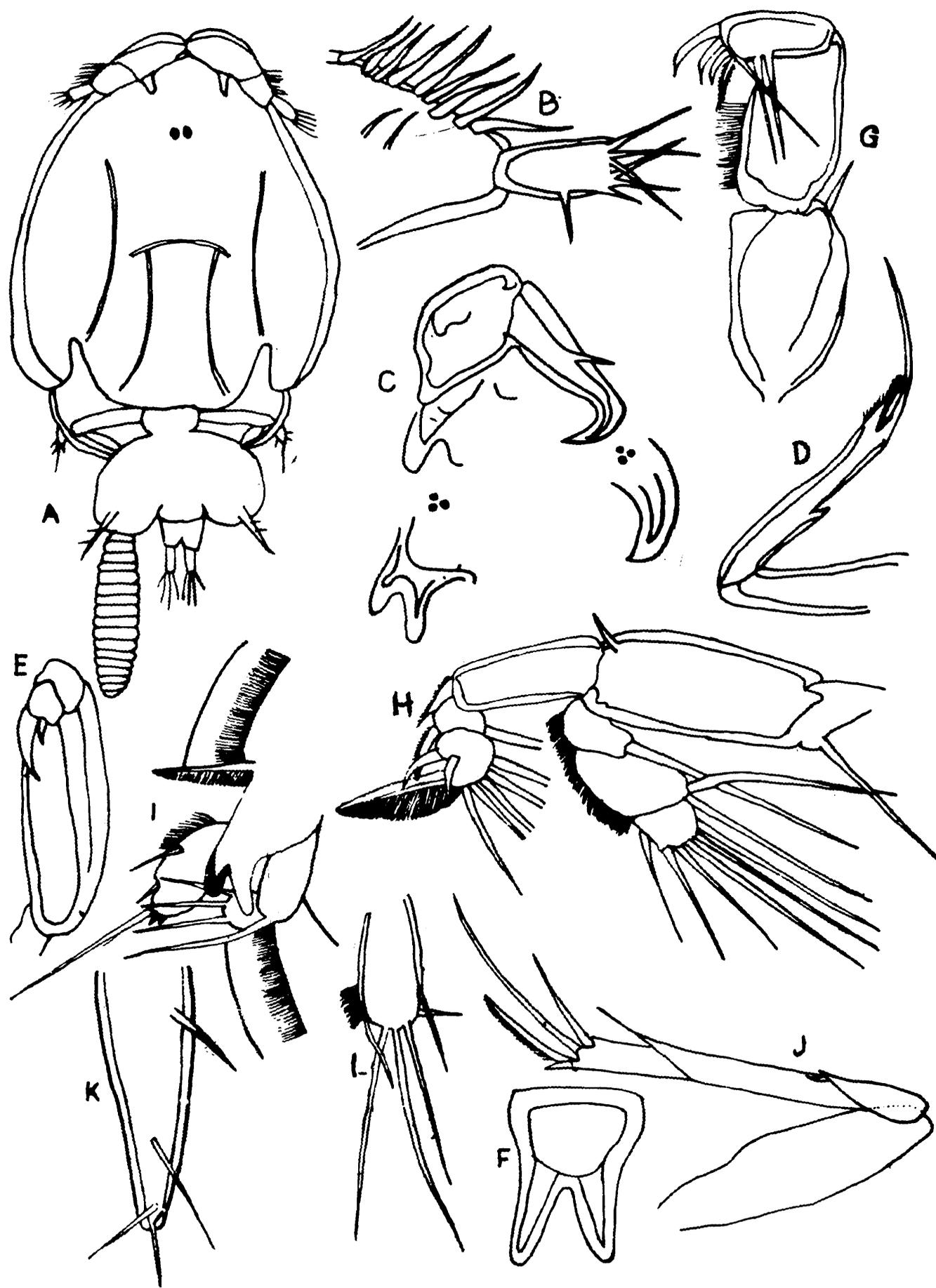


Fig. 1. *Lepeoptheirus krishnai* sp. nov. A. Carapace; B. Antennule; C. Antenna; D. Mascilla; E. Mascilliped; F. Sternal fork; G. Distal segment of first leg; H. Basipod; I. A pron of third leg; L. Caudal ramus.

The distal segment of the first leg has three strong curved claws, a short seta and three long stout setae along the inner margin (Fig. G). The basipod of the second leg is narrow and long (Fig. H). The outer border of the endopod segments has spinules. Apron of third leg is well developed, and the claw at the base of the exopod is bifid and curved inward (Fig. I). Exopod segments have very short spine like setae, the apical one is very long and slender, the fourth with three long slender claws (Fig. J). Fifth leg is a short process carrying four setae (Fig. K). The egg strings are uniseriate, short and oblong.

Total length : 1.96 mm.

Male : Unknown.

DISCUSSION

The genus *Lepeophtheirus* comprised of many species in which fifth leg is well developed like the present species. The shape of the cephalothorax of the present species is very characteristic and has a superficial resemblance to that of *L. spinifer*. *L. krishnai* sp. nov. can be distinguished from it by the shape of the genital segment and the fifth leg. The extreme development of fifth leg is an important character of the genus *Dentigryps* Wilson and hence Lewis (1964) suggested the transfer of all the species of *Lepeophtheirus* with well developed fifth leg to *Dentigryps*. But Pillai (1966) felt it natural to sink *Dentigryps* in the Synonymy of *Lepeophtheirus*. *L. krishnai* sp. nov. has a very short egg string, a feature comparable to that of *L. gonistii*.

The present species can be easily distinguished from all other species of *Lepeophtheirus* by a combination of many characters such as the shape of the cephalothorax, genital segment, postoral process, tip of the first leg and the process at the base of the exopod of the third leg.

SUMMARY

A new caligoid copepod, *Lepeophtheirus krishnai*, from the gills of *Siganus canaliculatus* of the Pulicat Lake, east coast of India is described. This species can be distinguished from all the known species by the shape of the cephalothorax, genital segment, postoral process, tip of the first leg and the process at the base of the exopod of the third leg.

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