DESCRIPTION OF A NEW SPECIES OF *LAMPROGLENA* (COPEPODA: LERNAEIDAE) FROM KERALA

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ABSTRACT

A copepod parasite, *Lamproglena krishnai* sp. nov., collected from the gills of *Channa striatus* (Bloch) at Cochin is described in detail. The new species is compared with the known species of the genus.

INTRODUCTION

The genus *Lamproglena*, including more than 20 species, all parasitic on freshwater fishes, is the most primitive group of Lernaeidae. This genus was included in the family Dichelesthidiidae by Fryer (1959) without referring to the study of Sproston et al (1950). Because of the cyclopoid nature of the developmental stages of *Lamproglena*, Sproston et al (1950) removed it from Dichelesthidiidae to Lernaeidae. Subsequently, Fryer (1961) accepted this transfer by recognizing the importance of Sproston's larval studies. Kabata (1976) also included this genus in Lernaeidae and described in detail the history and systematics.

*Lamproglena krishnai* sp. nov⁴

Figs. 1.

Material: Eight females were collected from the gills of *Channa striatus* (Bloch) from a freshwater pond at Cochin. (The holotype females will be deposited in the Indian Museum, Calcutta, India.)

Female: Body elongate (Fig. 1A), cylindrical, narrowing towards the hind end. Head comparatively small, antero-lateral parts expanded and fused with the thoracic segment, having a pair of fleshy lobe at the anterior end. First thoracic segment free, broader than long. Second, third and fourth thoracic segments are stout, forming a pear-shaped trunk. Fifth thoracic segment is free from the trunk and genital segment and is broader than long. Genital segment clearly separated from the fifth thoracic segment also longer than broad, but gradually tapering.

⁴ Named after Dr. N. Krishna Pillai, who is the pioneer in the study of parasitic copepods of Kerala Coast.
posteriorly, having a prominent lateral constriction near the centre. Abdomen clearly three-segmented. First and second segment cylindrical, distinctly separated, equal in length. Third segment gradually narrowing posteriorly and having the combined length of the first two segments. Posterior end of the third segment bifurcated to form the caudal lamina.

First Antenna: (Fig. 1B), is an elongated structure with indistinct segmentation, having five naked setae on the middle and four on the tip.

Second Antenna: (Fig. 1C), is shorter than the first antenna having two terminal naked setae.

Maxilla: (Fig. 1D), basal segment broad and stout having a slender winged claw pointed towards the tip.

Maxilliped: (Fig. 1E), two segmented, basal segment is very stout. Distal segment short, but slightly longer than broad. Terminally the segment bears four stout and strong distally curved subequal claws.

First leg: (Fig. 1F), biramous, basipod stout, with a pectinate ridge near the postero-ventral margin. Exopod distinctly three segmented, first segment with an outer spine distally and an inner naked seta in the middle. Second segment having an inner naked seta. Third segment with two subterminal stout spines and four elongated naked setae. Endopod three segmented, inner margin of the segments with toothed ridges. First and second segments bear a single seta and the third segment with four setae of subequal length on the outside.

Second leg: (Fig. 1G), biramous, exopod three-segmented: the basal segment of the exopod is comparatively very stout with an outer spine and an inner naked seta. Second and third segment subequal in length. Second segment with an inner median naked seta. Terminal segment with three naked setae and a terminal spine. Endopod three-segmented, inner margin of the endopod with toothed ridges and outer margins armed with setae. First and second segment having one each and third having three naked setae.

Third leg: (Fig. 1H), biramous, exopod three-segmented, basal segment stout, other two segments comparatively short. First segment with a spine on the outer margin and a naked seta on the inner margin. Second segment with an inner naked seta. Terminal segment with two stout claw-like spine and four naked setae. Endopod three-segmented. First and second segments with single naked seta on its outer margin anteriorly. Third segment with four naked setae antero-laterally. The inner margin of all the segments toothed.

Fourth leg: (Fig. 1I), biramous, exopod three-segmented, basal segment of the exopod is long and stout, armed with an outer spine and an inner naked seta. Second and third segments subequal in length. Second segment with a naked seta
on its inner margin. Terminal segment with two stout terminal claw-like spine and the inner margin with three naked setae. Endopod three-segmented, inner margin of all segments toothed. Outer margin of the first and second segments each with a naked seta. Terminal segment with three naked setae.

**Fifth leg:** (Fig. 1J), uniramous, two-segmented; basal segment with two naked setae. Terminal segment armed with two naked distal setae.

**Caudal lamina:** (Fig. 1K), fused with the abdomen, conical in shape diverging each other from the postero-median line of the abdomen having a spine on the base. Each lamina at the tip carries three spines of which the central spine is longer.

**Total length:** 3.5 mm.

**Discussion**

*Lamproglena krishnai* sp. nov. shows resemblance to *L. ophiocephali* Yamaguti (1939) in its general body shape. But the present new species differs clearly in various other details. In *L. ophiocephali* the genital segment is fused with the thoracic segment and the abdomen is indistinctly segmented, whereas in *L. krishnai* sp. nov. the genital segment is distinctly separated from the thoracic segment and the abdomen distinctly three-segmented. The caudal lamina of the new species completely fused with the abdomen and conical in shape; but in *L. ophiocephali* the caudal lamina is separated from the abdomen and oval in shape. In *L. ophiocephali* in all the thoracic legs both the exopod and endopod are two-segmented, whereas in *L. krishnai* in all the legs these are distinctly three-segmented. Postero-ventral margin of the basipod of the first leg alone is pectinate in the present species, whereas in *L. ophiocephali* all the basipods of the legs carry pectination. In the present case, the arrangement of setae and spines on the legs are entirely different from *L. ophiocephali*. *L. krishnai* sp. nov. differs from all the known species of the genus by its three-segmented nature of leg rami, distinctly segmented abdomen and the number of spines and setae present on the legs.

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**References**


