

## New Host Record, *Rastrelliger kanagurta*, for *Nerocila phaeopleura* Parasites (Crustacea, Isopoda, Cymothoidae)

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**Abstract:** A new host of cymothoid isopoda, *Nerocila phaeopleura*, was identified from the body (caudal and opercular regions) of a Scombridae fish, *Rastrelliger kanagurta*, is the new host record of the isopod parasite *N. phaeopleura* from Parangipettai coastal environment, Southeast coast of India. The economically important marine fish species *R. kanagurta* were examined for crustacean parasites infection. *Rastrelliger kanagurta* (Teleostei, Perciformes, Scombridae), collected from Parangipettai coast. *N. phaeopleura* parasitized 6.4% (10 of 155) of the collected *R. kanagurta*.

**Key words:** Isopod parasite • New host • *Rastrelliger kanagurta* • *Nerocila phaeopleura*

### INTRODUCTION

*Nerocila* is a large genus in Cymothoidae, including 38 species up to date. All the species of the genus divided into two groups, i. e., *Nerocila* group and *Emphyilia* group [1]. The Cymothoidae are ectoparasitic isopods of marine, freshwater, or brackish-water teleost fishes. Numerous families and species of fishes, of commercial importance, are infected. Cymothoids settle on various regions of the body including fins, the buccal cavity, the gill chambers, or sometimes living in a pouch. Upon finding a suitable host, they start their parasitic life feeding on blood and tissues [2-4]. The infestation of isopods parasites in fish [5-7]. In the present study, we reported for the first time the new host record of the fish *Rastrelliger kanagurta* infected by the isopod parasite *Nerocila phaeopleura* double parasitizing in the both body surface and buccal cavity.

### MATERIAL AND METHODS

*Rastrelliger kanagurta* (Cuvier, 1816; Teleostei, Perciformes, Scombridae), were captured by fishing line from the Parangipettai, (Lat 11°29' N; 79°46'E) Southeast coast of India on August 2009. A total of 155 specimens of freshly landed marine fishes were collected from commercial fish landings of Parangipettai, examined for ectoparasites. Generally gill nets and trawlers are operated in the near shore area for fishing. Parasitic isopods always adhere to the body of fish. They were pulled gently and

deeply embedded; they were pinched from the body tissue surrounding their attachment organs with forceps. The parasites were preserved in 70% alcohol or in 5% formalin.

### RESULTS

Fishes from the landing centres of Parangipettai were collected and examined for the ectoparasites (Fig.1and2). Identification of fishes were based on standard identification methods of [8-10].

### Taxonomical Description:

Class : Crustacea  
Order : Isopoda  
Family : Cymothoidae Leach, 1814  
Genus : *Nerocila* Leach, 1818  
Species : *Nerocila phaeopleura* (Bleeker, 1857, Morton, 1974)

**Material Examined:** *Rastrelliger kanagurta* (Cuvier, 1816; Scombridae), were parasitized by a single specimen (ovigerous female) of *N. phaeopleura* from the Parangipettai, (Lat 11°29'N; 79°46'E) Southeast coast of India on August 2009 (Fig.3).

**Infection Values:** The prevalence of *N. phaeopleura* on *R. kanagurta* was 6.4% (10 of 155 hosts parasitized) (Table.1).

Table 1: Infestation of parasites on fishes in relation to month (August 2009)

No. of fishes examined	No. of fishes infected (% prevalence)	No. of parasites collected (Mean intensity)
155	10 (6.4)	10 (1)

Distribution: India. West Bengal, Canning India (Record: 22.02.1986) and Bay of Bengal India (Record: 1995).

Host: fish, *Rastrelliger kanagurta*., Scombridae.



Fig. 1: *Nerocila phaeopleura* attach to the caudal region of *Rastrelliger kanagurta*



Fig. 2: *Nerocila phaeopleura* attached near the opercular region of *Rastrelliger kanagurta*



Fig. 3: Dorsal and Ventral view of female *N. phaeopleura*

### DISCUSSIONS

**Color:** Brown or Pale Brown Head quadrate, eyes distinct, first and second antenna composed of nine and ten articles, pleonic appendages with setae. Inner margin of endopod of uropod not serrated.

**Description of Female :** Body length 18-21 mm, width 7-8 mm, body longer than broad, symmetrical, bluish black or stell blue with uniform distribution of chromatophores; Cephalon -hemispherical with smoothly rounded anterior

margin, posterior border tirsinuate, eyes dark distinct set of postero lateral aspect of cephalon; pleon -distinct narrower than pereon.

**Description of Male:** 11-13 mm long, 4-6 width, body very small; eyes dark.

**Remarks:** Three species belonging to the genus *Nerocila* (*N. bivittata* (Risso, 1816), *Nerocila maculata* (Milne Edwards, 1840), *Nerocila orbignyi* (Guerin-Meneville, 1829) were already reported parasitizing Turkish fishes [11]. *Nerocila kisra* [12] and *N. sigani* [12] are close to the new species in morphology. The Differences Between *N. Kisra* and *N. Donghaiensis* are the former with the basal antennular articles set close together, cephalon narrowed anteriorly and the dactyli of pereopods not swelling. In this study, *N. phaeopleura* is recorded for the first time from the marine fish *R. kanagurta*. It is clear that the *Rastrelliger kanagurta* is an occasional potential host for this species but it may be just as well accidental.

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