

## Some Copepod and Isopod Parasites of Bermuda Marine Fishes

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**Abstract.**— Three species are added to the depauperate parasite fauna of Bermuda: *Caligus balistae*, *Lernanthropus talipes*, and *Alcirona insularis*. The latter, normally a rare associate, seems to thrive on groupers (Serranidae) in captivity. An offshore record for *Nerocila lanceolata* on ocean triggerfish *Canthidermis sufflamen* contrasts with its known nearshore occurrence. A new host record is noted for each of four parasites occurring in Bermuda: *Caligus balistae*, *A. insularis*, *Cymothoa oestrum*, and *N. lanceolata*.

Sterrer (1986) summarized the copepod and isopod species known from Bermuda. One of us (T.G.R.) worked at the Bermuda Aquarium and collected the following five species of crustacean parasites on fishes. Each of these reports represents either a new host record or a new locality record, or both. All specimens were preserved in 70% ethanol and deposited in the Crustacean Collection of the U.S. National Museum (USNM).

### *Caligus balistae*

The copepod *Caligus balistae* was described from triggerfish *Balistes* sp., from the "West Indies" (Steenstrup and Lutken 1861). Cressey (1991) found this copepod on planehead filefish *Mona-canthus hispidus* from the Sargasso Sea, and on scrawled filefish *Aluterus scriptus*, sobaco *Canthidermis sobaco*, rough triggerfish *Canthidermis maculata*, and dolphin *Coryphaena hippurus* from the southern USA and the northeast coast of South America. We report this copepod from a new host, the ocean triggerfish (scientific names of hosts given in Table 1). This report is consistent with what is known about this copepod (i.e., that it largely parasitizes members of the family Balistidae). The new locality is only slightly north of another recorded locality, the Sargasso Sea (Table 1).

### *Alcirona insularis*

The isopod *Alcirona insularis* has been considered a rare and rather casual associate on fishes. The high number ( $N = 17$ ) that we recovered from

a coney from Bermuda suggests more than an accidental association (Table 1). This seems to be the first record of the association of this isopod and fish in a fish culture or host confinement situation. The variety of females, males, and immatures on the host indicates that the isopod was reproducing in captivity. The stomachs of most of the isopod specimens were filled with blood.

This isopod has not been previously reported from the coney or from Bermuda. *Alcirona krebsii* has been found on groupers in Bermuda (Sterrer 1986). The pereopod 1 illustrated by Sterrer (1986) for *A. krebsii* appears to be the pereopod of *A. insularis*. This leaves some question as to which isopod he examined.

The terminal setae on the pleotelson in our specimens are longer and more variable than has been previously described. These should be evaluated with a larger number of specimens and re-figured.

### *Cymothoa oestrum*

We have records of the isopod *Cymothoa oestrum* on the blue runner in the Caribbean, but we do not believe that a report of this host has appeared in the literature. Thus, our report of this isopod on blue runner from Bermuda (Table 1) is a new host record. The frequency with which *C. oestrum* appears in this host is much lower than its frequency of occurrence in the horse-eye jack *Caranx latus* and crevalle jack *Caranx hippos*.

### *Nerocila lanceolata*

The isopod *Nerocila lanceolata* is generally limited to nearshore bottom fishes. Its occurrence on a fish, a tripletail, in a drifting Sargassum raft suggests a more pelagic or oceanic distribution (Table 1). The record is also of interest because of the small size of the host and isopod. Such early infections are seldom documented. This fish occurs throughout the range of the isopod, but it has not previously been noted as a host.

TABLE 1.—New information on copepods and isopods of marine fishes from Bermuda.

Host species	Parasite(s) found			Host total length (cm)	Locality	Collection date	USNM number
	Number	Sex	Position				
CLASS COPEPODA; ORDER CALIGIDEA							
Family Caligidae; <i>Caligus balistae</i> Steenstrup and Lutken, 1861							
Ocean triggerfish <i>Canthidermis sufflamen</i> <sup>a</sup>	1	Juvenile	Fin	4.1	Sargassum, Flatts Inlet <sup>b</sup>	3 Dec 1981	295965
Family Anthosomatidae; <i>Lernanthropus talipes</i> Wilson, 1935							
Bermuda chub <i>Kyphosus sectatrix</i>	2	Female	Gills	43.0	Bermuda Aquarium <sup>b</sup>	20 Jul 1981	295964
CLASS MALACOSTRACA; ORDER ISOPODA							
Family Corallanidae; <i>Alicirone insularis</i> Hansen, 1890							
Coney <i>Epinephelus fulvus</i> <sup>a</sup>	17	Both	Skin	23.2	Bermuda Aquarium <sup>b</sup>	16 Nov 1983	295967
Family Cymothoidae; <i>Cymothoa oestrum</i> (Linnaeus, 1793)							
Blue runner <i>Caranx crysos</i> <sup>a</sup>	1	Female	Mouth	33.7	Devonshire Bay	Not recorded	295968
Family Cymothoidae; <i>Nerocila lanceolata</i> (Say, 1818)							
Tripletail <i>Lobotes surinamensis</i> <sup>a</sup>	1	Juvenile	Fin	3.5	Sargassum, Flatts Inlet	4 Dec 1981	295965

<sup>a</sup> New host record.

<sup>b</sup> New locality record (i.e., first time parasite has been recorded in Bermuda).

### *Lernanthropus talipes*

Wilson (1935) described the copepod *Lernanthropus talipes* from a female specimen found on a Bermuda chub in the Dry Tortugas, Florida. We found two females on an individual of the same host species in Bermuda (Table 1). We have not found this parasite during extensive examinations of Bermuda chubs and other fishes from Puerto Rico.

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### References

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