

Two Lernaepodids and One Pennellid Copepod determined on Three Marine Fishes Collected in Turkey.

Türkiye’de Üç Deniz Balğında Saptanan İki Lernaepodid ve Bir Pennellid Copepod

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Abstract

In this paper, three parasitic copepods were reported on three different fish species for the first time in the seas of Turkey. The detected copepods are *Neobrachiella bispinosa* (Nordmann, 1832) on gills of *Trigla lucerna*; *Eubrachiella exigua* (Brian,1906) on gills of *Pagellus erythrinus*; *Lernaeolophus sultanus* (Nordmann,1839) on mouth base of *Diplodus vulgaris*.

Key words: Copepod, parasites, Turkish Fauna.

Introduction

Their large size and mesoparasitic life (Kabata, 1979) have raised a large attention to Pennellidae. Penetrating deeply the tissues of their hosts, they were considered as extremely harmful to them.

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The most recent account and discussion of their effects on the fish has been published by Kabata (1984).

Now, the family Lernaeopodidae involves about 250 species and undoubtedly belongs to the most successful families of Siphonostomatoida Thorell, 1859. It is cosmopolitan in the oceans of the world and in the fresh waters of the northern hemisphere. Its members live on many diverse fishes from the most primitive Elasmobranchs to the most evolved Teleosts. Their phylogeny was discussed in detail by Kabata (1979).

In this study, one Pennellidae and two Lernaeopodidae were found on three distinct fish species from the seas of Turkey.

Material and Method

The fish specimens were caught by gill net at Bodrum (The Mediterranean). The parasites collected were fixed in 70% alcohol. The identifications and morphometric characteristics were performed according particularly to Yamaguti (1963), Kabata (1979), Radujkovic and Raibaut (1987, 1989).

Results and Discussion

Pennellidae Burmeister, 1835

Lernaeolophus sultanus (Nordmann, 1839) (fig.1, 2)

Syn (after Radujkovic and Raibaut, 1987, 1989)

Pennella sultana (Nordmann, 1839)

Lernaea sieboldi Kock, 1860

Host: *Diplodus vulgaris* (Geoffroy Saint-Hilaire, 1817)

Locality: Bodrum (The Mediterranean)

Prevalence: %12

Intensity min-max: 1

Total number of parasites: 15

Lernaeolophus sultanus was reported from: *Caranx ascensionis*, locality not given, by Nordmann (1864), *Serranus cabrilla*, *Serranus scriba*, *Maena vulgaris* in the Mediterranean by Brian (1912), *Haemulon plumieri* in Florida by Wilson (1917), *Alutera schoepfii*, *Tylosurus marinus* in Woods Hole region by Wilson (1932), *Istiophorus gladius* in Ceylon by Kirtisinghe (1935), *Pneumatophorus colias* in Las Palmas (Canary Islands) by Grabda (1972), *Belone belone* and *Diplodus annularis* in Greece by Papoutsoglou (1976), *Diplodus puntazzo* in the occidental Mediterranean by Ben Hassine (1983) and in Montenegro, Adriatic by Radujkovic and Raibaut (1987, 1989). Its distribution area covers the Atlantic Ocean, the Mediterranean and the Indian Ocean.

Lernaeopodidae Olsson, 1869

Eubrachiella exigua (Brian, 1906) (fig.3)

Syn (after Radujkovic and Raibaut 1987, 1989):

Brachiella exigua Brian, 1906

Host: *Pagellus erythrinus* (L., 1758)

Locality: Bodrum (The Mediterranean).

Prevalence: % 8.57

Intensity min-max: 1

Total number of parasites: 3

Eubrachiella exigua was reported from: *Dentex vulgaris* and *Dentex* sp. in Mauritania by Brian (1924); *Pagellus erythrinus* in Italy, Gulf of Genoa and Gulf of Naples by Brian (1906), Monaco by Monod (1923), Algeria by Nunes-Ruivo (1954), Greece by Papoutsoglou (1976), Tunisia by Ben Hassine *et al.*, (1978), Languedoc, France by Herrera-Cubilla (1985), Montenegro, Adriatic by Radujkovic and Raibaut (1987, 1989).

Neobrachiella bispinosa (Nordmann, 1832) (fig.4)

Syn (after Kabata, 1979, Radujkovic and Raibaut 1987, 1989):

Brachiella bispinosa (Nordmann, 1832)

Lernaeopoda obesa Kroyer, 1837

Anchorella ovalis Kroyer, 1837

Host: *Trigla lucerna* (L., 1758).

Locality: Bodrum (The Mediterranean).

Prevalence: %100

Intensity min-max.: 1-3

Total number of parasites: 8

Neobrachiella bispinosa was reported: from *Trigla gurnardus* in Belgium by Beneden (1870), in Scotland and Ireland by T. and A. Scott (1913) and in Scotland, Ireland and Belgium by van Oorde-de Lint et Schuurmans Stekhoven (1936); from *Trigla spp* in England, Plymouth by Bassett-Smith (1896); from *Trigla cuculus* in England, Plymouth by Leigh- Sharpe (1928 and 1933); from *Trigla pini* and *Acanthias vulgaris* in Scotland, Ireland and Belgium by van Oorde-de Lint et Schuurmans Stekhoven (1936); from *Trigla corax* in Italy by Richiardi (1880); from *Trigla obscura* and *Trigla lucerna* in Languedoc, France by Herrera-Cubilla (1985); from *Trigla lucerna* in Mauritania by Brian (1924) and in Montenegro, Adriatic by Radujkovic and Raibaut (1987, 1989).

Neobrachiella bispinosa is restricted to species of the genus *Trigla* and its report from *Acanthias vulgaris* is certainly incorrect (Radujkovic and Raibaut, 1987, 1989)

Captions

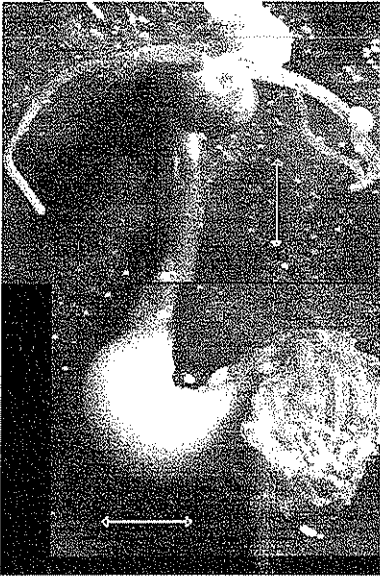


Figure 1. *Lernaelophus sultanus*
(Nordmann, 1839) Scale = 2mm

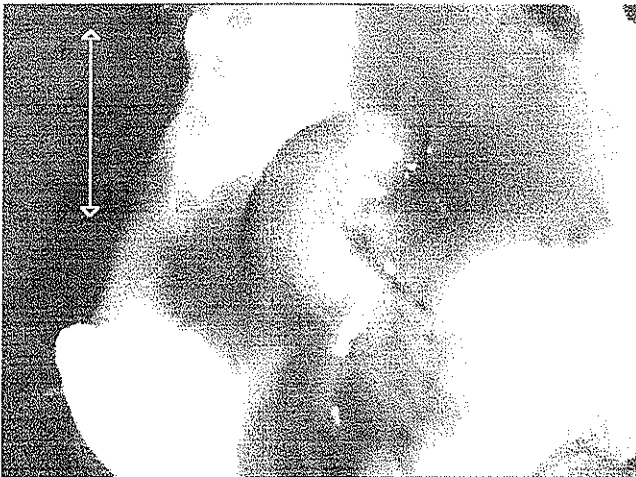


Figure 2. *Lernaelophus sultanus*
(Nordmann, 1839) Scale = 1.5mm



Figure 3. *Eubrachiella exigua*
(Brian,1906) Scale = 2mm

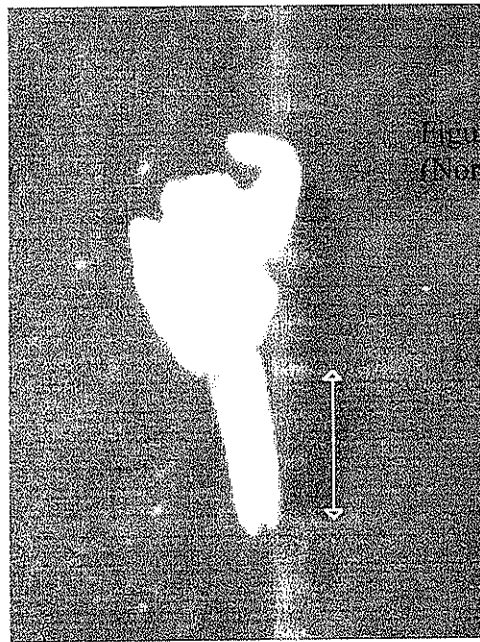


Figure 4. *Neobrachiella bispinosa*
(Nordmann,1832) Scale=2mm

Özet

Bu çalışmada Türkiye denizlerinde üç farklı balık türünden ilk kez üç parazitik copepod türü; kırlangıç balığının (*Trigla lucerna*) solungaçlarından *Neobrachiella bispinosa* (Nordmann,1832), mercan balığının (*Pagellus erythrinus*) solungaçlarından *Eubrachiella exigua* (Brian,1906), karagöz balığının (*Diplodus vulgaris*) ağız tabanından *Lernaeolophus sultanus* (Nordmann,1839) bildirilmiştir:

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