

New Host Records for *Ceratothoa oestroides* and *Anilocra physodes* (Isopoda, Cymothoidae) in Turkish Waters

Jean Paul TRILLES * Ahmet ÖKTENER ** 

- * UMR 5119 (CNRS-UM2-IFREMER), Équipe Adaptation écophysiological et ontogénese, Université de Montpellier 2, CC. 092, Place E. Bataillon, 34095 Montpellier cedex 05, FRANCE
** İstanbul Tarım İl Müdürlüğü, Kontrol Şube Müdürlüğü, Kumkapı Balık Hali Su Ürünleri İrtibat Bürosu (Büyükşehir Belediyesi Su Ürünleri Hal Müdürlüğü, No:11), Kennedy Caddesi, Kumkapı, İstanbul - TURKEY

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Summary

Ceratothoa oestroides (Risso) was collected from the gill cavity of a wild bluefish, *Pomatomus saltatrix* (Linnaeus) (Teleostei, Pomatomidae) and *Anilocra physodes* Linnaeus on the body surface of a cultured common dentex, *Dentex dentex* (Teleostei, Sparidae). This is the first report of *Ceratothoa oestroides* from the bluefish anywhere in the world and the first report of *Anilocra physodes* from the cultured common dentex in Turkey.

Keywords: *Isopod, Ceratothoa, Anilocra, Pomatomus, Dentex, Turkish coasts*

Türkiye Kıyılarında *Ceratothoa oestroides* ve *Anilocra physodes* (Isopoda, Cymothoidae) için Yeni Konak Kayıtları

Özet

Ceratothoa oestroides (Risso) (Isopoda, Cymothoidae) lüfer balığının *Pomatomus saltatrix* (Linnaeus) (Teleostei, Pomatomidae) solungaç boşluğundan, *Anilocra physodes* Linnaeus (Isopoda, Cymothoidae) türü ise kültürü yapılan sınağrit balığının *Dentex dentex* (Linnaeus) (Teleostei, Sparidae) vücut yüzeyinden toplanmıştır. *Ceratothoa oestroides*'in lüfer balığından kaydı dünyada, *Anilocra physodes*'in sınağrit balığından kaydı Türkiye'de ilk tir.

Anahtar sözcükler: *Isopod, Ceratothoa, Anilocra, Pomatomus, Dentex, Türk sahilleri*

INTRODUCTION

Cymothoids are a family of ectoparasitic isopods found on the body, fins, or inside the buccal or branchial cavities of numerous freshwater and marine fish. They are protandrous hermaphrodites. Their life cycle involves only one host (Holoxenic cycle). Numerous families and species of fishes, including many of commercial importance, are infected by cymothoids¹⁻³. Now, 15 species of Cymothoidae are known from marine fish in Turkey⁴.

Bluefish is a pelagic, migratory and cosmopolitan species which inhabits warm and temperate waters. Bluefish migrate via the Aegean Sea to northward from the Mediterranean in spring and return southward in the early autumn in Turkish waters⁵. Bluefish is the

eighth most important marine fish in Turkey with 8.399 tonnes caught in 2006⁶. The common dentex is found in inshore waters. It is a benthopelagic species, found in eastern Atlantic and Mediterranean⁷. Initial attempts have been made to introduce common dentex into aquaculture systems since 2000 in Turkey⁸.

Studies about parasites of the bluefish and common dentex from the Turkish coasts are scanty. Previously, one monogenean (*Microcotyle pomatomi*), 3 digeneans (*Lecithaster* sp., *Paramacroderoides* sp., *Opechona bacillaris*), 2 nematodes (*Hysterothylacium aduncum*, *Philometra saltatrix*) from *Pomatomus saltatrix* (Linnaeus) (Teleostei, Pomatomidae) and one digenean (*Lepidauchen stenostoma*), one nematod (*Hysterothylacium* sp.), one



İletişim (Correspondence)



+90 535 6200279



ahmetoktener@yahoo.com

isopod (*Gnathia* sp.) from *Dentex dentex* (Linnaeus) (Teleostei, Sparidae) have been recorded from the Mediterranean Sea, the Sea of Marmara in Turkey^{4,9}. This paper reports additional information on the parasitic fauna of the wild bluefish and the common dentex cultured in Turkey.

MATERIAL and METHODS

Four specimens of bluefish infested by cymothoids were caught in the Aegean Sea Coasts of Turkey (Aliğa Refinery, 38° 49' N 26° 56' E). Seven infested specimens of common dentex were bought from farming system in the Aegean Sea Coasts (Karaburun, 38° 26' N; 26° 42' E) of Turkey. They were examined for ectoparasites in October 2008. After their catch, the fish were placed on ice for approximately six hours. The parasites were removed and preserved in 70% ethanol. Prevalence (P) and the mean intensity (Im) were calculated according to Bush et al.¹⁰. All the parasite specimens are preserved in the collection of A. Öktenler (Istanbul Provincial Directorate of Agriculture). Identification of the cymothoids were performed according to Trilles^{1,11,12,13}.

RESULTS

One female (Total length = 2.0 mm) of *Ceratothoa oestroides* (Risso) (Isopoda, Cymothoidae, Ceratothoinae) was found in the gill cavity of *Pomatomus saltatrix* (P = 25% and Im = 1).

Three females (Total length from 14 to 16 mm) of *Anilocra physodes* Linnaeus (Isopoda, Cymothoidae, Anilocrinae) were found on the body surface of *Dentex dentex* (P = 28.5% and Im = 1.5).

DISCUSSION

Ceratothoa oestroides (Risso) is widely distributed in the Mediterranean and the Adriatic Sea. It has been also recorded from the northeastern Atlantic Ocean including the northwest coasts of Africa^{13,14}. This ubiquitous species is found on many different host species with the families Centracanthidae and Sparidae being the most frequently parasitized families^{13,15}. It has recently been reported from *Dicentrarchus labrax* and *Sparus auratus* on fish farms in Adriatic Sea and Greece^{16,17}. In Turkey, it has been mentioned from Sparidae, Serranidae, Mullidae, Rajidae, Scombridae, Centracanthidae, Clupeidae,

Carangidae, Zeidae in the Mediterranean, the Aegean Sea and the Sea of Marmara⁴.

Pomatomus saltatrix is parasitized by cymothoids worldwide, such as *Anilocra physodes* Lin., *Nerocila cephalotes* Schioedte and Meinert, *N. macleayi* White, *N. orbigny* (Guerin-Meneville), *Olencira praegustator* (Latrobe), *Mothocya taurica* (Czerniavsky), *Livoneca redmanni* Leach, *Aegathoa medialis* Richardson¹³. This is the first report of *Ceratothoa oestroides* from the bluefish anywhere in the world.

Anilocra physodes Linnaeus is widely distributed in the Mediterranean, the Adriatic Sea and the Atlantic Ocean¹³. This euryxenic species can be found infesting diverse fish species, including Sparidae, Gadidae, Serranidae, Atherinidae, Trachinidae, Lophiidae, Centracanthidae, Squatinidae, Torpedinidae, Triglidae, Carangidae, Clupeidae, Mullidae, Sciaenidae, Uranoscopidae, Pomatomidae, Scorpaenidae, Zeidae, Mugilidae, Rajidae^{4,13,15,18,19}. It was reported from Centracanthidae, Sparidae, Serranidae, Labridae, Mugilidae, Scombridae, Sciaenidae, Carangidae, Sphyraenidae in the Mediterranean Sea, the Sea of Marmara and the Aegean Sea^{4,20,21}. This is the first report of *Anilocra physodes* from the cultured common dentex in Turkey

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