

First record of *Thecacineteta calix* (Ciliophora: Suctorina) on harpacticoid copepod from Aegean Sea, Turkey

FURKAN DURUCAN

Işıklar Caddesi No. 16, TR-07100 Antalya, Turkey

Corresponding author: email: f_durucan@hotmail.com

Keywords Suctorians, epibiosis, environment, host specificity, diagnosis

Abstract The present study report a marine suctorian species *Thecacineteta calix* (Schroder, 1907) on harpacticoid copepod collected from Fethiye (Muğla), Aegean Sea, Turkey. This is the first record of this suctorian ciliates from Turkey. It is also first record of this species from Aegean Sea.

Pierwsze stwierdzenie *Thecacineteta calix* (Ciliophora: Suctorina) widłonoga z rzędu Harpacticoida z Morza Egejskiego, Turcja

Słowa kluczowe sysydliczki, epibioza, środowisko, wybiórczość gospodarza, diagnoza

Streszczenie W artykule zaprezentowano pierwsze stwierdzenie w Turcji i na Morzu Egejskim morskiego sysydliczka *Thecacineteta calix* (Schroder, 1907) stwierdzonego w Fethiye (Muğla), Morze Egejskie, Turcja.

Introduction

Suctorian ciliates can be found in all types of water bodies on a wide diversity of hosts and substrates. They inhabit both anorganic and organic material, plants and animals and feed microalgae and other ciliates. Several suctorian ciliates are common epibionts of benthic marine and interstitial invertebrates. Marine and fresh water mites have been identified as hosts of suctorian ciliates which may be commensals, ecto – or endoparasites. They are common epibionts on marine and freshwater invertebrates such as copepods, cladocerans, nematodes, kinorhynchans, halacarid and hydrachnid mites (Chatterjee, Nanajkar, Dovgal, Sergeeva, Bhave, 2019; Durucan, Boyacı, 2016; Durucan, Artüz, Dovgal, 2019). In Turkey, the first taxonomic study on marine suctorians was done by Durucan and Boyacı (2019) who reported *Praethecacineteta halacari* (Schulz, 1933) on *Copidognathus venustus* Bartsch, 1977 from Levantine Sea (Antalya). After that, Durucan et al. (2019) reported *Paracineta irregularis* Dons, 1928 on *Rhombognathus* sp. from Sea of Marmara.

In the present study, specimens of *Thecacineta calix* were observed on a marine harpacticoid copepod as epibionts for the first time in Turkey. This record also new for Aegean Sea.

Material and Methods

The present study is based on material collected by the author whilst studying halacarids from Fethiye, Muğla (September, 2019) (36.602517°N, 29.030953°E) (Figure 1). Sediment samples were collected by using SCUBA at locality. After that sediment samples were sieved in 100 µm in the laboratory under a binocular microscope (Nikon SMZ 10). Drawings were made using a camera lucida microscope (Nikon Eclipse E400). The light microscopy photographs were taken with camera phone (Honor Play 8A). The ciliated harpacticoid copepod specimen mounted in Hoyer's medium and kept in the author's personal collection in Antalya.

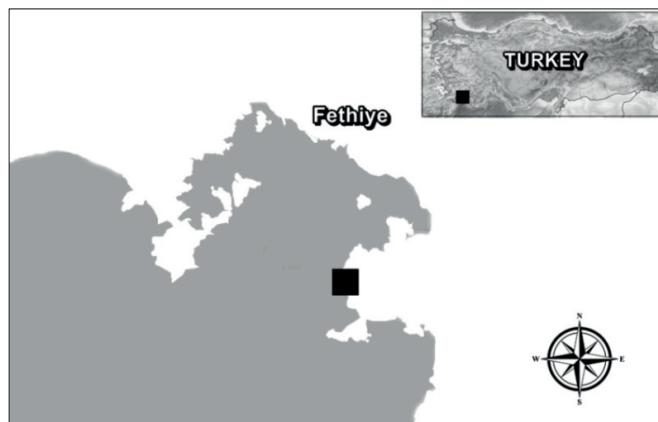


Figure 1. Map of the study area (black square) showing the sampling station (Fethiye, Muğla)

Results and Discussion

Systematics

Class Suctorea Claparede & Lachmann, 1859
 Subclass Vermigenia Jankowski, 1978
 Order Spelaeophryida Jankowski, 1978
 Family Thecacinetidae Matthes, 1956
 Genus *Thecacineta* Collin, 1909
Thecacineta calix (Schroder, 1907) (Figure 2)

Material examined

Five suctorian ciliates identified as *Thecacineta calix* have been observed on the cuticle of the harpacticoid copepod collected from medium coarse sand, at a depth of 10 m, in Fethiye, Muğla (September, 2019) (36.602517°N, 29.030953°E) (Figure 1). Coll. F. Durucan.

Diagnosis

Marine loricate suctorian. Whole lorica cuticle with covered by annular ridges (13–16). Length of lorica 100–110 μm ; width of lorica 50–60 μm . Macronucleus large, oviform, located at the bottom of the cell body (Dovgal, Chatterjee, Ingole, 2008) (Figure 2).



Figure 2. Posterior part of harpacticoid copepod with *Thecacineta calix* marked with an asterisk

Distribution and host specificity

In this study, only a ciliated harpacticoid copepod has been found from the sampling area while studying on halacarid mites along Fethiye coast. *Thecacineta calix* (Schroder, 1907) was described by Schroder (1907) from a marine nematodes from Kerguelen Islands, Antarctica. The species has distributed worldwide (Chatterjee et al., 2019). However, the species was recorded only from the Adriatic Sea (Rovinj and Trieste) in the Mediterranean basin (Chatterjee et al., 2019).

Including this study, total number of known marine suctorian ciliate is reach 2 to 3 in Turkey after reporting *Paracineta irregularis* Dons, 1928 and *Praethecacineta halacari* (Schulz, 1933) (Durucan, Boyacı, 2019; Durucan et. al., 2019).

Acknowledgements

I would like to thank due to Isparta University of Applied Sciences, Eğirdir Fisheries Faculty, Biology, Ecology and Limnology laboratory (Isparta, Turkey) for providing laboratory facilities. I am also very thankful to anonymous reviewers for their constructive comments on the manuscript.

References

- Chatterjee, T., Nanajkar, M., Dovgal, I., Sergeeva, N., Bhave, S. (2019). New records of epibiont *Thecacineteta calix* (Ciliophora: Suctorea) from the Caspian Sea and Angriya Bank, Arabian Sea. *Cahiers de Biologie Marine*, 60, 445–451.
- Dovgal, I.V., Chatterjee, T., Ingole, B. (2008). An overview of Suctorian ciliates (Ciliophora, Suctorea) as epibionts of halacarid mites (Acari: Halacaridae). *Zootaxa*, 1810, 60–68.
- Durucan, F., Boyacı, Y.Ö. (2016). First Record of the Ciliate *Praethecacineteta halacari* (Ciliophora: Suctorea) Epibiont on *Copidognathus* Halacarid Mite from Portugal. *Süleyman Demirel Üniversitesi Eğirdir Su Ürünleri Fakültesi Dergisi*, 12 (2), 97–100.
- Durucan, F., Artüz, M.L., Dovgal, I.V. (2019). The first record of *Paracineta irregularis* (Ciliophora, Suctorea) as epibiont on *Rhombognathus* halacarid mite (Acari, Halacaridae) from the Sea of Marmara, Turkey. *Protistology*, 13 (2), 67–70.
- Durucan, F., Boyacı, Y.Ö. (2019). First record of *Praethecacineteta halacari* (Suctorea: Ciliophora) from Antalya, Turkey. *Acta Aquatica Turcica*, 15 (2), 135–138. DOI: 10.22392/actaquatr.577448.

Cite as: Durucan, F. (2019). First record of *Thecacineteta calix* (Ciliophora: Suctoria) on harpacticoid copepod from Aegean Sea, Turkey. *Acta Biologica*, 26, 31–34. DOI: 10.18276/ab.2019.26-03.