

A new record of the genus *Trygaeus* Dohrn, 1881 and species *Trygaeus communis* Dohrn, 1881 (Arthropoda, Pycnogonida) from Turkey (Eastern Mediterranean)

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Sampling studies in the Turkish Aegean Sea revealed the occurrence of the sea spider species, Trygaeus communis Dohrn, 1881. The genus Trygaeus and species Trygaeus communis Dohrn, 1881 are recorded for the first time from Turkey. The genus and species are also recorded for the second time from the Eastern Mediterranean Sea. Distribution map of the species in the Eastern Mediterranean Sea is provided, together with photographs and line drawing of the species. This record further extends the known distribution of the species to Turkey in the Eastern Mediterranean.

Key words: Pycnogonida, *Trygaeus communis*, Turkey, Eastern Mediterranean, Mediterranean Sea

INTRODUCTION

Trygaeus communis Dohrn, 1881 is endemic to the Mediterranean Sea and the only species in the genus *Trygaeus*. *T. communis* has occasionally been found mainly in western and central regions of the Mediterranean Sea (ARNAUD, 1987; CHIMENZ & LATTANZI, 2003). In the Eastern Mediterranean Sea, it was reported only from Crete Island (Greece) by ARNAUD (1987). To date, there is no record of the genus *Trygaeus* from Turkey. An examination of sea spiders collected in Mordoğan (İzmir Bay, Turkish Aegean Sea) revealed the presence of a species belonging to the genus *Trygaeus* Dohrn, 1881, which is identified in this paper as *T. communis*.

The presence of the genus and species are reported for the first time from Turkey and the

second time from the Eastern Mediterranean Sea.

MATERIAL AND METHODS

By snorkelling, one specimen of the species was collected from *Cystoseira mediterranea* Sauvageau, 1912 facies in the upper infralittoral zone (0.5 m depth) of Mordoğan, İzmir Bay (Aegean Sea, Turkey) (Fig. 1). The specimen was fixed in 5% formaldehyde, later rinsed with fresh water and then preserved in 70% ethanol. The specimen was examined under a stereomicroscope. Drawing was made with the aid of a drawing tube mounted on an Olympus CX31 compound microscope. The following papers were used for the species identification: STOCK (1968), LEHMANN *et al.* (2014) and MUNILLA &



Fig. 1. Earlier established occurrence of *Trygaeus communis* Dohrn, 1881 in the Eastern Mediterranean Sea (filled rectangle) and the sampling area (filled triangle) reported in this study

SOLER-MEMBRIVES (2014). The specimen was deposited in the ESFM (Museum of the Faculty of Fisheries, Ege University, İzmir).

RESULTS

Systematics

Order PANTOPODA Gerstäcker, 1863

Suborder EUPANTOPODIDA Fry, 1978

Superfamily ASCORHYNCHOIDEA Pocock, 1904

Family AMMOTHEIDAE Dohrn, 1881

Genus *TRYGAEUS* Dohrn, 1881

Trygaeus communis Dohrn, 1881 (Figs. 2–3)

DOHRN, 1881; BOUVIER, 1923; STOCK, 1966:1968; KRAPP-SCHICKEL & KRAPP, 1975; MUNILLA & DE HARO, 1984; LEHMAN *et al.* 2014.

Material examined: 1 ♂ (EFSM-PYC/2014-1), Mordoğan (İzmir Bay, Turkish

Aegean Sea), 38°31'07"N, 26°37'44"E, *Cystoseira mediterranea* Sauvageau, 1912, 0.5 m, 10.08.2014.

Trunk length (frontal margin of cephalic segment to tip of 4th lateral process), 1.34 mm; trunk width (across 1st lateral processes), 0.76 mm.

Remarks: According to DOHRN (1881), BOUVIER (1923) and STOCK (1966) the palps vary in the number of articles from 4 to 7 (LEHMAN *et al.*, 2014). In this study, the palp has 5 articles (Fig. 3).

Worldwide Distribution: Endemic (Mediterranean Sea) (SOLER-MEMBRIVES & MUNILLA, 2015).

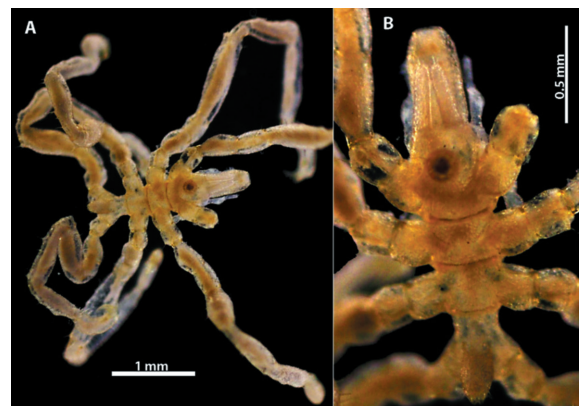


Fig. 2. *Trygaeus communis* Dohrn, 1881, ♂ from Mordoğan, İzmir Bay (Aegean Sea, Turkey): A. Dorsal view; B. Trunk, dorsal view

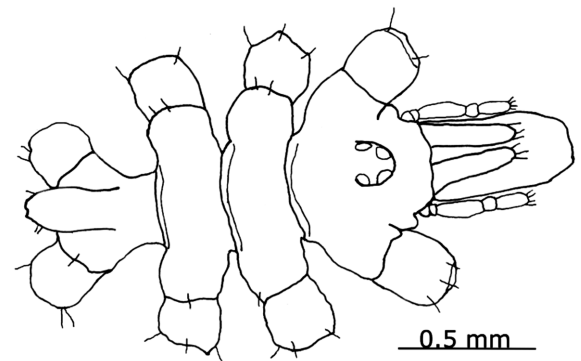


Fig. 3. *Trygaeus communis* Dohrn, 1881, ♂ from Mordoğan, İzmir Bay (Aegean Sea, Turkey). Trunk, dorsal view

DISCUSSION

Most previous records of *Trygaeus communis* Dohrn, 1881 from the Mediterranean Sea are from the western and central regions: Spanish coast (STOCK, 1966; MUNILLA, 1981:1984:1993:1997; MUNILLA & DE HARO, 1984; MUNILLA & NIETO, 1999). French coast (BOUVIER, 1923; BOURDILLON, 1954; ARNAUD, 1987). Italian coast (DOHRN, 1881; FARAGGIANA, 1940; SOYER, 1966; KRAPP, 1973; CHIMENZ *et al.*, 1979; ARNAUD, 1987; LEHMANN *et al.*, 2014). Croatian coast (KRAPP-SCHICKEL & KRAPP, 1975; ARNAUD, 1987; SCHULLER, 1989; LEHMANN *et al.*, 2014). Tunisian coast (ARNAUD, 1987).

In the Eastern Mediterranean Sea, this species is reported only from Crete Island (Greece) by ARNAUD (1987) (Fig. 1). The new record of *T. communis* reported in this study further extends the known distribution of this species to the Turkish Aegean Sea in the Eastern Mediterranean Sea. With this species, the total number of species is raised to 29 in the Turkish seas, as follows:

Ammothella longipes (Hodge, 1864); *A. uniunguiculata* (Dohrn, 1881); *A. longioculata* (Faraggiana, 1940); *A. biunguiculata* (Dohrn,

1881); *A. appendiculata* (Dohrn, 1881). *Achelia langi* (Dohrn, 1881); *A. vulgaris* (Costa, 1861); *A. echinata* Hodge, 1864. *Tanystylum orbiculare* Wilson, 1878; *T. conirostre* (Dohrn, 1881). *Trygaeus communis* Dohrn, 1881. *Ascorhynchus castelli* (Dohrn, 1881). *Anoplodactylus petiolatus* (Kroyer, 1844); *A. pygmaeus* (Hodge, 1864); *A. virescens* (Hodge, 1864); *A. digitatus* (Böhm, 1879); *A. californicus* Hall, 1912; *A. stocki* Bacescu, 1958; *A. angulatus* (Dohrn, 1881); *A. nanus* Krapp, Kocak & Katagan, 2008. *Cilipallene emaciata* (Dohrn, 1881); *C. phantoma* (Dohrn, 1881); *C. spectrum* (Dohrn, 1881); *C. brevirostris* (Johnston, 1836); *C. tiberi* (Dohrn, 1881). *Pycnogonum nodulosum* Dohrn, 1881. *Endeis charybdaea* (Dohrn, 1881); *E. spinosa* (Montagu, 1808). *Nymphon gracile* Leach, 1814.

These 29 different species of pycnogonids, out of a total number of 1330 species worldwide (MUNILLA & SOLER-MEMBRIVES, 2014), represent 2.1% of all known pycnogonid species. To date, a total number of 56 pycnogonid species are found in the Mediterranean Sea (KOCAK, 2015). Thus, the reported 29 species in the Turkish seas represent 51.7% of the actual Mediterranean Sea species.

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Received: 8 June 2018

Accepted: 5 April 2019

Novi nalaz roda *Trygaeus* Dohrn, 1881 i vrste *Trygaeus communis* Dohrn, 1881 (Arthropoda, Pycnogonida) u Turskoj (istočno Sredozemlje)

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SAŽETAK

Tijekom uzorkovanja u turskom dijelu Egejskog mora pronađenisu primjerci vrste *Trygaeus communis* Dohrn, 1881. U Turskoj su prvi put zabilježeni rod *Trygaeus* i vrsta *Trygaeus communis* Dohrn, 1881. godine. Također, rodovi i vrste zabilježeni su po drugi put u istočnom Sredozemlju. U ovom radu prikazana je karta rasprostranjenosti vrste u istočnom Sredozemnom moru, zajedno s fotografijama i crtežima.

Ovaj zapis dodatno proširuje poznatu zastupljenost ove vrste u Turskoj u istočnom Sredozemlju.

Ključne riječi: Pycnogonida, *Trygaeus communis*, Turska, istočno Sredozemlje, Sredozemno more

