First record of *Atelopsalis pacifica* (Acari: Halacaridae) from Turkey

Furkan Durucan¹*, Yunus Ömer Boyacı²

¹Işıklar Caddesi, Antalya, Turkey

²Faculty of Fisheries, University of Süleyman Demirel, Isparta, Turkey

**Abstract**

The genus *Atelopsalis* is reported for the first time from Turkey. The material examined in the present study was collected at Kaş (36.157583° N, 29.630333° E) from 30 m depth on the West Coast of Antalya in Turkey. General information on the morphology of a protonymph of male *Atelopsalis pacifica* are described in this paper, with original illustrations.

**Keywords:**

*Atelopsalis*, Acari, Halacaridae, Mediterranean Sea, Antalya

**Article history:**

Received 29 July 2017, Accepted 26 September 2017, Available online 30 October 2017

**Introduction**

Halacarid mites are relatively small benthic organisms, the adult body length is less than 1 mm, and live in a wide variety of substrates. They are abundant in algal communities, colonies of hydrozoans, bryozoans, barnacles, mussels, and on and in sediments. They generally live submerged habitats, but a few species are adapted to survive in the splash zone. They present at all latitudes, from polar to tropical regions. Up to now, more than 1000 species have been recorded from all over the world in this family (Bartsch, 2006).

*Atelopsalis* Trouessart, 1896 is widely distributed and represented with 8 species from all oceans. Small-sized, idiosoma 171-248 μm long, with well-developed idiosomal plates (Pepato et al., 2004; Bartsch, 2006). Little is known about the halacarid species in Turkey.

*Corresponding Author: Furkan Durucan, e-mail: f_durucan@hotmail.com*
During first author’s PhD thesis project on halacarids along the Western Mediterranean Sea 
Coast of Turkey, specimens belonging to the genus of *Atelopsalis* were collected. The genus 
*Atelopsalis* is reported for the first time in this study from Turkey.

**Material and Methods**

Three males and a single protonymph of *Atelopsalis pacifica* Bartsch, 1985 were found from Kaş 
(36.157583° N, 29.630333° E) Antalya, Turkey on soft type of sand bottom at 30 m depth on 
October 2015. The sediment samples were collected using SCUBA diving and mites were extracted 
by washing sand in a bowl of water and the suspensions decanted into a 100 µm sieve. The 
halacarids were sorted under a stereo microscope. The halacarids were cleared in lactic acid and 
mounted in glycerin jelly. Figures were drawn with aid of a camera lucida (Nikon SMZ 10). The 
specimens are kept in first author’s personal collection (FD-HAL/20-22).

**Result**

**Male:** Dorsal and ventral plates are large, ornamented and foveate. The idiosomal measurements 
of specimens 200 µm long, 125 µm wide. AD 75 µm long, 63 µm wide posteriorly quadrate, bears 
3 areolae (1 anterior and 2 posterior). Posterior 2 areolae long, 1-2 pore wide. OC narrow, longer 
than wide (65/15 µm), tapering posteriorly, each with 2 large corneae and light-brown eye spots. 
PD 113 µm long, 98 µm wide, having 2 longitudinal costae 1 rosette pore wide. All ventral plates 
separate. AE bears 2 pairs of areolae, 75 µm long, 110 µm wide, and there is a pair of epimeral 
vesicles on each plate. Each PE with 1 dorsal and 3 ventral setae. GA 100 µm long, 75 µm wide. 
GA with 5 pairs of pgs; 3 pair of sgs. GO 28 µm long, 23 µm wide. Spermatopositor large, 
extending well beyond the anterior margin of GO and anterior pgs (Figure 1 A-C). Gnathosoma 
short, with rosette pores ventrolaterally, almost as long as wide (37/35 µm). Palps 3 segmented. 
Basal pair of maxillary setae long. Total palp length is 16 µm (Figure 1 D, E). Leg I much wider 
than following legs. The surface of telofemur I is ornamented with a spiniform lamella. Chaetotaxy 
of leg I, 1, 2, 5, 4, 8, 6. Tibia I bears two short mid-segmental spines near its middle length. 
Telofemur I bears an anterior medial spine-like projection. Tarsus I with 3 dorsal and 3 ventral 
setae (Figure 1 F).

**Protonymph:** Idiosoma 155 µm long, 110 µm wide. AD 65 µm long, 55 µm wide. OC have 
2 cornea, PD 102 µm long, 63 µm wide and 1 rosette pore wide. GA 50 µm long, 54 µm wide 
long, anteriorly truncate.

**Discussion**

The species of *Atelopsalis pacifica* was first time found at 15 m depth, in the shallow subtidal zone 
of Philippines (Mactan Island) by Bartsch (1985). After that, the species recorded from India (Bay 
of Bengal) by Sarma & (Chatterjee, 1990) and Western Australia (Rottnest Island and Esperance) 
by Bartsch (2007). The present study constitutes the fourth record of this species from the world 
seas and stand as the first report of the genus from the Turkish coastal waters.

*Atelopsalis pacifica* resembles *A. atlantica* Pepato & Tiago, 2004 in characters: similar 
ornamentation on AD, PD and AE, a spine like projection on telofemur-I. However, *A. atlantica* 
bears an areola on OC which is not on *A. pacifica*, and has costae on PD almost twice broader than 
that found on *A. pacifica*. The species were identified following the description of (Bartsch, 1985),
Sarma & (Chatterjee, 1990 and (Bartsch, 2007). The general morphology of our specimens agree with the studies.

Figure 1. *Atelopsalis pacifica* (Bartsch, 1985). A-Idiosoma, dorsal, male; B-PD plate, detailed, male; C-Idiosoma, ventral, male; D-Gnathosoma, dorsal, male; E-Gnathosoma, ventral, male; F-Leg I, lateral (arrow showing sp fineform lamella on telofemura I), male; G-Idiosoma, dorsal, protonymph; H-Idiosoma, ventral, protonymph. Scale bars: 50 μm. (AD, anterior dorsal plate; OC, ocular plate(s); PD, posterior dorsal plate; AE, anterior epimeral plate; PE, posterior epimeral plate; GA, genitoanal plate; pgs, perigenital setae; sgs, subgenital setae)
Acknowledgements

This study was financially supported by the Süleyman Demirel University, SDÜ-BAP 3973-D2-14 project. Number: 3973-D2-14. The first author’s field work and some of the illustrations were made using the facilities of the SDÜ-ESUF. We are grateful to Dr. Ilse Bartsch (Forschungsinstitut Senckenberg) for her useful criticisms on the manuscript.

References