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First Record of *Amerobelba decedens* Berlese 1908 (Acari: Oribatida: Amerobelbidae) from Turkey

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Özet. Amerobelbidae Grandjean 1954 familyasına ait olan *Amerobelba decedens* Berlese 1908 Türkiye'den ilk kez kaydedilmiş ve bu türe ait karakteristik özellikler, şekil ve Tarama Elektron Mikroskobu (SEM) fotoğrafları ile birlikte Sakarya ilinden toplanan örnekler üzerinden verilmiştir. Daha önceki verilerle karşılaştırıldığında, örneklerimiz notogaster kıllarındaki heterotrichy ve vücut büyüklüğü bakımından farklılık göstermektedir.

Anahtar Kelimeler. Acari, oribatida, Amerobelbidae, *Amerobelba*, yeni kayıt.

Abstract. *Amerobelba decedens* Berlese 1908, belonging to family Amerobelbidae Grandjean 1954, recorded for the first time from Turkey and it's characteristic features, figures and Scanning Electron Microsopy (SEM) photographs have ben given on the basis of specimens collected from Sakarya province. Our specimens differ from previously described ones by presence of notogastral heterotrichy and smalled body dimensiones.

Keywords. Acari, Oribatida, Amerobelbidae, *Amerobelba*, new record.

1. Introduction

Oribatid mites are described as hemiedaphic in terrestrial ecosystems, in other words they are one of the organisms living in organic matter and raw humus and providing partial decomposition of these organic matters [1]. They also play an important role in nutrient cycle, soil formation and dispersion of fungal spores.

Although oribatid mites are one of the richest group of Acari with approximatetly more than 10.000 described species, studies on oribatid mites are restricted with about 150 species in Turkey [2-8].

Family Amerobelbidae has 6 genera; *Amerobelba* Berlese 1908, *Berndamerus* Mahunka 1977, *Hellenamerus* Mahunka 1974, *Mongaillardia* Grandjean 1961, *Rastellobata* Grandjean 1961 and *Roynortonia* Ermilov, 2011 with totally 12 species

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[7, 9]. This family differs from the related families by absence of costula or lamellar line, complete dorsosejugal scissure and rounded rostrum.

The genus *Amerobelba* can be distinguished from the related genera by absence of prodorsal costula, straight anterior margin of notogaster, setiform and ciliated sensillus. There is only one species, *Amerobelba decedens*, belonging to this genus.

2. Material and Methods

Mites were collected in soil and litter samples from Sakarya province and extracted using a Berlese funnel apparatus. They were fixed and stored in 70% ethanol. Mites were sorted from the samples under a stereomicroscope and mounted on slides in modified Hoyer's medium or 35% lactic acid. Drawings were made with the aid of a camera lucida attached to a compound microscope. All measurements are given in micrometers (μm). Examined materials are deposited in the Acarological Collection of author, Sakarya University, Turkey.

3. Results

***Amerobelba decedens* Berlese, 1908.**

Material examined: Sakarya: Adapazarı, 1605 m, 18.X.2009, 5 ♀♀, 1 ♂; Sakarya: Serdivan, 1515 m, 14.II.2011, 3 ♀♀.

Measurements and color: Body 654 (650-745) in length and 385 (363-400) in width ($n = 9$). Color reddish brown.

Prodorsum (Figures 1A and 2): Rostrum conical, rostral setae (*ro*) arched and approximaterly 41 in length and the distance between each other 34. Average length of lamellar setae (*le*) 20 and the distance to each other 60.

Lamellar setae nearer to rostral setae than interlamellar setae. Interlamellar setae (*in*) smooth and fine, average length 18 and distance between *in-in* 53. Prodorsum not bearing costula, the smallest prodorsal setae is the exobothridial (*ex*) one. Bothridia well developed and dorsally closed. Sensillus (*ss*) thin, apically with 5-6 short cilia, and 120 in length. Pedotecta I and II well developed. Connection between prodorsum and notogaster deepened and covered with secretion.

Notogaster (Figures, 1A and 3): Anterior margin of notogaster straight. Surface of notogaster without ornamentation. 10 pairs of smooth notogastral setae present.

Length of setae changing in between 16-30. Setae c_2 is the shortest and setae h_1 is the longest of notogastral setae.

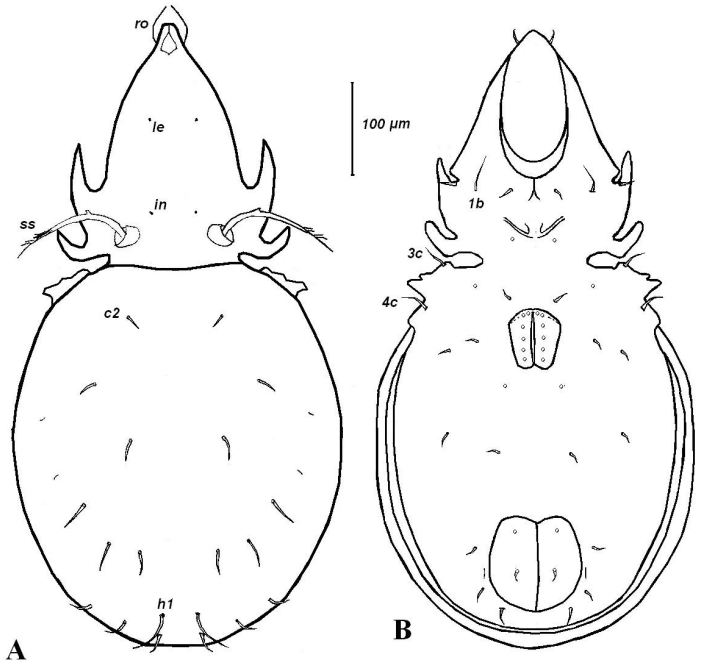

FIGURE 1. *Amerobelba decedens* A dorsal view of adult, B ventral view of adult.

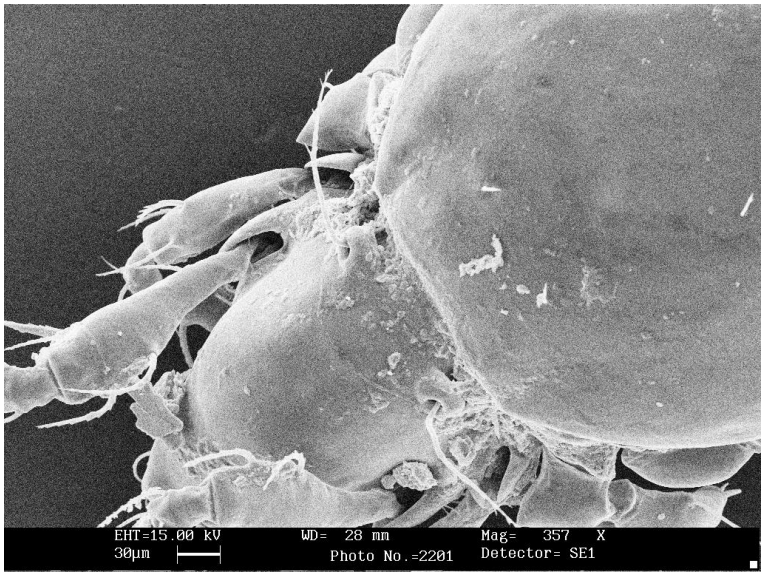

FIGURE 2. *Amerobelba decedens:*Prodorsum (SEM photograph).

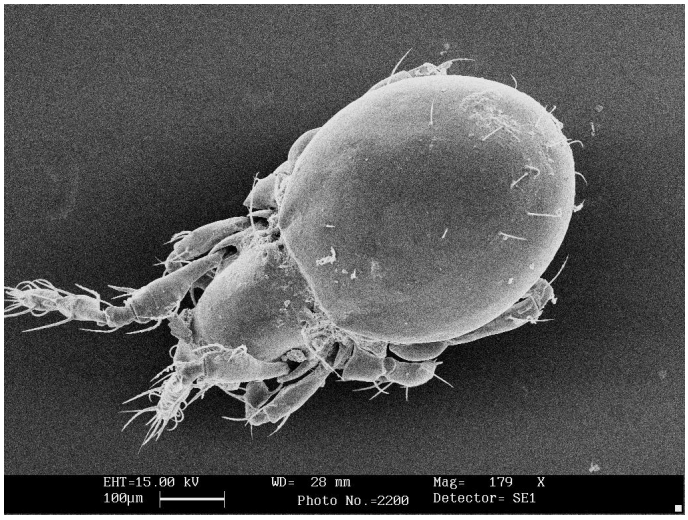

FIGURE 3. *Amerobelba decedens:*Dorsal view (SEM photograph).

Ventral region (Figures 1B, 4-7): Epimeral regions fused and apodems are indeterminate. Epimeral setal formula 3:1:3:3 and all epimeral setae short and smooth.

Genital plate 63 in length and 98 in width. 6 pairs of genital, 3 pairs of aggenital, 2 pairs of anal and 3 pairs of adanal setae present. Fissure *iad* in paraanal and ad_3 in adanal position.

Legs: All legs monodactylous. Setal formula of legs: Leg I: 1-5-3(1)-4(2)-20(2); Leg II: 1-5-3(1)-4(1)-17(2); Leg III: 2-3-2(1)-4(1)-15; Leg IV: 1-2-2-4(1)-12.

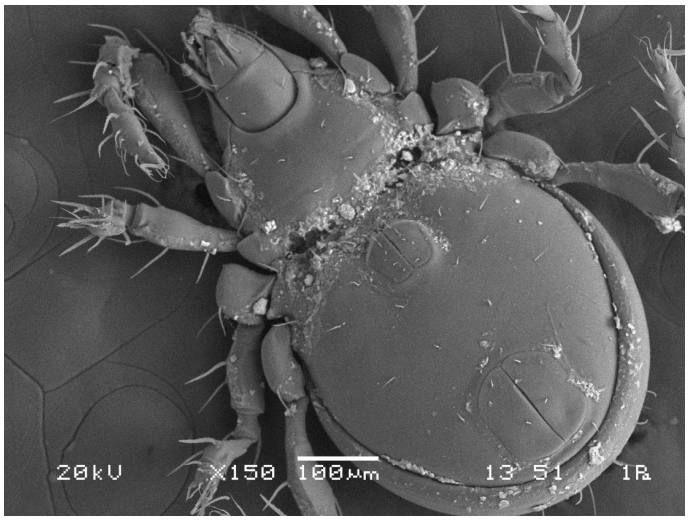

FIGURE 4. *Amerobelba decedens:*Ventral view (SEM photograph).

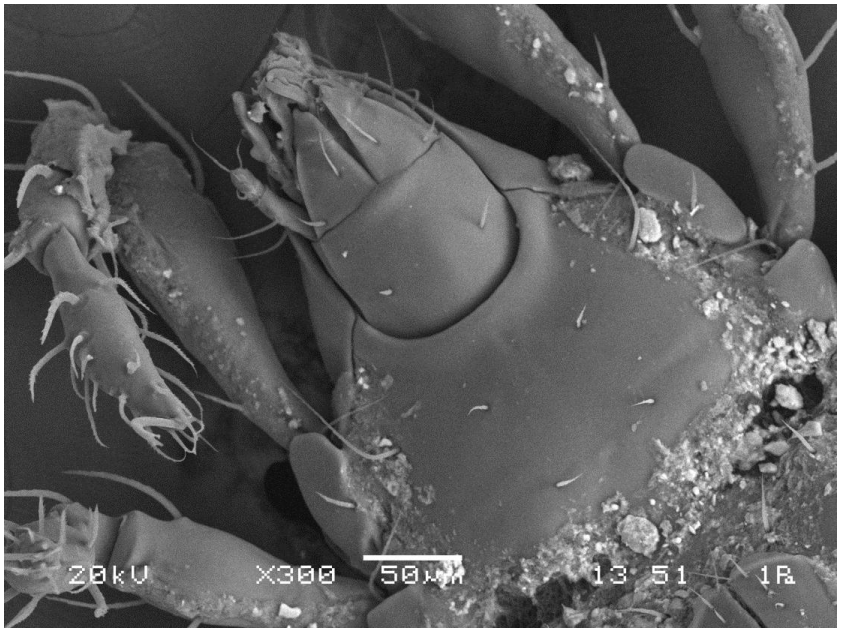

FIGURE 5. *Amerobelba decedens:* Infracapitulum and partly epimeral region (SEM photograph).

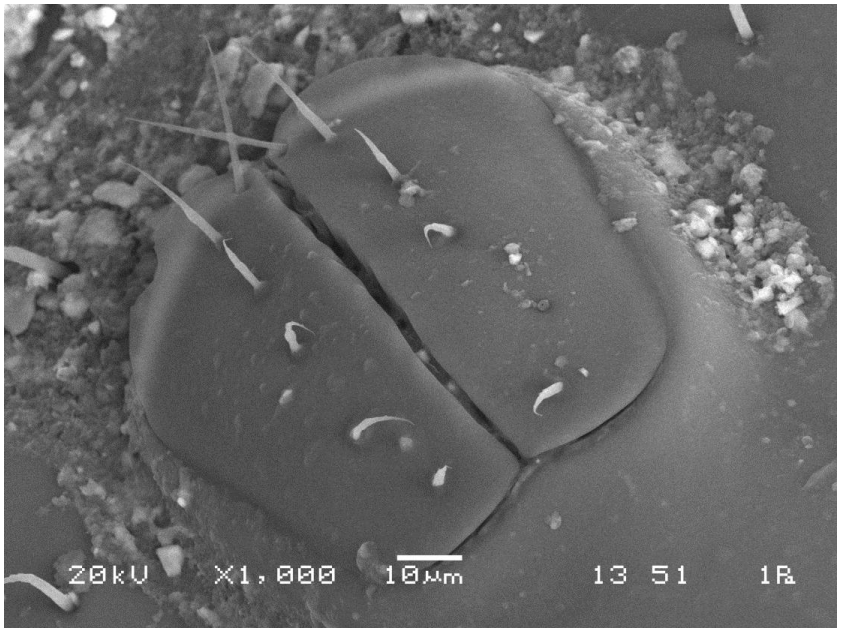

FIGURE 6. *Amerobelba decedens:* Genital plate (SEM photograph).

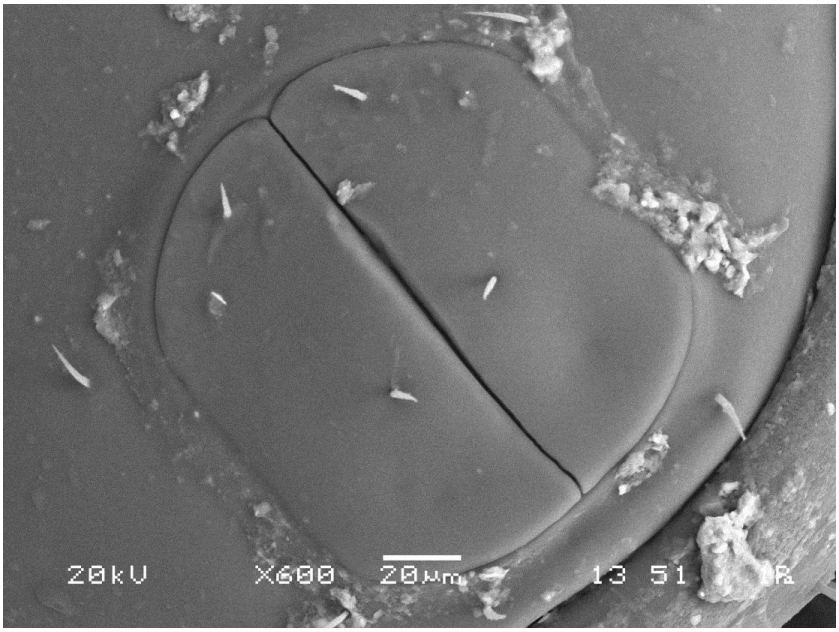

FIGURE 7. *Amerobelba decedens:* Anal plate (SEM photograph).

4. Discussion

This is the first record of Family Amerobelbidae from Turkey. Genus Amerobelba can be easily distinguished from related taxa by absence of prodorsal costula, straight anterior margin of notogaster and sensillus with short cillia.

Body size of this species previously given as 730×480 by Weigmann and Schwalbe [10]; 840-850×450-470 by Perez-Inigo, [11]; 725-775×400-425 by Kahwash *et al.* [12]; 800 by Kunts [13] and 725-780 by Miko [14]. In our specimens body dimensions 654 (600-745)×384 (363-400).

Our specimens differ from previously described ones by presence of notogastral heterotrichy and smaller body dimensions. *1b, 3c* and *4c* were longer than the other epimeral setae like in the description of specimens by Weigmann and Schwalbe [10] but the logsets one is *1b* in our specimens.

Setal formula of legs given as Leg I: 1-5-3(1)-4(2)-20(2); Leg II: 1-5-3(1)-4(1)-17(2); Leg III: 2-3-2(1)-4(1)-15; Leg IV: 1-2-2-4(1)-12 by Weigmann and Schwalbe (1994) [10] and given as Leg I: 1-5-3-4-20(1); Leg II: 1-5-3-4-17(1); Leg III: 2-3-1-4-15(1); Leg IV: 1-3-2-4-12(1) by Perez-Inigo [11], Perez-Inigo [15]. Setal formulas of legs in our specimens are in accordance with Weigmann and Schwalbe [10].

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