

## FIRST RECORD OF GENUS *LASIOBELBA* AOKI, 1959 (ACARI: ORIBATIDA) FROM TURKEY

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ABSTRACT: In this study the genus *Lasiobelba* is firstly recorded from Turkey with the species *Lasiobelba* (*L.*) *kuehnelti* (Csiszár, 1961). Redescription and SEM images have been given on the basis of specimens collected from Sakarya province.

KEY WORDS: Acari, Oribatida, *Lasiobelba*, new record.

The subfamily Oppiinae Sellnick, 1937 has 23 genera and 161 species (Subías, 2015) all over the world. To date, only one genus and one species *Oppia nitens* Koch, 1836 have been assigned to the subfamily Oppiinae from Turkey (Özkan et al., 1988, 1994; Baran & Ayyıldız, 2004; Erman et al., 2007). The genus *Lasiobelba* in the subfamily Oppiinae is newly recorded from Turkey.

The genus *Lasiobelba* has two subgenera and thirty one species (Subías, 2015). To date there were 17 known species of the subgenus *Lasiobelba* (*Lasiobelba*) Aoki, 1959 worldwide and no record for the Turkish fauna. *Lasiobelba* is characterized by large size (more than 400 µm), absence of lamellar line or costula, laceolate or setiform sensillus.

### MATERIAL AND METHODS

Mites were extracted by a Tullgren funnel apparatus from the soil and litter samples collected from Sakarya province between October 2009 and February 2011. They were fixed and stored in 70% ethanol. Mites were sorted from the samples under a stereomicroscope (Olympus SZX51) and mounted on slides in modified Hoyer's medium (30 g gum Arabic, 50 ml distilled water, 200 gr chloral hydrate, 16 ml glycerol) or 35% lactic acid for microscopic observation. The scanning electron microscopic (SEM) images were taken by JEOL JSM 6060 LV. Drawings were made with the aid of a camera lucida attached to a compound microscope (Leica DM1000LED). All measurements are given in micrometers (µm).

The terminology used in this paper follows Balogh (1983) and Subías & Balogh (1989). Examined materials are deposited in the Acarological Collection of the last author, Sakarya University, Sakarya, Turkey.

### RESULTS

#### *Lasiobelba* (*Lasiobelba*) *kuehnelti* (Csiszár, 1961)

**Synonyms.** *Oppia yodai* Aoki, 1965; *Oppia yodai africana* Kok, 1967; *Cilioppia pori* Vasiliu e Ivan, 1995, *Lasiobelba arabica* Mahunka, 2000, *Lasiobelba neonominata* Subías, 2004.

**Material examined:** Sakarya: Adapazarı, 1605 m, 8.VII.2013, 3♀, in soil with *Quercus* sp. litter, and 8.VII.2014, 1♀, in soil from hazelnut grove.

**Measurements and color:** body in 535 (520-549)  $\mu\text{m}$  in length and 265 (263-267)  $\mu\text{m}$  in width (n=4). Color light brown.

**Prodorsum** (Figs. 1 & 2): Elongated, representing approximately 37 % of total body length. Rostrum conical, rostral setae (*ro*) about 30  $\mu\text{m}$ . Average length of lamellar setae (*le*) 73  $\mu\text{m}$ , interlamellar setae (*in*) 78 and exobothridial setae, 55  $\mu\text{m}$ . Setae *le* closer to setae *ro* than the setae *in*. Sensillus 84  $\mu\text{m}$  in length and slightly fusiform, apically pointed and finely ciliated (Fig. 2). Ratio of prodorsal setae as setae *ss* > *in* > *le* > *ex* > *ro*. Three pairs of sigilla between interlamellar setae.

**Notogaster** (Figs. 1 & 3): oval, anterior border of notogaster convex. Ten pairs of heterotrichous setae present. Setae *c*<sub>2</sub> very fine and hardly visible, rest of nine notogastral setae long, baciliform and ciliated (Fig. 3). Setae *p*<sub>1</sub> and *p*<sub>3</sub> shorter than the others.

**Ventral region** (Figs. 4-7): Epimeral regions separated medially. Apodema II hardly visible, rest of the apodems (apodema sejugal and apodema IV) well developed. Epimera III+IV elongated, discidium small. Epimeral setae finely ciliated and epimeral setal formula 3:1:3:3. Genital plate 61  $\mu\text{m}$  in length and 46  $\mu\text{m}$  in width. Anal plate 103  $\mu\text{m}$  in length and 93  $\mu\text{m}$  in width. 5 pairs of genital, 1 pair of aggenital, 2 pairs of anal and 3 pairs of adanal setae present. Genital setae minute (11  $\mu\text{m}$ ), aggenital adanal and anal ones longer and (26, 22 and 20  $\mu\text{m}$  respectively). Anal, aggenital and genital setae rarely ciliated, adanal ones densely ciliated.

**Legs:** All legs monodactylous.

## DISCUSSION

Hitherto only one genus and species belonging to subfamily Oppiinae *Oppia nitens* was known from Turkey. The genus *Oppia* Koch, 1836 and *Lasiobelba* Aoki, 1959 differentiated from each other by the shape of sensillus. In the genus *Oppia* sensillus fusiform or spindle-lanceolate and dilated less than its distal half on the other hand sensillus lanceolate or lanceolate-setiform and dilated at least in its distal half (Subías & Arillo 2001).

*Lasiobelba arabica* Mahunka, 2000, *Lasiobelba neonominata* Subías, 2004, *Cilioppia pori* Vasiliu & Ivan, 1995, *Oppia yodai* Aoki, 1965 and *Oppia yodai africana* Kok, 1967 are given as the synonyms of *Lasiobelba (L.) kuehnelti* (Csiszár, 1961) by Subías (2015).

Body dimensions of this species have been determined by other authors as follows size of this species previously given as 414-619 / 228-338  $\mu\text{m}$  (Mahunka, 2000; Subías & Arillo, 1997; Vasiliu & Ivan, 1995; Kok, 1967; Csiszár, 1961). In our specimens body dimensions 535 (520-549)  $\mu\text{m}$  in length and 265 (263-267)  $\mu\text{m}$ . According to the above data, our measurements are found in the known range of the body dimensions. Our specimens only differs from previously described ones by sharp pointed rostrum (Fig. 7).

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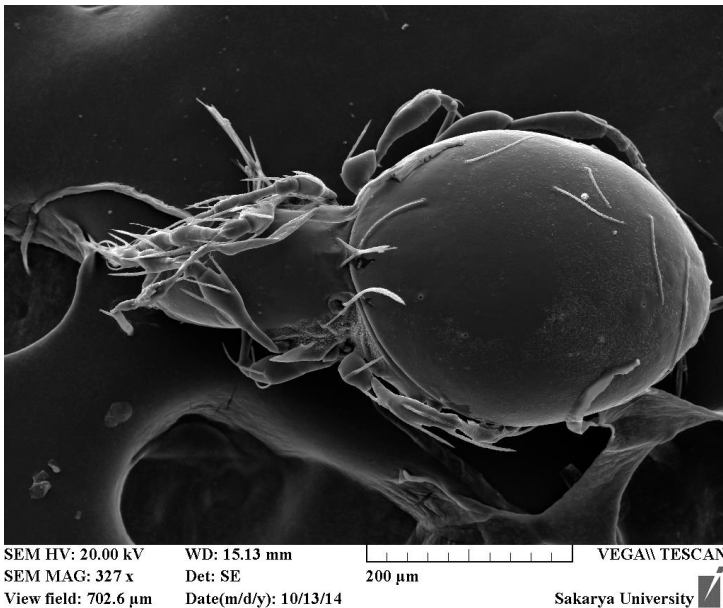


Figure 1. *Lasiobelba (L.) kuehnelti* dorsal view of adult Scanning electron microscopy image.

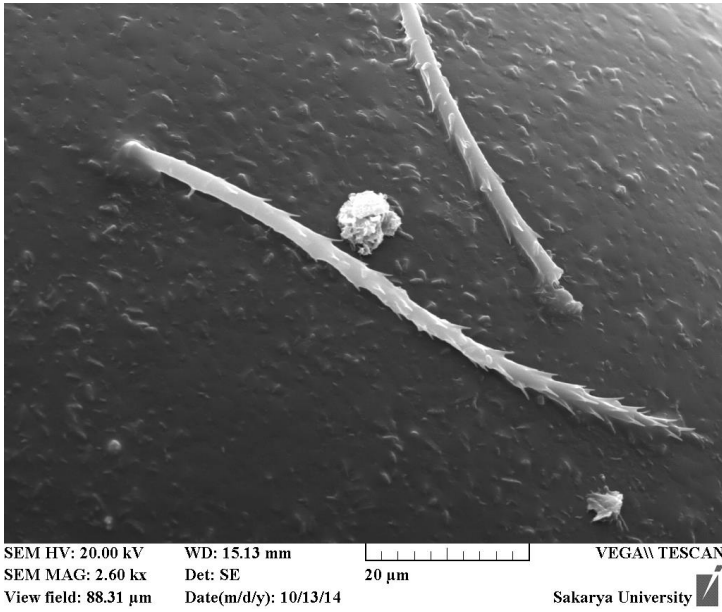


Figure 2. *Lasiobelba (L.) kuehneli* prodorsum, Scanning electron microscopy image.

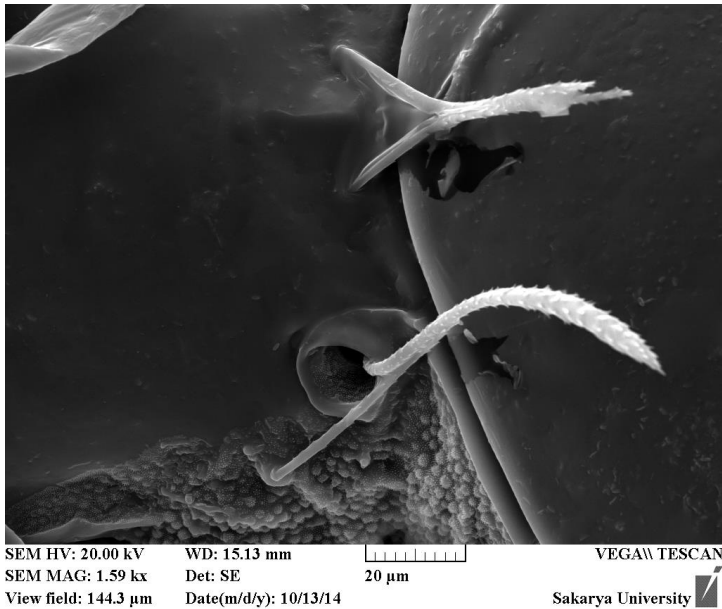


Figure 3. *Lasiobelba (L.) kuehneli* notogastral setae, Scanning electron microscopy image.

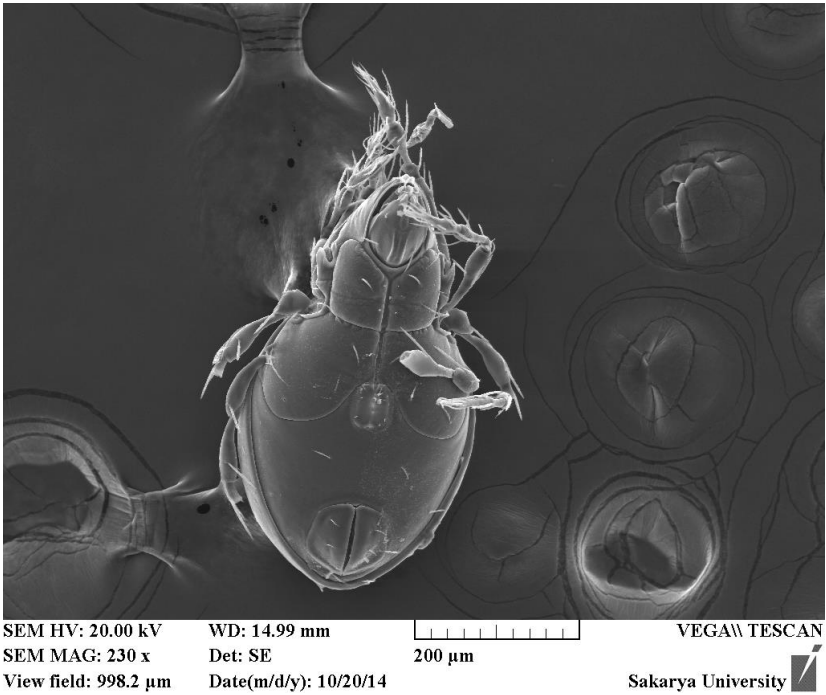


Figure 4. *Lasiobelba (L.) kuehnelti* ventral region, Scanning electron microscopy image.

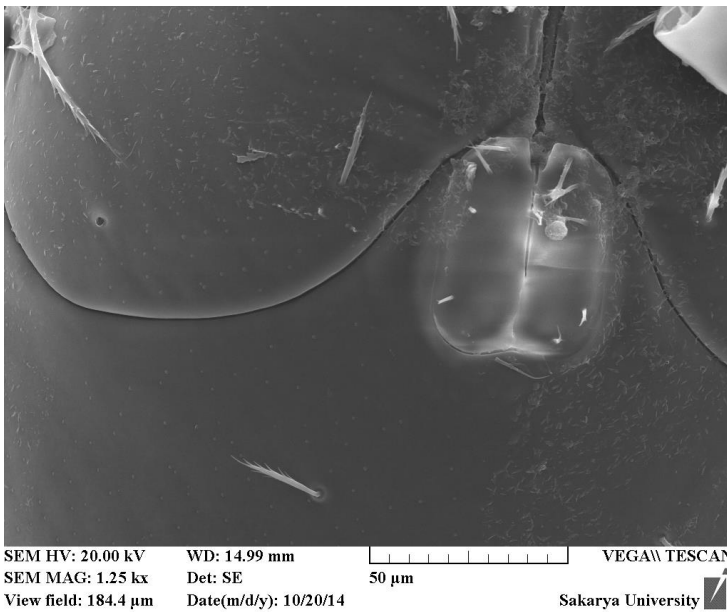


Figure 5. *Lasiobelba (L.) kuehnelti* genital plate, Scanning electron microscopy image.

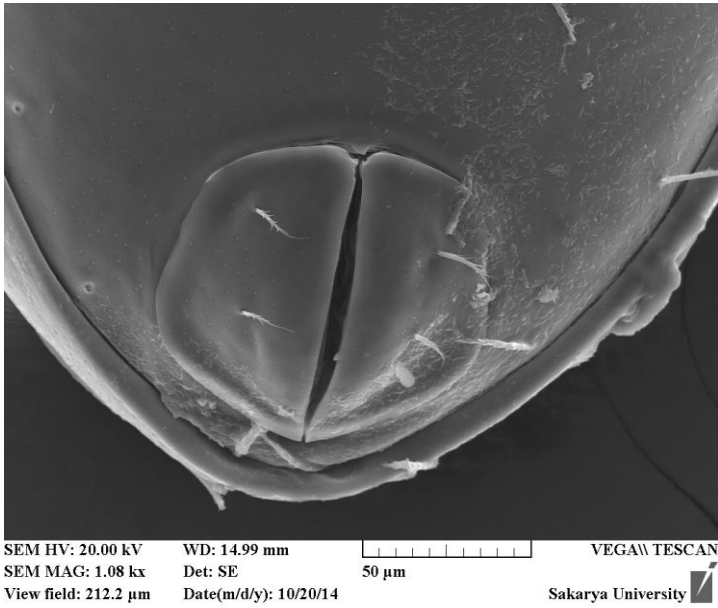


Figure 6. *Lasiobelba (L.) kuehnelti* anal plate, Scanning electron microscopy image.

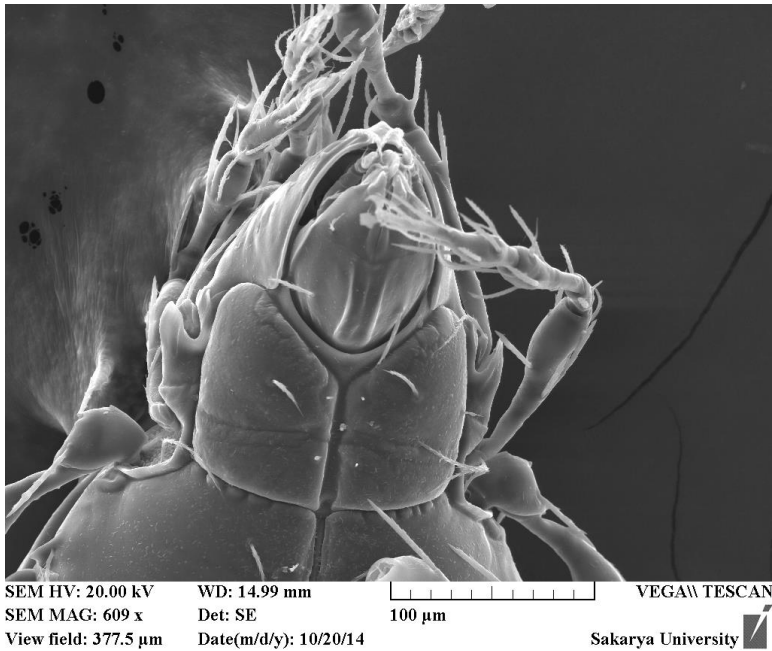


Figure 7. *Lasiobelba (L.) kuehnelti* epimeral region and ventral view of rostrum, Scanning electron microscopy image.