

A NEW SPECIES OF *SEPARATOPPIA* MAHUNKA, 1983 (ACARI, ORIBATIDA, OPPIIDAE) FROM INDIA

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ABSTRACT

S. G. Ermilov & V. Pešić. 2013. A new species of *Separatoppia* Mahunka, 1983 (Acari, Oribatida, Oppiidae) from India. *Graellsia*, 69(2): 243-246.

A new oribatid mite species of the family Oppiidae –*Separatoppia indica* n. sp.– is described from India. This species is morphologically most similar to *Separatoppia concava* Ermilov & Rybalov, 2013 (Ethiopia), but differs from the latter by length of interlamellar and notogastral setae and development of humeral processes. The genus *Separatoppia* Mahunka, 1983 is recorded for the first time from India and the Oriental region.

Key words: oribatid mite; *Separatoppia*; new species; new record; India.

RESUMEN

S. G. Ermilov & V. Pešić. 2013. Nueva especie of *Separatoppia* Mahunka, 1983 (Acari, Oribatida, Oppiidae) de la India. *Graellsia*, 69(2): 243-246 (en inglés).

Se redescubre una nueva especie de ácaro oribátido de la familia Oppiidae –*Separatoppia indica* n. sp.– de India. La nueva especie es muy similar morfológicamente a *Separatoppia concava* Ermilov & Rybalov de Etiopía, pero se diferencia de ella por la longitud de las setas interlamelares y notogastrales y el desarrollo del proceso humeral. Es la primera cita del género *Separatoppia* Mahunka, 1983 en India y en la región oriental.

Palabras clave: Ácaros Oribátidos; *Separatoppia*; especie nueva; nueva cita; India.

Introduction

During taxonomic identification of oribatid mites from India we discovered a new species, belonging to the genus *Separatoppia* Mahunka, 1983. The main purpose of this paper is to describe

and illustrate this Indian species under the name *Separatoppia indica* n. sp.

The genus *Separatoppia* comprises six species, which are distributed in the Ethiopian region (Subías, 2004, online version 2012; Ermilov & Rybalov, 2013). Hence, this genus is recorded for

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the first time from India and the Oriental region. The main generic characters of *Separatoppia* are summarized by Subías & Balogh (1989) and Ermilov & Rybalov (2013). An identification key to known species of the genus has been presented earlier (Ermilov & Rybalov, 2013).

Material and methods

Specimens were mounted in lactic acid on temporary cavity slides for measurement and illustration. All body measurements are presented in micrometers. The body length was measured in lateral view, from the tip of the rostrum to the posterior edge of the ventral plate. Notogastral width refers to the maximum width in dorsal aspect. Lengths of body setae were measured in lateral aspect. Formulae for leg setation are given in parentheses according to the sequence trochanter-femur-genu-tibia-tarsus (famulus included). Formulae for leg solenidia are given in square brackets according to the sequence genu-tibia-tarsus.

Description of new species

Separatoppia indica n. sp.

(Figs. 1-3)

MATERIAL: Holotype (male) and paratype (male) of *Separatoppia indica* n. sp. were collected in India, Andhra Pradesh State, East Godavari District, Ravulapalem, bore well (water temp. 30°C; pH 7.5), 10.06.2009, collected by Y. Ranga Reddy. The holotype is deposited in the collection of the Zoological Institute of the Russian Academy of Sciences, St. Petersburg, Russia; paratype is in the personal collection of the first author.

DIAGNOSIS. Body size 258-262 x 147-155. Transcostula concave medially. Rostral setae longer than similar in length the lamellar and interlamellar setae. Sensilli fusiform, smooth. Humeral processes poorly visible. Notogastral and anogenital setae short. Anterior four setae of each genital plate inserted in one row.

DESCRIPTION. Measurements. Body length 258 (holotype), 262 (paratype); body width 147 (holotype), 155 (paratype).

Integument (Figs. 1, 3). Body color light brownish. Body surface smooth, only centro-dorsal and lateral surfaces of prodorsum microgranulate. Interbothridial region with two pairs of muscle sigillae.

Prodorsum (Figs. 1, 3). Rostrum widely rounded. Costulae shorter than half of prodorsum. Transcostula distinct, concave medially. Interbothridial and postbothridial regions with one pair of triangular tubercles each. Rostral (*ro*, 20), lamellar (*le*, 12), interlamellar (*in*, 12) and exobothridial setae (*ex*, 8) setiform, thin, slightly or indistinctly barbed, set on small or large (lamellar setae) tubercles. Sensilli (*ss*, 45-49) with long stalk and well-developed fusiform and smooth head.

Notogaster (Figs. 1, 3). Anterior margin convex. Humeral processes developed very poorly. Setae *c* absent, only represented by their alveoli. Nine pairs notogastral setae short (12), setiform, smooth or indistinctly barbed. Lyrifissures short; *ia* located near humeral processes, *im* located laterally to setae *h*₃, *ip* located between *p*₁ and *p*₂. Lyrifissures *ih* and *ips* visible in lateral view. Opisthonotal gland openings (*gla*) small, located posteriorly to setae *h*₃.

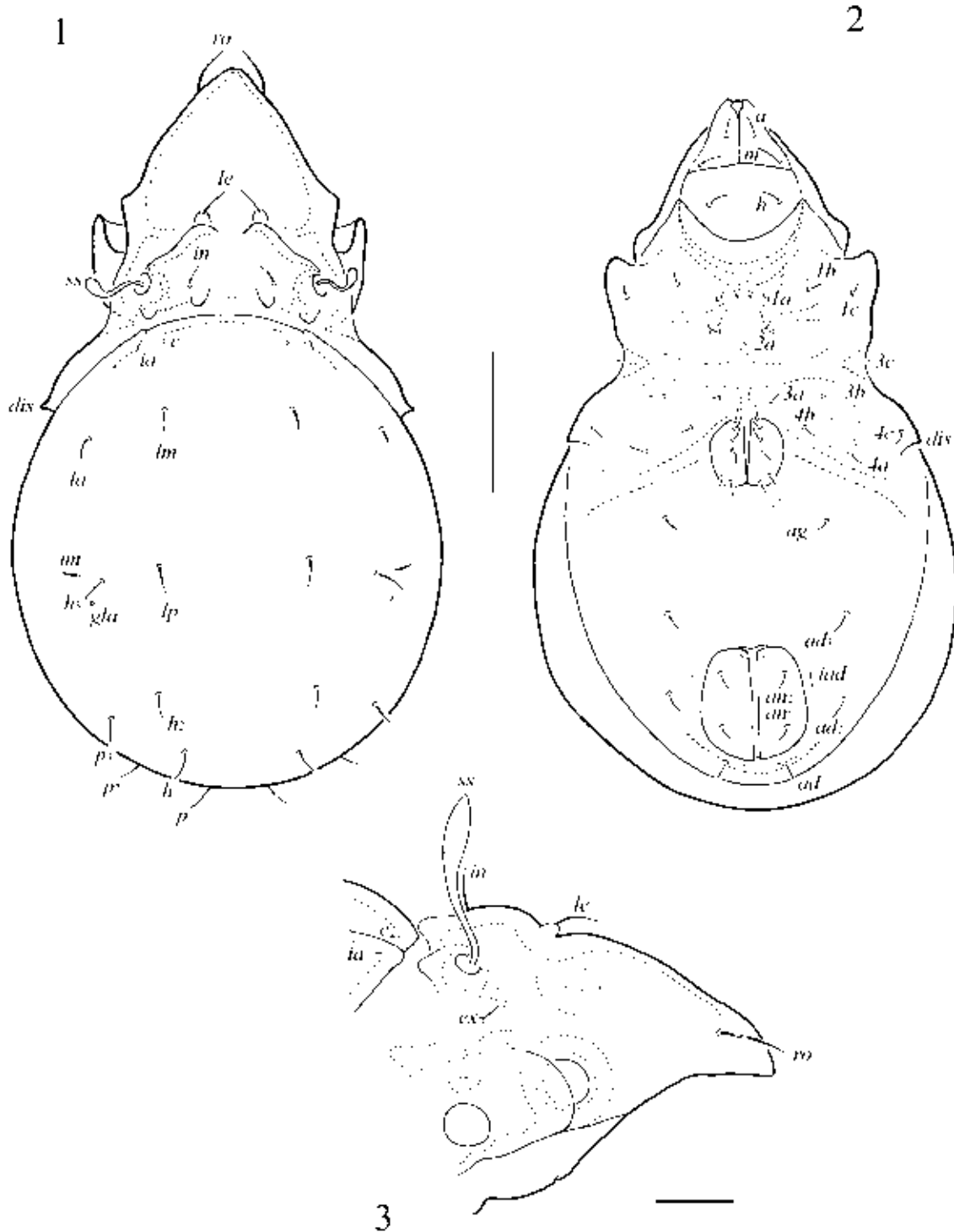
Gnathosoma (Fig. 2). Typical for *Separatoppia* (see Ermilov *et al.*, 2011).

Table 1. – Leg setation and solenidia of *Separatoppia indica* n. sp.

Table 1. – Quetotaxia de la patas y solenidio de *Separatoppia indica* n. sp.

Leg	Trochanter	Femur	Genu	Tibia	Tarsus
I	<i>v'</i>	<i>d</i> , (<i>l</i>), <i>bv''</i> , <i>v''</i>	(<i>l</i>), σ	(<i>l</i>), (<i>v</i>), φ_1 , φ_2	(<i>ft</i>), (<i>tc</i>), (<i>it</i>), (<i>p</i>), (<i>u</i>), (<i>a</i>), <i>s</i> , (<i>pv</i>), <i>v'</i> , (<i>pl</i>), <i>l''</i> , <i>e</i> , ω_1 , ω_2
II	<i>v'</i>	<i>d</i> , (<i>l</i>), <i>bv''</i> , <i>v''</i>	(<i>l</i>), σ	(<i>l</i>), (<i>v</i>), φ	(<i>ft</i>), (<i>tc</i>), (<i>it</i>), (<i>u</i>), (<i>a</i>), <i>s</i> , (<i>pv</i>), ω
III	<i>l'</i> , <i>v'</i>	<i>d</i> , <i>l'</i> , <i>ev'</i>	<i>l'</i> , σ	<i>l'</i> , (<i>v</i>), φ	(<i>ft</i>), (<i>tc</i>), (<i>it</i>), (<i>u</i>), (<i>a</i>), <i>s</i> , (<i>pv</i>)
IV	<i>v'</i>	<i>d</i> , <i>ev'</i>	<i>d</i> , <i>l'</i>	<i>l'</i> , (<i>v</i>), φ	<i>ft''</i> , (<i>tc</i>), (<i>u</i>), (<i>a</i>), <i>s</i> , (<i>pv</i>)

Roman letters refer to normal setae (*e* – famulus), Greek letters refer to solenidia. One apostrophe (') marks setae on anterior and double apostrophe (") setae on posterior side of the given leg segment. Parentheses refer to a pair of setae.



Figs. 1-3.— *Separatoppia indica* n. sp. 1) Dorsal view of body, 2) ventral view of body (legs not shown), 3) lateral view of prodorsum. Scale bars (1, 2) 50 μ m, (3) 20 μ m.

Figs. 1-3.— *Separatoppia indica* n. sp. Vistas dorsal (1) y ventral (2) del cuerpo (no se ilustran las patas), 3) vista lateral del prodorso. Escala (1, 2) 50 μ m, (3) 20 μ m.

Epimeral and lateral podosomal regions (Figs 1-3). Epimeral setal formula: 3-1-3-3. All setae short (8-10), smooth. Setae *3c* set on tubercles. Discidia (*dis*) triangular, blunt-ended.

Anogenital region (Fig. 2). Six pairs of genital (g_1 - g_6 , 8), one pair of aggenital (*ag*, 8), two pairs of anal (an_1 , an_2 , 8) and three pairs of adanal (ad_1 - ad_3 , 10-12) setiform, smooth. Anterior four genital setae of each genital plate inserted in one row. Lyrifissures *iad* located in paraanal position.

Legs. Typical for *Separatoppia* (see Ermilov *et al.*, 2011). Formulae of leg setation and solenidia: I (1-5-2-4-20) [1-2-2], II (1-5-2-4-13) [1-1-1], III (2-3-1-3-13) [1-1-0], IV (1-2-2-3-10) [0-1-0]; homology of setae and solenidia indicated in Table 1.

ETYMOLOGY. The new species is named after the country of origin, India, where the material was collected.

REMARKS. Due to the presence of concave translamella medially, *Separatoppia indica* **n. sp.** is similar only to *Separatoppia concava* Ermilov & Rybalov, 2013 from Ethiopia (Ermilov & Rybalov, 2013). However it clearly differs from the latter species by having short notogastral setae (versus very long in *S. concava*), longer interlamellar setae (versus minute in *S. concava*), and poorly developed humeral processes (versus well-developed in *S. concava*).

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