

## NEW SPECIES OF THE GENUS *GRAPTOPPIA* (ACARINA: ORIBATIDA: OPPIIDAE) FROM TRIPURA, INDIA

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### ABSTRACT

The paper contains description along with illustrations of a new species of an oribatid mite *Graptoppia* (*Graptoppia*) *jiyotikanae* sp. nov. from Tripura, India. The new species differs from other known species by the presence of smooth prodorsal and notogastral setae, 10 spines on outer border of head of sensillus and body punctuation.

### KEYWORDS

Acarina, *Graptoppia* (*Graptoppia*) *jiyotikanae*, India, new species, Oribatid mite, Tripura

The genus *Graptoppia* was erected by Balogh (1983) with *Dameosoma foveolatum* Paoli (1908) as the type species from Italy. Subias and Rodriguez (1985) studied the genus and established three subgenera depending on the position of fissure *iad* and the number of genital setae. One subgenus *Graptoppia* (*Apograptoppia*) Subias and Rodriguez was made with the type species *Dameosoma foveolatum* Paoli, 1908 having directed apoanal fissure *iad*. The other two subgenera were included in a group having para anal fissure *iad*. The two subgenera are differentiated on the basis of a number of genital setae. The subgenus with five pairs of genital setae are placed under subgenus *Graptoppia* (*Graptoppia*) Balogh with the type species *Graptoppia* (*Graptoppia*) *paraanalis* Subias and Rodriguez (1985). The subgenus with four pairs of genital setae are placed under subgenus *Graptoppia* (*Stenoppia*) Balogh (1983) with the type species *Oppia italica* Bernini (1973).

The specimens collected from the southern district of Tripura are under the subgenus *Graptoppia* (*Graptoppia*) Balogh. Subias and Balogh (1989) in the identification keys to the genera of Oppiidae included five species, viz., *Fronddoppia exigua* Mahunka (1983), *Stenoppia italica quinquepilosa* (Morell, 1987), *Oppia nukusia* Shtancheva and Koschanova (1984), *Oppia parva* Kok (1967) and *O. sundensis* Hammer (1979) under the genus *Graptoppia* (*Graptoppia*) Balogh.

Balogh and Balogh (1992) in their key in the book 'The Oribatid Mites Genera of the World (Vol I & II)' included six species under *Graptoppia* (*Graptoppia*) Balogh. The genus *Graptoppia* (*Graptoppia*) was first reported from India by Sanyal (2000).

### Generic diagnosis

Transmellar line well developed; sensillus fusiform, ciliate; nine pairs of notogastral setae (without setae  $c_2$ ); setae  $ad_3$  behind aggenital setae.

### Distribution

India: Tripura. Elsewhere: Borneo, Brazil, Chile, Italy, Java, Nigeria, Russia, South Africa, Spain.

### Subgenus *Graptoppia* Balogh

1983. *Graptoppia* (*Graptoppia*) Balogh, *Acta Zoologica Hungaria* 29(1-3): 48.

Type-species: *Graptoppia* (*Graptoppia*) *paraanalis* Subias and Rodriguez, 1985.

### Subgeneric diagnosis

Nine pairs of notogastral setae (without setae  $c_2$ ); fissure *iad* paraanal; five pairs of genital setae; two pairs of bright spots between interlamellar setae; sensillus fusiform, ciliate.

### Distribution

India: Tripura. Elsewhere: Brazil, Borneo, Crimea, Java, Russia, Spain.

### METHODOLOGY

Soil, litter and humus samples were collected from upper 5-10cm of soil profile in southern district of Tripura. The mite specimens were extracted by using Tullgren's dry funnel extraction apparatus and were collected in glass vials containing a mixture of 70% alcohol and 5% glycerol. Prior to identification the mites were desclerotized in lactic acid.

The type specimens are deposited in the National Zoological Collection, Zoological Survey of India, Kolkata. All measurements are in microns ( $\mu$ ).

*Graptoppia* (*Graptoppia*) *jiyotikanae* sp. nov.  
(Figures 1-3)

### Material examined

Holotype: Adult female, 28.iv.1992, from humus under cow dung at Kakraban (Udaipur), Tripura, India, coll. D. Saha.

Paratypes: 4 adult females; data same as for holotype; 6 adult females, 17.iv.1992, from humus with decomposed leaves at Santi Bazar (Belonia), Tripura, India, coll. S. Saha.

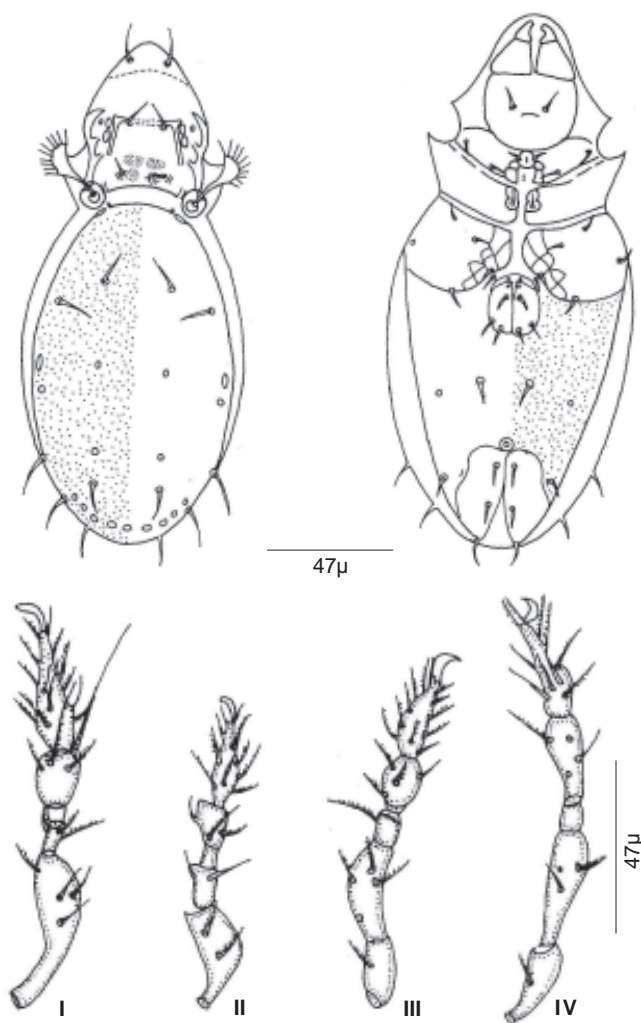
### Diagnosis

Colour: Light brown.

Measurements: Body length: 209-225 $\mu$ m; body width: 89-95 $\mu$ m.

Prodorsum: Rostrum rounded; rostral setae short (14), smooth, nearly equal to mutual distance (13) between them; a faint line forming an arch immediately below rostral setae; lamellar setae

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Figures 1-3. *Graptoppia (Graptoppia) jytikanae* sp. nov.  
1 - Dorsal view; 2 - Ventral view; 3 - Legs (I-IV)

short (11), smooth, smaller than their mutual distance (14), situated behind the translamellar line; prominent and thin lamellar lines combine to a faint translamellar line forming a transverse ridge; interlamellar setae short (9), nearly half to their mutual distance (16); two pairs of light spots in interlamellar region; sensillus flat, disk-shaped head set with 10 almost equally long spines on its outer border; prodorsum without any punctuation.

**Notogaster:** Notogaster oval-shaped, anterior margin broad and posterior end round, nine pairs of smooth, thin, short (17-21) notogastral setae, *ta* represented by minute pore; notogaster finely punctuated.

**Epimeral Region:** Epimeral region ornamented with faint reticulations; epimeral setae thin, minute, smooth; epimeral setal formula 3:1:3:3.

**Ano-genital region:** Genital plates almost rectangular (length: 26, width: 21) with five pairs of setae, three pairs placed close together on medial border in anterior part of genital plates and two pairs very close to posterior border; aggenital setae one pair, short (9), thin; anal plates almost rectangular (length: 40,

width: 35) with two pairs of anal setae; three pairs of adanal setae, *ad*<sub>1</sub> postanal, *ad*<sub>2</sub> peranal (close to aggenital setae) in position; ventral plate finely punctuated.

**Legs:** Monodactylous, leg setae unilaterally barbed. Leg chaetotaxy: I: 4-3-0-1-13-1; II: 2-2-0-3-10-1; III: 1-4-1-4-12-1; IV: 1-3-0-4-10-1.

#### Distribution

India: Tripura (South District).

#### Remarks

The new species resembles *Graptoppia (Graptoppia) sundensis* Hammer (1979) in the position of prodorsal and notogastral setae, structure of sensillus, presence of two pairs of light spots in interlamellar region. But it can be separated from *sundensis* having smooth prodorsal and notogastral setae, a faint arched line below the base of rostral setae, presence of 10 spines on outer border of head of sensillus and also by the presence of punctuation on notogaster and ventral plates.

The new species is named after Smt. Jyotikana Saha, mother of the second author.

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