

## Four New *Xenillus* Species from the Neotropical Region (Acari: Oribatei)

By

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**Abstract.** Four species, *X. irregularis*, *X. deformatus*, *X. fecundus* and *X. diversisetosus* spp. n. are described. A key is given to the species-group of *X. ornatus* (COVARRUBIAS, 1967).

In our undetermined materials deriving from the Neotropical Region there are still numerous *Xenillus* species awaiting a thorough study and detailed description. The present contribution is devoted to the description of 4 species whose status has been unambiguously clarified. The recent examinations reveal that the shape of sensillus and the development of lamellae, especially so the form of lamellar cuspides, are highly variable within any one species. In every case it seems inevitable to characterize the taxa with the combination of various features. The present paper was written by strictly observing these viewpoints.

### *Xenillus irregularis* sp. n.

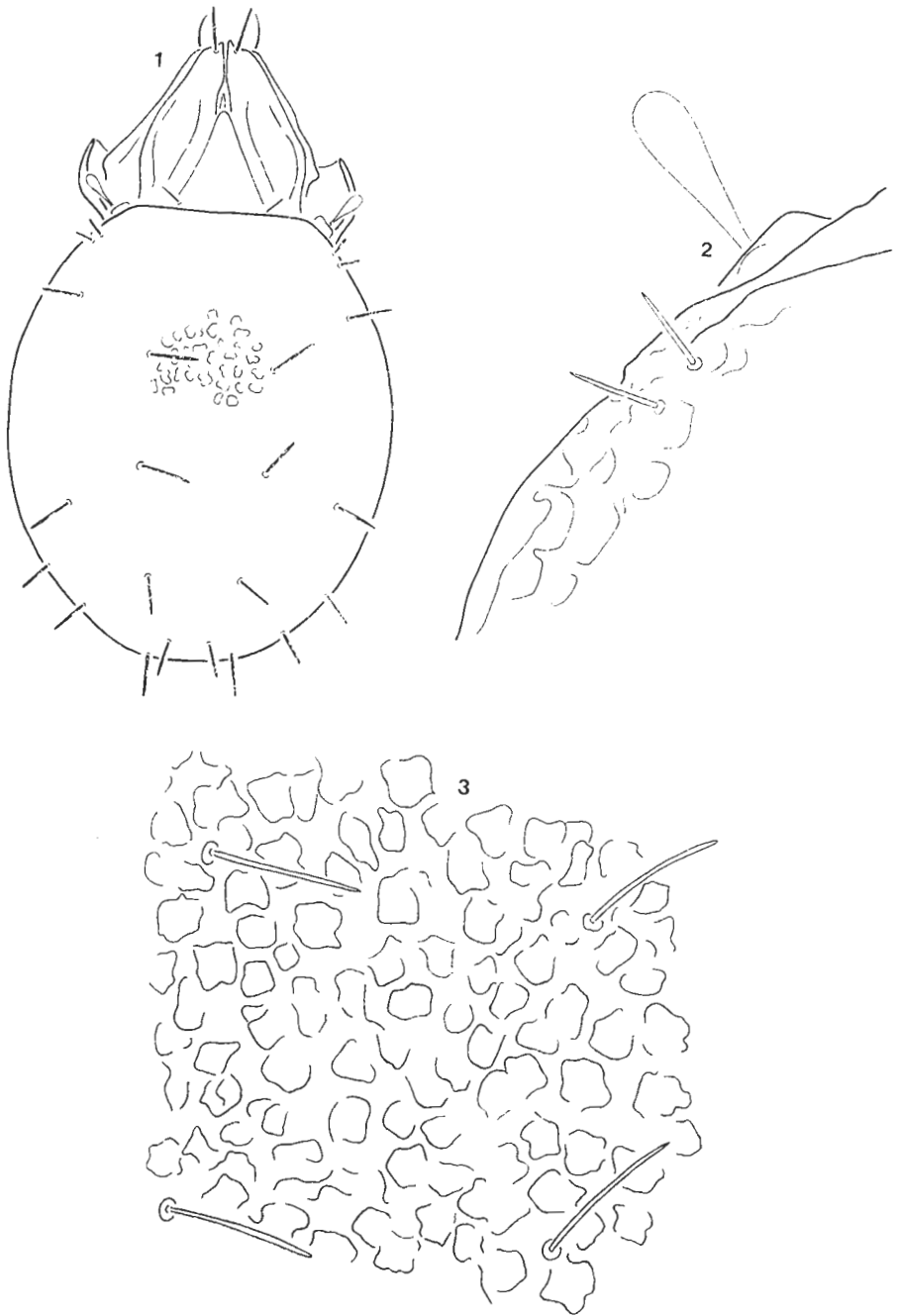
(Figs. 1–3)

Length 681  $\mu\text{m}$ , width 361  $\mu\text{m}$ .

Prodorsum: Sensillus fusiform, short, with a gradually dilated, elongate head; more than three times longer than broad at the broadest part; with broadly rotundate end. Lamellar setae straight, erect, divergent, smooth. Lamellae converging. Lamellar cuspides long, free; intercuspidal triangle long, free. Outer tip of lamellae rotundate, inner tip rotundately acuminate. Rostral setae slightly inward curved, smooth. Interlamellar setae short, smooth. Lamellae without foveolae.

Notogaster: 11 pairs of short, bacilliform, straight, erect, smooth notogastral setae. Setae  $c_1$  and  $c_2$  shorter than the remaining notogastral setae, originating near to each other. Notogaster with irregularly polygonal foveolae; their contours often interrupted.

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Figs. 1–3. *Xenillus irregularis* sp. n. 1: Dorsal view; 2: Sensillus, setae  $c_1$  and  $c_2$ ; 3: Central part of notogaster (with setae  $da$  and  $dm$ )

Locus typicus: Ecuador, Cotopaxi, about 4000 m. Leg.: J. BALOGH and P. BALOGH. Habitat: moss and detritus under páramo grass; holotype: 1 specimen.

Remarks: There are five species of *Xenillus* in the Neotropical Region having short, fusiform sensillus, but none of them has short, bacilliform, straight, smooth notogastral setae; short interlamellar setae and irregularly polygonal foveolae with often interrupted contours.

*Xenillus deformatus* sp. n.

(Figs. 4–7)

Length 647  $\mu\text{m}$ , width 467  $\mu\text{m}$ .

Prodorsum: Sensillus long, setiform, straight, with gradually dilated, fusiform end. The apical part of dilated end with some cilia. Interlamellar setae short, setiform. Lamellae broad, covering the rostral part of prodorsum. Lamellar cuspides obliquely truncate; their inner tip pointed, outer tip absent. Intercuspidal triangle long, pointed. Lamellar cuspides basally at level with intercuspidal triangle each with one semicircular line. Lamellae without foveolae.

Notogaster: 11 pairs of short, bacilliform, straight, smooth notogastral setae. Notogastral heterotrichy: setae  $c_2$ ,  $p_1$ ,  $p_2$  and  $p_3$  shorter than the remaining notogastral setae. Notogaster with irregularly deformed, partly evanescent foveolae; foveolae mostly longitudinally elongate.

Locus typicus: Peru, 102 km W from Pucallpa, rest of a primary rain forest. Habitat: humus with roots under the litter. Holotype: one specimen.

Remarks: This new species belongs to the artificial species-group *Xenillus subnudus* – *Xenillus laurencei*. The species of this group have long sensillus mostly with dilated, disciform or paddle-shaped end. There are 8 species in this group, but only three have smooth, setiform, short notogastral setae: *X. peruensis*, *X. columbianus* and *X. butantanensis*. However, these species have quite different lamellar cuspis and notogastral sculpture.

*Xenillus fecundus* sp. n.

(Figs. 8–11)

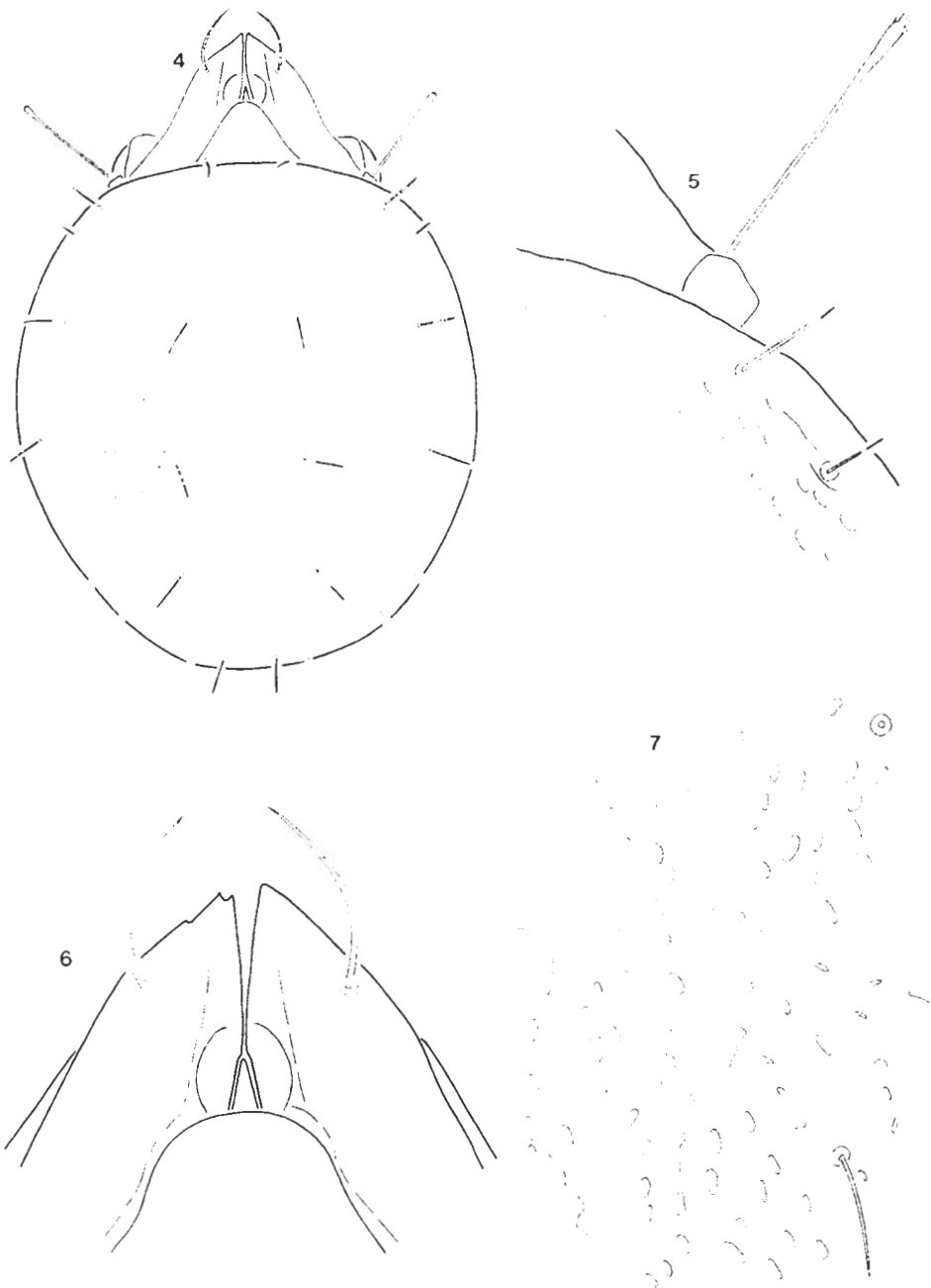
Length 746–830  $\mu\text{m}$ , width 484–631  $\mu\text{m}$ .

Prodorsum: Sensillus lanceolate; in their first third setiform, then lanceolately dilated with long, setiform, finely ciliate end. Lamellae narrow, with short, bicuspidate cuspis and with long, divergent, finely ciliate lamellar setae. Surface of cuspis sparsely foveolate. Rostral region not covered, rostral setae fine, long, unilaterally and sparsely ciliate. Interlamellar setae long, ciliate.

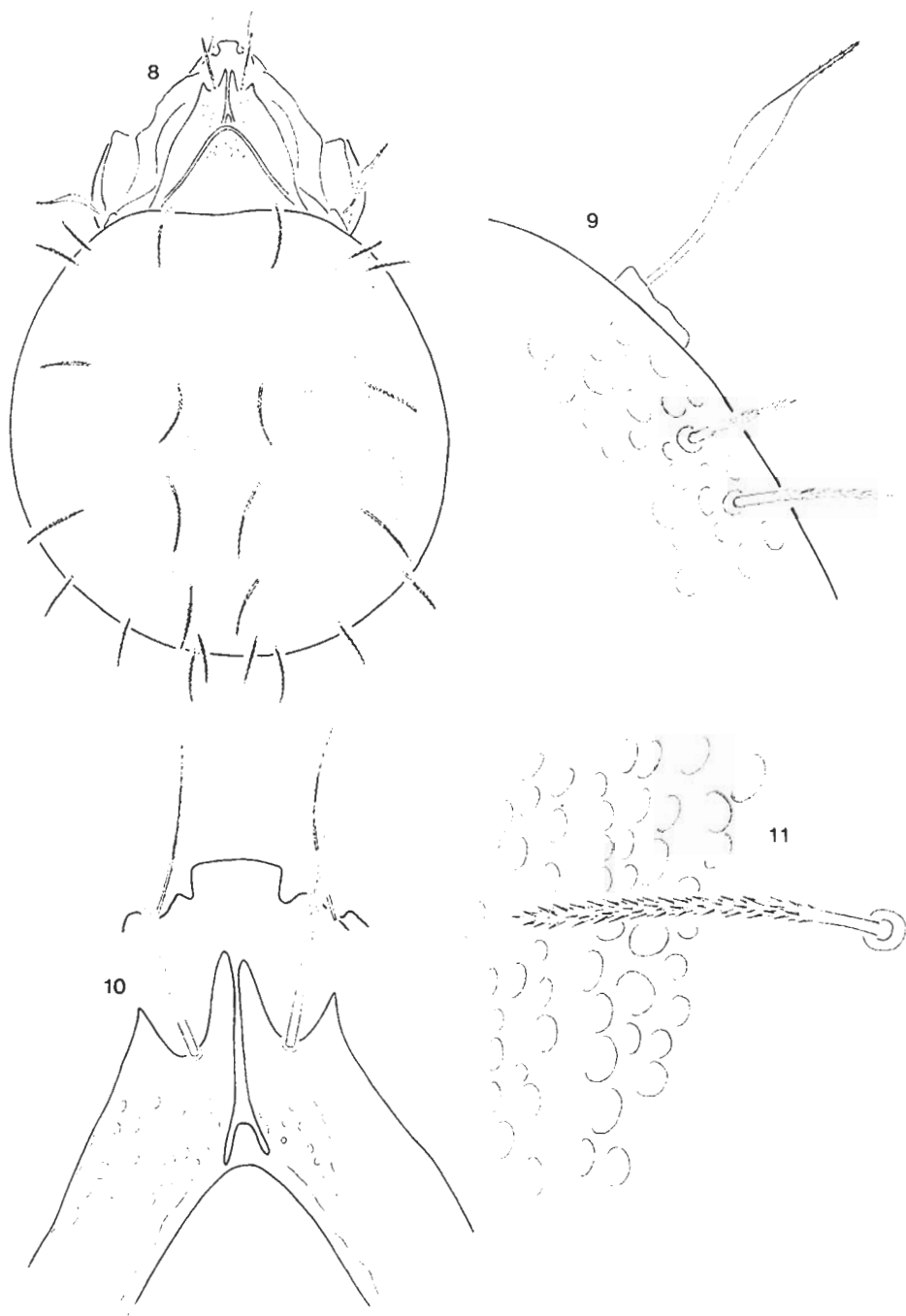
Notogaster: 11 pairs of medium long, densely ciliate setae. Setae  $c_1$  and  $c_2$  shorter than the remaining notogastral setae, originating near to each other. Notogaster densely foveolated. Inside of hysterosoma with 10(?) transparent eggs (hence the specific name).

Locus typicus: Brasil, Campinas, near to “Americana”, secondary vegetation. Habitat: litter and humus, interwoven with roots. Holotype: 1 ex.; 2 paratypes from the same locality.

Remarks: See after the next species.



Figs. 4-7. *Xenillus deformatus* sp. n. 4: Dorsal view; 5: Sensillus, setae  $c_1$  and  $c_2$ ; 6: Lamellar cuspides; 7: Central part of notogaster, left side (with alveoles of setae  $da$  and with seta  $dm$ )



Figs. 8–11. *Xenillus fecundus* sp. n. 8: Dorsal view; 9: Sensillus, setae  $c_1$  and  $c_2$ ; 10: Rostrum and lamellar cuspides; 11: Lateral part of notogaster, left side (with seta  $1a$ )

*Xenillus diversisetosus* sp. n.

(Figs. 12–15)

Length 578  $\mu\text{m}$ , width 369  $\mu\text{m}$

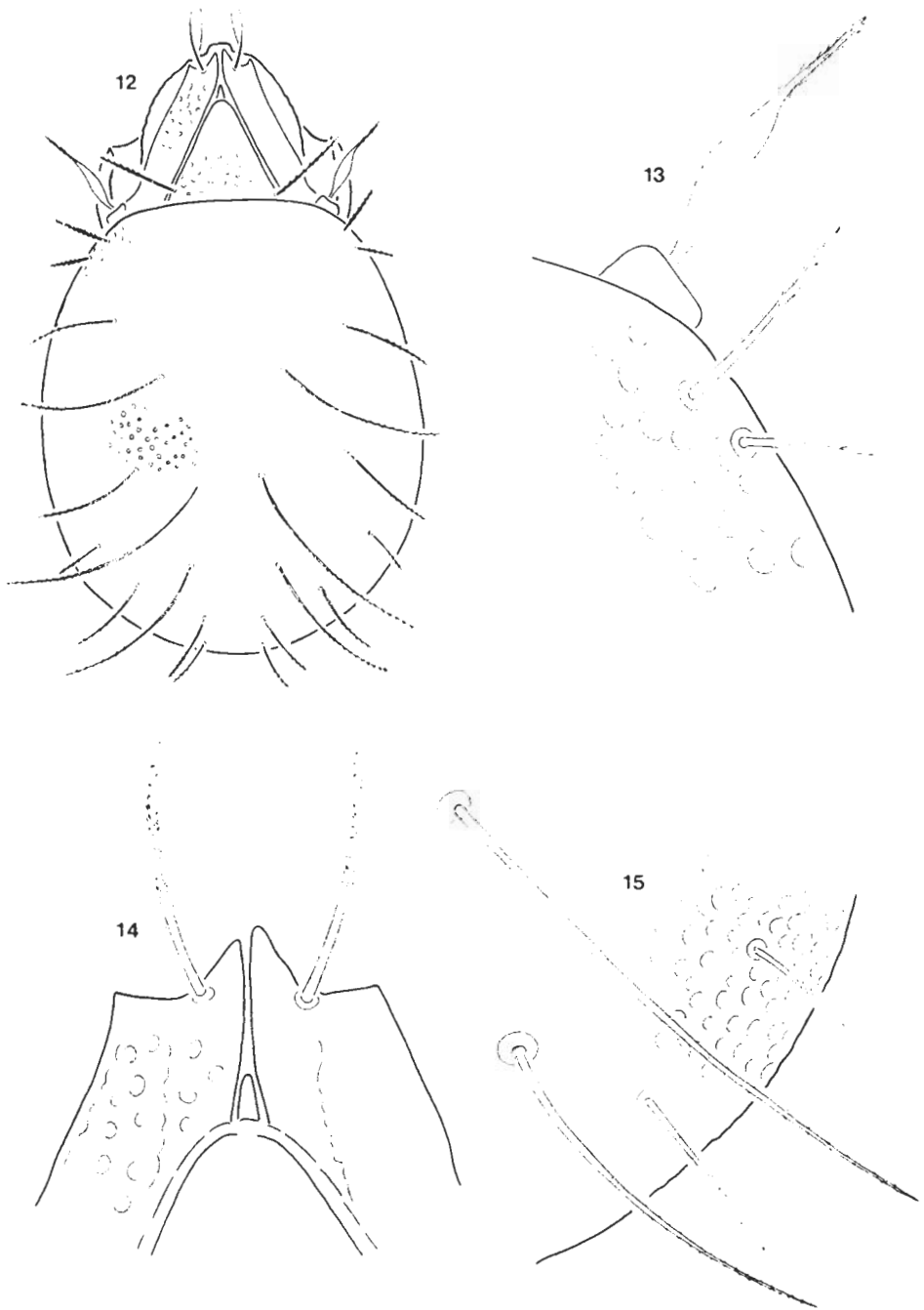
Prodorsum: Sensillus lanceolate; first setiform, then lanceolately dilated with long, setiform, finely ciliate end. Lamellae long, with bicuspidate cusps and with arcuately divergent, finely ciliate lamellar setae. Interlamellar setae long, ciliate. Lamellae and the interlamellar area sparsely foveolated. Lamellar cuspides reaching rostrum.

Notogaster: 11 pairs of notogastral setae with strong notogastral heterotrichy. Setae  $c_2$  the shortest;  $c_1$ ,  $p_1$  and  $p_3$  slightly longer; setae  $da$ ,  $dm$  and  $dp$  (that is the three pairs in median row) the longest; setae  $la$ ,  $lm$ ,  $lp$  and  $p_2$  shorter than setae  $d$ . Notogaster densely foveolated.

Locus typicus: Chile, Santana near Taropoto, Nov. 1968, leg. Dr. H. FRANZ.  
Habitat: soil.

Remarks: The species-group *X. ornatus* (COVARRUBIAS, 1967) (sensillus lanceolate with long, setiform, finely ciliate end) has five species. The identification key of these species is as follows:

- 1 (2) Notogastral heterotrichy: three pairs of median setal rows, i.e. setae  $da$ ,  $dm$  and  $dp$  much longer than the remaining notogastral setae, their apical half sparsely ciliate. Length 578  $\mu\text{m}$ , width 369  $\mu\text{m}$ . (Chile.)  
**diversisetosus** sp. n.
- 2 (1) Notogastral setae — excepting setae  $c_1$  and  $c_2$  — the same length.
- 3 (4) Interlamellar area granulated. Lamellae longitudinally lineolated. Notogaster with slit-like fissures. Length 1020  $\mu\text{m}$ , width 673  $\mu\text{m}$ . (Chile.)  
**ornatus** (COVARRUBIAS, 1967)
- 4 (3) Interlamellar area foveolated. Notogaster either with rotundate or with elongate and medially dimidiated foveolae.
- 5 (6) Interlamellar setae shorter than lamellae. Notogastral setae short: setae  $da$  shorter than distance  $da-dm$ . Setae  $c_1$  and  $c_2$  much shorter than sensillus. Length 746–830  $\mu\text{m}$ , width 484–631  $\mu\text{m}$ . (Brasil.)  
**fecundus** sp. n.
- 6 (5) Interlamellar setae as long as or longer than lamellae. Notogastral setae long: setae  $da$  as long as or longer than distance  $da-dm$ . Setae  $c_1$  and  $c_2$  as long as or longer than the sensillus.
- 7 (8) Lamellar cuspides separate; intercuspidal triangle absent. Notogaster with circular foveolae. Length 861  $\mu\text{m}$ , width 502  $\mu\text{m}$ . (Chile.)  
**disjunctus** BALOGH & MAHUNKA, 1977
- 8 (7) Lamellar cuspides touching. Notogaster with elongate and medially dimidiated foveolae. Length 834–1009  $\mu\text{m}$ , width 512–594  $\mu\text{m}$ . (Paraguay.)  
**longipes** MAHUNKA, 1984



Figs. 12–15. *Xenillus diversisetosus* sp. n. 12: Dorsal view; 13: Sensillus, setae  $c_1$  and  $c_2$ ; 14: Lamellar cuspides; 15: Posterior part of notogaster, right side (with setae  $dm$ ,  $dp$ ,  $p_2$  and  $p_3$ )

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