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ORIBATIDS FROM SABAH (EAST MALAYSIA) VII  
(ACARI: ORIBATIDA)  
(ACAROLOGICA GENAVENSIA LXXXV)<sup>1</sup>

BY

**Sándor MAHUNKA<sup>2</sup>**

(Ms soumis le 22.5.1996, accepté le 17.9.1996)

ABSTRACT

**Oribatids from Sabah (East Malaysia) VII (Acari: Oribatida).** (*Acarologica Genavensia* LXXXV). - Two new oribatid species are described from Sabah: *Austroceratoppia sabahna* sp. n. (Peloppiidae) and *Pteroripoda perennis* sp. n. (Oripodidae).

INTRODUCTION

In continuation of my previous contributions on the Oribatida of Sabah, formerly Northern Borneo, (MAHUNKA 1987a, b, 1988, 1991, 1995, 1996; MAHUNKA & MAHUNKA-PAPP 1988) the description of following two new species is presented: *Austroceratoppia sabahna* sp. n. belonging to the family Peloppiidae and *Pteroripoda perennis* sp. n. belonging to the family Oripodidae.

Details on the general aim of the research and the origin of the material are given in my earlier publications on the fauna of Sabah. I thank cordially Dr Bernd Hauser, Head of the Arthropod Department of the Muséum d'Histoire naturelle, Geneva, for allowing me to study this valuable material. This research program was also partly sponsored by the Hungarian Research Found (OTKA 17629).

The descriptions and the terminology applied in this contribution follow those of my previous papers (e.g. MAHUNKA 1994).

LIST OF LOCALITIES

Sab-82/4 SABAH (Sandakan Residency): Sepilok: "Kabili-Sepilok Forest Reserve", forêt (Lowland Dipterocarp Forest) près de la "Orang-Utan Rehabilitation Station", prélèvement de sol dans les angles formés par les contreforts ailés de grands arbres, 30 m; 23.IV.1982; leg. B. Hauser (B)<sup>3</sup>

<sup>1</sup> New title of the series "Neue und interessante Milben aus dem Genfer Museum I.-LX." and "New and interesting mites from the Geneva Museum LXI.-LXXX."

<sup>2</sup> Zoological Department, Hungarian Natural History Museum, Baross utca 13, H-1088 Budapest; Hungary.

<sup>3</sup> (B) = extraction par appareil BERLESE.

- Sab-82/15 SABAH (West Coast Residency): Mt Kinabalu: "Bukit Ular Trail" (sentier reliant "Kambarangan Road" à "Power Station"), tamisage de feuilles mortes et de bois pourri, 1790 m; 28.IV.1982; leg. B. Hauser (W)<sup>4</sup>
- Sab-82/21 SABAH (West Coast Residency): Mt Kinabalu: "Summit Trail" (sentier reliant "Power Station" au sommet), prélèvement de litière et d'humus sous des coussinets de mousses et de lichens, 3900 m; 30.IV.1982; leg. B. Hauser (B)
- Sab-82/43 SABAH (Interior Residency): route de Kimanis, à 16 milles de Keningau: hélicoptère, tamisage en forêt brumeuse, 1380 m; 12.V.1982; leg. B. Hauser (W)/(B)

## DESCRIPTIONS

### *Austroceratoppia sabahna* sp. n.

**Material examined:** Holotype: Sab-82/15, 8 paratypes from the same sample; 1 paratype Sab-82/4; 2 paratypes Sab-82/21; 2 paratypes Sab-82/43. Holotype and 8 paratypes: MHNG<sup>5</sup>, and 5 paratypes (1497-PO-94): HNHM<sup>6</sup>.

**Measurements.** - Length of body: 484–505 µm, width of body: 293–316 µm.

**Prodorsum:** Rostral apex sharply pointed, triangular. A pair of large teeth laterally, and 2–3 much smaller ones at the basis of the rostral setae present (Fig. 5) (these latter could not be seen on all specimens). Lamellae long, with a long free distal end, on which a sharp outer and a short inner cusp visible (of variable length). They do not reach the rostral apex. A wide tutorium without cusp, and a sharp, strong, long, spiniform projection on the pedotecta I also observable in lateral aspect (Fig. 1). Among the prodorsal setae *ro* very thick, fusiform. Rostral setae also thick, but spiniform interlamellar setae setiform, very long, reaching beyond the tip of the rostral apex. Exobothridial setae indicated only by their alveoli. Sensillus clearly setiform, shorter than interlamellar setae. All prodorsal setae well ciliate.

**Notogaster:** Globular, with two pairs of very long, thick and straight notogastral setae and five pairs of alveoli. Glandular opening observable, lyrifissures visible only in lateral aspect.

**Lateral part of podosoma:** Pedotecta I very large with the above mentioned sharp projection (Fig. 3). Pedotecta II–III consists of two parts, discidium also large, angular.

**Ventral regions:** The form of apodemes are typical for the genus *Austroceratoppia* (Fig. 4), but among them a pair of distinct thin lines in front of the genital aperture, directed backwards, are also visible. Epimeral setae excepting setae *3c* and *4c*, strong, partly spiniform, as in the other species of this genus. Setae *3c* and *4c* short, setiform, simple. Epimeral setal formula: 3 – 1 – 3 – 3. Six pairs of genital setae long, among them three pairs much longer than the other three pairs in anteriomedian

<sup>4</sup> (W) = extraction par appareil WINKLER-MOCZARSKI.

<sup>5</sup> MHNG = deposited in the Muséum d'Histoire naturelle, Genève.

<sup>6</sup> HNHM = deposited in the Hungarian Natural History Museum, Budapest, with identification number of the specimens in the Collection of Arachnida.

position (Fig. 4). Aggenital and adanal setae also strong, thickened, anal ones setiform. All setae in the ventral regions distinctly barbed and/or ciliate. Lyrifissure *iad* removed very far from anal apertures.

**L e g s :** All legs tridactylous, strong heterodactyly present. Claws of leg I smaller and less curved than those of the other legs. Leg IV longer than the others, it is a jumping leg, with very strong, spiniform setae on genu, tibia and tarsus (Figs 2 and 6).

**R e m a r k s :** Four species<sup>7</sup> are known in this genus. The new species stands nearest to *A. serapi* Mahunka, 1995, but it is well distinguished from it by the form of the rostrum and the ratio of the notogastral setae. These two species differ from *A. dentata* and *A. crassiseta* by the shape of the anterior margin of the rostrum and by the ratio of the adanal setae (setae *ad*<sub>2</sub> more than twice as long than *ad*<sub>1</sub>).

**D e r i v a t i o n o m i n i s :** After the country of origin of this species.

### **Pteroripoda perennis** sp. n.

**M a t e r i a l e x a m i n e d :** Holotype: Sab-82/21, 2 paratypes from the same sample. Holotype and 1 paratype: MHNG and 1 paratype (1496-PO-94): HNHM.

**M e a s u r e m e n t s . -** Length of body: 369–396 µm, width of body: 212–226 µm.

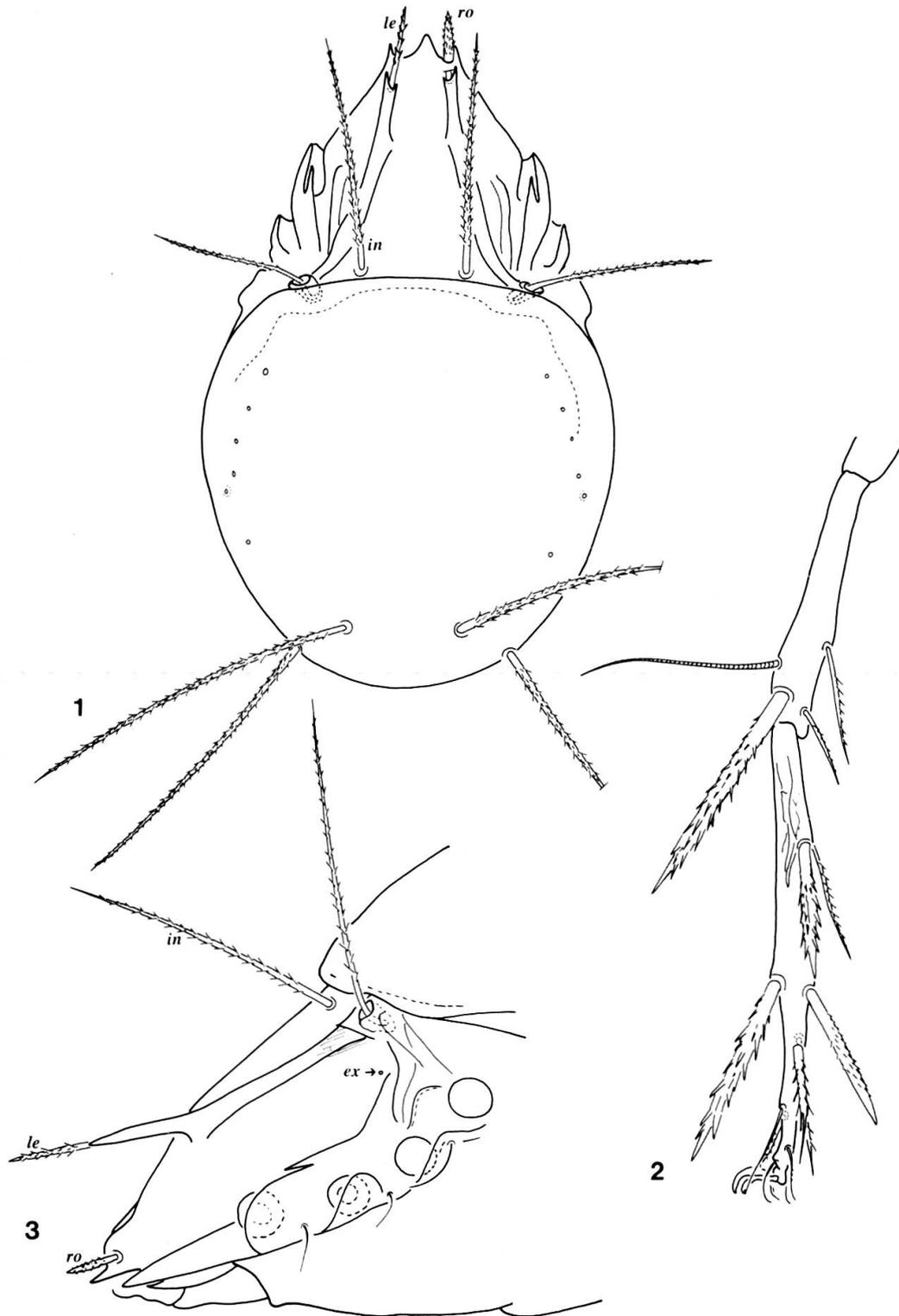
**P r o d o r s u m :** Rostrum rounded, lamellae running marginally, lamellar setae arising on its distal end. Rostral setae arising on small tubercles, shorter than the lamellar setae, interlamellar setae the longest of all. All smooth and simple. Sensillus completely covered by the pteromorphae (Fig. 7), its head clavate and with a clearly spiculate distal half (Fig. 13).

**N o t o g a s t e r :** Surface ornamented by fine sculpture consisting of shallow alveoli, perceptible only in lateral view. Ten pairs of smooth, fine notogastral setae, their distal end flagellate or filiform. Four pairs of small sacculi and five pairs of lyrifissures present, lyrifissure *ih* and *ips* situated laterally (Fig. 9) between *p*<sub>2</sub> and *p*<sub>3</sub>.

**L a t e r a l p a r t o f p o d o s o m a :** Pedotecta I and II–III small, discidium hardly observable. Sejugal region with some well sculptured lath. Circumpedal carina strong and long, but not reaching the lateral margin of the ventral plate. Prodorsum laterally (Fig. 10) with a fine polygonal sculpture.

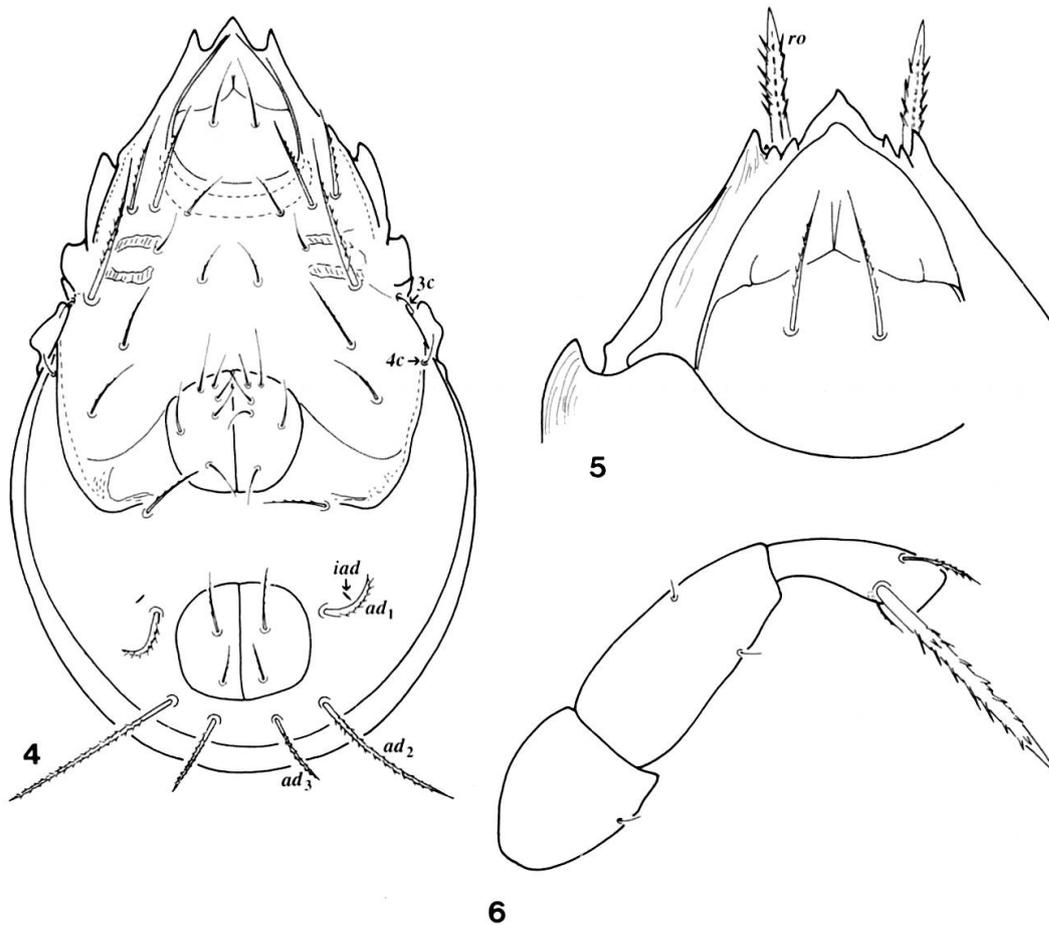
**V e n t r a l r e g i o n s :** Epimeral surface smooth. Apodemes well developed, *ap*<sub>2</sub> and *ap. sej.* long, directed toward the genital aperture but ending in a short, transversal lath close to it. Epimeral setal formula: 3 – 1 – 2 – 1 (Fig. 8). Circumpedal carina strong and long, but not reaching to the lateral margin of the ventral plate. This plate punctate marginally with an indistinct sculpture, consisting of fine wrinkles. Anogenital setal formula: 4 – 0 – 2 – 3. All setae in this region short, simple and filiform, setae *ad*<sub>3</sub> arising in preanal position. Lyrifissure *iad* mostly in paraanal position, sometimes visible also in inverse apoanal position.

<sup>7</sup> HAMMER (1980) compared her species (*A. dentata* Hammer) to *Ceratoppia crassiseta* Balogh & Mahunka, 1967, but did not unambiguously establish the new combination which I propose therefore: *Austroceratoppia crassiseta* (Balogh & Mahunka, 1967) comb. n.



FIGS 1-3.

*Austroceratoppia sabahna* sp. n. – 1: body in dorsal view, 2: tarsus and tibia of leg IV, 3: prodorsum in lateral view.



FIGS 4-6.

*Austroceratoppia sabahna* sp. n. – 4: body in ventral view, 5: mental region, 6: trochanter, femur and genu of leg IV.

**Legs:** All legs tridactylous, heterodactyly present. All tarsi "compressed", after the solenidium steeply arching to claws. Setae (*tc*), (*it*) and (*u*) with a dilated, round distal end. Some setae are absent, e.g. seta *s* of tarsus I (Fig. 11), seta *v*' of tibia I, seta *l'* of genu IV. Setal formulae of legs:

I: 1 – 5 – 2+1 – 3+2 – 15+2 – 3

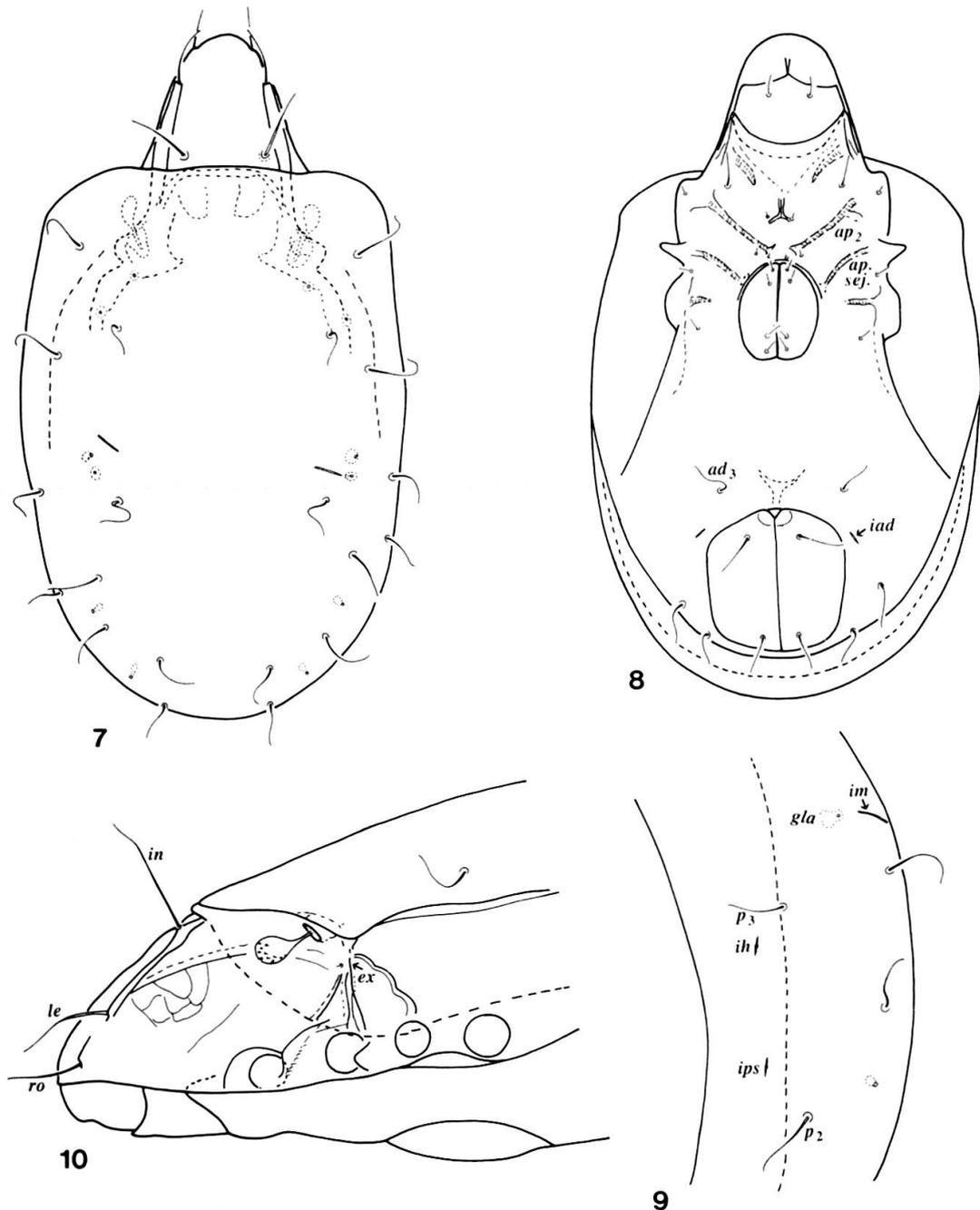
IV: 1 – 2 – 1 – 3+1 – 10 – 3.

Solenidium  $\omega_2$  characteristically curved. Solenidia  $\phi$  of tibia I arising on a long protuberance. Femur of leg II (Fig. 14) very broad, with a wide blade-like formation ventrally, bearing 5 setae like the femur I (Fig. 12).

**Remarks:** The genus *Pteroripoda* Balogh & Mahunka, 1974 was described from Cuba (collected in the Sierra Maestra at 1730 m). Heretofore only the type species has been known. On the basis of the main characters (see also GRANDJEAN 1956) (epimeral and anogenital setal formulae, the position of the adanal setae, the form of apodemes etc.) the present new species belong without doubt to this genus (AOKI &

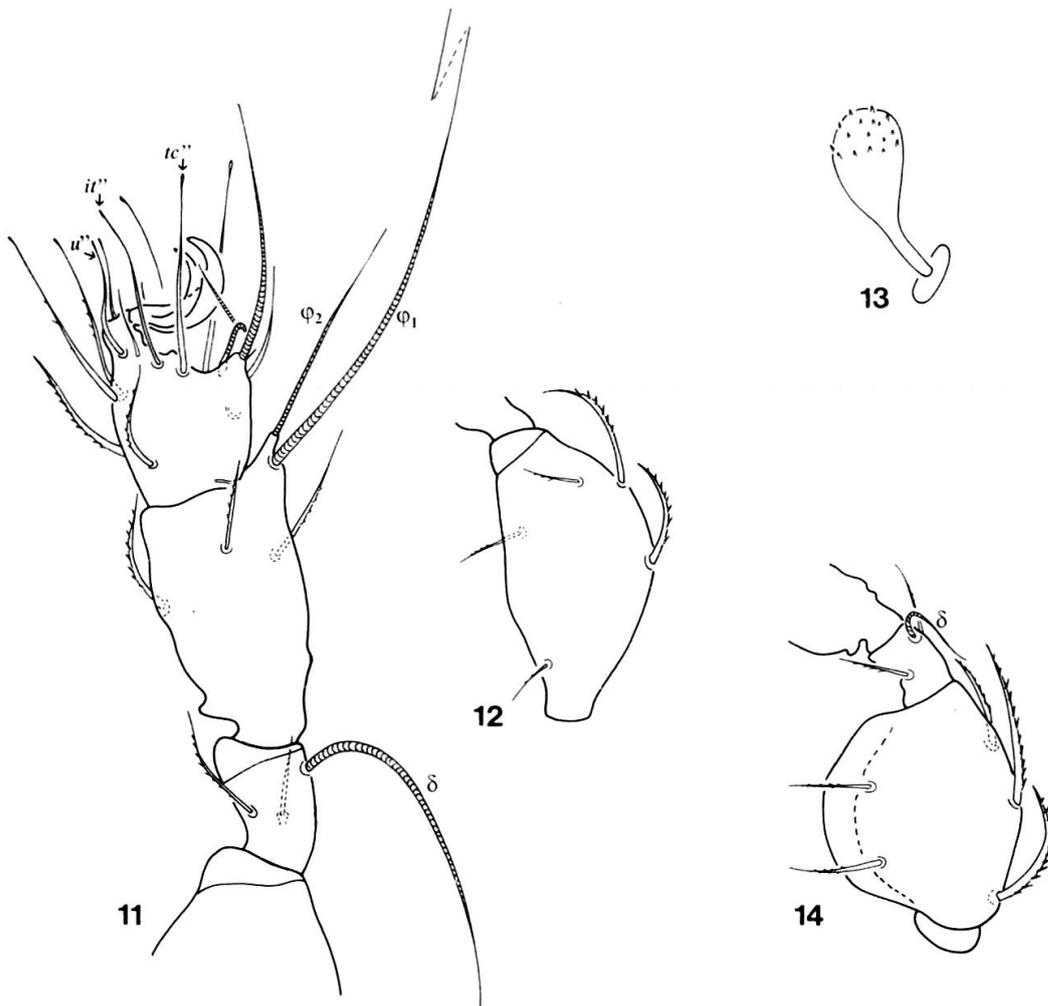
OHKUBO 1974, BALOGH & BALOGH 1984). It differs from the type species (*P. minutissima* Balogh & Mahunka, 1974) by the form of the pteromorphae and the sculpture of the notogaster.

*Derivat o n o m i n i s*: *perennis* (latin = persistent) in view of the remarkable altitude of the locus typicus (near to 4000 m).



FIGS 7-10.

*Pteroripoda perennis* sp. n. - 7: body in dorsal view, 8: body in ventral view, 9: lateral part of podosoma, 10: lateral part of notogaster.



FIGS 11–14.

*Pteroripoda perennis* sp. n. – 11: genu, tibia and tarsus of leg I, 12: femur of leg I, 13: Sensillus, 14: femur of leg II.

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