

## Three new *Cavernocepheus* species (Acari, Oribatei: Otocepheidae) from Mexico

By  
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**Abstract.** Three new oribatid species of the genus *Cavernocepheus* are described from Mexico: *C. acutus*, *C. fusifer* and *C. furcatus* spp. n.

J. BALOGH, A. BORHIDI, S. MAHUNKA and J. G. PALACIOS-VARGAS have proposed a project with the title: „The exploration of the oribatid fauna of Mexico”. This project was accepted by both the Mexican CONAYT and the Hungarian OMFB, and was documented in a bilateral agreement. The Mexican leader of the theme is Dr. PALACIOS-VARGAS, university lecturer, the leader of UNAM Laboratory of Microarthropods, and the participants are the researchers and postgraduate students of the laboratory. The Hungarian leader of the project is Dr. BORHIDI, university lecturer (JPTE, Department of Botany, Pécs), DR. J. BALOGH, professor emeritus (ELTE, Budapest), Dr. P. BALOGH (Animal Ecology Research Group of the Hungarian Academy of Sciences, Budapest) and Dr. S. MAHUNKA, vice director (Hungarian Natural History Museum, Budapest).

In a very rich material collected by PALACIOS-VARGAS in Mexico three new species belonging to the genus *Cavernocepheus* J. BALOGH & MAHUNKA, 1969 were discovered. The genus is known from Manaus, Brazil, the single specimen of the type species, *C. monstruosus* J. BALOGH & MAHUNKA, 1969 was collected from litter of a tropical rain forest. Two further specimens of the same species were then found in Costa Rica (MAHUNKA, 1982).

### *Cavernocepheus acutus* sp. n.

(Figs. 1-3)

**Measurements.** Length 476-586  $\mu\text{m}$ , width 230-303  $\mu\text{m}$ .

**Prodorsum.** Rostral and lamellar setae short, of the same length, originated near each other. Interlamellar setae longer, their apical half sparsely ciliate. Sensillus setiform, smooth, pointed, directed first outwards then inwards (Fig. 2). Lamellae slightly convergent with short prelamella. Bothrydia connected with an irregularly undulating line.

**Notogaster.** Dorsosejugal region with a deep hollow occupying anterior part of notogaster, and with two broad humeral protuberances. There are median lines, originating at the irregularly undulating transversal line, disappearing at the half length of

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notogaster. Ten pairs of medium long, smooth and setiform notogastral setae. Setae *ta* originating near anterior margin of humeral protuberance (Fig. 1).

Ventral side. Epimeral setal formula: 3-1-3-3. Epimeral setae short, of the same length. Three pairs of genital setal alveoli. One pair of aggenital, two pairs of anal, three pairs of adanal setae (Fig. 3).

Legs monodactyle.

Material examined. Colotlipa, Guerrero State, Mexico, 16. October 1983, ex litter; coll. PALACIOS.

Remarks. See after the descriptions.

Derivatio nominis. Named after the pointed sensillus.

### *Cavernocephus fusifer* sp. n.

(Figs. 4-5)

Measurements. Length 476-480  $\mu\text{m}$ , width 189  $\mu\text{m}$ .

Prodorsum. Rostral lamellar and interlamellar setae short, about of the same length, smooth. Lamella long, almost parallel, with very short prelamella. Sensillus with slightly dilate head, smooth.

Notogaster. Dorsosejugal hollow short with divergent sides. Humeral protuberances almost triangular. Median lines of notogaster originating at the anterior margin of humeral protuberances, joint and disappear at the half length of notogaster. Ten pairs of smooth, pointed notogastral setae. Setae *ta* originated far from anterior margin of humeral protuberance (Fig. 4).

Ventral side. Epimeral setal formula: 3-1-3-3. Epimeral setae short. Three pairs of genital, one pair of aggenital, two pairs of anal, three pairs of adanal setae (Fig. 5).

Legs monodactyle.

Material examined. Coestalostoc, Puebla State, Mexico, 13. February 1991, ex litter; coll. PALACIOS.

Remarks. See after the descriptions.

Derivatio nominis. Named after the dilated sensillus.

### *Cavernocephus furcatus* sp. n.

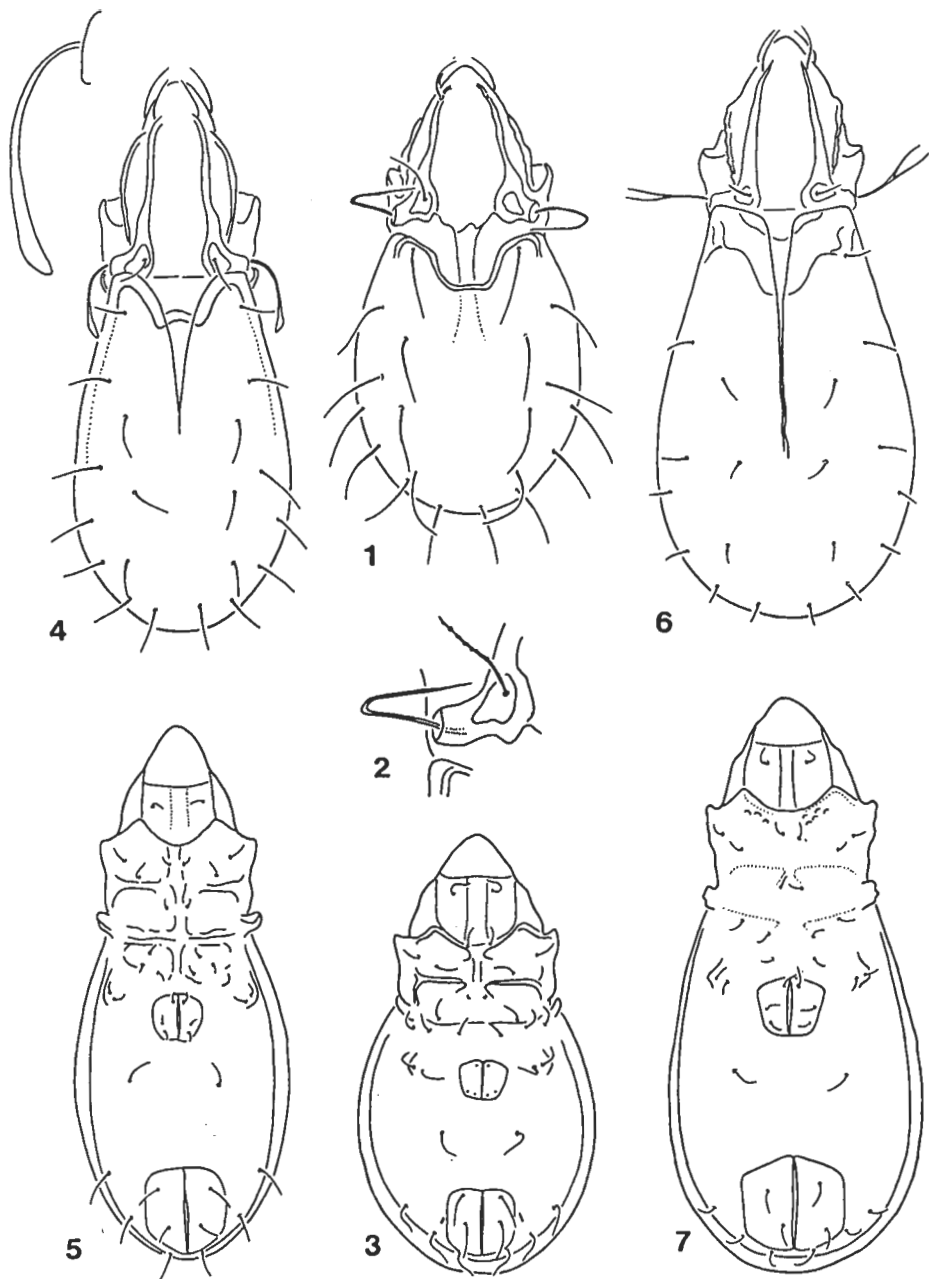
(Figs. 6-7)

Measurements. Length 623  $\mu\text{m}$ , width 271  $\mu\text{m}$ .

Prodorsum. Prodorsal setae short and smooth. Lamellae long, parallel, with short converging prelamellae. Sensillus setiform, medium long, about at the half length bifurcate with two long branches.

Notogaster. Dorsosejugal hollow covered by the humeral protuberances. Humeral protuberances almost squared; anterior margin straight with long, straight parallel sides; disappearing at the niveau of notogastral setae *ms*. Notogaster elongated; at the anterior margin the narrowest, then gradually dilated and at niveau of the notogastral setae *ms* the broadest. Notogastral setae short, fine, smooth. Setae *ta* far from anterior margin of humeral protuberance but close to its lateral margin. Setae *ta* far anterior: distance *ta-te* twice as long as distance *te-ti* (Fig. 7).

Ventral side. Epimeral setal formula: 3-1-3-3. Epimeral setae short. There are each 3 to 5 evanescent foveolae at the anterior margin of epimeral. Three pairs of genital, one pair of aggenital, two pairs of anal and three pairs of adanal setae (Fig. 7).



Figs. 1-7. 1-3. *Cavernocephalus acutus* sp. n. 1: dorsal view, 2: sensillus, 3: ventral view. - 4-5. *Cavernocephalus fusifer* sp. n. 4: dorsal view, 5: ventral view. - 6-7. *Cavernocephalus furcatus* sp. n. 6: dorsal view, 7: ventral view

Legs monodactyle.

Material examined. Catemaco, Veracruz State, Mexico, 28. August, 1983, ex litter; coll. PALACIOS.

*Key to the species of the genus Cavernocephus*

- 1 (2) 12–13 pairs of notogastral setae present; notogastral setae flagellate. – Brazil, Amazonia: *monstruosus* J. BALOGH & MAHUNKA, 1969
- 2 (1) 10 pairs of setiform notogastral setae.
- 3 (4) Sensillus bifurcate; dorsosejugal hollow covered by the humeral protuberances. – Mexico: *furcatus* sp. n.
- 4 (3) Sensillus not furcate: the median third of dorsosejugal hollow non covered by the humeral protuberances.
- 5 (6) Median lines of notogaster originating at the irregularly parallel, undulating transversal line between the bothrydia: sensillus setiform, pointed; notogastral setae long, setae *ti* as long as distance *ta–ti*. – Mexico: *acutus* sp. n.
- 6 (5) Median lines of notogaster originating at the inner margin of humeral protuberance, convergent and fused at the niveau of setae *ti*; sensillus with slightly dilated end; notogastral setae short, distance *ta–ti* more than twice as long as setae *ta*. – Mexico: *fusiger* sp. n.

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