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Achipteria longisetosa sp. n. – a new oribatid mite species from Georgia (Acari, Oribatida)

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(With 1 figure)

Abstract

A new oribatid species from the Georgian subtropical region Adjara, *Achipteria longisetosa* sp. n., is described. The new species belongs to a small species group, together with *A. nitens* (Nicolet, 1855), *A. italica* Oudemans, 1914 and *A. holomonensis* Cancela da Fonseca & Stamou, 1987, which is distinguishable from several other congeners mainly by long notogastral setae. *A. longisetosa* sp. n. differs from the other cited *Achipteria* species in a smaller body size and in the lack of a long free tip of the tutorium.

Introduction

Within a scientific research program on soil fauna of the subtropical region Adjara in West Georgia, a new species of the genus *Achipteria* Berlese, 1885, was found. The taxon was compared with several members of the genus recorded from the region, as well as other species known mainly from the Palaearctic. The genus contains worldwide about 35 described species, about 25 of these occur in the Palaearctic region. Normally, the notogastral setae in *Achipteria* species are very short, often less than 15 μm , in the shoulder area less than 30 μm . As far as we know, only three Palaearctic species have notogastral setae with more than 100 μm , at least in the shoulder area. The new species of the genus *Achipteria* can be well separated from the other species with long notogastral setae by additional characters.

Description

Achipteria longisetosa sp. n.

(Fig. 1)

DIAGNOSIS. Lamellar cusp with acute lateral tooth. Interlamellar setae long. Tutorium with very short tip. Pedotectum I with small tooth. Sensillus long, head rounded. Sacculi well discernible. Anterior setae of notogaster very long (100-130 μm); body length 450-475 μm .

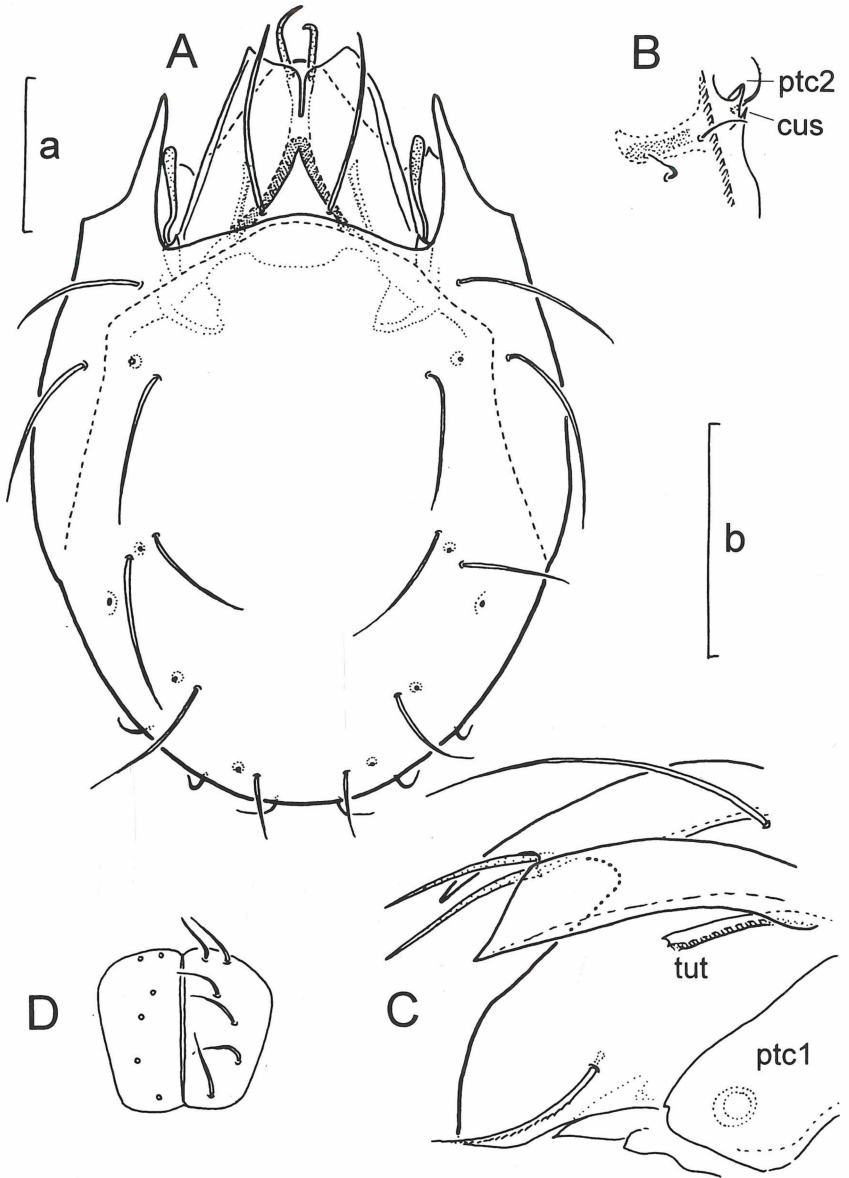


Fig. 1. A) dorsal aspect of *Achipteria longisetosa* sp. n. B) ventral view of part of epimeres with custodium and pedotectum 2. C) lateral view of prodorsum. D) genital plates. (scale a: 100 μ m in fig. 1A; scale b: 100 μ m in figs 1B-D. cus: custodium; ptc1, ptc2: pedotectum 1 resp. 2; tut: turtorium).

General characters. Length of body: 450-475 µm. Colour: dark reddish-brown. Cuticle smooth.

Prodorsum. Lamellar cusp with acute lateral tooth, anterior border slightly concave. Lamellar setae of median length inserted below the inner edge of cusps (Fig. 1A). Sensillus with long stalk, head slender claviform. Rostrum covered by cusps. Interlamellar setae long, ± reaching the tip of the rostrum. Pedotectum I with short tooth. Tutorium short, without prolonged free tip (Fig. 1C).

Notogaster. Anterior border only slightly arched anteriorly, with the usual sharp projections of pteromorphs, distal edge of pteromorph rounded. Clear spot indistinct. Four pairs of sacculi well discernible. 10 pairs of notogastral setae, 6 pairs in anterior and dorsal positions very long (90-130 µm), thin, smooth, posterior notogastral setae remarkably smaller (Fig. 1A).

Ventral region. Epimeres with moderately long setae, with the normal setation formula 3-1-3-3. Anogenital chaetotaxy: 6 *g*, 1 *ag*, 2 *an*, 3 *ad*; the genital setae are about 20 µm long (Fig. 1D). The discidium has a short and acute custodium tip (Fig. 1B).

All legs have 3 claws.

TYPE LOCALITY. West Georgia, (41°30'45" E, 41°43'15" N), subtropical region Adjara, 30.08.2001, The Machakhela Ravine, a mixed wood with *Castanea sativa*, *Quercus dschorochensis*, *Carpinus orientalis*, *Taxus bacata*; undergrowth with *Buxus colchicus*, *Corylus avellana*, *Smilax excelsa*. 68 m a.s.l.

TYPE MATERIAL. Altogether four specimens. Holotype and paratype (females) are deposited in the collection of the Laboratory of Invertebrate Animals of the Zoological Institute, Georgian Academy of Sciences; one paratype in the Laboratory of Soil Zoology and Ecology, Institute of Biology, Free University Berlin and in the Zoological Museum Hamburg (ZMH Acc. No. A31/03).

ETYMOLOGY. The species name *A. longisetosa* sp. n. refers to the long notogastral setae.

Discussion

The most important diagnostic characters of *A. longisetosa* sp. n. are: very long notogastral setae, tutorium without long free tip, body length 450-475 µm.

There are only three *Achipteria* species described with long notogastral setae, these are *A. nitens* (Nicolet, 1855), *A. italica* Oudemans, 1914 and *A. holomonensis* Cancela da Fonseca & Stamou, 1987. *A. nitens* (as redescribed by van der Hammen 1952 and Perez-Iñigo 1993), *A. italica* (as redescribed by Oudemans 1927, Shaldybina 1975 and Cancela da Fonseca & Stamou, 1987) and *A. holomonensis* have only two pairs of very long setae in the pteromorphal region instead of six pairs of prolonged setae of

the new species; all three reference species have very long free tutorial tips which reach the rostral border or even are longer with crosswise tips. The bodies are longer: *A. nitens* with 600-780 µm, *A. italica* with about 483-546 µm, *A. holomonensis* with 512-556 µm. *A. nitens* (own observation) and *A. holomonensis* lack a distinct custodial tip at the discidium. *A. italicus* (after Cancela da Fonseca & Stamou 1987: Fig. B3) has a very large custodium tip; *A. longisetosa* sp. n. has a small one (Fig. 1D).

A. sellnicki van der Hammen, 1952 (as redescribed by Sellnick 1960 and Shaldybina 1975; identical with „*A. nitens*“ sensu Willmann 1931) shows a similar tutorialium without a long free tip (= cusp of tutorialium), as described above for *A. longisetosa* sp. n., but *A. sellnicki* differs by short notogastral setae and a body length about 725 µm.

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Zusammenfassung

Eine neue Art der Oribatida aus der subtropischen Region Adjara in Georgien, *Achipteria longisetosa* sp. n., wird beschrieben. Die Art gehört zusammen mit *A. nitens*, *A. italica* und *A. holomonensis* zu einer kleinen Artengruppe, die sich entgegen vielen anderen Arten der Gattung durch ihre langen Notogasterborsten auszeichnet. *A. longisetosa* sp. n. unterscheidet sich von den genannten anderen Arten der Gruppe durch kleinere Körpergröße und das Fehlen einer langen freien Spitze des Tutoriums.

References

- Cancela da Fonseca, J. P. & Stamou, G. P., 1987: About a new species of Oribatid mites from the Holomon forest, Greece: *Achipteria holomonensis* n. sp. (Acarina, Oribatida). – *Acarologia*, **28**: 91-95. Paris.
- Hammen, L. van der, 1952: The Oribatei of the Netherlands. – *Zool. Verh. Leiden*, **17**: 1-139. Leiden.
- Oudemans, A. C., 1927: Notizen über Acari, 27. Reihe (Oribatidae). – *Arch. Naturg.*, **91** (A9): 120-147. Berlin.
- Perez-Iñigo, C., 1993: Acari: Oribatei, Poronota. – *Fauna Iberica.*, *Mus. Nac. Cien. Natur.*, **3**: 1-320. Madrid.
- Sellnick, M., 1960: Formenkreis: Hornmilben, Oribatei. – *Die Tierwelt Mitteleuropas*, **4** (3. Lief., Ergänzung): 45-134. Leipzig.

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Shaldybina, E. S., 1975: Achipteriidae. – In: Ghilarov, M. S. & Krivolutski, D. A. (eds) – *Opredelitel' obitajuschtschich w potschwe kleschtschej. Sarcoptiformes*. Izd. Nauka, 338-346 pp. Moskwa. [in Russian]

Willmann, C., 1931: Moosmilben oder Oribatiden (Cryptostigmata). – *Die Tierwelt Deutschlands*, **22** (V): 79-200. Jena.

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