

DESCRIPTION OF A NEW WATER MITE SPECIES OF THE GENUS *UNIONICOLA* HALDEMAN (ACARIFORMES, UNIONICOLIDAE)

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ABSTRACT: A description of the male of a new water mite, *Unionicola expansipalpis* from Ethiopia is presented.

KEY WORDS: Unionicolidae, *Unionicola expansipalpis*, water mite, new species.

INTRODUCTION

This paper describes the male of a new water mite species, *Unionicola expansipalpis*, from the Ethiopian lake Tana. The nomenclature of idiosomal setae is given after Tuzovsky (1987). The following abbreviations are used: P 1–V, pedipalp segments (trochanter, femur, genu, tibia and tarsus); I Leg 1–6, first leg, segments 1–6 (trochanter, basifemur, telofemur, genu, tibia and tarsus) i.e. III Leg 4 = genu of third leg; n — is the number of specimens measured. All measurements are given in μm . The type material is deposited in the collection of the Institute for Biology of Inland Waters (Borok, Russia).

Subfamily Unionicolinae Oudemans, 1909

Unionicola (*Armatax*) *expansipalpis* Tuzovskij, sp.n.

Figs. 1–3.

Description of male. Body somewhat flattened dorsoventrally. Integument soft and smooth. Dorsum with 2 pairs of muscle attachment platelets (Fig. 1 a). Anterior pair of platelets relatively large, longitudinal; posterior platelets oval or circular and considerable smaller than anterior ones. Trichobothria Fp and Oi without glandularia, other dorsal setae associated with glandularia. Setae Fch (Fig. 1 b) thicker than other idiosomal setae. Setae Vi longer than other proterosomal ones. Excretory pore (Fig. 1 c) longitudinal, placed dorso-caudally. Sclerites, bearing seta and glandularia Ci (Fig. 1 d), larger than other dorsal ones.

Anterior and posterior coxal groups divided by rather wide interspace (Fig. 1 e). Apodemes of first coxal group relatively short and not extending posteriorly to anterior edge of third coxae. Suture line between third and fourth coxal plates incomplete and curved, medial end of suture line directed to anterior edge of third coxal plate. Posterior end of first coxal plates with two short unequal processes: lateral process with oblique tip and thin seta (Fig. 1 f), medial process pointed and without seta. Lateral parts of second and third coxal plates extended into long double-pointed processes, lat-

eral processes of second coxal plates slightly longer than lateral processes of third coxal plates. Fourth coxal plates with a short projection on medial portion of posterior edge. Sclerites, bearing seta and glandularia Pe, fused with posteromedial margin of fourth coxal plates. Surface of all coxal plates punctate.

Genital plate (Fig. 1 g) wider than long, its anteromedian portion well developed.

Gonopore long and rather wide. Genital plate with 6 subequal acetabula and 8 unequal setae on each side, posteromedial genital seta considerable longer than other genital ones. Setae Pi without glandularia, other idiosomal ventral setae associated with glandularia. Sclerites bearing setae and glandularia Le larger than other ventral sclerites.

Pedipalps (Fig. 2 a) short and wide, first three segments and proximal portion of tibia expanded dorsoventrally. Trochanter of pedipalps without setae. Pedipalpal femur with 2 spine-like proximal setae and 2 thin distal setae. Pedipalpal genu with 1 lateral seta and 1 dorsodistal one. Pedipalpal tibia strongly tapering distally, with 2 ventrolateral tubercles near middle of segment (each has thin seta), 1 short ventrodiscal tubercle (with short, blunt spine), 1 distolateral pointed spine (tip of which directed to ventral edge of segment), and 1 thin distolateral seta. Tibia of second pedipalp (Fig. 2 b) without ventrodiscal spine. Pedipalpal tarsus with long proximal solenidion, 3 short unequal pointed spines distally to middle of segment, with large dorsodistal spine, and 5 thin setae.

Leg I (Fig. 3 a) without swimming setae and shorter than legs II–IV. First four segments of leg I thicker than tibia and tarsus. Basifemur of leg I with small ventrodiscal protrusion bearing 2 unequal setae, telofemur with straight ventral margin and convex dorsal one. Genu of leg I tapering distally, tibia slightly thickened near middle of segment, tarsus cylindrical. Leg II–IV long, slender; all segments, except trochanter, cylindrical (Fig. 3 b–c). Legs II–IV with swimming setae. The number of swimming setae on legs II–IV is as follows:

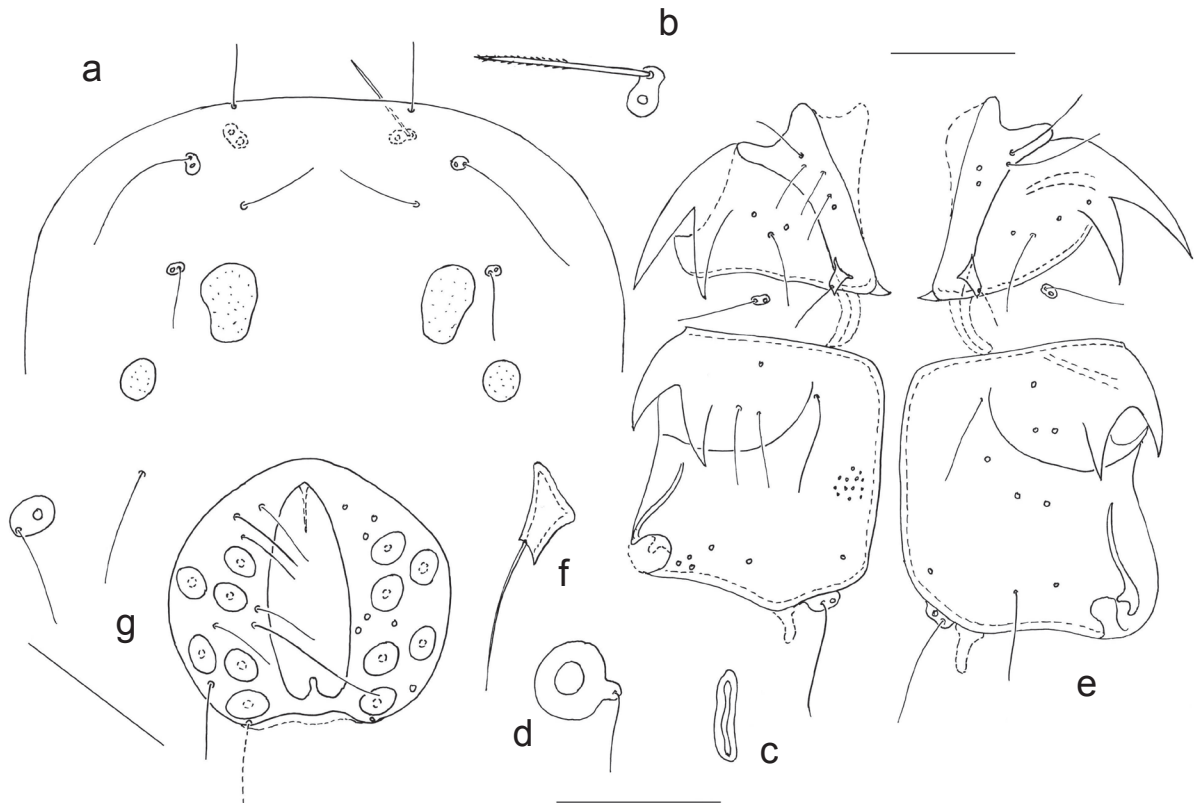


Fig. 1. *Unionicola expansipalpis*, male: a — anterior portion of dorsum, b — seta Fch, c — excretory pore, d — glandularia and seta Ci, e — ventral view, f — distolateral process with seta on coxa I, g — genital plate, seta Pi, seta and glandularia Le. Scale bars: a, e, g = 100; b, c, d, f = 50.

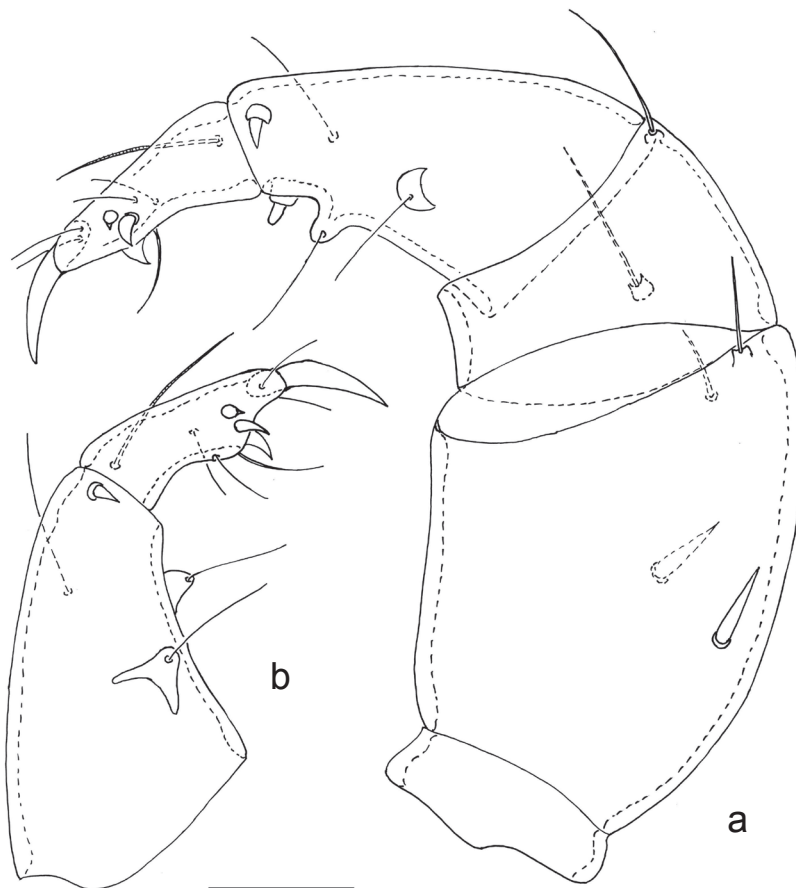


Fig. 2. *Unionicola expansipalpis*, male: a — pedipalp, b — pedipalpal tibia and tarsus. Scale bar: a, b = 50.

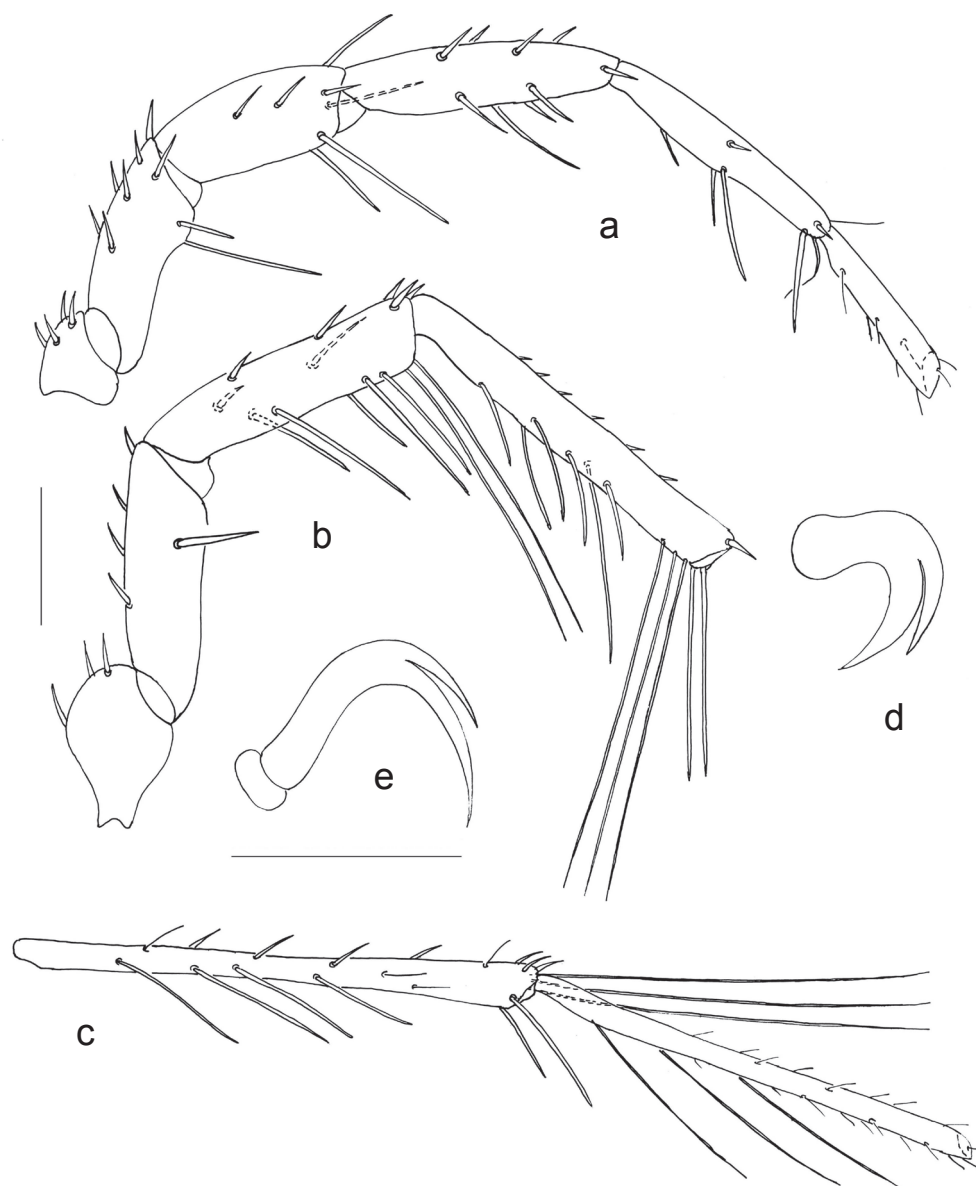


Fig. 3. *Unionicola expansipalpis*, male: a — leg I, b — trochanter, basifemur, telofemur and genu of leg IV, c — tibia and tarsus of leg IV, d — claw of leg I, e — claw of leg III. Scale bars: a, b, c = 100, d, e = 25.

leg II: 2 on tibia, leg III: 1 on telofemur, 5 on genu and 3 on tibia, leg IV: 2 on genu and 3 on tibia. Swimming setae usually placed in distal portion of segments, but on genu III 2 swimming setae located in proximal half of segment, and 3 swimming setae in distal half. Claws of all legs hook-like with 2 denticles, internal denticle longer than external one. Claws of leg I thick and relatively small (Fig. 3 d), claws of legs II–IV rather thin and large (Fig. 3 e).

Measurements (n=1). Length of body 510; length of setae Fch 60; length of coxae I+II 155, their width 115; length of coxae III+IV 215, their width 180; length of anterior dorsal platelets 65, their width 42; length of posterior dorsal platelets 25–30, their width 30–35; length of genital plate

138, width 156; length/height of pedipalpal segment (P 1–5): 24/108, 175/132, 78/115, 145/90, 75/36; length of leg segments: I Leg 1–6: 65, 130, 140, 190, 185, 130; II Leg 1–6: 60, 175, 190, 265, 288, 280; III Leg 1–6: 65, 145, 155, 210, 270, 230; IV Leg 1–6: 100, 145, 200, 260, 350, 320.

Type material. Holotype: male, slide 9407, Ethiopia, Tana lake, 16.11.2006, coll. A. Zhokhov (deposited in the Institute for Biology of Inland Waters, Borok, Russia).

Differential diagnosis. The new species is closely related to *Unionicola dentifera* Cook, 1966. The male of *U. expansipalpis* differs from *U. dentifera* by the following characters (characters states of *U. dentifera* follow Cook, 1966 and are given in parenthesis): the pedipalpal wide (slen-

der); the pedipalpal tibia strongly tapering distally (slightly); the posterior end of the first coxae with 2 unequal processes (with 2 subequal processes); the anterior ends of the genital plates are connected by a rather wide bridge (narrow bridge); the apodeme of coxae I+II not reaching the anterior margin of coxa III (reaching).

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