

*Stenotarsonemus paradoxus* n. sp.,  
a new species of the mite family Tarsonemidae  
(Acari: Prostigmata)

WOJCIECH MAGOWSKI

(With 6 figures)

Abstract

*Stenotarsonemus paradoxus* a new species is described and figured. It was found in a swamp near Kielce in Poland.

Methods

The specimen was obtained in a Tullgren-Berlese funnel and mounted in Hoyers medium. Description, illustrations and measurements were made with the help of a phase-contrast microscope. Applied terminology is based on LINDQUIST & SMILEY (1978) and KALISZEWSKI (1984). All measurements in this paper are given in  $\mu\text{m}$ .

*Stenotarsonemus paradoxus* n. sp.

Female-body length 300, width 146.

Gnathosoma: circular, little wider (36) than long (26). Palpi small, directed anteromedially, each with minute palpal seta. Basal levers distinct, cheliceral stylets inconspicuous. Dorsal pair of gnathosomal setae smooth, tapered, about 2,5 times longer than ventral pair. Postpalpal pair of setae reduced. Pharynx well sclerotized, 17,5 long and 5 wide.

Idiosoma-dorsal side (Fig. 1): elongate, 283 long and 146 wide, ellipsoidal, with dorsal side fine granulated. Propodosomal shield of subtrapezoidal form, about 3/4 as long as wide, with concave posterior margin and extensions where sensilli are inserted. Tracheal trunks relatively well sclerotized and developed, each with bag-like extension medially and bifurcated posteriorly.

Vertical setae  $v_1$  9,5 long, located a little posteriorly in relation to stigmatae, distance between their insertations 29,5. Sensillus 19 long, smooth roundish-elongate capitate. Scapular setae  $sc_2$  56 long, and distance between their insertations 43. Distance between insertion of  $sc_2$  and  $v_1$  nearly equal (31) to distance between insertations of  $v_1$  setae. Tergital setae  $c_1$  16 long, tapered but stouter and 1/6 longer than attenuated setae  $c_2$  (14). Distance between  $c_1$  48, between  $c_2$  117, i.e. about 2,5 times greater. Setae  $c_1$  and  $c_2$  located transversely, nearly rectilinearly, 34,5 to another. Setae  $d$  small, 7 long, inserted in distance 50 to another. Setae  $e$  and  $f$  short, tapered, slight. Setae  $e$

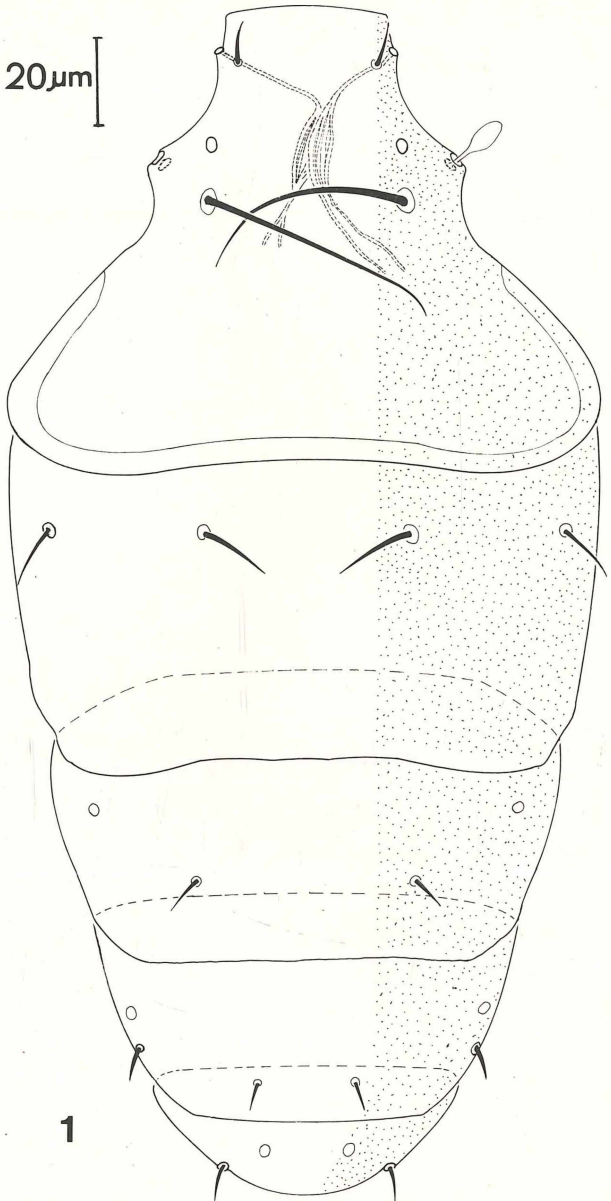


Fig. 1: *Steneotarsonemus paradoxus* n. sp., female, dorsal view.

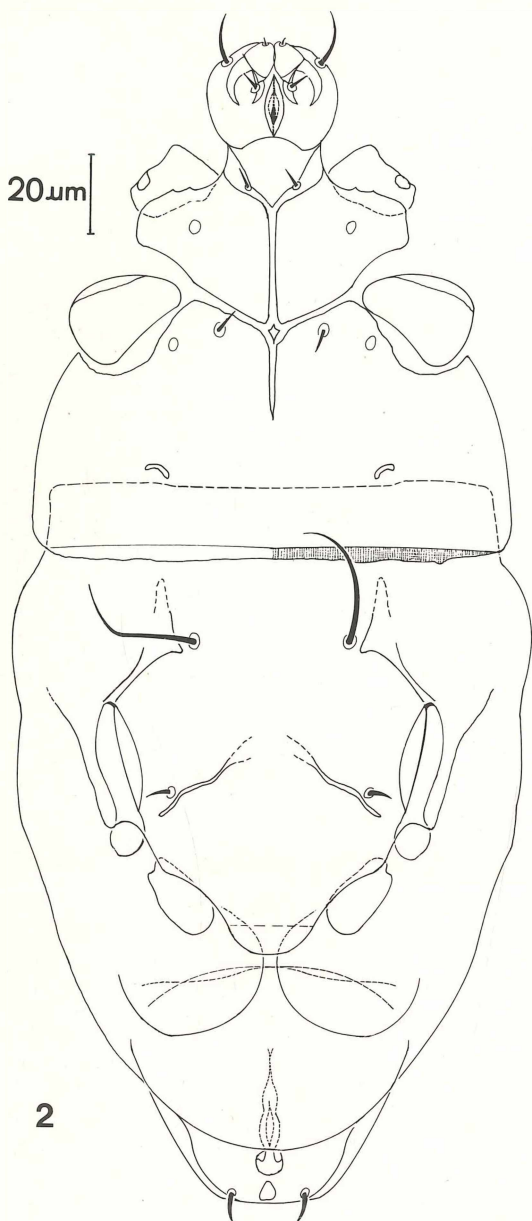


Fig. 2: *Steneotarsonemus paradoxus* n. sp., female, ventral view.

6,5 long, inserted more anteriorly than f (5,5 long). Distance between insertions of setae e 79, and between f 26. Setae h 10 long, inserted at distance of 36. All setae of dorsal side simple, smooth. Scapular and tergital pits present on propodosomal shield and D, EF and H tergites.

Ventral side (Fig. 2): propodosomal plate 94 long and 72 wide. Apodemes distinct, anteromedial apodeme conspicuously connected with apodemes I and II. Distance between lateral ends of apodeme I 26. Transverse apodeme reduced in the form of two short curved remnants. Apodemes III slightly curved extends anteromedially in relation to trochanteres III. Apodemes IV moderately shorter and softer than III, wave-form, inconspicuous in anteromedial part. Posteromedian apodeme fully reduced. Intertrochanters lobe - tegula little less than three times wider (21) as long (7,5).

Coxal setae 1a inserted at half length of apodemes I, and coxal setae 2a inserted slightly posteriorly to apodemes II. Both pairs short, slender and smooth. Coxal pairs of setae 3a long, attenuate, smooth, little shorter than the distance between them. Setae 3b short, slender, located anteriorly to middles of apodemes IV. Caudal setae ps 9 long, located in the end of opisthosoma. The anal aperture structures visible between insertations of setae ps.

Legs (Figs. 3-6) (measured without trochanters). Leg I: little shorter (56) than leg II (62) and leg III (73). Pretarsal claw of leg I relatively slender, curved apically. Claws on legs II and III paired, normally developed. Pulvilli distinct. Subunguinal seta u present on tarsi I, II and III, developed as short, thin rod with two or three indistinct teeth apically.

Chaetotaxy of leg I: 4-4-6(2  $\phi$ )+8(1  $\omega$ ). Tarsal capitate solenidion present, 7 long. Tibial sensory cluster developed classically as for genus, with solenidion  $\phi_1$  5,  $\phi_2$  5 and eupathid k 6 long. Tibial seta l' formed characteristically for species, moderately long, thin, clearly barbed. Genua seta d stout and also pilose. Femoral seta of leg I stout, relatively short.

Chaetotaxy of leg II: 3-3-4-6(1  $\omega$ ). Capitate solenidion  $\omega$  shorter (4 long) than spinelike seta pl'' (6 long).

Chaetotaxy of leg III: 1+3-4-5.

Leg IV 52 long. Tibiotarsus 9 long and femurogenu 5 times as long (43) as tibiotarsus. Seta v' whip-like, 84 long, less than 3 times longer than subapical seta tc'' (27). Genua distal seta v' 13 long, about twice longer than femoral one v' (6 long).

Male and larva unknown.

### Diagnosis

Female of the new species resembles strongly to female of *Steneotarsonemus spirifex* (MARCHAL, 1902) (SCHAARSCHMIDT 1959, KALISZEWSKI 1977). It differs from it by the following features:

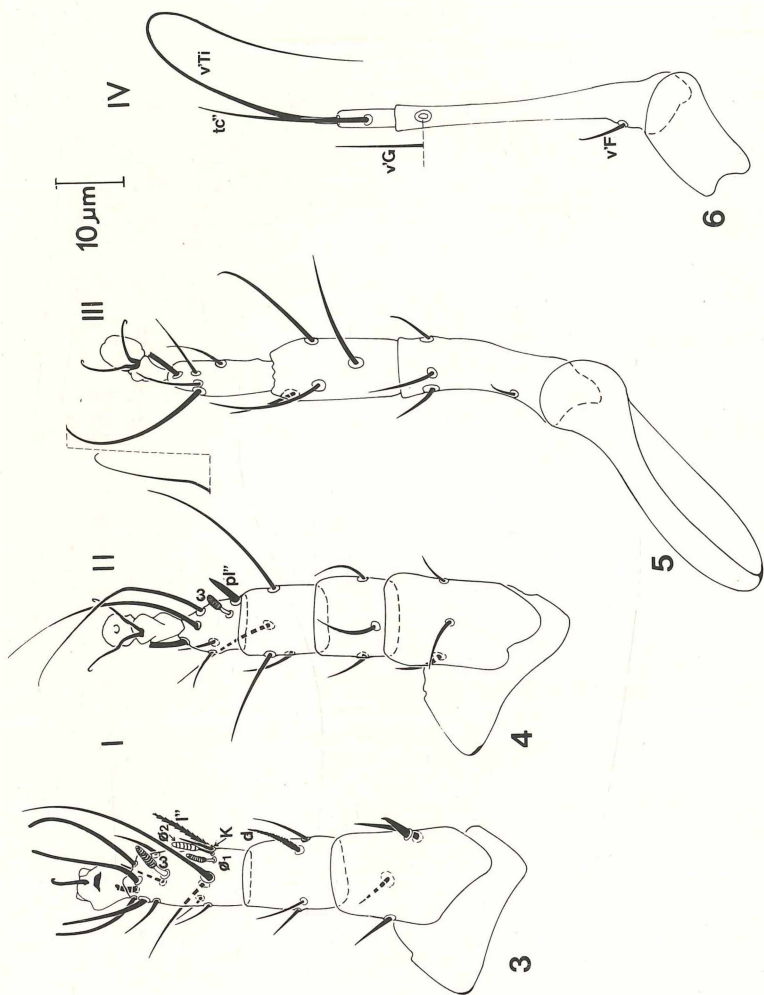


Fig. 3-6: *Steneotarsonemus paradoxus* n. sp., female, leg I (3), leg II (4), leg III(5), leg IV (6).

<i>St. paradoxus</i> n. sp.	<i>St. spirifex</i> (MARCHAL)
Dorsal side	
Setae $v_1$ do not reach anterior edge of propodosomal shield	Setae $v_1$ extends out of anterior edge of propodosomal shield
Sensillus truncate, dully ended	Sensillus finely spiculate, ellipsoidal
Setae $c_2$ located on same level as $c_1$	Setae $c_2$ located anteriorly to $c_1$
Setae $c_2$ shorter than $c_1$	Setae $c_2$ longer than $c_1$
Ventral side	
Setae 1a subequal 2a	Setae 1a shorter than 2a
Setae 3b inserted anteriorly to apodemes IV	Setae 3b inserted on apodemes IV
Legs	
Spine $pl''$ II longer than solenidion $\omega$ II	Spine $pl''$ shorter than solenidion $\omega$ II
Femurogenu IV nearly 5 times as long as tibiotarsus IV	Femurogenu IV nearly 3 times as long as tibiotarsus IV

#### Type material and habitat

The female holotype was collected on August 26, 1982 in the swamp "Torfowisko Stopiec Szlachecki" near Kielce in Poland; sample from grass (*Carex* sp.) and moss (*Sphagnum* sp.), A. KAZIMIERSKI leg.

Holotype mounted in slide No. A38/85 and deposited in the Zoologisches Institut und Zoologisches Museum der Universität Hamburg, Bundesrepublik Deutschland.

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Address of the author:

WOJCIECH MAGOWSKI, Department of Animal Morphology, Institute of Biology, A. Mickiewicz University, Szamarzewskiego 91, 60- 569 Poznań, Poland.

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Autor(en)/Author(s): Magowski Wojciech

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