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NEW ANYSTID MITE SPECIES (TROMBIDIFORMES, PROSTIGMATA, ANYSTIDAE) FROM UKRAINE

Tarsolarkus praeceps Pogrebyak sp. n. is described from the semiforest zone of Ukraine. Mites were collected from soil surface and cereals grasses of stepped slope.

Key words: *Tarsolarkus praeceps*, Anystidae, fauna, mites, external morphology, Ukraine.

Introduction

Norwegian acarologist Sig Thor made a description of *Tarsolarkus articulatus* (Thor, 1912), founded in moss of the seashore rocks at the Island of Senja, also near Bergen, Bremanger and Ljan (Oslo suburban). In addition he noted them in similar localities at riverside of subalpine areas of Pollfoss waterfall, Otta river (Gudbrandsdal valley, Oppland county). He made a firm decision for unknown reasons, that his collections should be destroyed after his death. Later, Oudemans redescribed this species (Oudemans, 1936) by his non-type materials from the Swedish continental Island Ön (near Strömsund, Jämtland Län). Some revision of this genus proposed by Otto (2000) based on his examinations of European mite collections and his previous works (Otto, 1999a, b). He included genus *Neotarsolarkus* with its species *Neotarsolarkus clypeatus* Kuznetsov, 1983 into the *Tarsolarkus*, finding no distinguish differences of new one. Also he concluded that *T. oudemansi* Barilo, 1984 is a junior synonym of *T. articulatus*. As for now there are 3 described species of *Tarsolarkus* known in the world: *T. articulatus* Thor, 1912 is known from European seashore and mountain areas; *T. longisetus* Barilo, 1984 — from the valley of Zaravshan river near Samarkand, Uzbekistan (Барило, 1984); *T. clypeatus* (Kuznetsov, 1983) from only two geographical points of Tajikistan, the valley of the river Yahsu, Kulob District and from mountain part of Faizobod District (Кузнецов, 1983). Otto (2000) has misspelled Tajikistan district town name with big Russian city Leningrad, and wrongly stated that this last species distributed in Russia. Mites of last two species were collected from shrubs, grasses and soil surface.

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Materials and methods

Two samples were collected from the Semiforest zone of Ukraine — Kyiv region, Boguslav district, neighborhood of the village Biyivtsi, stepped slope, soil surface and cereals grasses, latitude: 49°29'24.00"N, longitude: 31°01'09.70"E. This hilly region is the foothills of the Dnieper upland, near the river Ros. One slide marked c253c, August 19, 1990, consist 1F, one other marked 09060701/3, June 7, 2009, 1M. The materials are deposited in the mite collection of Zoological Museum, National Museum of Natural History NAS of Ukraine. Terminology and nomenclature of external morphology are followed on Otto (2000). All measurements are in micrometers.

Tarsolarkus praeceps Pogrebnyak sp. n.

Male and female are similar enough in chaetotaxy. Male differs by internal genitalia, length of genital flaps and more gracil seta set.

Body ellipsoid, 920–960 mkm length, 600–660 mkm width. Gnathosoma is connected with short neck which has fine transverse striation and adds 380–385 mkm (from neck to palptibia claws) to the general length of 1300–1350.

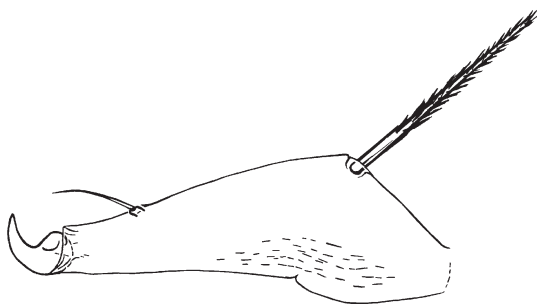
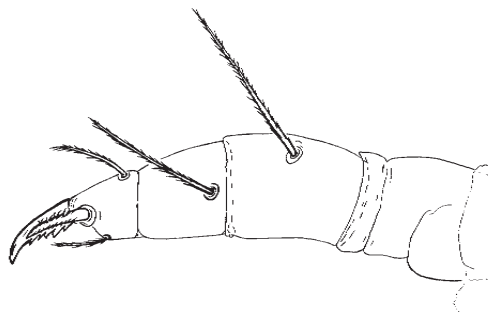
Dorsum (fig. 1a). Propodosoma orthotrichous, with one additional seta in the middle, characteristic for this genus. This unpaired seta slightly shorter (100–110) and thinner than the neighboring *sce* (100–120). Sensillae *vi* (80–90) and *sci* (100–110) moderately long, *sci* only slightly longer than *ve* (95–110). Sensillae slitley serrated, all other dorsal setae tomentous. Propodosomal shield weakly defined. Its edge visually limited by striation of cuticle in front of the sensillae *vi*, the side of the eyes and before of *c*-row setae. 4–5 neutrichous setae (85–115) between *c1*, *c1* (220–245) and *c2* (120–135) close together and located on the platelet. 6 neutrichous setae (90–120) between *d1*, *d1* (210–235) and attendant *ds* (90–100) close together and located on the platelet. Rear and side for the *ds* — 2 neutrichous setae (65–95). 4 neutrichous setae (100–120) between *e1* (200–225) and 1–2 more laterally (100–120). Rear and side for the neutrichous medial 1–2 setae more (80–100). The 2 neutrichous setae (110–120) between *fl* (160–195), shifted slightly forward. 1–2 neutrichous setae (105–110) more laterally and rear and side for them 1–2 setae (80–85) more. The only one neutrichous seta (95) between *hl* (140–150), shifted slightly forward, and 1 more laterally (95).

Venter (fig. 1b). Striated cuticle extends medially between the coxae of legs. Coxae adjacent pairs of legs also separated by striated cuticle. Forefront of coxa I 100–125 mkm. 13–14 tomentous setae (70–90) with pointed end on the coxa I. These setae are longer than those of other coxae. Terminally they are organized in the transverse row of 5 + 1 more seta separately. Medially 7–8 setae on coxa I. A pair of the same setae (70–75) in the base of coxa I on cuticle. Setae of coxae II–IV tomentous, with truncated ends. This feature distinguishes the described species from other known in which the ventral body setae are pointed. Forefront of coxa II is 200 mkm or above. Coxae II with 15–17 setae, 6 of them (55–85) in terminal tuft. One seta from terminal tuft (penultimate posterior) — macrochaeta (140). 9–11 shorter setae (40–70) medially on the coxa II. Forefront of coxa III is 240 mkm long. Coxae III with 18–20 setae, 5 of them (60–85) in terminal tuft. 13–15 truncated setae (35–70) medially and one thin macrochaeta (105–115) on the posterior edge of coxa III. Forefront of coxa IV is a bit shorter then 240 mkm. Coxae IV with 12–13 setae, 4 of them (60–70) in terminal tuft. Last posterior seta from terminal tuft (70–75) — macrochaeta — thinner and more pointed. 8–9 truncated setae (30–50) medially on coxa IV. Apodemes of



Fig. 1 a — dorsal view of male (arrow indicate unpaired seta that are diagnostic for the genus, setae marks mentioned in text); b — ventral view of male

Рис. 1 а — спинная сторона, самец (стрелка указывает на непарную щетинку, характерную для рода, обозначения щетинок см. в тексте); б — брюшная сторона, самец

*Fig. 2.* Chelicera*Рис. 2.* Хелицера*Fig. 3.* Palp (palptarsus omitted)*Рис. 3.* Пальпа (лапка пальп не показана)

coxae IV visible through the cuticle. They connect coxa IV medially forming keel which extends along the coxae III–IV. 10 pair of short tomentous truncated setae (35–50) between coxae IV and frontal part of genital opening. 6 pair of such setae (45–50) side of the genital valves together with just a bit longer *ag1* and *ag2*. Truncated setae (50–71) surround the located terminal anal opening (6–7 pairs of male or 3–4 pairs of female). 5–6 setae (30–45) on each anal valve ventro-terminal and a pair of more long (65–85) dorsal. Male genital opening is 205 microns in length. Two rows of short and very fluffed setae located on each genital valve flap. The external row is located in front of the valve and consists of 4–5 setae (40–50). Internal row runs along the entire flap and is formed in three cascade. The first stage of 10–12 setae (13–16), the second of 8–10, the third 6–7 (25–50 mkm in length). Internal genitalia has a specific butterfly-like shape, contains two pairs of large plumose setae of complex form, as well as three pairs of thin smooth setae (20–30) placed in frontal part on protractions. Striation of cuticle (approximately a line per microne density) creates a specific patterns rear for coxae IV, which are changed from the longitudinal to transverse apart of the genital flaps.

Gnathosoma. Chelicerae (190–200) with a longitudinal striation in the basal part (fig. 2). Their basal seta (105–110) tomentous and truncated, terminal one (35–40) — smooth. Chelicera clog 19 mkm in base and 20 high. Palp setae tomentous (fig. 3). Only one seta (120–125, 100) on the palpfemur (88) and palpgenu (60). Palptibia (min 33, max 49) with two setae (33, 35), and two strong claws in terminal position. Big claw (50) is armed with 2 rows of 5 teeth, smaller one (38–40) is equipped by 2 rows of 12–14 fine seta-like denticles. Palptarsus (80–85) with 23 setae. Basal tuft of 4 setae (43–45), one more (28–33) claw-like, bent at the base so that stretches along the tarsus, and is located next to the claws of palptibia. Palptarsus has two terminal tuft of 4 and 5 setae (28–50). One terminal seta longer than others (70). One minute solenidion is situated in the middle of dorso-lateral part of palptarsus. Hypostome (100 x 83) with 4 pairs of smooth setae on its venter side (fig. 4). They are on the small protrusions. Basal setae (40–43) longer about two times more than frontal (20–23). Peritremes linear, with a cellular structure of 8–10 cells.

Legs. Tarsal appendages are similar for all four legs, with a typical for this genus empodium, rounded, bulb-like, studded with a numerous tiny setoids. Tarsal claws with 2 rows of rather large denticles, a bit bigger for legs I, II (20 x 13) than for legs III, IV (16 x 9). Femora divided into basifemur and telofemur. Tarsi with pseudosegments

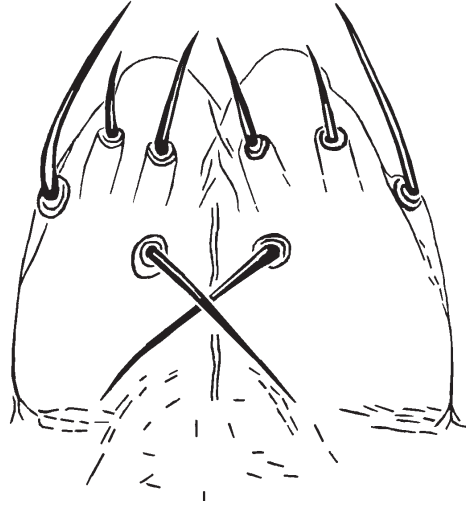


Fig. 4. Subcapitulum

Рис. 4. Субкапитулюм

which separate basal and terminal parts. Padding between the basal part of the tarsus and following pseudosegment wider than the next, resembles additional pseudosegment, with a weak striation.

Leg I. Visible length (without coxa, with tarsal claws) — 730 mkm. Trochanter (max 75–90, min 38–40) with 4 setae (75–123). Basifemur (85) with 10 setae, two ventral shorter (51, 53), one of which particularly thin. Telofemur (65) with 14 setae, one ventral shorter and thinner (51). 3–4 coarser and longer setae in the terminal tuft, the longest — 130 mkm. Genu (150) with 28–30 setae. 4–5 coarser and longer setae (max 86) in the terminal tuft, some other thinner macrochaetae (eupatidiums) (max 108). Tibia (158) with 30–32 setae, 3–4 coarser and longer setae (max 95) form the terminal tuft. Two little solenidia (10, 8) (one in depression) and tiny famulus form group in dorso-terminal part of tibia. Tarsus is 213 mkm long. Its basal part (38) with 16–18 setae. Small solenidium (10) and tiny famulus on the basal part of tarsus, second solenidium (8) is located on the neighboring pseudosegment. 7–8 pseudosegments. Terminal part of tarsus (18) with 17 setae. 5–6 coarser and longer setae in the terminal tuft (max 45–50), outstanced the tarsal claws and 2 shorter and more feathery setae ventrally.

Leg II. Visible length (without coxa, with tarsal claws) — 900 mkm. Trochanter (max 93, min 50–55) with 5 setae (88–110). Basifemur (88) with 10 setae, one ventral is thin and shorter (65). Telofemur (88) with 16 setae. 3–4 coarser and longer setae in the terminal tuft, the longest is 111 mkm. Genu (160) with 34 setae and 4–5 coarser and longer setae (max 90) form a terminal tuft, some other thinner macrochaetae (eupatidiums) (max 81). Tibia (208) with 30 setae, 4–5 coarser and longer setae (max 108) in the terminal tuft. Tiny famulus and two little solenidia (8, 5) (one in depression) close one another on dorso-terminal part of tibia. Tarsus 265–275 mkm long, with 22–24 setae. Basal part of tarsus (49) with small solenidium (8) and tiny famulus, second solenidium (5) on the next pseudosegment. 7–8 pseudosegments. Terminal part of tarsus (18) with 16–17 setae. Some setae coarser and longer (53–55) in the terminal tuft.

Leg III. Length — 960 mkm. Trochanter (max 88, min 50) with 5 setae (78–113). Basifemur (60) with 7 setae, telofemur (84) with 11, genu (155) with 25 (max 113), some other thinner macrochaetae (eupatidium) (max 77), tibia (235) with 38–40 setae (max 108). One little solenidion (6) in terminal part of tibia. Tarsus (310–320) with no solenidia. 10 pseudosegments on the tarsus. Basal part (44) with 20–22 setae, terminal one (13) with 8–9.

Leg IV. Length — 1130 mkm. Trochanter (max 133, min 88) with 3 setae (70–88). Basifemur (88) with 5–6 setae, telofemur (100) with 11, the longest — 165–185 mkm in length, genu (175–188) with 24–26, the longest terminal — 162 in length, some other thinner macrochaetae (eupatidium) (max 81), tibia (280) with 22 setae (max 122). Tarsus (370) with no solenidia. 10–11 pseudosegments on the tarsus. Basal part (71) with 19–20 setae, terminal one (18) with 9–10.

A few females and males of *Chaussieria domestica* (C.L. Koch, 1847) (Trombidiformes, Anystidae) are in the same samples with the new described.

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С.Г. Погребняк

НОВИЙ ВИД КЛЕЩЕЙ-АНИСТИД (TROMBIDIFORMES, PROSTIGMATA, ANYSTIDAE) ИЗ УКРАИНЫ

Tarsolarkus praeceps Pogrebnyak sp. n. описан с лесостепной зоны Украины. Клещи были отловлены на поверхности почвы и на злаковых травах остепненного склона.

Ключевые слова: *Tarsolarkus praeceps*, Anystidae, клещи, фауна, внешняя морфология, Украина.

С.Г. Погребняк

НОВИЙ ВИД КЛІЩІВ-АНИСТИД (TROMBIDIFORMES, PROSTIGMATA, ANYSTIDAE) З УКРАЇНИ

Tarsolarkus praeceps Pogrebnyak sp. n. описано з лісостепової зони України. Кліщі були здобуті на поверхні ґрунту та на злакових травах остепненого схилу.

Ключові слова: *Tarsolarkus praeceps*, Anystidae, кліщі, фауна, зовнішня морфологія, Україна.