Vestnik zoologii, **45**(1): e-23–e-27, 2011
DOI 10.2478/v10058-011-0003-8

UDC 595.422(477)

A MYRMECOPHILOUS MITE *MYRMOZERCON TAURICUS* SP. N. OF THE FAMILY LAELAPIDAE (ACARI, MESOSTIGMATA) FROM UKRAINE

V. A. Trach[1], A. A. Khaustov[2]

[1] *I. I. Mechnikov Odessa National University, Shampanskij al., 2, Odessa, 65058 Ukraine*
E-mail: listoed@rambler.ru
[2] *Nikita Botanical Gardens — National Scientific Center, Yalta, Crimea, 98648 Ukraine*
E-mail: alkhaustov@mail.ru

Received 7 July 2010
Accepted 18 December 2010

A Myrmecophylous Mite *Myrmozercon tauricus* sp. n. of the family Laelapidae (Acari, Mesostigmata) from Ukraine. Trach V. A., Khaustov A. A. — A laelapid mite *Myrmozercon tauricus* Trach et Khaustov, sp. n. collected from nests of ants *Crematogaster schmidti* (Mayr, 1853) (Hymenoptera: Formicidae) in Crimea (Ukraine) is described. The genus *Myrmozercon* Berlese, 1902 is recorded in Ukraine for the first time.

Key words: Laelapidae, *Myrmozercon*, new species, Crimea, Ukraine.

***Myrmozercon tauricus* sp. n. — новый вид мирмекофильных клещей семейства Laelapidae (Acari, Mesostigmata) из Украины. Трач В. А., Хаустов А. А.** — Из муравейников *Crematogaster schmidti* (Mayr, 1853) (Hymenoptera: Formicidae) с территории Крыма (Украина) описан новый вид клещей семейства Laelapidae — *Myrmozercon tauricus* Trach et Khaustov, sp. n. Род *Myrmozercon* Berlese, 1902 впервые приводится для фауны Украины.

Ключевые слова: Laelapidae, *Myrmozercon*, новый вид, Крым, Украина.

The genus *Myrmozercon* Berlese, 1902 includes 21 described species known from Europe, the Arabian Peninsula, North America, the Caribbean, Africa and Australia (Baker, Strandtmann, 1948; Hunter, Hunter, 1963; Ueckermann, Loots, 1995; Shaw, Seeman, 2009). Almost all species are described from ants or their nests, five species of the genus *Myrmozercon* associated with ants of the genus *Crematogaster* Lund, 1831 (Vitzthum, 1930; Hunter, Hunter, 1963). Six *Myrmozercon* species are known from Europe (five species from Italy and one from Austria) (Berlese, 1904; Vitzthum, 1930; Hunter, Hunter, 1963; Shaw, Seeman, 2009). The detailed diagnosis of the genus was given by Walter (2003) and complemented by Shaw and Seeman (2009). Species of the genus *Myrmonyssus* are characterized by hypotrichy of palpal trochanter; many species have hypo- and hypertrichy of legs coxae. Previously described genera *Myrmonyssus* Berlese, 1903, *Parabisternalis* Ueckermann et Loots, 1995 and *Laelaspulus* Berlese, 1904 were recently synonymized with *Myrmozercon* (Rosario, Hunter, 1988; Shaw, Seeman, 2009).

Study of nests of ants *Crematogaster schmidti* (Mayr, 1853) (Hymenoptera: Formicidae) from "Cape Martyan" Nature Reserve (Crimea, Ukraine) revealed a new species of the genus *Myrmozercon* described in this paper. The genus *Myrmozercon* is recorded in Ukraine for the first time.

The setal nomenclature follows Evans and Till (1965), the dorsal setal nomenclature by Ueckermann and Loots (1995). Measurements are given in micrometers (μm) for the holotype and paratypes (in parentheses). The holotype and one paratype are deposited in the collections of the Museum of Zoology, I. I. Mechnikov National University of Odessa, other paratypes in the collections of the Zoology Department of I. I. Mechnikov University of Odessa.

Myrmozercon tauricus Trach et Khaustov, **sp. n.** (fig. 1–2)

Material. Holotype ♀, slide № 19–02–2000/01, Ukraine, Crimea, "Cape Martyan" Nature Reserve, in the nest of *Crematogaster schmidti* (Mayr, 1853) in the bark of *Pinus pallasiana* D. Don, 19.02.2000, coll. A. A. Khaustov. Paratypes: 1 ♀ with same data as holotype; 10 ♀, 2 ♂, Ukraine, Crimea, "Cape Martyan" Nature Reserve, in the nest of *C. schmidti* (Mayr, 1853) under the bark of *Quercus pubescens* Willd., 30.03.2010, coll. A. A. Khaustov and V. A. Trach.

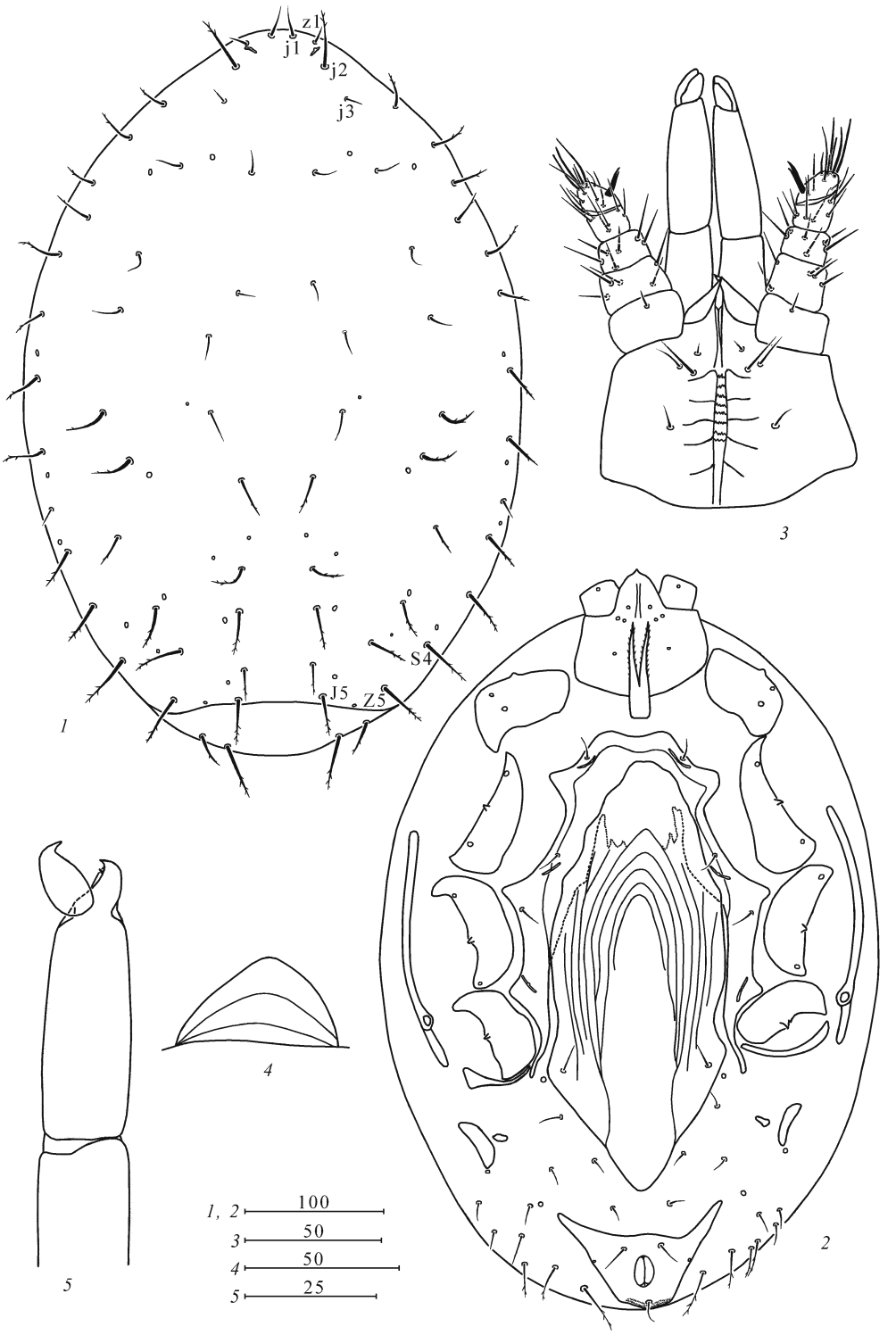

Fig. 1. *Myrmozercon tauricus*, ♀: *1* — idiosoma, dorsal view; *2* — idiosoma, ventral view; *3* — gnathosoma; *4* — tectum; *5* — chelicera. Values of scale bars in micrometers.

Рис. 1. *Myrmozercon tauricus*, ♀: *1* — идиосома, дорсально; *2* — идиосома, вентрально; *3* — гнатосома; *4* — тектум; *5* — хелицера. Значения масштабных линеек в микрометрах.

Description

Female. Dorsum (fig. 1, *1*). Idiosoma ovoid, dark-yellow, 515 (478–534) in length. Dorsal shield not covering entire surface of dorsum, its porterior margin slightly concave, 478 (460–488) in length, 354 (331–359) in width. Dorsal shield with 34 pairs of setae, most of them serrated. Length of some dorsal setae: j1 — 25 (23–27), z1 — 11 (10–11), j2 — 42 (40–46), j3 — 12 (10–14), S4 — 37 (36–39), Z5 — 35 (35–38), J5–33 (32–34). A pair of lyrifissures situated near z1. Dorsal shield bearing 15 pairs of pores and poroids. Integument posterior to dorsal shield with 2 pairs of serrate setae.

Venter (fig. 1, *2*). Tritosternum — 74 (63–76) in length, laciniae — 57 (48–59) in length. Sternal shield with 3 pairs of setae and 3 pairs of lyrifissures, 223 (202–214) in length, maximum width — 181 (172–185). All sternal setae simple, 17–19 (16–23) in length. Posterior part of sternal shield fused with endopodal shield. Seta St4 absent. Genito-ventral shield large, well sclerotized, tapering posteriorly, 281 (264–286) in length, maximum width — 122 (109–126), the shield has characteristic ornamentation consisting of longitudinal striae. Genito-ventral shield with simple setae St5, its length — 17–18 (16–19). Anal shield triangular, anterolaterally horn-like, 50 (54–71) in length, 113 (96–113) in width. Anal shield with 2 simple paranal setae 19 (17–21),

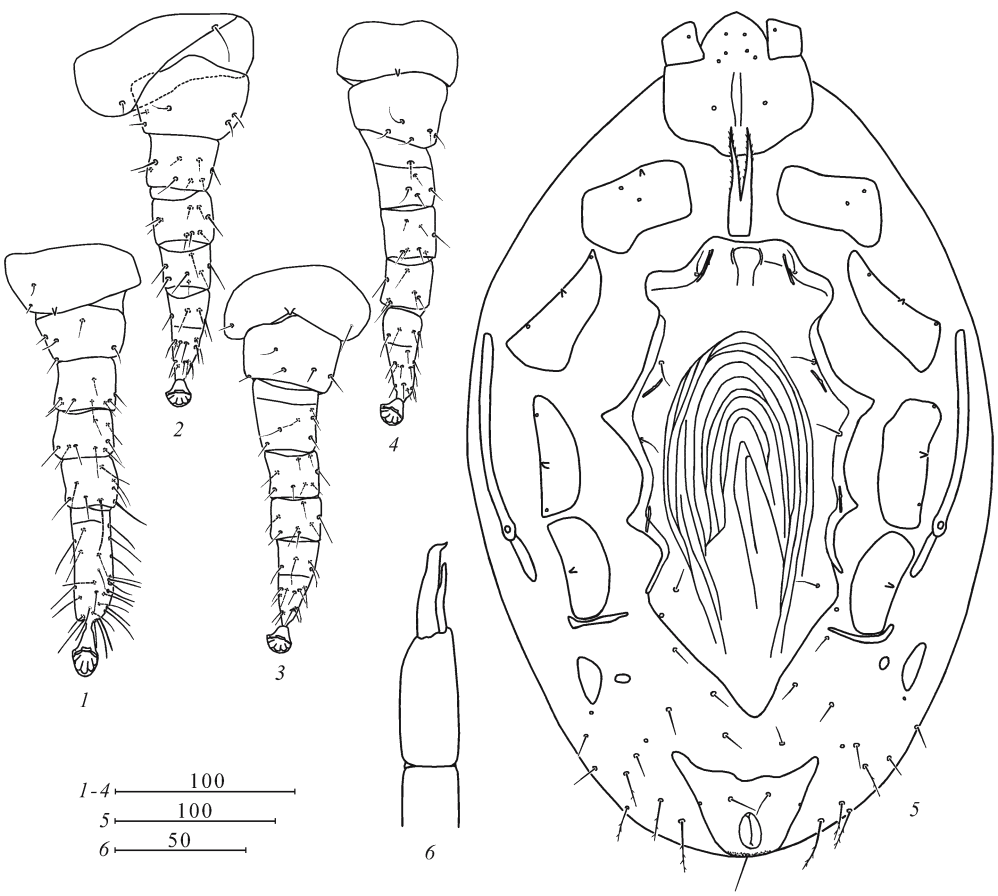

Fig. 2. *Myrmozercon tauricus*, ♀: *1–4* — legs I–IV, respectively; ♂: *5* idiosoma, ventral view; *6* — chelicera. Values of scale bars in micrometers.

Рис. 2. *Myrmozercon tauricus*, ♀: *1–4* — ноги I–IV соответственно; ♂: *5* — идиосома, вентрально; *6* — хелицера. Значения масштабных линеек в микрометрах.

simple postanal seta 21 (19–21), pair of small pores and terminal cribrum. Opisthogaster with 11 pairs of setae, part of which serrated (setae length — 13–32 (11–34)), 3 pairs of pores and 2 pairs of metapodal shields, length of the biggest of them — 35 (32–36), width — 7 (6–11). Peritremes short — 163 (147–164), extending to the middle of coxa II. Spermatheca hardly visible.

Gnathosoma (fig. 1, *3*). Tectum smooth, its anterior margin rounded-triangular (fig. 1, *4*). Corniculi broad. Length of hypostom — 105 (88–101), width — 92 (84–97). Hypostomal setae smooth, length of h1 — 4 (4–5), h2 — 15 (15–17), h3 — 11 (11–12), palp coxal seta — 8 (7–9). Deutosternal groove with eight rows of 3–6 denticles. Chaetotaxy of palps (from trochanter to tarsus): 1–5–6–7–11. Length of palps (trochanter to tarsus) — 66 (65–69). Palp apotele 2-tined. About two setae on palpal tibia and about four setae on palpal tarsus are solenidia. Movable digit of chelicerae (fig. 1, *5*) wide, with apical tooth, its length — 15 (14–15). Fixed digit more narrow, with pilus dentilis and apical tooth. Length of second cheliceral segment (to tip of fixed digit) — 53 (51–59).

Legs (fig. 2, *1–4*). All leg with ambulacra, without claws. All legs setae smooth. Coxa IV without setae. Leg chaetotaxy (from coxa to tibia): I — 2–5–8–8–8, II — 2–5–8–8–7, III — 2–5–6–8–7, IV — 0–5–5–7–7. Tarsus I with many solenidia. Length of legs: I — 235 (214–244), II — 218 (202–227), III — 218 (214–239), IV — 227 (218–239).

Male. Dorsum. As in female. Length of idiosoma — 488–497, length of dorsal shield — 460–470, width — 322–331.

Venter (fig. 2, *5*). Tritosternum as in female. Sternoventral shield large, tapering posteriorly, with characteristic ornamentation consisting of longitudinal striae, with 4 pairs of setae (St1, St2, St3 and St5) and 3 pairs of lyrifissures. Length of sternoventral shield — 273–277, maximum width — 151–155. Setae on sternoventral shield simple, their length — 17–22. Genital opening situated between setae St1 and first pair of lyrifissures. Anal shield and opisthogaster as in female. Peritremes short, length — 139–141.

Gnathosoma. As in female. Movable digit of chelicerae (fig. 2, *6*) wide, with apical tooth, its length — 15 (14–15). Chelicerae edentate, movable digit completely fused with spermatodactyl. Length of movable digit — 37, fixed digit — 25–27, second cheliceral segment (to tip of movable digit) — 84–88.

Legs. As in female. Length of legs: I — 214–223, II — 218–223, III — 223–227, IV — 227–231.

Differential diagnosis. *Myrmozercon tauricus* sp. n. is closely related to *M. yemeni* (Ueckermann et Loots, 1995). Both species are characterized by the dorsal shield with 34 pairs of setae, absence of the seta St4, posterior part of the sternal shield fused with the endopodal shield, the triangular anal shield with anterolateral horns, presence of movable digit of the chelicerae, and coxa chaetotaxy 2–2–2–0. *M. tauricus* sp. n. differs from *M. yemeni* by chaetotaxy of the palpal femur (*M. yemeni* has 4 setae, *M. tauricus* sp. n. — 5), the well sclerotized genito-ventral shield with characteristic ornamentation consisting of longitudinal striae (smooth in *M. yemeni*), and length and shape of the dorsal setae (for example more long j2).

Etymology. The name of the new species refers to its geographical distribution.

Authors are grateful to Dr. Eddie Ueckermann (ARC–Plant Protection Research Institute, Pretoria, South Africa) for detailed photos and information on *M. yemeni* morphology.

Baker E. W., Strandtmann R. W. Myrmonyssus chapmani, a new species of hypoaspid mite (Acarina: Laelaptidae) // J. Parasitology. — 1948. — **34** (5). — P. 386–388.

Berlese A. Illustrazione iconografica degli Acari mirmecofili // Redia. — 1904. — **1**. — P. 299–474.

Evans G. O., Till W. M. Studies on the British Dermanyssidae (Acari: Mesostigmata). Part I. External morphology // Bulletin of the British Museum (Natural History), Zoology. — 1965. — **13**. — P. 249–294.

Hunter P. E., Hunter C. A. The genus Myrmonyssus with descriptions of two new species (Acarina: Laelaptidae) // Acarologia. — 1963. — **5**. — P. 335–341.

Rosario R. M. T., Hunter P. E. The genus Myrmozercon Berlese, with descriptions of two new species (Acari: Mesostigmata: Laelapidae) // J. Parasitology. — 1988. — **74** (3). — P. 466–470.

Shaw M. D., Seeman Q. D. Two new species of Myrmozercon (Acari: Laelapidae) from Australian ants (Hymenoptera: Formycidae) // Zootaxa. — 2009. — **2025**. — P. 43–55.

Ueckermann E. A., Loots G. C. A new laelapid genus and species (Acari: Parasitiformes: Laelapidae) from Yemen // African Entomology. — 1995. — **3** (1). — P. 35–38.

Vizthum H. G. Ein Ameisengast (Acar.) // Mitteilungen der Deutshen Entomologishen Gesselschaft Berlin. — 1930. — N **6**. — S. 89–91.

Walter D. E. A new mite from an arboreal ant (Formicidae: Polyrhachis sp.): Myrmozercon iainkayi n. sp. (Mesostigmata: Laelapidae) // International J. Acarology. — 2003. — **29**, N 1. — P. 81–85.