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TWO NEW SPECIES OF MITES OF THE FAMILY ACAROPHENACIDAE (ACARI, HETEROSTIGMATA) FROM CRIMEA (UKRAINE)

A. A. Khaustov

*Nikita Botanical Gardens – National Scientific Center,
Yalta, Crimea, 98648 Ukraine
E-mail: alkhaustov@mail.ru*

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Two New Species of Mites of the Family Acarophenacidae (Acari, Heterostigmata) from Crimea (Ukraine). Khaustov A. A. – Two new mite species of the family Acarophenacidae: *Paradactylidium pyemotoformis* Khaustov, sp. n. and *Adactylidium absurdum* Khaustov, sp. n. are described from Crimea. Genera *Adactylidium* and *Paradactylidium* are recorded from Ukraine for the first time.

Key words: Acarophenacidae, *Adactylidium*, *Paradactylidium*, new species, Crimea.

Два новых вида клещей семейства Acarophenacidae (Acari, Heterostigmata) из Крыма (Украина). Хаустов А. А. – Два новых вида клещей семейства Acarophenacidae: *Paradactylidium pyemotoformis* Khaustov, sp. n. и *Adactylidium absurdum* Khaustov, sp. n. описаны из Крыма. Рода *Adactylidium* и *Paradactylidium* впервые отмечены в Украине.

Ключевые слова: Acarophenacidae, *Adactylidium*, *Paradactylidium*, новые виды, Крым.

Mites of the family Acarophenacidae are egg parasitoids of different insects (Kaliszewski et al., 1995). Host association of mites of the genus *Paradactylidium* is unknown (Goldarazena et al., 1999). Mites of the genus *Adactylidium* are parasitoids and external parasites of different thrips (Thysanoptera) (Goldarazena et al., 2001). Previously, only one species of this family *Paracarophenax scolity* Khaustov, 1999 was found in Crimea. During examination of mite collection of the Nikita Botanical Gardens – National Scientific Centre (Yalta, Ukraine) two new species from genera *Adactylidium* and *Paradactylidium* were found and described below. Genera *Adactylidium* and *Paradactylidium* are recorded from Ukraine for the first time.

In the description, terminology follows E. Lindquist (1986). All measurements are given in micrometers (μm) for holotypes. Type material is deposited in the collection of the department of Acarology, Schmalhausen Institute of Zoology, Kyiv, Ukraine.

***Paradactylidium pyemotoformis* Khaustov, sp. n. (fig. 1–6)**

Material. Female holotype, slide σ NK250687, from unknown locality in Crimea, 25.06.1987, coll. N. N. Kuznetsov.

Female (holotype). Idiosoma 183 long, maximum wide 78.

Idiosomal dorsum (fig. 1). Body distinctly elongate. All tergites smooth, in posterior part with distinct longitudinal striae. Propodosoma dorsally with 3 pairs of setae. Tracheal trunks with well sclerotized sacs. All dorsal setae thin, smooth, sharply pointed. At least cupuli *im* present. Length of dorsal setae: v_1 11, sc_1 22, sc_2 19, c_1 19, c_2 20,

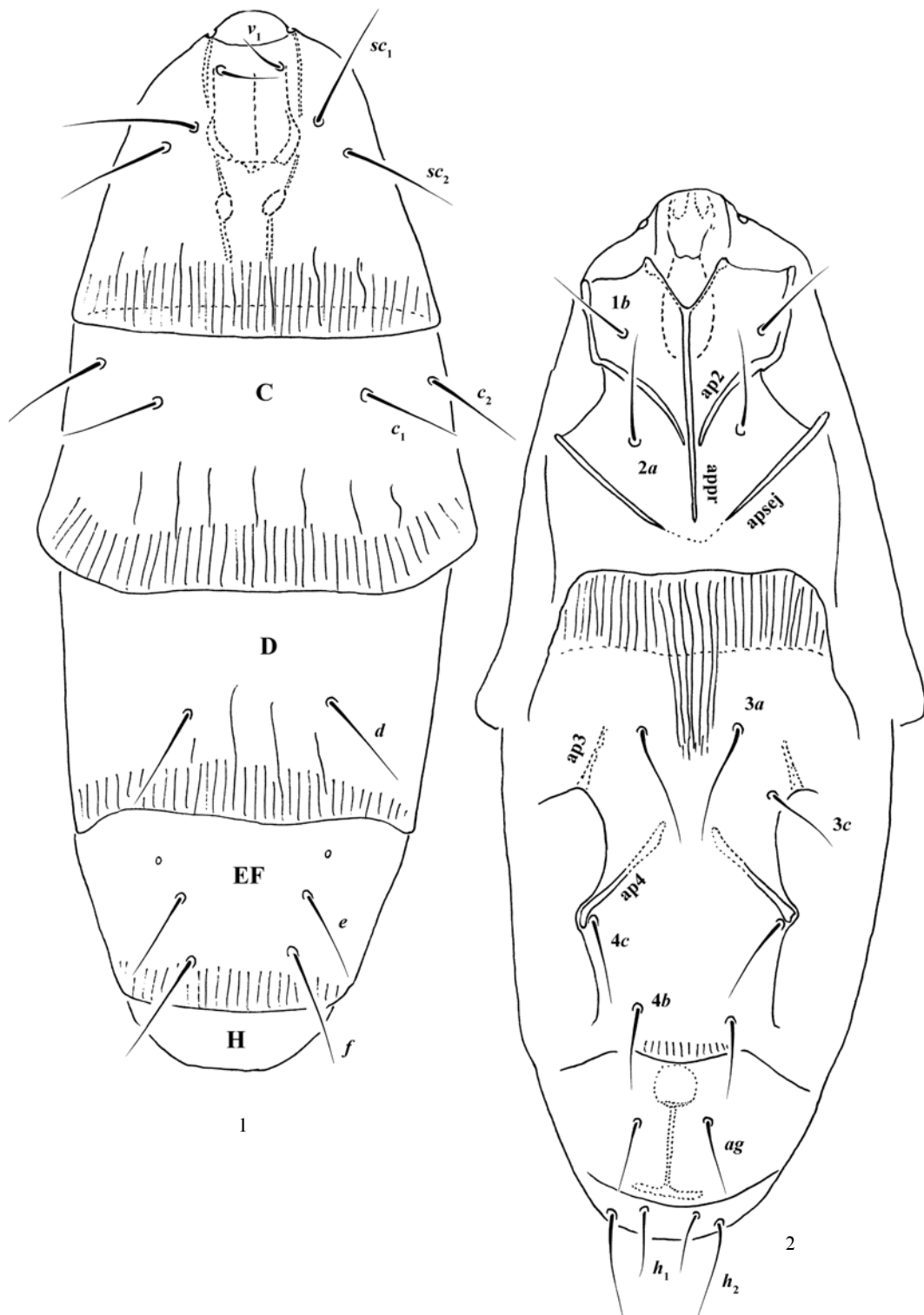
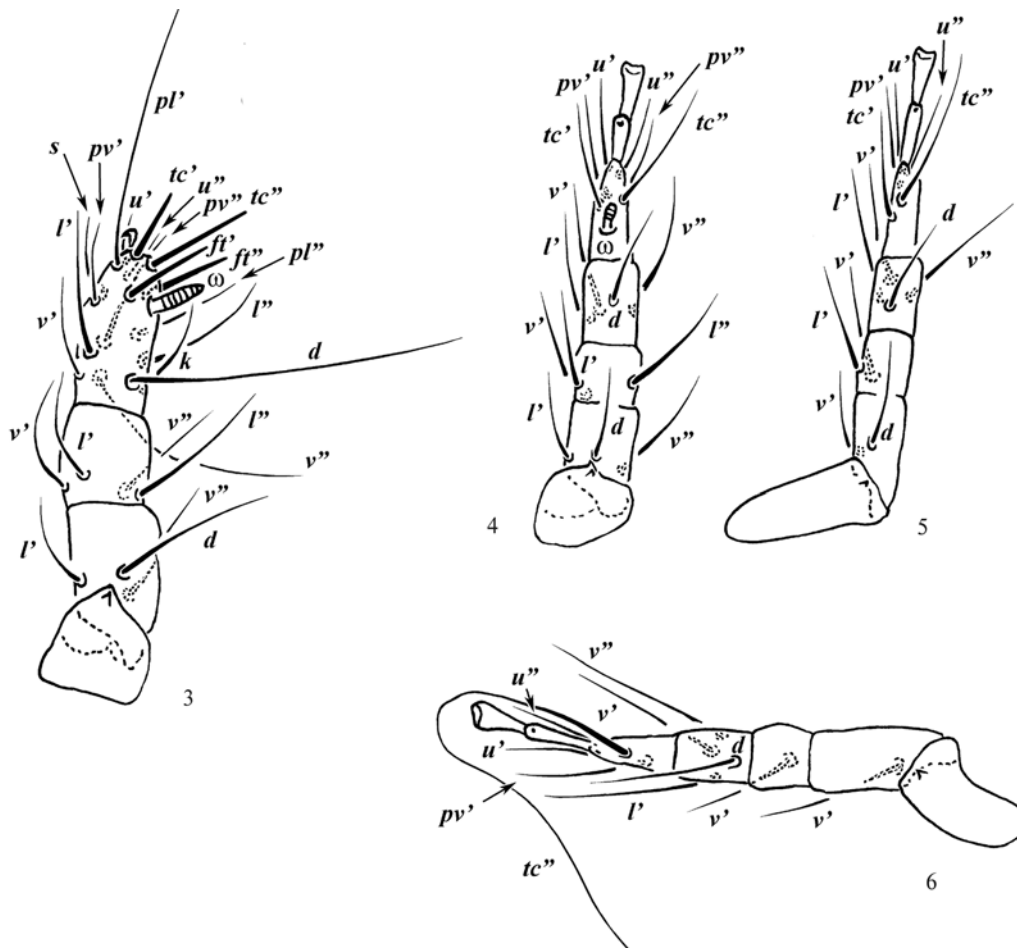


Fig. 1. *Paradactylidium pyemotoformis*, ♀: dorsum of the body.

Рис. 1. *Paradactylidium pyemotoformis*, ♀: дорсальная сторона тела.

Fig. 2. *Paradactylidium pyemotoformis*, ♀: venter of the body.

Рис. 2. *Paradactylidium pyemotoformis*, ♀: вентральная сторона тела.

Figs. 3–6. *Paradactylidium pyemotoformis*, ♀: legs I–IV.Рис. 3–6. *Paradactylidium pyemotoformis*, ♀: ноги I–IV.

d 20, e 19, f 22, h_1 11, h_2 18. Distances between dorsal setae: v_1 – v_1 10, sc_1 – sc_1 21, sc_2 – sc_2 31, c_1 – c_1 37, c_1 – c_2 10, d – d 24, e – e 22, f – f 18, h_1 – h_1 9, h_1 – h_2 6.

Idiosomal venter (fig. 2). Apodemes 2 and sejugal apodeme distinctly developed but not joined with well-sclerotized presternal apodeme. Sejugal apodeme not developed medially. All ventral plates smooth. Anterior and posterior margins of posterior sternal plate with weak striation. All ventral setae thin, smooth, sharply pointed. Apodemes 3 weakly sclerotized. Apodemes 4 well-sclerotized laterally and weak medially. Length of ventral setae: $1a$ 15, $2a$ 19, $3a$ 24, $3c$ 18, $4b$ 14, $4c$ 16, ag 15.

Legs (fig. 3–5). Setation of legs I (number of solenidia in parenthesis): Tr0–Fe3–Ge4–TiTa17(1). Tibiotarsus cylindrical, with small claw. Solenidion ω (7) finger-shaped. Tibiotarsus I only 1.8 times longer than genu I. Setae pl' and d much longer than other setae on tibiotarsus I (fig. 3). Tarsi II–IV without claws. Leg II (fig. 4): Tr0–Fe3–Ge3–Ti4–Ta6(1). Solenidion ω (4) finger-shaped. Leg III (fig. 5): Tr0–Fe2–Ge2–Ti4–Ta5. Leg IV (fig. 6): Tr0–Fe1–Ge1–Ti4–Ta4. Tarsus with very long, whip-like setae tc'' .

Differential diagnosis. Genus *Paradactylidium* includes only 2 species: *P. micrangulatum* Mahunka, 1973, and *P. oconnori* Goldarazena, Ochoa, Jordana, 1999. The new species differs from both known species by distinctly more elongated body, by dis-

tinctly shorter tibiotarsus I, which only 1.8 times longer than genu I (almost 3 times longer in *P. micrangulatum* and *P. oconnori*), by complete reduction of poststernal apodeme (vestige of poststernal apodeme present in *P. micrangulatum* and *P. oconnori*).

Etymology. The name refers to similarity of new species body shape with that of mites of the genus *Pyemotes* (family Pyemotidae).

***Adactylidium absurdum* Khaustov, sp. n.** (fig. 7–12)

Material. Female holotype, slide N 1752, on leaves of *Senecio* sp. (Asteraceae). Ukraine: Crimea, vicinity of Sudak, 02.09.1971, coll. E. A. Vasilyeva; paratypes: 1 female with same data as holotype.

Female (holotype). Idiosoma 135 long, 100 maximum width.

Dorsum (fig. 7). Gnathosomal apodeme conspicuous basally, without median projections. All tergites smooth. Propodosoma dorsally with 2 pairs of setae. All dorsal setae smooth, sharply pointed, setae *d*, *e*, *f*, *h*₁, and *h*₂ slightly thicker than *sc*₁, *sc*₂, *c*₁, and *c*₂ setae. Length of dorsal setae: *sc*₁ 21, *sc*₂ 16, *c*₁ 18, *c*₂ 15, *d* 17, *e* 16, *f* 15, *h*₁ 10, *h*₂ 11. Distances between dorsal setae: *sc*₁–*sc*₁ 32, *sc*₂–*sc*₂ 65, *c*₁–*c*₁ 45, *c*₁–*c*₂ 18, *d*–*d* 50, *e*–*f* 12, *f*–*f* 15, *h*₁–*h*₁ 11, *h*₁–*h*₂ 9.

Idiosomal venter (fig. 8). Apodemes 1, 2 and sejugal apodeme well developed and joined with presternal apodeme. All ventral plates smooth. All ventral setae thin, smooth, sharply pointed. Apodemes 3 distinct. Apodemes 4 well developed but not joined with poststernal apodeme. Length of ventral setae: *2a* 9, *3a* 8, *3c* 7, *4b* 8, *4c* 7, *ag* 10.

Legs (fig. 9–12). Setation of legs I: Tr0–Fe3–Ge4–TiTa15. Tibiotarsus cylindrical, without claw. Solenidion ω absent (fig. 9). Tarsi II–IV without claws. Leg II (fig. 10): Tr0–Fe3–Ge3–Ti4–Ta6(1). Solenidion ω (4) finger-shaped. Leg III (fig. 11): Tr0–Fe2–Ge1–Ti4–Ta4. Leg IV (fig. 12): Tr0–Fe1–Ge1–Ti4–Ta4. Tarsus with long, whip-like setae *tc*”.

Differential diagnosis. The genus *Paradactylidium* includes 14 described species. The new species differs from all its congeners by the absence of solenidion on the tibiotarsus I.

Etymology. The species name refers to very unusual (absurd) absence of the solenidion on the tibiotarsus I.

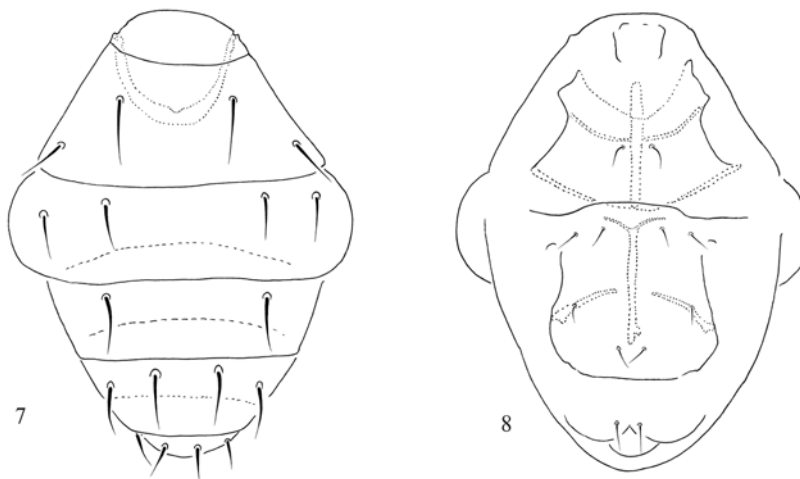
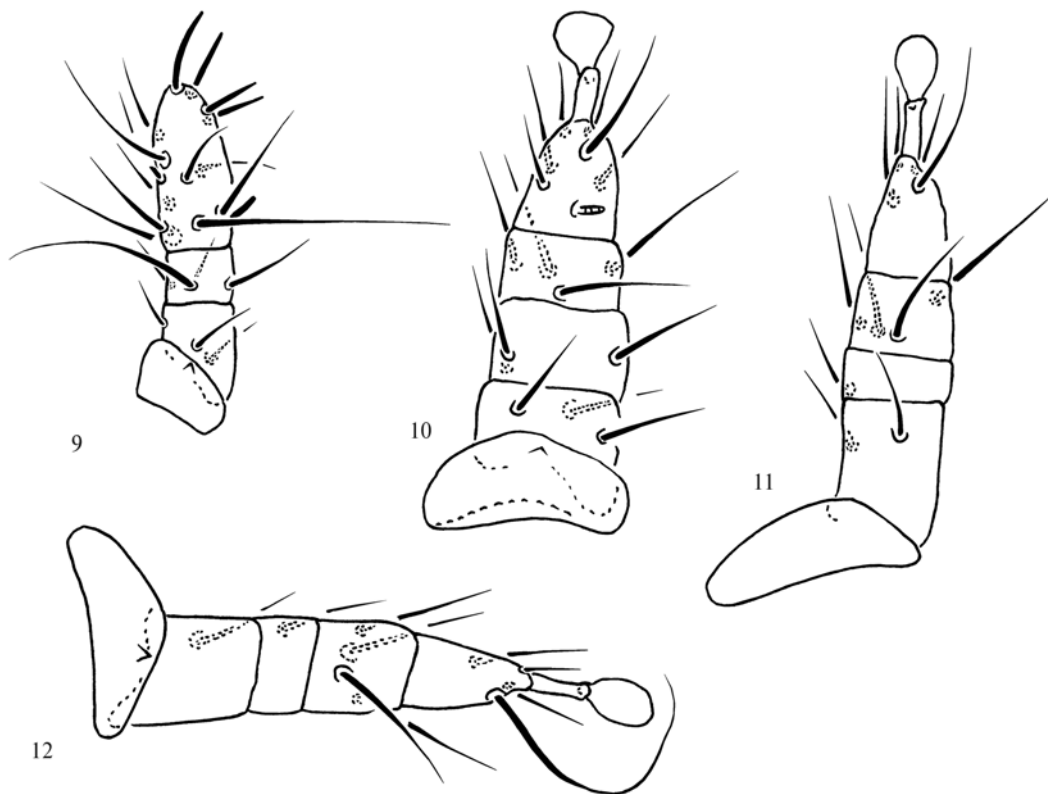


Fig. 7. *Adactylidium absurdum*, ♀: dorsum of the body.

Рис. 7. *Adactylidium absurdum*, ♀: дорсальная сторона тела.

Fig. 8. *Adactylidium absurdum*, ♀: venter of the body.

Рис. 8. *Adactylidium absurdum*, ♀: вентральная сторона тела.



Figs. 9–12. *Adactylidium absurdum*, ♀: legs I–IV.

Рис. 9–12. *Adactylidium absurdum*, ♀: ноги I–IV.

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Goldarazena A., Ochoa R., Jordana R. Revision of the genus *Paradactylidium* Mahunka (Acari: Heterostigmata) // *Internat. J. Acarol.* – 1999. – **25**, N 2. – P. 91–99.

Goldarazena A., Ochoa R., Jordana R., OConnor B. M. Revision of the genus *Adactylidium* Cross (Acari: Heterostigmata: Acarophenacidae), mites associated with thrips (Thysanoptera) // *Proc. Entomol. Soc. Wash.* – 2001. – **103**, N 3. – P. 473–516.

Kaliszewski M., Athias-Binche F., Lindquist E. E. Parasitism and parasitoidism in Tarsonemina (Acari: Heterostigmata) and evolutionary considerations // *Advances in Parasitology.* – 1995. – **35**. – P. 335–367.

Khaustov A. A. The redescription of “*Pediculoides*” *ipidarius* Redikortsev, 1947, with description of the new species from the genus *Paracarophenax* (Acari: Heterostigmata: Acarophenacidae) // *Acarina.* – 1999. – **7**, N 1. – P. 57–59.

Lindquist E. E. The world genera of Tarsonemidae (Acari: Heterostigmata): a morphological, phylogenetic, and systematic revision, with a reclassification of family-group taxa in Heterostigmata // *Memoirs of Entomological Society of Canad.* – 1986. – **136**. – P. 1–517.