

**A NEW SPECIES OF THE GENUS *KAMPIMODROMUS*
(PARASITIFORMES, PHYTOSEIIDAE) FROM UKRAINE AND MOLDOVA**

**НОВЫЙ ВИД КЛЕЩЕЙ РОДА *KAMPIMODROMUS*
(PARASITIFORMES, PHYTOSEIIDAE) ИЗ УКРАИНЫ И МОЛДОВЫ**

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ABSTRACT

A new species of phytoseiid mites, *Kampimodromus corylosus* sp.n. (Parasitiformes, Phytoseiidae), is described. A description is based on material from different regions of Ukraine and Moldova. It is closely related to *K.aberrans* Nesbitt, 1951, and is distinguishable from the latter by presence of a pair of dorsal pores *is*, closely placed anal pores, different form of ventrianal shield in females, larger number of denticles on Df of female chelicerae, relative length of some setae and other features.

РЕЗЮМЕ

Описан новый вид обитающих на растениях клещей-фитосейид *Kampimodromus corylosus* sp.n. (Parasitiformes, Phytoseiidae) с территории Украины и Молдовы. Новый вид близок к *K.aberrans* Nesbitt, 1951, от которого легко отличается наличием пары дорсальных пор *is*, сближенными анальными порами, иной формой вентроанального щита самки, увеличенным количеством зубцов на Df хелицер самки, относительной длиной некоторых дорсальных щетинок и другими признаками.

INTRODUCTION

Reidentifications of mites from the collection of plant-inhabiting phytoseiids that have been found through some years in different regions of Ukraine and Moldova unmasked a new species of the genus *Kampimodromus*. A description, drawings and measurements of *Kampimodromus corylosus* sp.n. are given. The setal nomenclature follows that of Kolodochka, 1998. The nomenclature of spermatheca structures follows that of Kolodochka, 1990. The measurements are given in micrometers. Type material is preserved in the collections of the Institute of Zoology, the National Academy of Sciences of Ukraine (IZNASU), Kiev.

***Kampimodromus corylosus* sp.n.**

Material. Holotype — female (No. 1541r), hazelnut (*Corylus avellana* L.), oak forest underwood, Teremky, near Kiev city, Ukraine, 15.07.1975, coll. L. Kolodochka; paratypes — 34 females, 7 males, 2 deutonymphs, 4 protonymphs (No. 1541b and No. 1541r.), together with holotype.

Hawthorn (*Crataegus* sp.) (No. 1543a), 1 female, 1 deutonymph, same data as the holotype;

hazelnut (No. 1498), 12 females, 3 males, 2 deutonymphs, near Gromovka village, Sudaksky Region, Crimea, Ukraine, 19.06.1975, coll. L. Kolodochka;

hazelnut, (No. 899), 2 females, 1 male, near Poroshkovo village, 23.06.1972; (No. 2277), 10 females, 2 males, 2 protonymphs, near Turya Polana village, Perechinsky Region, Zakarpatskaya Oblast, Ukraine, 27.08.1976, coll. L. Kolodochka;

hazelnut (No. 2986), 13 females, 3 males, 1 deutonymph, 1 protonymph, near Tuzara village, Kalarashsky Region, Moldova, 09.07.1978, coll. L. Kolodochka;

hazelnut (No. 3080), 14 females, 1 male, 3 deutonymphs, 4 protonymphs, (No. 3089и) 11 females, 4 males, (No. 3089б) 1 female, near Edintsy town, Moldova, 20.07.1978, coll. L. Kolodochka;

hazelnut (No. 3388), 14 females, 7 males, 6 deutonymphs, 15th kilometer of way Sudak town to Grushevka village away from Sudak, Second ridge of the Crimean Mountains, Crimea, Ukraine, 27.05.1979, coll. L. Kolodochka;

hazelnut (No. 4311), 4 females, 1 male, 1 deutonymph, near Tkhoryn, Ovrutsh Region, Zhytomirskaya Oblast, Ukraine, 29.07.1982, coll. L. Kolodochka;

hazelnut (No. 4430), 11 females, 3 males, near Berezhkivtsy village, Kremenetz forestry, Ternopolskaya Oblast, Ukraine, 26.07.1983, coll. L. Kolodochka;

hazelnut (No. 5376a), 4 females, (No. 53766), 3 females, 1 male, (No. 5377) 1 male, dendropark, Krasnokutsk town, Kharkovskaya Oblast, Ukraine, 09.06.1992, coll. L. Kolodochka;

hazelnut (No. 5059), 6 females, near Migia village, Pervomaysky District, Nikolayevskaya Oblast, Ukraine, 28.07.1988, coll. Terpilko;

burdock (*Arctium* sp.) (No. 5236), 2 females, near Ozoriane village, Varvensky District, Chernigovskaya Oblast, Ukraine, 28.07.1989, coll. Terpilko.

Female (holotype). Dorsal shield (Fig. 1, 1) slightly sclerotic, smooth in anterior to scale-reticulated and striated in posterior region of scutum, 5 pairs of solenostomes (*it*, *iv*, *il*, *is*, *ic*) and 16 pairs of setae. Dorsal setae sharp. Setae D1, AM1, AL1, AL3, AL4, PL1, PM2, PM3, AS, PS serrate and elongated, other setae shorter and smooth (PL3 and D6 may be supplied with 1–2 notch, — Fig. 1, 2–7). Setae D1 placed close to each other. Seta D3 equal in length to distance between their bases. Seta AM1 longer than the distance between its base and the base of seta AL1. Length of seta AL1 equal to distance between its base and the base of seta AL2. Sternal shield (Fig. 1, 8) smooth with 2 pairs of solenostomes and 3 pairs of setae (St1–St3) placed on postlateral appendices of the shield. Ventrianal shield (Fig. 1, 8) long, narrow and smooth with distinct lateral clippings. Widths of anterior and posterior parts of it are equal. Preanal setae placed in semi-longitudinal rows. Anal pores distinct, rounded and small, placed caudal to the level of PrA2 bases. There are 3 pairs of preanal setae (PrA1, PrA2, and V2) on ventrianal shield. Setae V1, MV1, MV2 and PV on the integument surrounding the ventrianal shield. Setae PV serrated. Other ventral setae smooth, sharp and thin. Peritreme extending anteriorly to the level between setae AM1 and AL1. Chelicerae (Fig. 1, 9) normal in relation to body size, fixed digit with 3 tiny denticules, movable digit without tooth. Metapodal platelets narrow (Fig. 1, 10). Spermatheca small, with saucer-shaped fundibulum and with small c-shaped atrium, cervix missing or very small (Fig. 1, 11–13). Posterior part of peritremal shield slightly curved (Fig. 1, 14). Macroseta on tarsus IV short and sharp, smooth or slightly serrate (Fig. 1, 15, 16).

Measurements are as follows: length of dorsal shield (Lds) — 300, width of dorsal shield (Wds) — 160; length of ventrianal shield (Lvas) — 90, width of ventrianal shield (Wvas) — 48, distance between anal pores (Lian) — 15; length of tarsus of leg IV (Lt) — 80. Length of: D1 — 22; D2, D3 —

14; D4 — 16; D5 — 23; D6 — 7; AM1 — 29; AM2 — 15; AL1, PS — 25; AL2 — 34; AL4 — 41; ML — 21; PL1 — 43; PL3 — 18; PM2 — 39; PM3 — 48; AS — 35; PV — 29; MCh tIV — 22.

Male (paratype). Setae AS and PS placed on dorsal shield (Fig. 2, 1). Setae D1, AM1, AL1, AL3, AL4, PL1, PM2, AS, PS serrated, other setae smooth. Ventrianal shield (Fig. 2, 2) with 3 pairs of preanal setae. Anal pores pointed, distinct, closely placed. Spermatodactyl (Fig. 2, 4–6) massive, beak-form, beak-shape appendix (ramus) longitudinal and curved.

Measurements: Lds — 240, Wds — 135; Lvas — 102, Wvas — 111, Lian — 18; Lt — 74; D1 — 17; D2, D3 — 16; D4 — 17; D5 — 26; D6 — 8; AM1 — 34; AM2 — 17; AL1 — 29; AL2 — 40; AL4 — 48; ML — 25; PL1 — 45; PL3 — 16; PM2 — 34; PM3 — 40; AS — 38; PS — 24; PV — 16; MCh tIV — 20.

Protonymph. Body cover is thin. Edges of dorsal shield are poor visible. Setal pattern and setal placing of the dorsal side of the body is similar on the whole to the same in specimens of senior phases (Fig. 2, 7). Dorsal setae smooth, in general short (in a row D with the exception of setae D5, as well as setae AM2, PL3) or moderate in length. Setae AL4 è PL1 are longest. Setae PL1, ML, D5 are placed approximately on one level and forms semi-transversal row. There are 5 solenostomes on dorsal shield. Tarsus of leg IV has 15 setae. Long macroseta is on basitarsus among them (Fig. 2, 8). Lds — 195; MCh tIV — 44.

Deutonymph. Body cover is thin. Edges of dorsal shield are poor visible. Setal pattern of dorsal shield likes to the same in protonymph but setal placing approximate to the same in adult phase (in opistosomal part especially) (Fig. 2, 9). Semi-transversal setal row not formed. There are 5 solenostomes on dorsal shield. There are 16 setae on basitarsus of leg IV together with long macroseta, which is relatively shorter than macroseta in protonymph (Fig. 2, 10). Lds — 245; MCh tIV — 35.

DIFFERENTIAL DIAGNOSIS

K. corylosus is similar to *K. aberrans* [Nesbitt, 1951] but this species differs by having a pair of dorsal solenostomes (*is*) in addition to 4 pairs of them in *K. aberrans*, by nearest placing of anal pores, by another forms of ventrianal shield in female, by some more denticules on fixed digit of female chelicera, by relative length of some dorsal setae and by other features.

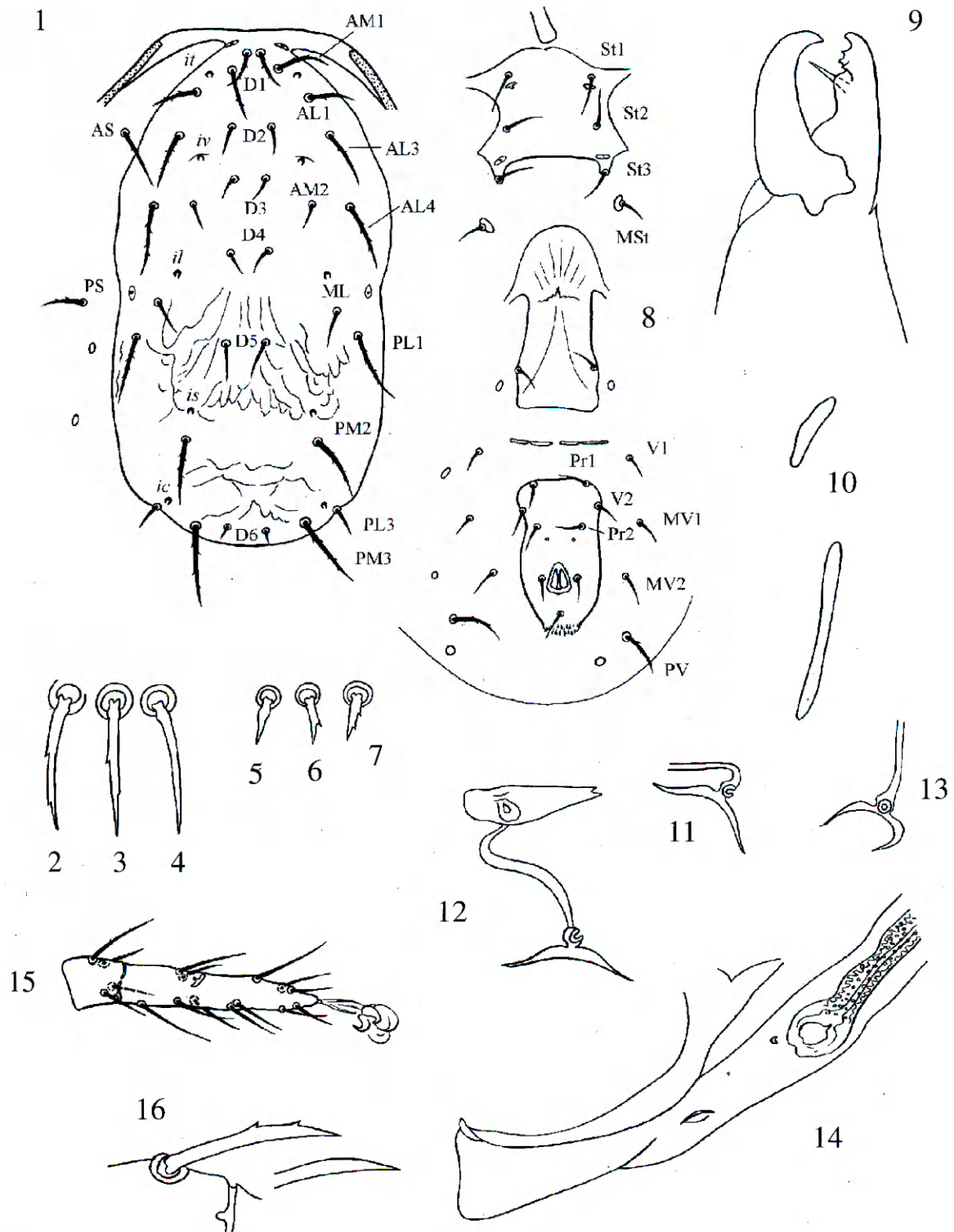


Fig. 1. *Kampimodromus corylosus* sp. n. Female: 1 — dorsal shield; 2-4 — seta PL3 (2, 3 — paratypes; 4 — holotype); 5-7 — seta D6 (5 — holotype; 6, 7 — paratypes); 8 — fragment of ventral body surface; 9 — chelicera; 10 — metapodal plates; 11-13 — spermatheca; 14 — caudal part of peritremal shield; 15 — tarsus of leg IV; 16 — macroseta on tarsus of leg IV.

K. corylosus is different from the known species, which have 5 pairs of dorsal solenostomes [Ragusa di Chiara, Tsolakis, 1994], by having features as follows: from South-African *K. alettae* [Ueckermann, Loots, 1985] by smooth setae ML, D4, D5;

from Caucasian *K. langei* [Wainstein et Arutunian, 1973] by smooth dorsal setae D2-D5; from *K. ericinus* [Ragusa di Chiara, Tsolakis, 1994] from Italy and Greece by visible shorter setae in lateral row on dorsal shield.

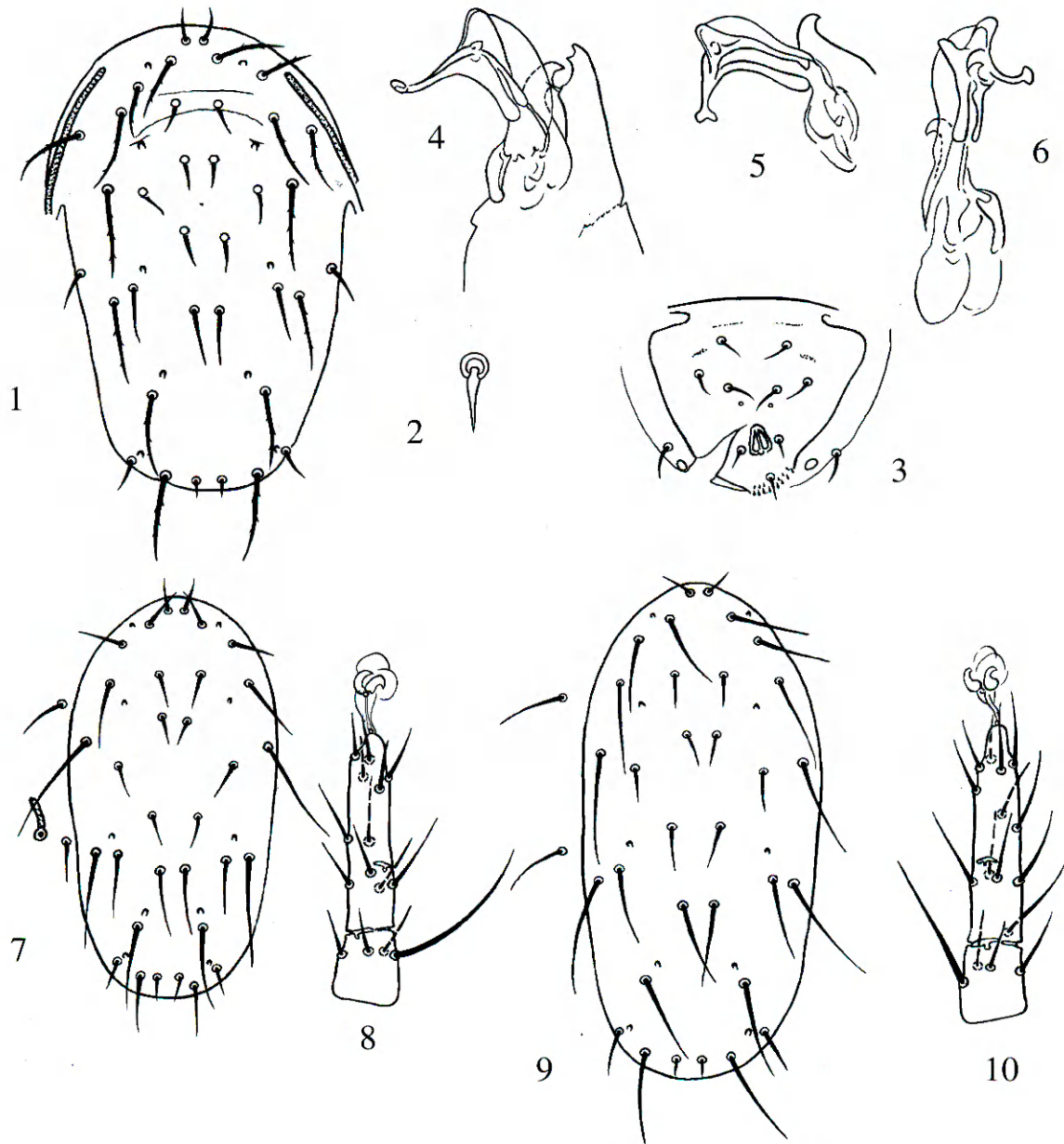


Fig. 2. *Kampimodromus corylosus* sp. n. Male: 1 — dorsal shield; 2 — seta D6; 3 — ventrianal shield; 4–6 — spermatodactyl (4 — paratype; 5, 6 — non type). Protonymph: 7 — fragment of the body dorsal surface; 8 — tarsus of leg IV. Deutonymph: 9 — fragment of the body dorsal surface; 10 — tarsus of leg IV.

DISCUSSION

Nothing is known about biology or food habits of *K. corylosus*. This description and illustrations are based on the holotype and paratype, which deposited in the IZNASU.

New species shows a close association with the hazelnut as a habitat. Rare exceptions from this fact do not mask such a connection. It is interesting that specimen of *K. aberrans* and *K. corylosus* were not found together on plants at least in the material from Ukraine and Moldova. Therefore any information in my earlier publications about findings of *K. aberrans* on hazelnut must be attributed to *K.*

corylosus. It is highly probable that the data, which were published by other investigators about mites of the genus *Kampimodromus* from hazelnut, may relate to a new species as well.

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