Notes on *Trichosiphonaphis (Xenomyzus) corticis* Aizenberg, 1935 and *T. (X.) foliotus* Shaposhnikov in Juchnevitch, 1968, nomen nudum (Homoptera: Aphididae)

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Description of oviparous females and the first description of apterous males of *Trichosiphonaphis (Xenomyzus) corticis* (Aizenberg, 1935) are given. *T. (X.) foliotus* Shaposhnikov in Juchnevitch, 1968 is a nomen nudum and synonym of *Loniceraphis paradoxus* Narzikulov, 1962.

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Four species of the genus *Trichosiphonaphis* Takahashi, 1922 are known from the former USSR. All of them belong to the subgenus *Xenomyzus* (Aizenberg, 1935). *T. (X.) corticis* (Aizenberg, 1935) had been described from Moscow Prov. of Russia. Later this species has been registered from Latvia (Rupais, 1979, 1989), Lithuania (Juronis, 1984), south of Primorsk Terr. of Russia (Pashtshenko, 1988) and Byelorussia (Buga, 2001). *T. (X.) polygoni* (van der Goot, 1917) (syn. *T. ishimikawae* (Shinji, 1941), *T. (X.) polygonifoliae* (Shinji, 1944) (Pashtshenko, 1988) and *T. (X.) tade* (Shinji, 1927) (syn. *T. polygonijaponica* Shinji, 1941) (Ivanovskaja & Rukavishnikov, 1980) had been registered from the south of Primorsk Terr. of Russia.

There are obvious gaps in our knowledge about *Trichosiphonaphis* species spread in former USSR. New data about *T. (X.) corticis* and explanation about *T. (X.) foliotus* (nomen nudum) are given in the article.

All measurements (always in μm), number of hairs, rhinaria, etc., and indexes are presented by extreme variants and in brackets by arithmetical mean, for example 368-412 (390). Measurements are given in the Table. Microscope slides are stored in the collection of the Zoological Institute of RAS (St.Petersburg).

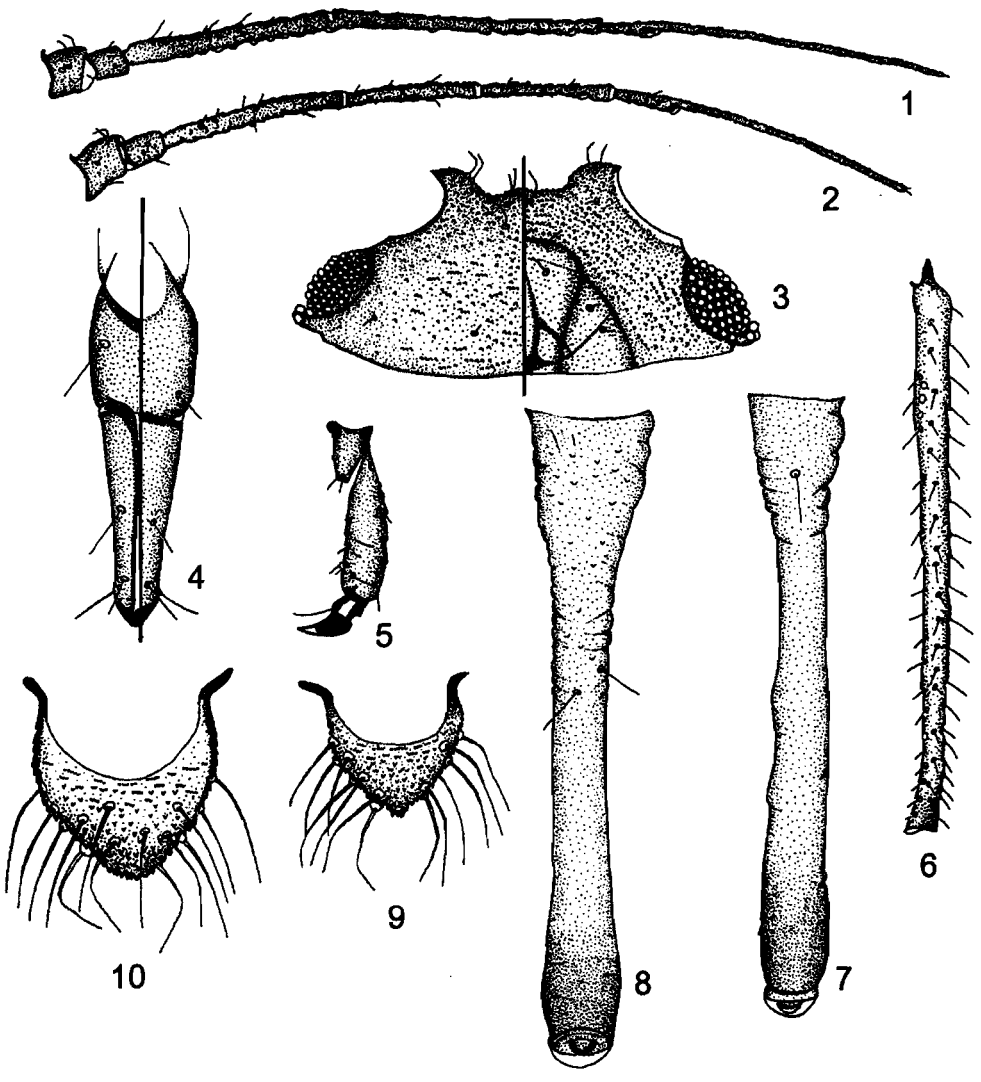
Trichosiphonaphis (Xenomyzus) corticis Aizenberg, 1935
(Table, Figs 1-10)

The species was described by Aizenberg (1935) as *Xenomyzus corticis*. His paper contains description of apterous viviparous and short descriptions of oviparous females and larvae. Knechtel & Manolache (1941) described apterous and alate viviparous females of *Alphitoaphis carpathica* sp. n., at present considered a synonym of *T. corticis* (Remaudière & Remaudière, 1997). Figures of fundatrix have been published by Rupais (1989). According to Remaudière et al. (1992), D. Hille Ris Lambers collected oviparous females and apterous males of *T. corticis* in October 1978 in Switzerland, but there is no description of these morphs in the paper.

Colonies of apterous viviparous and oviparous females together with apterous males were collected by S.V. Buga in Western Byelorussia. Below more detailed description of oviparous females and the first description of apterous males are given.

Material. **Byelorussia,** *Grodno Prov.*: 48 oviparous females, samples no. 9670, Smorgon' Distr., 2 km SW vill. Rachuny, 4.X.2005, on 2–4-year shoots of *Lonicera xylosteum* L.; 10 oviparous females and 3 apterous males, no. 9670-16.X, in culture, 16.X.2005.

Male. Apterous. Elliptic. Colour when alive dirty olive-green; without waxy pulverulence; 1st-2nd antennal segments dirty olive-green, 3rd-5th segments dark (except for pale base of 3rd segment), femora dirty grey-green with pale bases, tibiae light olive-green with dark apices, siphunculi pale with rather dark apices, cauda olive-green. Cleared specimens with dark brown head, antennae (except for base of 3rd antennal segment), femora (except for their bases), apices of tibiae, tarsi and peritremes, with light brown 3rd and 4th rostral segments, coxae and large sclerites at their bases, tibiae (except for their apices),



Figs 1-10. *Trichosiphonaphis* (*Xenomyzus*) *corticis*. **1-2**, antenna (1, of male; 2, of oviparous female); **3**, head of oviparous female; **4**, ultimate segment of rostrum of oviparous female; **5**, hind tarsus of oviparous female; **6**, hind tibia of oviparous female; **7-8**, siphunculi (7, of male; 8, of oviparous female); **9-10**, cauda (9, of male; 10, of oviparous female).

postsiphuncular sclerites, bands on tergites VII and VIII, apices of siphunculi, anal plate and cauda. Abdominal dorsum almost not sclerotized, except for short bands on abdominal tergites VII and VIII, postsiphuncular sclerites and peritremes. Surface of head with pointed spinules sometimes forming short rows, of thorax and abdominal tergites I-VI wrinkled, of abdominal tergites VII and VIII with long rows of small, partially fused, pointed spinules, of postsiphuncular sclerites with rows of pointed spinules fused and forming scales, of ventral side of thorax with short and of ventral side of abdomen with long rows of small spinules forming strongly stretched cells. Hairs on dorsal surface of thorax and abdomen short, blunt or weakly capitate, hairs on ventral surface of thorax and abdomen finely pointed; longest dorsal, marginal and ventral hairs on abdominal tergite III 10-11 (11), 11-13 (12) and 51-58 (56) long, 0.31-0.43 (0.38), 0.35-0.50 (0.44) and 1.54-2.30 (2.01) times as long as articular diameter of 3rd antennal segment, respectively; abdominal tergite III with 4-5 (4.7) dorsal hairs; tergite VI with 2-3 (2.3) hairs between si-

Table. Biometric data for males and oviparous females of *Trichosiphonaphis* (*Xenomyzus*) *corticis* (Aizenberg, 1935)

Morph	Number of samples / specimens	Length of body	Length of antennae	Length of antennae / length of body	Hind femora		Head width across the compound eyes	Length of hind tibia	Last antennal segment		
					length	length/head width across the compound eyes			length of base	length of processus terminalis	length of processsus terminalis/length of base
Males	1/3	1462-1523 (1492)	1334-1507 (1429)	0.95-1.03 (0.99)	452-477 (469)	–	–	771-853 (812)	96-109 (104)	408-445 (425)	3.85-4.63 (4.12)
Oviparous females	2/20	1543-1954 (1745)	1283-1648 (1480)	0.77-0.97 (0.85)	426-538 (489)	1.04-1.18 (1.11)	410-459 (439)	731-934 (838)	106-126 (116)	357-443 (397)	2.90-3.90 (3.44)

Morph	Ultimate rostral segment				2nd segment of hind tarsus			Siphunculi		Length of cauda	Length of siphunculi/ length of cauda
	length	length/			length	length/		length	length/ width of siphunculi at half length		
		head width across the compound eyes	length of 2nd segment of hind tarsus	length of base of last antennal segment		head width across the compound eyes	length of base of last antennal segment				
Males	162-177 (169)	–	1.56-1.63 (1.59)	1.57-1.68 (1.63)	104-109 (106)	–	1.00-1.08 (1.03)	368-412 (390)	8.56-12.54 (10.45)	96-99 (97)	3.73-4.29 (4.01)
Oviparous females	159-174 (169)	0.36-0.41 (0.38)	1.45-1.76 (1.57)	1.36-1.58 (1.46)	96-114 (107)	0.23-0.26 (0.24)	0.84-1.00 (0.93)	387-501 (451)	10.93-14.14 (12.44)	114-147 (132)	3.19-4.00 (3.46)

phunculi; tergite VIII with 2 hairs, longest hairs 56-63 (60) long, 2.20-2.38 (2.29) times as long as articular diameter of 3rd antennal segment, respectively. Marginal and spinal tubercles absent. Head without epicranial coronal suture. Antennal tubercles not high, diverging; surface of antennal tubercles with short scales formed by fused spinules; median tubercle weakly developed; frons moderately concave; ratio of depth of sinus to distance between bases of antennae 0.10. Occipital hairs short, blunt or weakly capitate; frontal hairs finely pointed; longest occipital and frontal hairs 8-10 (9) and 51-58 (55) long, 0.23-0.38 (0.32) and 1.54-2.19 (1.86) times as long as articular diameter of 3rd antennal segment, respectively. Antennae 5-segmented due to incomplete fusing of 3rd and 4th segments; surface of 1st and 2nd antennal segments with separate pointed spinules or small scales, of 3rd-5th segments weakly imbricated; hairs on 1st-3rd segments finely pointed, on 4-5th segments pointed; longest hair on 3rd segment 38-46 (41) long, 1.38-1.60 (1.47) times as long as articular diameter of the segment; longest hair on basal part of 5th segment 0.57-0.64 (0.60) times as long as articular diameter of basal part of the segment. Secondary rhinaria with sclerotized rim and more or less convex membrane, elliptical or almost rounded, weakly projected, small rhinaria strongly projected, 36-51 (42.3) on 3rd antennal segment, 5-10 (7.0) on 4th segment. Rostrum reaching abdominal segments II-III. Ultimate rostral segment elongate wedge-shaped, with 5-7 (6.0) long accessory hairs. Legs strong, hind femora and hind tibiae 0.31-0.33 (0.32) and 0.53-0.58 (0.56) times as long as body, respectively; coxae with rows of small spinules, trochanters, femora and tibiae smooth, 2nd tarsal segments weakly imbricated. Hairs on legs finely pointed, on inner sides in proximal 2/3 of tibia pointed or blunt; ventral hair on hind trochanter 1.00-1.02 (1.01) times as long as basal diameter of hind femur; longest dorsal, ventral and dorso-apical hairs on hind femur 48-58 (54), 48-56 (52) and 23-28 (26) long, respectively; longest dorsal hair on hind tibia 1.31-1.54 (1.39) times as long as the mid-diameter of the latter. Chaetotaxy of first tarsal segments 3,3,3. 2nd segment of hind tarsus 4.31-4.66 (4.43) times as long as its maximum width. Siphunculi almost cylindrical, broader at base and near apex than in the middle (diameter of the swollen part near apex 1.19-1.43 (1.31) times the smallest diameter of the basal half), without distinct flanges, weakly rounded at apex, strongly wrinkled at base, with sparse, strongly smoothed-out scales in apical half, with 0-1 (0.7) long, finely pointed hairs in distal half. Hairs on anal plate finely pointed. Cauda escutcheon-like, with 12-19 (15.0) finely pointed hairs.

Measurements. Body – 1462, antennae – 1508: III – 630 × 24, IV – 172, V – 96+445; hind trochanter+femur – 543, hind tibia – 853, siphunculus – 412 × 33; cauda – 96 × 121(at base) × 91 (before base).

Oviparous female. Broad elliptic. Colour when alive dirty green; without waxy pulverulence; 1st and 2nd antennal segments dark olive-green, 3rd-5th segments dark (except for pale base of 3rd antennal segment), femora dirty grey-green, tibiae light olive-green with dark apices, siphunculi pale with pale brown-green bases and rather dark apices, cauda olive-green. Cleared specimens with dark brown head, antennae (except for base of 3rd antennal segment), 3rd and 4th rostral segments, coxae and large sclerites at their bases, femora (except for their bases), apices of tibiae, tarsi, arms of mesosternal furca, peritremes and subgenital plates, with light brown tibiae (except for their apices), postsiphuncular sclerites, band on tergites VIII, apices of siphunculi, anal plate and cauda. Abdominal dorsum almost not sclerotized, except for short band on abdominal tergite VIII and peritremes. Surface of head with pointed spinules forming short rows or short scales, of thorax and abdominal tergites I-VI wrinkled, of abdominal tergites VII and VIII with long rows of small, partially fused spinules, which form scales on posterior part of tergites VIII, of ventral side of thorax with short and of ventral side of abdomen with long rows of small spinules sometimes forming strongly stretched cells. Hairs on dorsal surface of thorax and abdomen short, blunt or weakly capitate, on ventral surface of thorax and abdomen finely pointed; longest dorsal, marginal and ventral hairs on abdominal tergite III 8-13 (9), 8-13 (10) and 63-83 (73) long, 0.22-0.40 (0.28), 0.23-0.40 (0.32) and 1.92-2.75 (2.29) times as long as articular diameter of 3rd antennal segment, respectively; abdominal tergite III with 3-6 (4.2) dorsal hairs; tergite VI with 2-4 (2.6) hairs between siphunculi; tergite VIII with 13-25 (19.3) hairs, longest hairs 66-89 (79) long, 2.08-2.83 (2.49) times as long as articular diameter of 3rd antennal segment. Marginal and spinal tubercles absent. Head without epicranial coronal suture. Antennal tubercles not high, diverging, surface of antennal tubercles with short scales formed by partially fused spinules or rarely with large pointed spinules; median tubercle weakly developed; frons moderately concave; ratio of depth of sinus to distance between bases of antennae 0.06-0.12 (0.10). Occipital hairs short, blunt or weakly capitate, frontal hairs finely pointed; longest occipital and frontal hairs 8-15 (9) and 33-76 (60) long, 0.21-0.48 (0.27) and 1.04-2.31 (1.92) times as long as articular diameter of 3rd antennal segment, respectively. Antennae 6-segmented, with-

out secondary rhinaria; surface of 1st-3rd segments with more or less small scales, of 4th segment weakly imbricated, of 5-6th segments imbricated; hairs on 1st-4th segments finely pointed, on 5-6th segments pointed; longest hair on 3rd segment 40-58 (47) long, 1.26-1.75 (1.49) times as long as articular diameter of the segment; longest hair on basal part of 6th segment 0.50-0.80 (0.66) times as long as articular diameter of basal part of the segment. Rostrum reaching abdominal segments II-III. Ultimate rostral segment with 4.0-5.0 (4.2) long accessory hairs. Legs strong, hind femora and hind tibiae 0.26-0.32 (0.28) and 0.44-0.57 (0.48) times as long as body length, respectively; fore and middle coxae and inner side of hind coxae with rows of small spinules, outer side of hind coxae, trochanters, ventral surface of femora and tibiae smooth, dorsal surface of femora with sparse small scales; 2nd tarsal segments weakly imbricated. Hairs on legs finely pointed, on inner sides in proximal 2/3 of tibiae pointed or blunt; ventral hair on hind trochanter 0.89-1.40 (1.10) times as long as basal diameter of hind femur; longest dorsal, ventral and dorso-apical hairs on hind femur 40-83 (61), 53-76 (66) and 20-46 (27) long, respectively; longest dorsal hair on hind tibia 1.44-2.08 (1.75) times as long as mid-diameter of the latter. Hind tibia with 3-19 (9.3) rounded pheromone plates. First tarsal segments with 3,3,3 hairs, sometimes with 2 on one hind tarsus and rarely with 2 hairs on both. 2nd segment of hind tarsus 3.82-4.72 (4.10) times as long as its maximum width. Siphunculi almost cylindrical, broader at base and near apex than in the middle (diameter of the swollen part near apex 1.18-1.56 (1.36) times the smallest diameter of the basal half), without distinct flanges, weakly rounded at apex; strongly wrinkled at base, almost smooth, with very sparse, strongly smoothed-out scales in apical half; with 0-4 (2.0) long, finely pointed hairs in distal half. Subgenital plate oval with weak constriction along medial line, with 17-30 (22.1) finely pointed hairs on anterior half and 32-48 (40.8) hairs along the hind margin. Hairs on anal plate finely pointed. Cauda elongate escutcheon-like, almost shortly tongue-shaped, with 17-24 (20.5) finely pointed hairs.

Measurements. Body – 1746 × 1213, antennae – 1490: III – 354, IV – 248, V – 215, VI – 114+392; hind trochanter+femur – 553, hind tibia – 843, siphunculus – 453 × 38; cauda – 132 × 147(at base) × 106 (before base).

Loniceraphis paradoxa Narzikulov, 1962

= *Trichosiphonaphis (Xenomyzus) foliotus* Shaposhnikov in Juchnevitch, 1968: 87 (nomen nudum).

Trichosiphonaphis (Xenomyzus) foliotus Shaposhnikov in Juchnevitch, 1968 is present in the 'Catalogue of the word's Aphididae' (Remaudière & Remaudière, 1997) as a valid name. Kadyrbekov (2004) mentions this species as a new synonym of *Loniceraphis paradoxa* Narzikulov, 1962 without any comments.

Juchnevitch (1968) in the paper 'Aphids (Homoptera, Aphidinea) from Eastern Kazakhstan' (1968) wrote: „*Xenomyzus foliotus* Schap. [sic!]: Rare species. Had been found in forest-steppe zone of the Kalbin Mountains on *Lonicera tatarica*. Aphids suck tips of young shoots and undersides of leaves. Initiates of leaf wrinkling. Alatae had been registered in June. Attended by ants *Formica pratensis*."

No reference is given to a work containing the species description. Moreover any description of *Trichosiphonaphis* species by G.Ch. Shaposhnikov do not exists. The foregoing text by Juchnevitch (1968) cannot be considered as description according to Article 13.1 of the International Code of Zoological Nomenclature (1999) because of absence of charachteristics destined for species identification.

Slides of aphids collected by L.A. Juchnevitch from Kazakhstan are preserved in the collection of Zoological Institute of RAS (St.Petersburg): no. 5082 (Kazakhstan, VKO [Vostochno-Kazakhstanskaja oblastj], Ulanskij rajon, Kolbinskij khr.[ebet], Kzyl-Su, zhimolost' [handwritten in Russian, translation: Kazakhstan, East Kazakhstan Prov., Ulan Distr., Kolbin Mts., Kzyl-Su, *Lonicera*], 3 alate viviparous females, 16.VI. 1961) and no. 5083 (Kazakhstan, VKO [Vostochno-Kazakhstanskaja oblast'], Ulanskij rajon, Kolbinskij khr.[ebet], Kzyl-Su, *Lonicera tatarica* [handwritten in Russian, translation: Kazakhstan, East Kazakhstan Prov., Ulan Distr., Kolbin Mts., Kzyl-Su], 4 alate viviparous females, 16.VI.1962). Both items have been determined in May 1963 by G.Ch. Shaposhnikov as *Xenomyzus foliatus* [sic!] sp. n. There are additional notes dated August 1963: 'probably it is *Loniceraphis paradoxa* Narz.'. Our identification of these alate viviparous females confirms that the last opinion is true. Certainly the preliminary identification by G.Ch. Shaposhnikov served as a source for such mention in Juchnevitch's article.

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