

УДК 595.42

## TO THE KNOWLEDGE OF ACARID MITES OF THE GENUS *SCHWIEBEA* (ACARIFORMES, ACARIDAE) FROM THE FAR EAST, WITH NOTES ON SYSTEMATIC OF THE GENUS

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Accepted 20 March 1998

К познанию акаридных клещей рода *Schwiebea* (Acariformes, Acaridae) Дальнего Востока с замечаниями по систематике рода. Климов П. Б. — Для 5 видов рода *Schwiebea*, Oudemans, 1916 (Acariformes, Acaridae) с Дальнего Востока изучены взрослые стадии и гипопусы. Описан новый вид *Schwiebea neomycolicha* Klimov, sp. n. из Приморского Края (Россия). Установлена новая синонимия: *Schwiebea* (=*Megninietta* Jacot, 1936, syn. n.; *Jacotietta* Fain, 1977, syn. n.; *Troupeauia* Zachvatkin, 1941); *Schwiebea nova* (Oudemans, 1906) (=*Schwiebea rossica* Zachvatkin, 1941). Предложено новое подразделение рода *Schwiebea* на подроды: *Schwiebea* (s. str.) и *Robinisca* Zachvatkin, 1941, stat. n. Вид *Robinisca mycolicha* (Oudemans, 1912) отнесен к роду *Schwiebea*. *S. (R.) armata* (Mahunka, 1979); comb. n. и *S. (R.) capitata* (Mahunka, 1979), comb. n. перемещены из рода *Caloglyphus* (=*Sancassania* Oudemans, 1916, part.). *S. piceae* Bugrov, 1990, comb. n.; *S. longibursata* Fain et Wauthy, 1979, comb. n.; *S. cepa* Karg, 1987 comb. n. и *S. ruienensis* Fain et Wauthy, 1979, comb. n. перемещены из подрода *Jacotietta*; *S. (R.) tuzkoliensis* Bugrov, 1990, comb. n.; *S. (R.) sakhalinensis* Bugrov, 1990, comb. n.; *S. (R.) kurilensis* Bugrov, 1990, comb. n. и *S. (R.) danielopoli* Fain, 1982, comb. n. перемещены из подрода *Schwiebea*. Описываются неизвестные ранее гипопусы и гетероморфные самцы *S. longibursata*. Последний вид впервые приводится для Южной Кореи. Впервые описывается бурса copulatrix у *S. nova*. Приводятся данные по биологии видов *S. neomycolicha*, *S. nova* и *S. longibursata*.

Ключевые слова: Acari, Acariformes, Acaridae; *Schwiebea neomycolicha*, новый вид; *Schwiebea*, *Robinisca*, *Troupeauia*, *Megninietta*, *Jacotietta*, *Schwiebea nova*, *Schwiebea rossica*, синонимия; *Schwiebea longibursata*, гипопусы, гетероморфные самцы, Южная Корея, первое нахождение; Дальний Восток России.

To the knowledge of acarid mites of the genus *Schwiebea* (Acariformes, Acaridae) from the Far East, with notes on systematic of the genus. Klimov P. B. — Both adults and hypopi are examined for 5 species of the genus *Schwiebea*, Oudemans, 1916 (Acariformes, Acaridae) originated from Far East. *Schwiebea neomycolicha* Klimov, sp. n. is described from Primorskiy Kray, Russia. New synonymy is established: *Schwiebea* (=*Megninietta* Jacot, 1936, syn. n.; *Jacotietta* Fain, 1976, syn. n.; *Troupeauia* Zachvatkin, 1941); *Schwiebea nova* (Oudemans, 1906) (=*S. rossica* Zachvatkin, 1941). New subdividing on subgenera of the genus *Schwiebea* is proposed: *Schwiebea* (s. str.) and *Robinisca* Zachvatkin, 1941, stat. n. Species *Robinisca mycolicha* (Oudemans, 1912) is attributed to genus *Schwiebea*. *S. (R.) armata* (Mahunka, 1979), comb. n. and *S. (R.) capitata* (Mahunka, 1979), comb. n. are transferred from genus *Caloglyphus* (=*Sancassania* Oudemans, 1916, part.). *S. piceae* Bugrov, 1990, comb. n.; *S. longibursata* Fain et Wauthy, 1979, comb. n.; *S. cepa* Karg, 1987 comb. n. and *S. ruienensis* Fain et Wauthy, 1979, comb. n. are transferred from subgenus *Jacotietta*. *S. (R.) tuzkoliensis* Bugrov, 1990, comb. n.; *S. (R.) sakhalinensis* Bugrov, 1990, comb. n.; *S. (R.) kurilensis* Bugrov, 1990, comb. n. and *S. (R.) danielopoli* Fain, 1982, comb. n. are transferred from subgenus *Schwiebea*. Unknown hitherto hypopi and heteromorphic males of *S. longibursata* are described. Latter species is recorded for the first time for South Korea. Bursa copulatrix of *S. nova* is described for the first time. Data on biology of *S. neomycolicha*, *S. nova* and *S. longibursata* are provided.

Key words: Acari, Acariformes, Acaridae; *Schwiebea neomycolicha*, new species; *Schwiebea*, *Robinisca*, *Troupeauia*, *Megninietta*, *Jacotietta*, *Schwiebea nova*, *Schwiebea rossica*, synonymy; *Schwiebea longibursata*, hypopi, heteromorphic males, South Korea, first record; Russian Far East.

### Introduction

The genus *Schwiebea* is known from both adults and hypopi but only few species are known from all these stages (*S. parallela* (J. Müller, 1860) (=*S. tshernyshevi* Zachvatkin, 1941); *S. falcifrons* Woodring, 1966 and *S. zingiberi* Manson, 1972). Existence of hypopi which morphologically more variable than adults and

lacking of description of hypopi of type species of this genus were the causes which had promoted description a number of new taxa (*Megninietta*, *Jacotietta*, *Troupeauia*, *Robinisca* and probably several other genera) which in fact are identical with the genus *Schwiebea* (s. l.).

Laboratory rearing of four species of mites (including one new) of *Schwiebea* originated from Far East of Russia by author has yielded they developmental stages (including hypopi) and shown, that adults and hypopi of the species form two groups (considered herein as subgenera). These groups are differ by common for both adults and hypopi characters [placement of *ba* (= $\omega_3$  of D. Griffiths, 1970 in hypopi) and setation of the genera III], thus, the previous subdividing on subgenera on basis of number of genual solenidia of legs I in adults (Zachvatkin, 1941; Fain, 1976) is discarded.

The first group (*Schwiebea nova* Oudemans, 1906 and *S. longibursata* Fain et Wauthy, 1979) comprises species which have *ba* and  $\omega_1$  placed in common "field" on tarsi I-II and genu III with single solenidion in adults and without any elements in hypopi. Adults of *S. talpa* (hypopi are unknown), type species of the genus, have the same characters and should be attributed to this group (*Schwiebea* subgen.). Thus, genera *Troupeauia* (type species *S. nova*) and *Megninietta* (=*Jacotietta* subgen., see below) (*ba* and  $\omega_1$  are depicted very close each other in *Megninietta ulmi* Jacot, 1936, the type species of the genus) all are junior subjective synonyms for subgenus *Schwiebea*. Species of the second group (*Schwiebea neomycolicha*, *S. parallela* and additionally, *S. zingiberi*, which being absent in author's collection but had been sufficiently described from both adults and hypopi) have bases of *ba* and  $\omega_1$  are separated each other on tarsi I-II and genu III with one seta and solenidion in adults and one seta in hypopi. They should be attributed to subgenus *Robinisca*, stat. n.

Terms of body parts and abbreviations of idiosomal setae follow D. Griffiths *et al.* (1990); terms of parts of bursa copulatrix and abbreviations of leg elements follow D. Griffiths (1970) (beside  $\omega_3$  in hypopi which is replaced by *ba*).

All measurements are given in micrometers. The material (including insect host) is kept in Institute of Biology and Pedology, Far Eastern Branch of Russian Academy of Sciences, Vladivostok (IBPV). Mites had been collected by author if otherwise indicated.

## Genus *Schwiebea* Oudemans, 1916

*Schwiebea* Oudemans, 1916: 264; Zachvatkin, 1941: 197; Turk & Turk, 1957: 126; Černý & Samšiňák, 1971: 506; Tareev, 1970: 9; Volgin, 1975: 43; Fain & Wauthy, 1979: 171; Fain, 1982: 360; Karg, 1987: 144; Manson, 1982: 71; Bugrov, 1995: 68; 1997: 152. Synonymy and species included see below for the subgenera.

Type species: *Schwiebea talpa* Oudemans, 1916, by original designation.

**Remarks.** The genus had been created for single species, *Schwiebea talpa*. In 1941, A. Zachvatkin had described several new species in this genus and established new genus *Troupeauia* (type species: *Tyroglyphus novus* Oudemans, 1906), based on hypopi only. In 1957, E. Turk & F. Turk had described both adults and hypopi under the name *Schwiebea nova* (Oudemans, 1906), thus, they synonymized *Troupeauia* with *Schwiebea* Oudemans, 1916. V. Černý and K. Samšiňák (1971) had accepted such synonymy. Fain (1976b) noted that hypopi and adults of *S. nova* describing by E. Turk & F. Turk (1957) do not correlated each other and retained *Troupeauia* in distinct genus. Present paper supports E. and F. Turks' point of view, but the genus *Troupeauia* is considered as an junior synonym for the subgenus *Schwiebea*.

The genus comprises about eighty species distributed in Holarctic, Afrotropic, Oriental, Neotropic and Antarctic Regions. Most species is known from adults only or from hypopi only. In fact, several species described from hypopi should be placed to other genera. Owing to insufficient description as well adults and hypopi in certain species, only part of the species which currently included in the genus *Schwiebea* are placed to corresponding subgenera below.

### Key to subgenera of the genus *Schwiebea* (adults and hypopi)

- 1(2). Bases of *ba* and  $\omega_1$  placed in common "field" on tarsi I-II in adults and on tarsus I only in hypopi. Genu III with single solenidion (adults) or without any elements (hypopi) ..... *Schwiebea* Oudemans, 1906
- 2(1). Bases of *ba* and  $\omega_1$  placed separately each other on tarsi I-II in adults hypopi. Genu III with single seta or with solenidion and seta or without any elements (hypopi) ..... *Robinisca* Zachvatkin, 1941, stat. n.

## Subgenus *Schwiebea* Oudemans, 1916

*Schwiebea* Oudemans, 1916: 264; Zachvatkin, 1941: 200 (as subgenus, part.); Fain, 1976a: 305 (as subgenus, part.); 1976b: 129; 122 (part.); Fain & Wauthy, 1979: 171 (as subgenus, part.); Fain, 1982: 360 (as subgenus); Tareev, 1970: 9 (part.); Karg, 1987: 144 (as subgenus, part.); Bugrov, 1995: 68 (as subgenus part.).

*Megninietta* Jacot, 1936: 631 (type species *Megninietta ulmi* Jacot, 1936, by original designation); Zachvatkin, 1941: 204 (as subgenus), **syn. n.**

*Troupeauia* Zachvatkin, 1941: 219 (type species *Tyroglyphus novus* Oudemans, 1906, by original designation; synonymized by F. Turk & E. Turk, 1957); Samšiňák, 1956: 355; Tareev, 1970: 9; Fain, 1976b: 129; Bugrov, 1997: 152.

*Jacotietta* Fain, 1976a: 305 (as subgenus, part.; type species: *Schwiebea falticis* Woodring, 1966, by original designation); Fain & Wauthy, 1979: 171 (as subgenus, part.); Fain, 1982: 361 (as subgenus, part.); Karg, 1987: 145 (as subgenus, part.); Bugrov, 1995: 70 (as subgenus, part.); 1997: 152 (as subgenus, part.), **syn. n.**

Species included (the species marked by **comb. n.** are transferred from subgenus *Jacotietta*): *S. aksuensis* Bugrov, 1990; *S. cepta* Karg, 1987 **comb. n.**; *S. falticis* Woodring, 1966; *S. longibursata* Fain et Wauthy, 1979, **comb. n.**; *S. nova* (Oudemans, 1906); *S. piceae* Bugrov, 1990, **comb. n.**; *S. punctata* Mahunka, 1962; *S. ruienensis* Fain et Wauthy, 1979, **comb. n.**; *S. scheucherae* Turk et Turk, 1957; *S. talpa* Oudemans, 1916; *S. tumestica* Mahunka, 1973 (=*Lamtoglyphus tumesticus* (Mahunka, 1973)); *S. ulmi* Jacot, 1936; (?) *S. laphriae* (Samšiňák, 1956) (=*Troupeauia laphriae*).

Remarks. The genus *Schwiebea* (adults) had been subdivided by A. Zachvatkin (1941) into two subgenera: *Schwiebea* (type species *S. talpa* Oudemans, 1916) and *Megninietta* Jacot, 1936 (type species *Megninietta ulmi* Jacot 1936). Later, M. Hughes (1957) and J. Woodring (1966) pointed out that such division was unwarranted and name *Megninietta* is invalid for the subgenus, because genus *Megninietta* includes species which do not belong to *Schwiebea*. M. Hughes (1957) gave redescription of *S. talpa* and noted that main characters dividing the subgenera (including the number of genual solenidia on the leg I) are variable even in the single species. Nevertheless, A. Fain (1976a) had retained division on subgenera in *Schwiebea* and replaced Zachvatkin's subgenus *Megninietta* by *Jacotietta* Fain, 1976 (type species *Schwiebea falticis* Woodring, 1966) which differs from nominative subgenus mainly by presence of two genual solenidia on legs I. The same author (1982) included species *Megninietta ulmi* to the genus *Schwiebea* (but did not keyed the species as it is insufficiently described). As *M. ulmi* has two genual solenidia on the legs I-II and it is a type species for the genus, so *Megninietta* should be considered as senior subjective synonym for the *Jacotietta* subgen. In present paper genera (subgenera) *Megninietta*, *Troupeauia* and *Jacotietta* all are considered as junior synonyms for the nominative subgenus *Schwiebea*.

## *Schwiebea (Schwiebea) talpa* Oudemans, 1906

*Schwiebea talpa* Oudemans, 1916: 265; Hughes, 1957: 293, Figs 1–14.

69. *Schwiebea (Schwiebea) talpa*: Fain, 1976b: 171, 1982: 361; Karg, 1987: 144; Bugrov, 1987: 151; 1995:

*Schwiebea (Schwiebea)pachyderma* Zachvatkin, 1941: 204, Figs 348–350 (synonymized by M. Hughes, 1957)

*Schwiebea pachyderma*: Volgin, 1975: 443, Fig. 1158.

Holotype (female) is kept in the Rijksmuseum of Leiden, the Netherlands.

Material. 2 ♀, Russia, Irkutsk Region, Bratsk, Energetik, forest litter, 8.09.1991; 1 ♀ Vladivostok, vc. Botanical garden, under bark of fallen tree, 1.05.1992.

Distribution. Cosmopolitan (Fain, 1982, 1987; Karg, 1987; Bugrov, 1995). *S. talpa subantarctica* Fain, 1976 is described from Kergulen Is.

**Schwiebea (Schwiebea) longibursata** Fain et Wauthy, 1979 (Figs 1—2)

*Schwiebea (Jacotietta) longibursata* Fain & Wauthy, 1979: 172, Figs 1—7; Fain, 1982: 362; Karg, 1987: 146; Bugrov, 1995: 73.

*Schwiebea nova* Turk & Turk, 1957: 131, Fig. 85 (part).

Depositorium of the holotype (female) and paratypes is not indicated.

Hitherto this species had been known on females only. Hypopi and heteromorphic males are described below.

**Material.** 6 ♀, 1 ♂, 6 hypopi, 3 protonymphs (mounted on 2 slides), Russia, Irkutsk Region, Bratsk, Energetik, suburban forest, in decaying bracket-fungus (*Polyphoraceae*) grown on fallen birch (*Betula*), 15.10.1995; 1 hypopus with *Imparipes* sp. (Acariformes, Tarsonemidae), Russia, Primorskiy Kray, 10 km N Livadia, ex *Pemphredon inornatus* Say, 1824 (Hymenoptera, Sphecidae), 19.09.1987 (P. Nemkov leg.); 14 hypopi, South Korea, Kyongsangnam-Do, Kojedo (Is.) (=Goje Island), GN Goje-city, Donghon-myon, ex *Necrodes asiaticus* Portevin, 1922 (Coleoptera, Silphidae) № 1.1, 4.07.1997 (A. B. Egorov leg.).

**Hypopus** (Figs 1.1—7). Body shape ovoid. Surface smooth. Idiosoma 201.3 long, 126.7 wide.

Gnathosoma enlarged, length longer than width. Width of gnathosoma approximately equal on full length of gnathosoma. Distal palpomeres indistinctly subdivided. Gnathosomal solenidia longer than gnathosoma.

Rostrum 13.4 long, well-developed; there is pair of pigmented small sclerites near its lateral edges. All idiosomal setae developed, represented by microsetae. vi placed outside propodosomal shield at level of rostral base. scx long (29.6 long), setiform, located outside the shield at level of hind edges of femora I. Distance between some setae is as follows: se—se 49.4, si—si 29.1, c<sub>1</sub>—c<sub>1</sub> 46.5, d<sub>1</sub>—d<sub>1</sub> 25.4, e<sub>1</sub>—e<sub>1</sub> 40.0, h<sub>1</sub>—h<sub>1</sub> 32.7. There is pattern of short interrupted lines on anterior edge of hysterosoma. Hysterosoma 123.8 long. Openings of opisthosomal glands situated between levels of d<sub>1</sub> and d<sub>2</sub>, h<sub>1</sub> 13.4 long. Sternal shield 82.3 long, 98.1 wide; with long, narrowing lateral edges (epimerites II 60.6 long) and short (15.7) hind edge. Sternum 31.5 long, significantly not reaching hind edge of sternal shield (the distance 43.6). Epimerae II 42.4 long, with curved externally tips, not reaching hind edge of sternal shield (the distance 23.0). Coxal field II not enclosed. Ventrogenital shield 60.6 long, 46.0 wide; not touching sternal one (there is short distance between the shields). Coxal fields III enclosed, well-defined, touching each other on rather long distance (13.3) at median line of body. Ventrum long (19.4), distance between ventrum and genital shield very short (0.7). Genital shield separated from ventral one by weak-visible bound, latter curved posteriorly. 1a, 3b, 3a and g (1.8 long) setiform; 4a (diameter 3.1) are suckers. Anal plate 31.3 long, 39.5 wide. Fore suckers 7.8; central ones 9.0; hind (ps<sub>1</sub>) and lateral (ps<sub>2</sub>) 5.4, supplied with wedge-like inner sclerites protruding from hind edge of the plate (length 10.1 and 13.0, respectively); fore cuticular suckers 5.6x4.3; hind ones absent.

**Legs.** Length of femora—tarsi I—III (length of corresponding legs are in parenthesis) is as follows: 21.3, 15.7, 14.5, 33.9 (85.5); 19.4, 13.1, 12.6, 30.8 (75.8); 11.9, 7.8, 7.3, 15.7 (42.6), respectively. Spines absent. Elements of leg chaetom represented by setiform or hair-like setae or setae with slightly widened tips. Leg I: mG 7.8; σ>12.3; gT 10.1; hT 7.8; ω<sub>1</sub> 16.8 with slightly clavate tip, its length is approximately half of tarsal length; there are ba (9.0 long, represented by solenidion) and very short ξ (famulus) in the common “field” with ω<sub>1</sub>; ω<sub>2</sub> 5.6 long, situated posteriorly ω<sub>1</sub> near base of tarsus; wa moved proximally from ra n la; e 16.8 with developed “saucer”. d III—IV long (d IV longer than leg IV and d III longer than tarsus III), situated paramedially on tarsi III—IV. f III—IV widened at tips. e IV longer than tarsus IV. Chaeto- and so

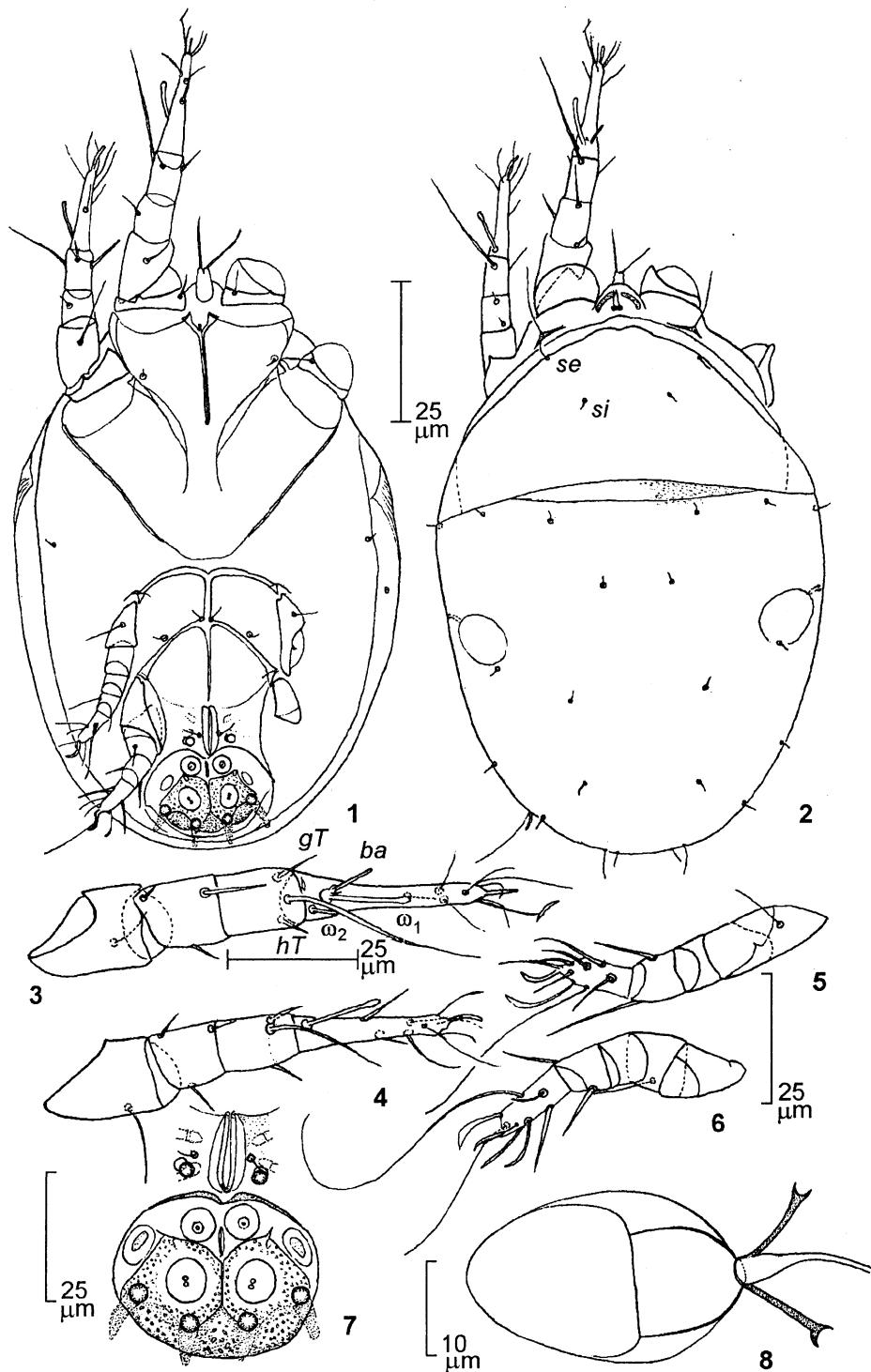


Fig. 1. *Schwiebea (Schwiebea) longibursata*, hypopus and female: 1 – ventral view; 2 – dorsal view; 3–6 – legs I–IV, respectively; 7 – anal plate; 8 – bursa copulatrix of female.

Рис. 1. *Schwiebea (Schwiebea) longibursata*, гипопус и самка: 1 – снизу; 2 – сверху; 3–6 – ноги I–IV, соответственно; 7 – анальный диск; 8 – бурса copulatrix самки.

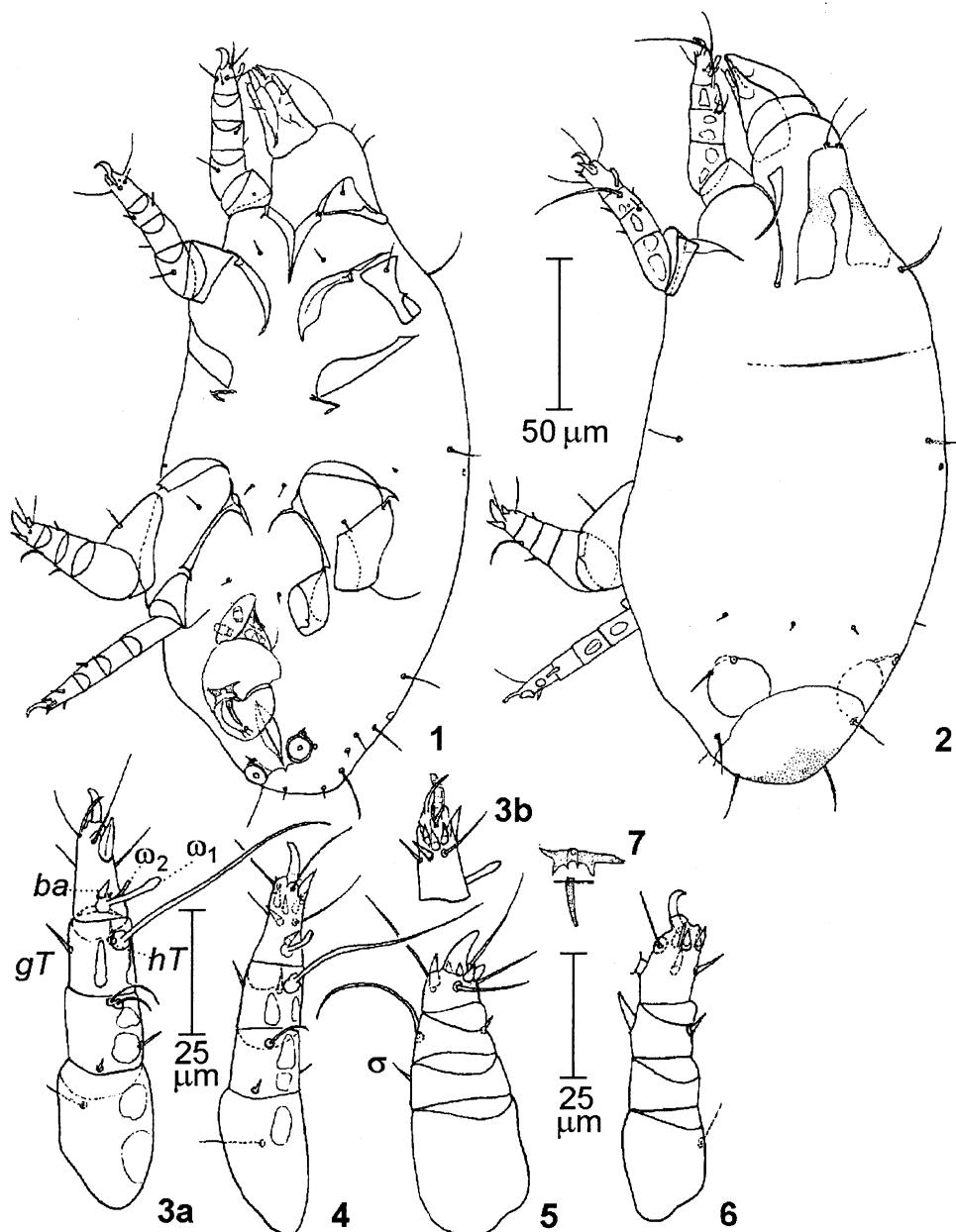


Fig. 2. *Schwiebea (Schwiebea) longibursata*, heteromorphic male: 1 — ventral view; 2 — dorsal view; 3 — leg I (a — сверху; b — лапка снизу); 4—6 — ноги II—IV, соответственно; 7 — гениталии.

Рис. 2. *Schwiebea (Schwiebea) longibursata*, heteromorphic male: 1 — ventral view; 2 — сверху; 3 — нога I (а — сверху; б — лапка снизу); 4—6 — ноги II—IV, соответственно; 7 — гениталии.

lenidiotaxy of legs I–IV (trochanters–tarsi) is as follows: 1–1–2+(1)–2+(1)–8+(3+1); 1–1–2+(1)–2+(1)–9+(1); 1–0–0+1+(1)–8; 0–1–0+1+(1)–8.

Length of idiosoma 188.9–215.6, width 115.8–147.7, length of idiosoma/width 1.42–1.67 (n=6). Length of sternum (1) is 29.1–37.5; distance between sternum and ventogenital shield (2) is 35.6–48.4; (2)/(1)=0.95–1.41 (n=6). Length of ventrum (1) is 18.2–24.2, distance between ventrum and genital shield (2) is 1.2–2.9; (1)/(2)=7.27–16.6 (n=6).

**Female.** Idiosoma 312.9–368.1 long, 147.2–184.1 wide (n=6). Bursa copulatrix (Fig. 1,8) with rather long tube. Proximal end of tube gradually turns into bell-shaped structure (width 2.57). Dilatable sac is enveloped by thin walled shell. The sac divided on two parts. First part comparatively better sclerotized, 8.38 long, 10.07 wide; while second part is slightly longer and wider than the first one. Chitinized openings of oviducts 8.95 long, with semicircular incisions on tips.

**Heteromorphic male** (Fig. 2.). Idiosoma 284.3 long, 133.2 wide. Incision of propodosomal shield is approximately 2/3 of shield length. Setae *ve*, *si*, *c<sub>1</sub>*–*c<sub>3</sub>* (*c<sub>3</sub>* represented by alveoli), *d<sub>1</sub>*, *ps<sub>1</sub>*–*ps<sub>3</sub>* and *ad<sub>1</sub>*–*ad<sub>3</sub>* absent. Propodosoma 104.1, hysterosoma 180.2 long. Length of *vi* 21.8, *se* 30.3, *cp* 17.1, *e<sub>2</sub>* 17.4, *h<sub>1</sub>* 24.5, *h<sub>2</sub>* 17.4. *e<sub>1</sub>* and *d<sub>2</sub>* represented by microsetae. Legs and leg elements shown in Figs 2,3–6. Solenidion  $\omega_3$  (7.3) longer than in female. Length of leg I–IV podomeres (length of corresponding leg are in parenthesis): 24.9, 16.2, 13.3, 18.9 (73.4); 24.7, 14.8, 12.1, 18.2 (69.8); 25.4, 9.0, 9.4, 17.0 (60.8); 21.6, 11.6, 11.1, 16.5 (60.8). Chaeto- and solenidiotaxy of legs I–IV (trochanters–tarsi) is as follows: 1–1–2+(2)–2+(1)–12+(3+1); 1–1–2+(1)–2+(1)–13+(1); 1–0–(1)–1+(1)–10; 0–1–0–1+(1)–8+2.

**Distribution.** Germany (Turk & Turk, 1957); Austria; Belgium; Russia: Moscow and Irkutsk Regions, Primorskiy Kray, Sakhalin (Bugrov, 1995, 1997); South Korea (first record).

**Biology.** Adults inhabit decaying coniferous (*Picea*, *Pinus*) and leaf (*Betula*) trees (under bark). Hypopi had been collected on *Lithobius forficatus* Linnaeus, 1758 (Lithobiomorpha, Lithobiidae), *Poecilus cupreus* Linnaeus, 1758 (Coleoptera, Carabidae), *Dorcus parallelolopipedus* Linnaeus, 1758 (Coleoptera, Lucanidae), *Dictyoptera aurora* Herbst, 1884 (Coleoptera, Cantharididae), *Cis boleti* Scopoli, 1763 (Coleoptera, Ciidae), *Hylobius abietis* Linnaeus, 1758 (Coleoptera, Curculionidae), *Lasius fuliginosus* (Latrelle, 1798) (Hymenoptera, Formicidae) (Turk & Turk, 1957 for *S. nova*, see below), *Necrodes asiaticus* and *Pemphredon inornatus*.

### *Schwiebea (Schwiebea) nova* (Oudemans, 1906) (Figs 3–4)

*Schwiebea nova*: Turk & Turk, 1957: 131, Figs 83–84 (part.); Černý & Samšíňák, 1971: 511, Fig. 58.

*Troupeauia nova*: Zachvatkin, 1941: 220, Figs 370–371; Fain, 1976b: 129, Figs 20–24.

*Schwiebea (Meginietta) rossica* Zachvatkin, 1941: 205, Figs 199–200, 347, 351, **syn. n.**

*Schwiebea (Jacotietta) rossica*: Fain, 1982: 361; Karg, 1987: 145; Bugrov, 1995: 73.

*Schwiebea rossica*: Tareev, 1970: 9.

Holotype (hypopus) is kept in the Rijksmuseum of Leiden, Netherlands.

**Material.** 10 ♀, 5 heteromorphic ♂, 2 homeomorphic ♂, Russia, Irkutsk Region, Bratsk, mixed forest, under bark of fallen birch (*Betula*), 15.10.1995; 1 hypopus, Primorskiy Kray, 3 km E Rettikhovka, ex *Laphria flava* Linnaeus, 1758 (Diptera, Asilidae), 23.07.1990 (N. Kurzenko leg.); 2 ♀, about 50 hypopi, Russia, Vladivostok, vc. Botanical Garden, in decaying bracket-fungus *Ganoderma applanatum* (Pers. ex Wallr.) Pat. (Aphyllophorales, Polyporaceae), 21.05.1995; 6 ♀, 2 ♂, 1 hypopus and other developmental stages with *Boletoglyphus extremiorientalis* Klimov (Acariformes, Acaridae), same locality, 26.08.1995; 1 hypopus with *Calvolia bulgarica* Štokrán, 1935 (Acariformes, Winterschmidtiidae) ex *Chrysis* sp. (Hymenoptera, Chrysidae), Primorskiy Kray, Khasan Distr., Novokachalinsk, 23.07.1995 (A. Lelej leg.); 1 hypopus ex *Platycerus caraboides* Linnaeus, 1758 (Coleoptera, Scarabaeidae), Novosibirsk Region, Maslyaninsky Distr., Matreny river, without date (Grigor'ev leg.).

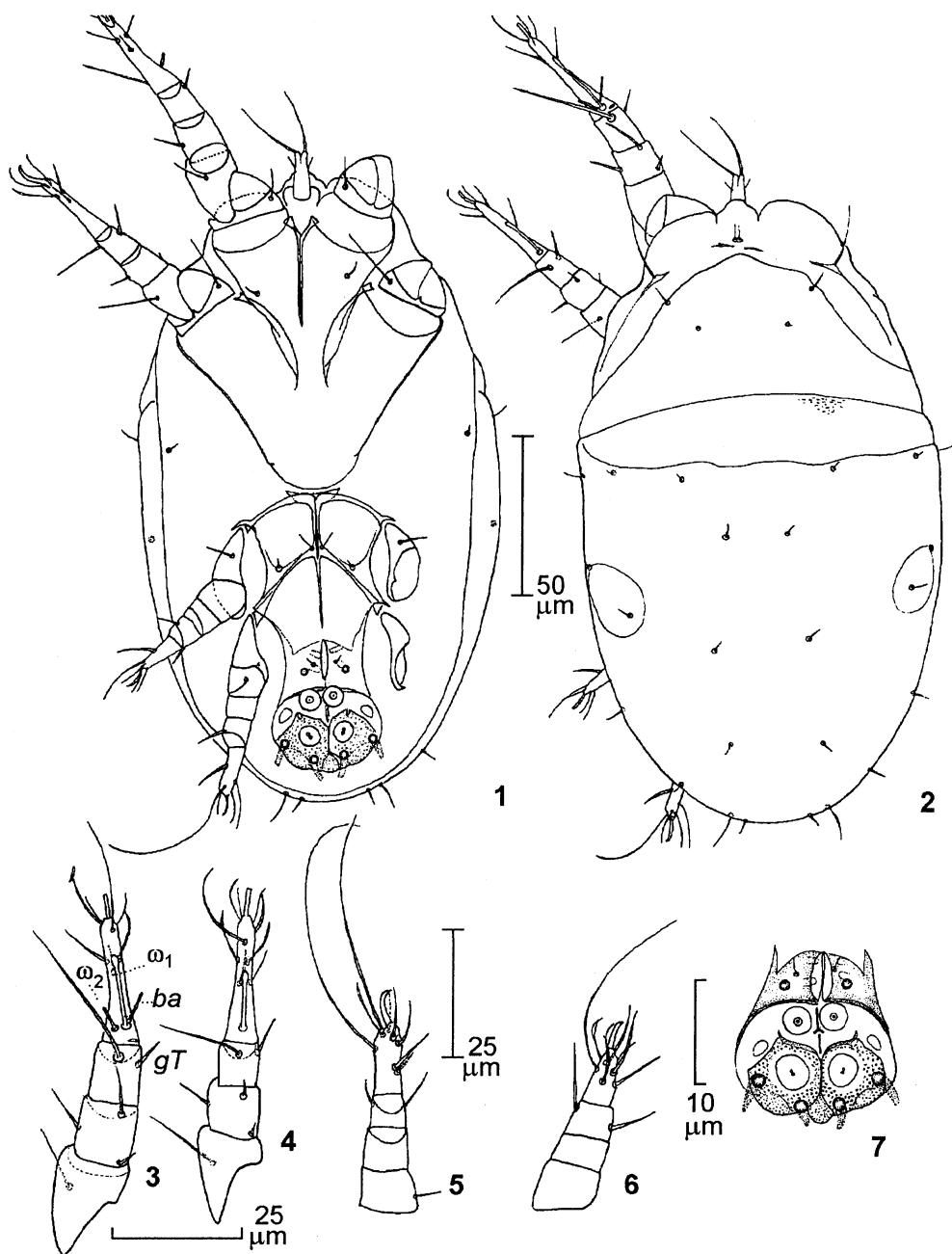


Fig. 3. *Schwiebea (Schwiebea) nova*, hypopus: 1 — ventral view; 2 — dorsal view; 3 — anal plate; 4—7 — legs I—IV, respectively.

Рис. 3. *Schwiebea (Schwiebea) nova*, гипопус: 1 — снизу; 2 — сверху; 3 — анальный диск; 4—7 — ноги I—IV, соответственно.

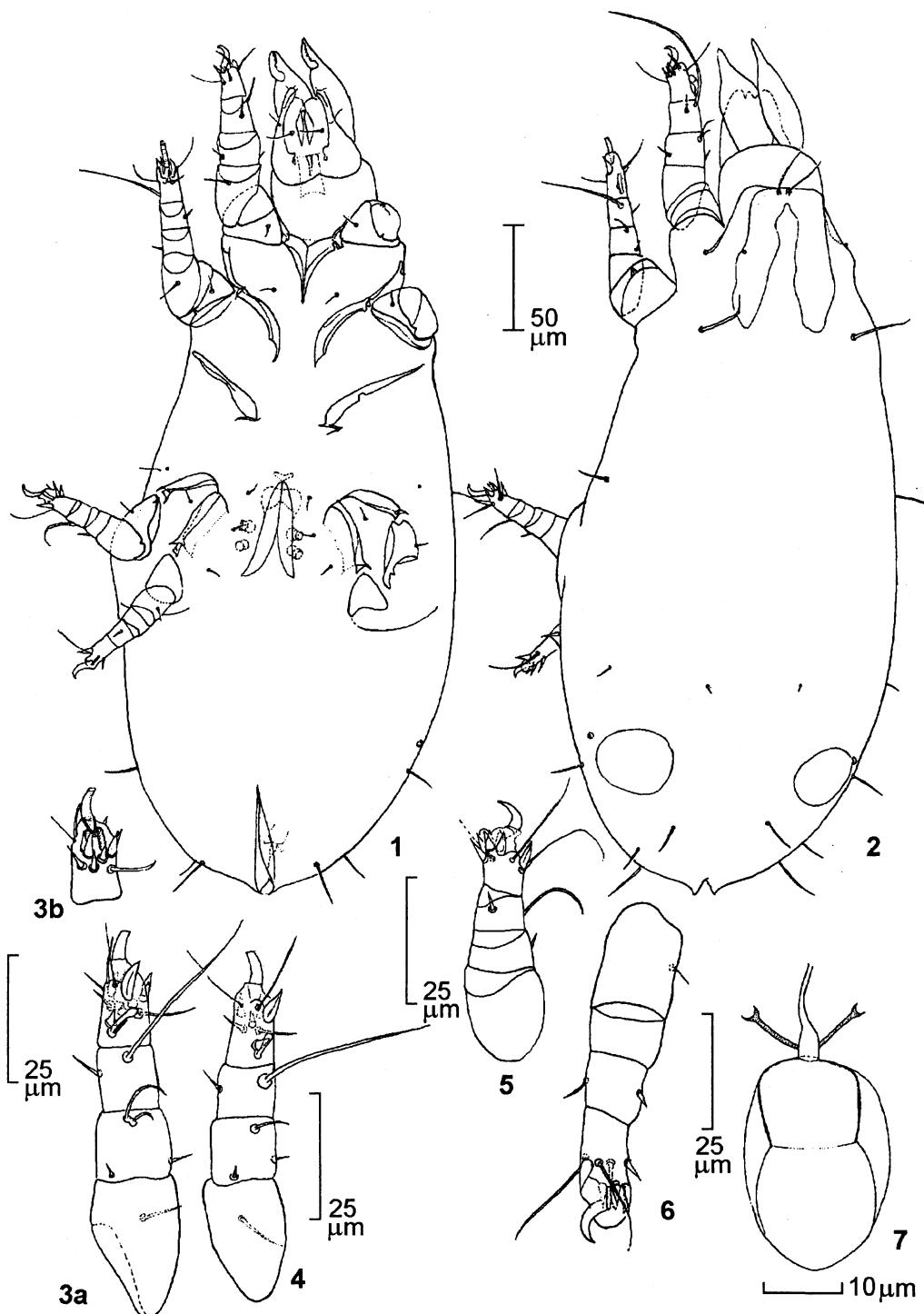


Fig. 4. *Schwiebea (Schwiebea) nova*, female: 1 — ventral view; 2 — dorsal view; 3 — leg I (a — dorsal view; b — tarsus, ventral view); 4–6 — legs II–IV, respectively; 7 — bursa copulatrix.

Рис. 4. *Schwiebea (Schwiebea) nova*, самка: 1 — снизу; 2 — сверху; 3 — нога I (а — сверху; б — лапка снизу); 4–6 — ноги II–IV, соответственно; 7 — бурса copulatrix.

Originally the species had been described on hypopi only, later A. Zachvatkin (1941) has described adults (females and heteromorphic males) under the name *S. rosicola* Zachvatkin. E. Turk & F. Turk (1957) redescribed both adults and hypopi but probably these authors dealt with two closely related species (adults which they described posses one tibial seta (seta *hT* being absent) as in *S. nova* but hypopi had two tibial setae (*hT* and *gT*) as in *S. longibursata*). Finally, A. Fain (1976b) gave redescription of holotype specimen (hypoporus) from Oudemans's collection. Owing to lack of adequate descriptions of both adults and hypopi of *S. nova* (beside Fain, 1976b for hypopi only) and possibility of geographical intraspecific morphological variation in the species, adults (females only) and hypopi are briefly redescribed below.

**Hypopus** (Fig. 3). Body ovoid. Surface smooth.

Gnathosoma as in *S. longibursata*. Idiosoma 201.8 long, 115.8 wide. Rostrum well-developed, not flanked by two sclerites. Arrangement of *vi*, *se* (6.1), *si* and *scx* (23.0) as in *S. longibursata*. Propodosomal shield 50.1, hysterosomal one 133.2 long. Distance between several setae is as follows: *se*—*se* 46.0, *si*—*si* 29.1, *c<sub>1</sub>*—*c<sub>1</sub>* 49.7, *d<sub>1</sub>*—*d<sub>1</sub>* 19.4, *e<sub>1</sub>*—*e<sub>1</sub>* 32.7, *h<sub>1</sub>*—*h<sub>1</sub>* 32.7. Coxal skeleton as in *S. longibursata*, but weak-developed triangle median sclerites near anterior edge of ventrogenital shield is present and distances between sternum and ventogenital shield and between ventrum and genital shield are longer (see below). Sternal shield 90.8 long and wide. Sternum 33.9, epimerae II 37.5, epimerites II 49.7 long. Distance between epimerites II and hind edge of sternal shield 29.1. Length of *h<sub>3</sub>* 12.1. Ventrogenital shield 62.2 long, 46.0 wide. *1a*, *3b*, *3a* and *g* setiform; *4a* represented by suckers. Coxal fields III touch each other on the distance 14.5; ventrum 21.8 long. Anal plate 26.6 long, 36.3 wide; anterior suckers 7.3; central suckers 7.3, with touching each other pores; hind suckers (*ps<sub>1</sub>*) 4.4; lateral suckers (*ps<sub>2</sub>*) 4.8; two latter elements supplied with inner well-sclerotized wedge-like sclerites 9.7 and 10.9 long, respectively.

Structure of arrangements of leg elements as in *S. longibursata*, but  $\omega_2$  placed on the level of  $\omega_1$  (or slightly basally) and tibiae I-II bearing with 1 seta (*gT*), seta *hT* absent. Length of leg I-IV podomeres (length of corresponding leg is in parenthesis) is as follows: 21.8, 12.8, 13.3, 27.9 (75.8); 20.8, 10.9, 10.7, 26.6 (69.0); 11.9, 7.3, 8.5, 14.5 (42.1); 9.7, 7.3, 8.5, 15.7 (41.2), respectively. Legs I (all measurements are given for length of tarsus I 30.2): *mG* 7.8, *cG* 5.6,  $\sigma$  11.7; *gT* 6.7,  $\phi$  34.7;  $\omega_1$  15.4,  $\omega_2$  4.5, *ba* (solenidion) 13.4, *e* 14.5 long. Chaeto- and solenidiotaxy of legs I-IV (trochanters-tarsi) is as follows: 1-1-2+(1)-1+(1)-8+(3+1); 1-1-2+(1)-1+(1)-9+(1); 1-0-0-1+(1)-8; 0-1-0-1+(1)-8.

Length of idiosoma 171.8–208.6, width 101.8–126.4, length of idiosoma/width 1.6–1.8 (n=13). Length of sternum (1) is 29.1–33.7; distance between sternum and ventogenital shield (2) is 46.0–53.8; (2)/(1)=1.37–1.83 (n=13). Length of ventrum (1) is 19.4–21.8, distance between ventrum and genital shield (2) is 3.1–6.3; (1)/(2)=3.19–6.15 (n=13).

**Female** (Fig. 4). Body elongate. Idiosoma 355.1 long, 159.9 wide.

Incision of propodosomal shield almost subdivided the shield on two halves. *scx* short, weak-developed. Following setae absent on idiosoma: *ve*, *si*, *c<sub>1</sub>*—*c<sub>3</sub>* (*c<sub>3</sub>* represented by alveoli), *d<sub>1</sub>*, *ps<sub>1</sub>*—*ps<sub>3</sub>* and *ad<sub>1</sub>*—*ad<sub>3</sub>*. Length of some setae: *vi* 20.8, *se* 29.1, *cp* 17.0, *d<sub>2</sub>* 7.0, *e<sub>2</sub>* 18.2, *h<sub>1</sub>* 15.0, *h<sub>2</sub>* 13.3, *h<sub>3</sub>* 21.8. Setae *e<sub>1</sub>* and *d<sub>2</sub>* very short, represented by micro-setae. Bursa copulatrix rather long. Tube gradually turns into bell-shaped structure (width 1.57) at proximal end. Dilatable sac enveloped by thin walled shell. The sac divided on two parts. First part comparatively better sclerotized, 11.8 long, 10.07 wide; while second part is slightly longer and wider than the first one. Chitinized openings of oviducts 6.71 long, with semicircular incisions on tips.

**Legs.** Arrangement, proportions and structure of leg I-IV elements are shown in Figs 4,3 – 6. *ba* on tarsi I-II placed in common with  $\omega_1$  "field". Length of leg I-IV podomeres (length of corresponding leg is in parenthesis): 32.0, 17.0, 14.5, 20.6 (84.0);

31.5, 12.8, 12.1, 20.1 (76.5); 21.3, 7.3, 9.7, 17.0 (55.2); 20.6, 7.3, 9.7, 18.6 (56.2), respectively. Chaeto- and solenidiotaxy of legs I–IV (trochanters–tarsi) is as follows: 1–1–2+(2)–1+(1)–12+(3+1); 1–1–2+(1)–1+(1)–12+(1); 1–0–(1)–1+(1)–10; 0–1–0–1+(1)–10.

Length of idiosoma 343.6–392.6, width 141.1–196.0 (n=8). Length of some setae is as follows:  $vi$  20.8–27.9,  $se$  26.6–33.9,  $cp$  17.0–24.2,  $d_2$  4.8–7.8,  $e_2$  15.2–24.2,  $h_1$  14.5–17.7,  $h_2$  13.3–19.4,  $h_3$  19.4–24.2.

**Distribution.** Germany: Bremen (Turk & Turk, 1957); Greece (Mahunka, 1972); Russia: European part (Zachvatkin, 1941; Bugrov, 1995), Novosibirsk and Irkutsk Regions (first record), Primorskiy Kray (Tareev, 1970).

**Biology.** The species (adults and hypopi) inhabits forest litter, fungi (without indefinite species), decaying coniferous (*Picea*, *Pinus*) and leaf (*Betula*) trees (under bark) (Bugrov, 1997). Hypopi are associated (probably non-obligately) with the insects inhabited similar habitats: *Hylobius abietis*, *Ectemnius* (*Ectemnius*) *guttatus* (van der Linden, 1829) (=*Crabro spinicollis* Herrich-Schäffer) (Hymenoptera, Sphecidae) (Zachvatkin, 1941), *Chrysis* sp., *Platycerus caraboides* and *Laphria flava*. In Far East this species had been collected on bracket-fungus *Ganoderma applanatum*.

**Remark.** All authors (beside E. Turk & F. Turk, 1957) describing *S. nova* have noted that setae  $e_1$  (= $d_3$ ) and  $d_2$  (= $l_2$ ) being absent in adults. These setae being present in my material (represented by microsetae). Probably, owing to small sizes these setae had been omitted or certain populations of *S. nova* have these setae and other ones have not.

*S. longibursata* and *S. nova* are closely related species. They differential characters are provided in the identification key below.

#### Key to *S. longibursata* and *S. nova* (adults)

- 1(2). Tibiae I–II with two spines. Length of incision of propodosomal shield is approximately two third of the length of shield. Chitinized openings of oviducts in females is longer 7  $\mu$  and approximately equal with width of dilatable sac of bursa copulatrix or slightly shorter ..... *S. longibursata* Fain et Wauthy, 1979
- 2(1). Tibiae I–II with one spine. Incision of propodosomal shield is slightly shorter than length of the shield. Chitinized openings of oviducts in females is shorter 7  $\mu$  and clearly shorter than width of dilatable sac of bursa copulatrix ..... *S. nova* (Oudemans, 1906)

#### Key to *S. longibursata* and *S. nova* (hypopi)

- 1(2). Tibiae I–II with two setae. Rostrum is flanked by dark sclerites. Anteriomedian triangle sclerite being absent near ventrogenital shield. Distance between sternum and ventrogenital shield is 36–48  $\mu$ ; distance between ventrum is 7–17  $\mu$ . Length of idiosoma/width is 1.4–1.7. Solenidion  $\omega_2$  is often placed posteriorly from the level of  $\omega_1$  ..... *S. longibursata* Fain et Wauthy, 1979
- 2(1). Tibiae I–II with one seta ( $gT$ ). Sclerite near lateral edges of rostrum being present. Anteriomedian triangle sclerites near ventrogenital shield is developed (but weak visible). Distance between sternum and ventrogenital shield is 46–53  $\mu$ ; distance between ventrum is 3–6  $\mu$ . Length of idiosoma/width is 1.6–1.8. Solenidion  $\omega_2$  is placed near the level of  $\omega_1$  ..... *S. nova* (Oudemans, 1906)

#### Subgenus *Robinisca* Zachvatkin, 1941, stat. n.

*Robinisca* Zachvatkin, 1941: 215 (part.).

*Schwiebea*: Zachvatkin, 1941: 200 (as subgenus, part.); Tareev, 1970: 9 (part); Fain, 1976a: 305 (as subgenus, part.); 1976b: 122 (part.); Fain, 1982: 360 (as subgenus, part.); Karg, 1987: 144 (as subgenus, part.); Bugrov, 1995: 68 (as subgenus, part.).

*Jacotiella* Fain, 1976a: 305 (as subgenus, part.); 1982: 361 (as subgenus, part.); Karg, 1987: 145 (as subgenus, part.); Bugrov, 1995: 70 (as subgenus, part.); 1997: 152 (as subgenus, part.).

Type species: *Tyroglyphus mycolichus* Oudemans, 1912 by original designation.

**Species included** (the species marked by **comb. n.** are transferred from subgenus *Schwiebea* if otherwise indicated): *S. (R.) capitata* (Mahunka, 1979), **comb. n.** (transferred from *Caloglyphus*); *S. (R.) danielopoli* Fain, 1982, **comb. n.**; *S. (R.) elongata* (Banks, 1906); *S. (R.) euryonympha* (Oudemans, 1911); *S. (R.) armata*

(Mahunka, 1979), comb. n. (transferred from *Caloglyphus* (=*Sancassania* Oudemans, 1916, part.); *S. (R.) kurilensis* Bugrov, 1990, comb. n.; *S. (R.) parallela* (J. Müller, 1860); *S. (R.) receptacula* Manson, 1972; *S. (R.) sakhalinensis* Bugrov, 1990, comb. n.; *S. (R.) scalops* Oudemans, 1924; *S. (R.) similis* Manson, 1972; *S. (R.) zingiberi* Manson, 1972; (?)*S. (R.) italicica* Oudemans, 1924.

**Remarks.** The genus *Robinisca* Zachvatkin, 1941 (type species: *Tyroglyphus mycocolichus* Oudemans, 1912) had been created for several species described on hypopi only. All these species beside *R. mycocolicha* belong to the genus *Viedebantia* Oudemans, 1927. Adults representatives of *Robinisca* (they are described below) shared all characters of the genus *Schwiebea* (s. l.). Certain characters (i. e. placement of  $\omega_1$  and  $ba$  on tarsi I, setation of genu III) of both adults and hypopi of the subgenus resembles this subgenus to genus *Rhizoglyphus* Claparede, 1869. Adults of the subgenus differ from those of the genus *Rhizoglyphus* by absence of several anterior ( $c_1-c_3$ ) and addanal ( $ad_1-ad_3$ ) setae of hysterosoma and in female only by absence of pseudanal setae ( $ps$ ).

### *Schwiebea (Robinisca) neomycolicha* Klimov, sp. n. (Figs. 5—7)

**Material.** Holotype: ♀, culture, on potato 14.08.1997 (culture were begun with adults which were collected on decaying bracket-fungus *Polyporellus badius* (Pers. ex S. F. Gray) Imazeki (Aphyllophorales, Polyporaceae) from Kedrovaya Pad' reserve (Primorskiy Kray, Russia). Paratypes: 14 ♀, 7 ♂ (heteromorphic), on the same slide as the holotype; approximately 45 hypopi, same data, (mounted on the other slide). Type material is deposited in the Institute of Biology and Pedology, Vladivostok, Russia. Supplementary material: about 50 specimens (including females, heteromorphic males and 1 homeomorphic male) from the same culture.

**Hypopus** (Fig. 5). Gnathosoma elongate, 28.5 long, 6.0–10.1 wide at the tip and base, respectively; lateral edges almost parallel; bearing with 2 conspicuous pair of setae: apical lateral spines (5.6) and ventral paramedian setiform setae. Basal "segment" 22.3, distal solenidia 30.5 long.

Idiosoma 230.1 long, 167.1 wide (length/width ratio 1.38), with fine punctuation. Propodosomal length 31.5. Length of hysterosoma/length of propodosoma 6.3. Propodosoma with small rostrum; *vi* placed on tip of the rostrum, short, touching each other by bases; *ve* and *scx* absent; *si* placed slightly before *se*, shorter than latter.

Setal set complete. All hysterosomal setae (including  $h_3$ ) represented by microsetae. Openings of opisthosomal glands are on the level of  $h_2$  – hind edge of sternal shield. Sternal shield 83.6 long, 118.7 wide. Coxal fields II enclosed; epimerae II almost touching hind edge of sternal shield, sternum 53.7 long, ending slightly before epimerae II. Ventral shield well defined, 78.2 long, 80.0 wide, touching sternal shield; ventrum 42.5 long, beginning on the fore angles of coxal fields IV; coxal fields III–IV enclosed; between internal edges of coxal fields III is narrow space. Genital shield separated from ventral one (but frequently its bound transparent and not clearly visible). Diameter of *1a*, *3b*, *4a* (all suckers): 4.1, 4.5, 4.9, respectively. Region of weak but fine punctuation located on median line of the venter (both on sternal and ventral shields). Anal plate 34.7 long, 47.0 wide; Ratio of its width/width of idiosoma 3.6. Fore suckers 7.8; central suckers 9.1x8.6; hind ones 6.7; lateral 6.9; fore cuticular suckers 9.2x6.2. There are large (5.6x3.4) cupules (*ih*) on the level of hind edge of anal plate.

Leg I 99.3 long; lengths of podomeres (femur–tarsus): 24.0, 21.8, 14.5, 46.0; seta of femur (*vF*) widened basally; tibial setae (*gT*, *hT*) both spiniform;  $\omega_1$  long, reaching 1/2 of tarsus;  $\omega_2$  short, touching  $\omega_1$  by its base;  $ba$  represented by solenidion (but it is not  $\omega_3$ ), reaching tip of tarsus; *wa* and *ra* elongate, spiniform; *la* setiform; *vsc* dilated apically. Leg II 84.8 long; lengths of podomeres (femur–tarsus): 26.6, 19.4, 12.6, 29.0; seta of femur (*vF*) widened basally; *gT* and *hT* spiniform;  $\omega_1$  long, reaching 2/3 of tarsus;  $ba$  short (represented by seta) not reaching tip of tarsus; *wa*, *ra* and *la* elongate spiniform; *vsc*, *e* and *f* widened apically. Tarsi III with 7 spines and 1 seta; tarsus IV similar to tarsus III, but the parabasal ventral spine is little longer. Chaeto- and soleniodiotaaxy of legs I–IV (trochanters–tarsi) is as follows: 1–1–2+(1)–2+(1)–8+(3), 1–1–2+(1)–2+(1)–8+(1), 1–0–1–1+(1)–8, 0–1–0–1+(1)–8.

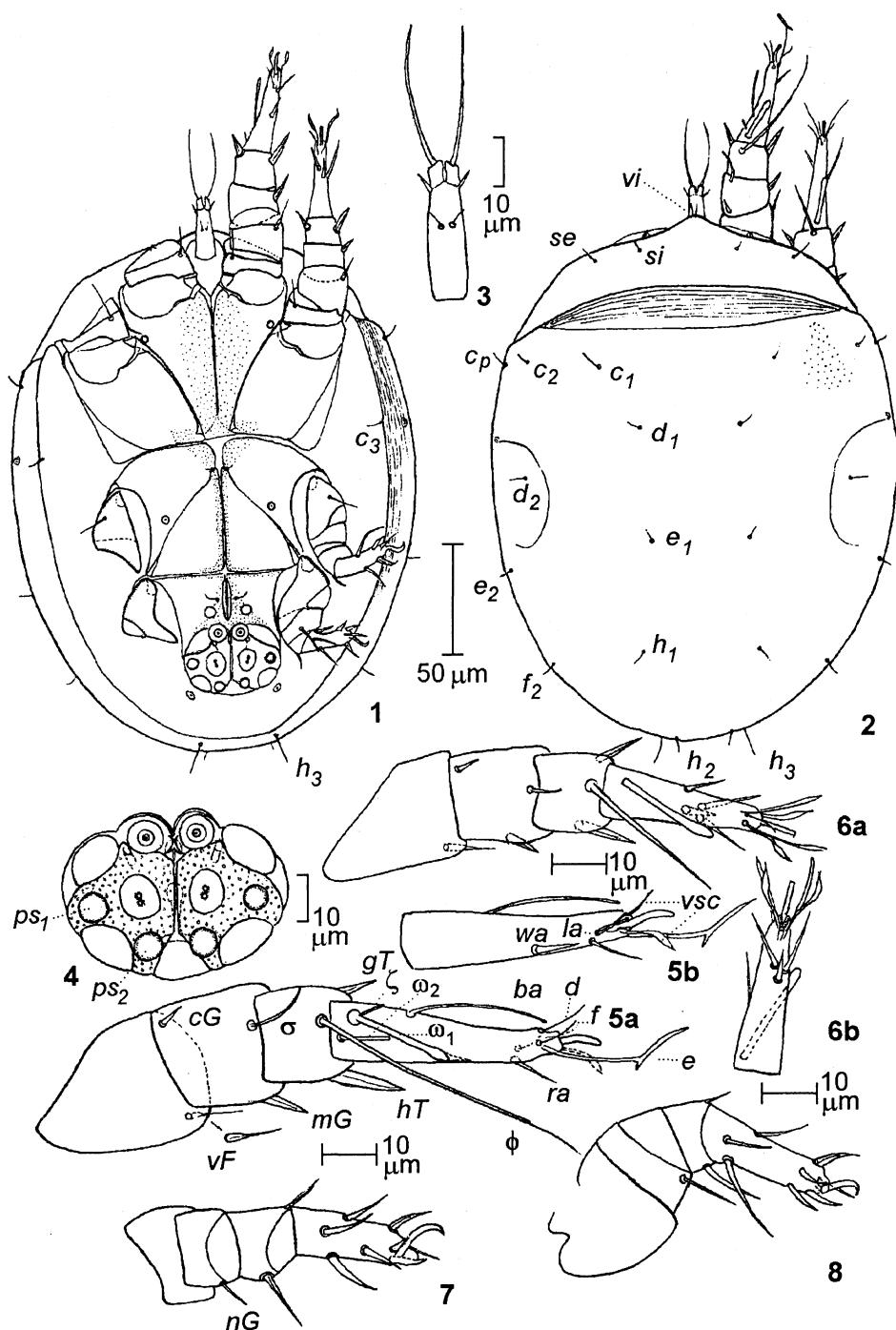


Fig. 5. *Schwiebea (Robinisca) neomycolicha*, sp. n., hypopus: 1 — ventral view; 2 — dorsal view; 3 — gnathosoma; 4 — anal plate; 5—6 — leg I-II, respectively (a — dorsal view; b — tarsus, ventral view); 7—8 — legs III—IV, respectively.

Рис. 5. *Schwiebea (Robinisca) neomycolicha*, sp. n., гипопус: 1 — снизу; 2 — сверху; 3 — гнатосома; 4 — анальный диск; 5—6 — ноги I-II, соответственно (а — сверху; б — лапка, снизу); 7—8 — ноги III—IV, соответственно.

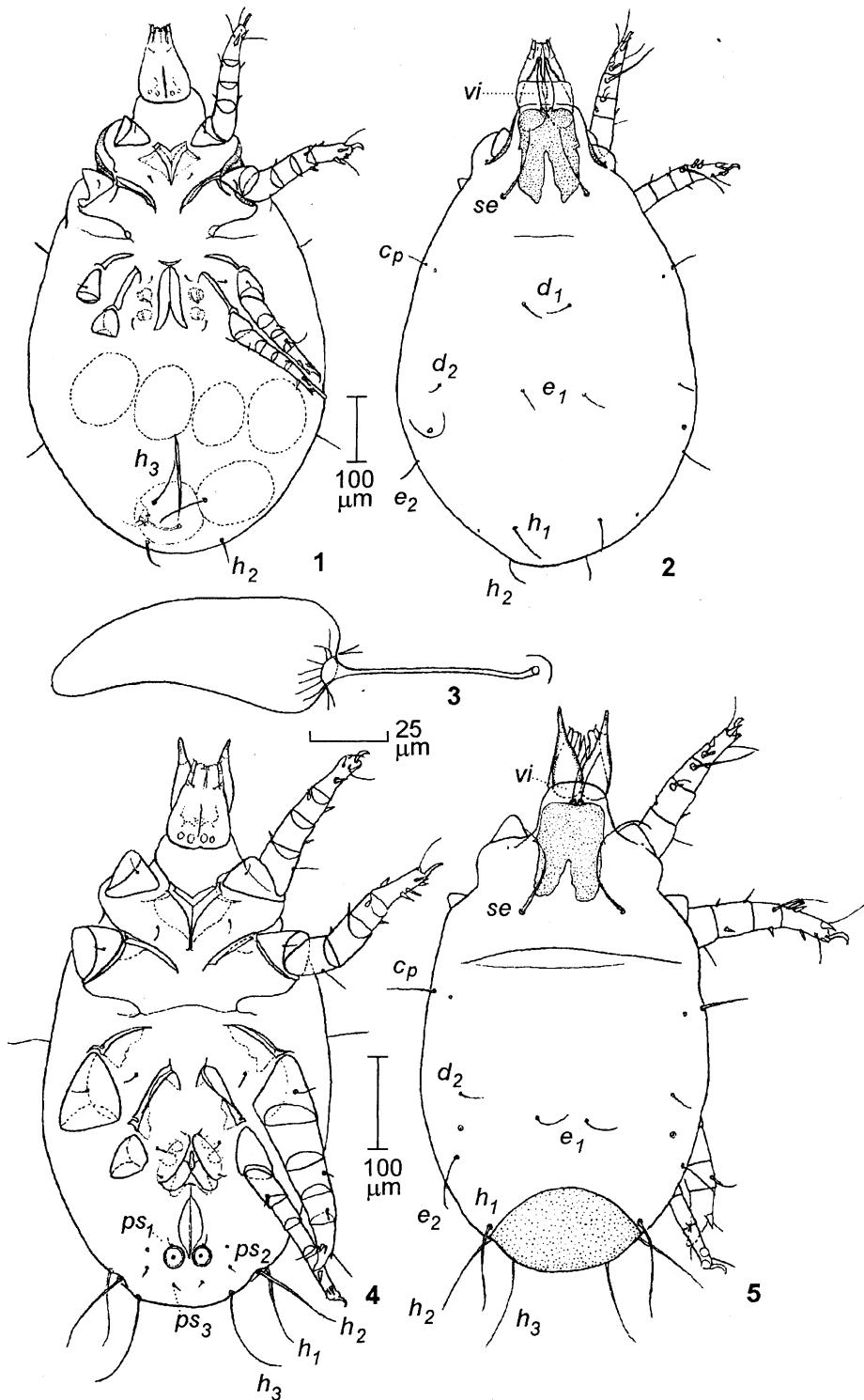


Fig. 6. *Schwiebea (Robinisca) neomycolicha*, sp. n., female and heteromorphic male: 1–3 – female (1 – ventral view; 2 – dorsal view; 3 – bursa copulatrix); 4–5 – heteromorphic male (4 – ventral view; 5 – dorsal view).

Рис. 6. *Schwiebea (Robinisca) neomycolicha*, sp. n., самка и гетероморфный самец (1 – снизу; 2 – сверху; 3 – бурса копуляции); 4–5 – гетероморфный самец (4 – снизу; 5 – сверху).

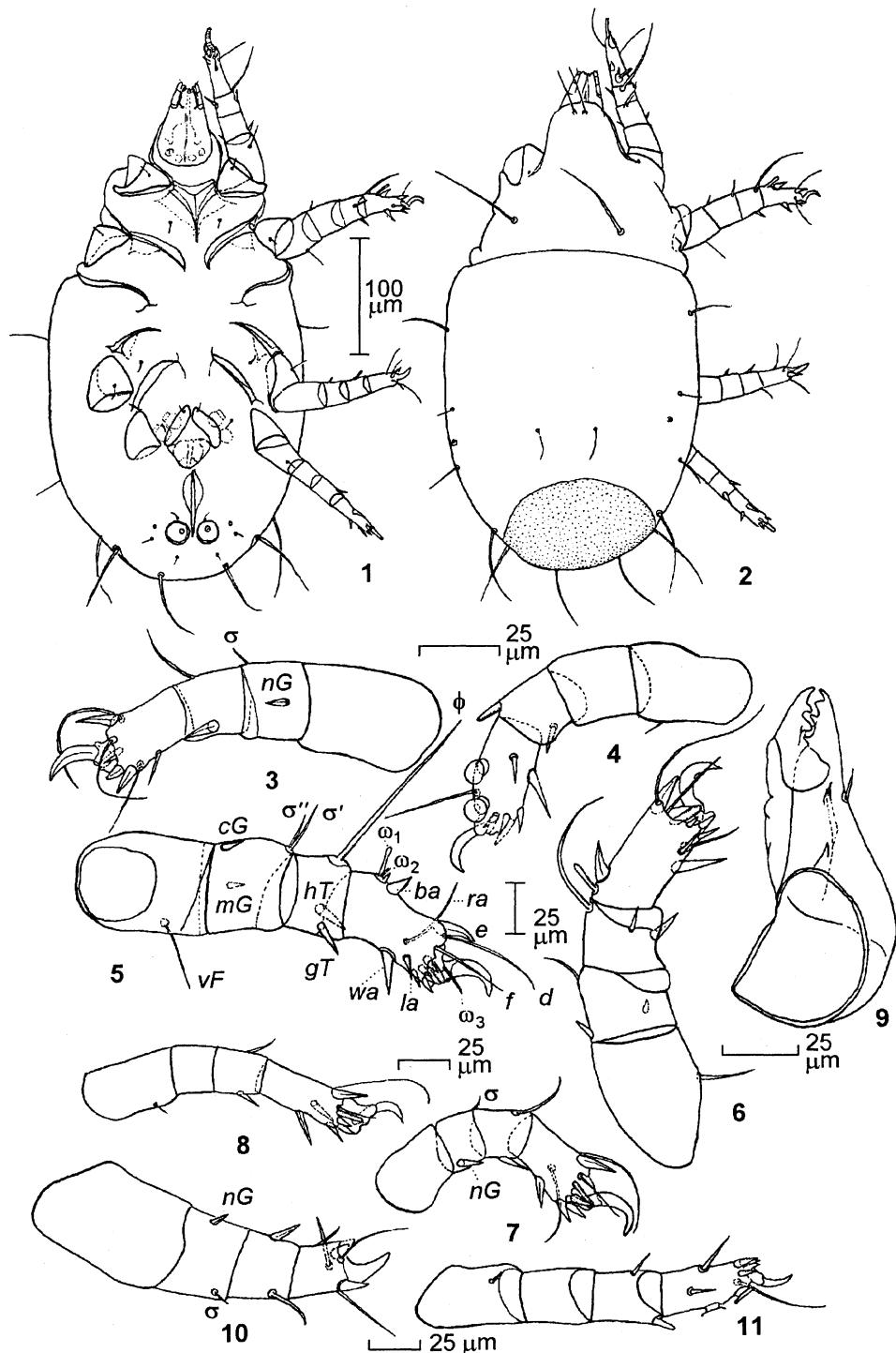


Fig. 7. *Schwiebea (Robinisca) neomycolicha*, sp. n., adults: 1–4 – gomeomorphic male (1 – ventral view; 2 – dorsal view; 3 – leg III; 4 – leg IV); 5–9 – female (5–8 – legs I–IV, respectively; 9 – chelicera); 10–11 – heteromorphic male (10 – leg III; 11 – leg IV).

Рис. 7. *Schwiebea (Robinisca) neomycolicha*, sp. n., взрослые: 1–4 – гомеоморфный самец; 1 – снизу; 2 – сверху; 3 – нога III; 4 – нога IV); 5–9 – самка (5–8 – ноги I–IV, соответственно; 9 – хелицера); 10–11 – гетероморфный самец (10 – нога III; 11 – нога IV).

Idiosoma 171.8–269.9 long, 130.0–200.0 wide; length of idiosoma/width 1.27–1.43; hysterosomal length/propodosomal length 4.76–7.69 (n=17).

Female, holotype (Figs 6.1–4, 7.5–9). Body length 812.2; idiosoma 728.8 long, 454.0 wide. Length of idiosoma/width 1.61.

**Gnathosoma.** Paraxial face of chelicera with 1 elongate spiniform seta and 2 protuberances (Fig. 7,9). Fixed digit with 3 teeth, movable one with 2 teeth. Subcapitulum with 2 pair of characteristic “windows” which placed ventrally near base of subcapitulum. Ventral seta *a* (after Hammen, 1982) setiform; dorsal one (*e*) represented by flattened spine.

Propodosoma with two pairs of setae (*vi* and *se*). *scx* represented by small processes, almost reduced. *se* 138.1 long. Propodosomal shield with incision on its hind edge; incision reaching 1/2 of the shield. Hysterosoma bearing with incomplete setal set. *c<sub>1</sub>*–*c<sub>3</sub>* and *f<sub>2</sub>* absent. Length of *c<sub>p</sub>* 79.9, *d<sub>1</sub>* 36.3, *d<sub>2</sub>* 26.6, *e<sub>1</sub>* 56.9, *e<sub>2</sub>* 47.2, *h<sub>1</sub>* 64.2, *h<sub>2</sub>* 53.2, *h<sub>3</sub>* 92.0. Distance between some setae is as follows: *se*–*se* 147.7, *d<sub>1</sub>*–*d<sub>1</sub>* 82.3, *e<sub>1</sub>*–*e<sub>1</sub>* 87.2, *h<sub>1</sub>*–*h<sub>1</sub>* 135.6. Pseudanal and addanal setae absent. Genital papillae: 29.1x30.8 (fore), 24.6x30.2 (hind). Bursa copulatrix as in Fig. 6.3; regular ornament of dilatable sac absent.

Legs I:  $\sigma'$  32.1;  $\sigma''$  19.6;  $\omega_1$  19.0; famulus 6.2;  $\omega_2$  7.8; *ba* 16.2 long; *ra* setiform. Legs II:  $\sigma$  17.9;  $\omega_1$  16.8; *ba* 20.1 long; *ra* setiform. *ba* on tarsi I–II placed separately from “ $\omega_1$  field”. Chaeto- and solenidiotaxy of legs I–IV (trochanters–tarsi) is as follows: 1–1–2+(2)–2+(1)–12+(2+1), 1–1–2+(1)–2+(1)–12+(1), 1–0–1+(1)–1+(1)–10, 0–1–0–1+(1)–10.

Body length 687.1–871.2, length of idiosoma 592.6–780.4, length of idiosoma/width 1.57–1.79 (n=22). *d<sub>1</sub>* in several specimens absent.

**Heteromorphic males** (Figs 6.4–5, 7.10–11). Idiosoma 527.6 long, 319.0 wide. Length of idiosoma/width 1.65. *vi* 92.0, *se* 130.8, *c<sub>p</sub>* 96.9, *d<sub>2</sub>* 18.2, *e<sub>1</sub>* 29.1, *e<sub>2</sub>* 50.9, *h<sub>1</sub>* 106.6, *h<sub>2</sub>* 118.7, *h<sub>3</sub>* 123.5. *d<sub>1</sub>* absent. Distance between some setae is as follows: *se*–*se* 113.8, *e<sub>1</sub>*–*e<sub>1</sub>* 60.6. Tarsus III with 4 setae and 3 spines. Second pair of pseudanal setae (*ps<sub>2</sub>*) placed near hind level of anal suckers. Tarsus IV with 3 setae, 4 spines and 2 suckers.

Body length 503.1–631.9, length of idiosoma 456.4–559.5, length of idiosoma/width 1.57–1.79 (n=16).

**Homeomorphic males** (n=1) Figs. 7.1–4. Body length 423.3; idiosoma 390.2 long 208.6 wide; length of idiosoma/width 1.87. *vi* 55.7, *se* 94.5, *c<sub>p</sub>* 60.6, *d<sub>2</sub>* 31.5, *e<sub>2</sub>* 37.5, *h<sub>3</sub>* 61.0, *h<sub>1</sub>* 77.5, *h<sub>2</sub>* 60.6. *d<sub>1</sub>* absent. Distance between some setae is as follows: *se*–*se* 92.0, *e<sub>1</sub>*–*e<sub>1</sub>* 53.3. Tarsus IV with 3 setae, 4 spines and 2 suckers.

**Differential diagnosis.** Females of new species are similar to *Schwiebea zingiberi* Manson, 1972 [China (including Hong Kong), Malaya] but differ in follows (character states of *S. zingiberi* are in parenthesis): bell-shaped structure of dilatable sac of bursa copulatrix is well developed (almost absent); pseudanal setae being absent (one pair is available); *ba* is shorter than  $\omega_1$  (both approximately of equal length); *h<sub>1</sub>* and *h<sub>2</sub>* are shorter than *h<sub>3</sub>* (*h<sub>1</sub>*, *h<sub>2</sub>*, *h<sub>3</sub>* are of equal length). Hypopi of *S. neomycolicha* are related to those of *S. zingiberi* and *S. mycolicha* Oudemans, 1912 but differ by solenidion *ba* which is long, reaching the tip of the tarsus (short, do not reach to tip of the tarsus in *S. zingiberi* and *S. mycolicha*); by apical spines of tarsi III–IV (setae in *S. zingiberi*; spines in *S. mycolicha*); by pores on central suckers of anal plate which do not touch each other (touching in *S. mycolicha*; do not touch in *S. zingiberi*).

**Etymology.** The specific name, *neomycolicha*, is derived from Greek adjective  $\eta\epsilon\sigma$  (new) and *mycolichus* (specific name of *Tyroglyphus mycolichus* Oudemans) with the reference to similarity of new species to *S. mycolicha*.

**Discussion.** Hypopi of new species are closely related to *Robinisca mycolicha*, type species of the genus, while the adults share all characters of the genus *Schwiebea*.

On the basis of presence of two solenidia on genu I ( $\sigma^c$  and  $\sigma^u$ ) they should be placed to the subgenus *Megninietta*. Therefore, genus *Robinisca* (part.) formally is an junior synonym of *Megninietta* (= *Jacotietta*). Comparison of hypopi of the new species and those of *S. nova* and *S. longibursata* Fain et Wauthy, 1979 (the species currently placed to *Jacotietta*) have revealed significant differences in several characters (i. e., placement of *se* and *si*; morphology of coxisternal and coxiventral skeleton and propodosomal shield; placement of  $\omega_1$  and *ba* on tarsi I; number of setae and solenidia on genua III). These characters are important for systematic even on generic level, so, the subdividing *Schwiebea* on subgenera on the basis of number of genual solenidia of legs I in adults is artificial.

### *Schwiebea (Robinisca) parallela* (J. Müller, 1860)

*Schwiebea parallela*: Samšiňák, 1958: 294.

*Schwiebea (Schwiebea) tshernyshevi* Zachvatkin, 1941: 201, Figs 329, 342–346; Tareev, 1970: 9; Fain, 1982: 360 (synonymized by K. Samšiňák, 1958).

*Schwiebea (Schwiebea) tchernichevi* (sic!): Bugrov, 1995: 69; 1997: 152.

*Schwiebea eurynymphae*: Turk & Turk, 1957: 129, Figs 80–82.

**Material.** 1 hypopus, Russia, Vladivostok, vc. Botanical garden, under bark of decaying tree, 14.05.1995; 3 hypopi, same locality, decaying bracket-fungus, ex *Cis jackuemartii* Mell. (Coleoptera, Ciidae), 22.05.1995; 4 ♀ 3 ♂ same locality, under bark of fallen tree, 22.05.1995; Russia, Kamchatka Region, vc. Petropavlovsk-Kamchatskiy, mouth of Krutoberezovaya river, ex unidentified Ichneumonidae (Hymenoptera), 4.07.1996 (Yu. Tshitjakov leg.); 1 hypopus, Russia, Kuril Islands, Paramushir, 4 km NW. Severo-Kuril'sk, ex *Nebria (Catonebria) catenulata banksi* Crotch, 1870 (= *Carabus nitidula* Fabricius) (Coleoptera, Carabidae), 5.08.1997 (A. Lelej & S. Storozhenko leg.); 1 hypopus ex *Nebria (Reductonebria) carbonaria* Eschscholtz, 1829, same data.

**Distribution.** Western Europe (Samšiňák, 1958); Ukraine (Zachvatkin, 1941); Russia: Moscow and Novosibirsk Regions (Bugrov, 1995, 1997), Primorskiy Kray (Tareev, 1970), Kunashir (Bugrov, 1995), Paramushir.

### Acknowledgements

I wish to express my thanks to Dr. A. Lelej for critical reading of the manuscript and collecting of the certain insects hosts, to Dr. P. Lehr and to Dr. A. Egorov for possibility to study they entomological collections, to Dr. N. Kurzenko, Dr. Yu. Storozhenko, Dr. P. Nemkov and Dr. Yu. Tshitjakov (all IBPV) for collecting of certain insect hosts, to Dr. A. V. Kompantzev (Severtsov Institute of Problems of Ecology and Evolution, Moscow) for identification of the beetle of the family Ciidae and Dr. E. M. Bulakh (IBPV) for identification of the bracket-fungi.

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## КРАСНАЯ КНИГА УКРАИНЫ

**Интересные находки насекомых на островах Днепродзержинского водохранилища и прилегающей территории [Interesting Findings of insects in the Islands of Dnieprodzherzhynsk Water Reserve and Adjacent Territory].** — С своеобразие видового состава насекомых Полтавской обл. основано на смещении фаун двух природных зон — лесостепной и степной с преобладанием видов, свойственных Лесостепи. Особый интерес представляют здесь находки видов степного происхождения. Одним из них является ктырь *Satanas gigas* (Diptera, Asilidae), обнаруженный в августе 1995 г. на берегах Днепродзержинского водохранилища в окр. с. Радянське. Вид достаточно редкий в области, находки единичны. Еще один краснокнижный вид пестрянка *Zygaena laeta* (Lepidoptera, Zygaenidae) зарегристирован в урочище Пелехи. В небольшом количестве здесь обнаружены также несколько особей *Scolia hirta* (Hymenoptera, Scoliidae). Другой вид этого рода — *S. maculata*, напротив, на юге Полтавской обл. встречается еще достаточно часто. Оба вида сколий включены в Красную книгу Украины. Мощные сосновые леса естественного происхождения сохранились на островах водохранилища: Вишняки, Крамерово, Старо-Орликские кучугуры. Нигде на побережье подобных стаций после создания водохранилища не осталось. На каждом из островов выявлены изолированные популяции сатира *Pararge aegeria* (Lepidoptera, Satiridae). Факт изолированности основан на существенной удаленности островов как друг от друга, так и от берегов. На острове Вишняки обнаружена белянка *Leptidea sinapis* (Lepidoptera, Pieridae). В других местах Кобеляцкого р-на данный вид не отмечен. — О. Н. Руденко (Полтавский пединститут, Украина).