

New and Little-Known in the Russian Fauna Beetles (Coleoptera) from the South of Primorskii Territory

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Abstract—Data on 17 species from seven families of the Coleoptera from the south of Primorskii Territory are provided. Six species, *Pterostichus lutschniki* (Carabidae), *Silvanolomus brevis* (Silvanidae), *Tritoma gangwonensis* (Erotylidae), *Serangium contortum* (Coccinellidae), *Chilopeltis laevipennis* (Salpingidae), *Xanthalia serrifera* (Tenebrionidae), and genus *Caenocryptorrhynchus* Morimoto (Curculionidae), with a new species *Caenocryptorrhynchus zherichini* Korotyaev, **sp. n.**, are recorded for the Russian fauna for the first time. New data are provided for eight rare or little-known species of the Russian fauna: *Anchomenus leucopus*, *Euplynes batesi*, *Chlaenius suvorovi* (all Carabidae), *Sumnius nigrofuscus* (Coccinellidae), *Salpingoides thoracicus*, *Salpingus depressifrons*, *Lissodema plagiatum* (all Salpingidae), and *Shirahoshizo rufescens* (Curculionidae). Differential diagnoses or keys are provided for the species new to the Russian fauna.

Keywords: Coleoptera, Carabidae, Silvanidae, Erotylidae, Coccinellidae, Salpingidae, Tenebrionidae, Curculionidae, *Caenocryptorrhynchus*, fauna, Primorskii Territory, Russia

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The coleopterous fauna of the Primorskii Territory is one of the most studied regional faunas in the Russian Far East (Sundukov, 2022). In addition to the three volumes of the key to the coleopterans of the Far East (Lehr, 1989, 1992, 1996), databases of the order Coleoptera from the southwestern Primorskii Territory and of the superfamily Caraboidea from southern Sikhote-Alin Mt. Range have been published in the recent years on the site Global Biodiversity Information Facility. The first database contains detailed geographical and ecological information on 13 274 specimens of coleopterans belonging to 629 species of 311 genera from 44 families examined by the authors, and on 10 008 specimens of 355 species from 142 genera in 16 families based on the published data (Makarov and Sundukov, 2022). The second database contains similar data on 55 953 specimens of the ground beetles, representing 426 subspecies

of 411 species in 86 genera from 3 families (Sundukov and Makarov, 2021).

In this paper we report data on 17 species of beetles new to or rare in the Russian fauna, from seven families (Carabidae, Silvanidae, Erotylidae, Coccinellidae, Salpingidae, Tenebrionidae, and Curculionidae), found mainly by the first two authors in the south of Primorskii Territory. The material cited in the text is stored in the following collections.

cESH—E.V. Shankhiz collection, Moscow, Russia.

cMS—M.E. Smirnov collection, Ivanovo City, Ivanovo Province, Russia.

cSIV—S.N. Ivanov collection, Vladivostok, Primorskii Territory, Russia.

DUBC—Daugavpils University beetle collection, Ilgas, Latvia.

FEB—Federal Scientific Center of the East Asia Terrestrial Biodiversity, Far East Branch, Russian Academy of Sciences, Vladivostok, Primorskii Territory, Russia.

HNHM—Hungarian Natural History Museum, Budapest, Hungary.

MPU—Moscow State Pedagogical University, Moscow, Russia.

ZISP—Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia.

ZMUM—Zoological Museum of the Lomonosov Moscow State University, Moscow, Russia.

Family CARABIDAE

Genus *PTEROSTICHUS* Bonelli, 1810

Subgenus *Phonias* Gozis, 1886

Two species of the subgenus *Phonias* Gozis, 1886 with only one, the posterior, discal pore on the 3rd elytral interval occur in the Far East. A key for differentiation of these species is given below based on the material from Primorskii Territory and from the islands of Sakhalin and Kunashir.

1. On average larger (body length 7.9–8.6 mm). Head of usual proportions (pronotal width/ head with eyes width ratio = 1.48–1.51; pronotal length/ head with eyes width ratio—1.22–1.27). Posterior angles of pronotum not produced, widely rounded, sides before angles very weakly convex. Basal margination of pronotum near basal foveae wide, glossy. Legs slender, rather long (pronotal length/fore tarsus length ratio = 0.87–0.89; elytral length/fore tarsus length ratio—2.10–2.33). Elytra long, parallel-sided. Elytral microsculpture in both sexes consisting of fine, almost isodiametrical or weakly transverse meshes *P. lutschniki* Jedlička.
- On average smaller (body length 6.7–8.2 mm). Head rather large (pronotal width / head with eyes width ratio = 1.31–1.40; pronotal length/ head with eyes width ratio—1.07–1.14). Posterior angles of pronotum subacuminate; sides before them shallowly concave or rectilinear. Basal margination of pronotum near basal foveae narrow. Legs relatively

short (pronotal length/fore tarsus length ratio = 1.01–1.04; elytral length/fore tarsus length ratio—2.56–2.58). Elytra shorter, weakly narrowing toward base or, more seldom, subparallel-sided. Elytral microsculpture in both sexes consisting of very narrow transverse meshes *P. longinquus* Bates, 1873.

We follow D.N. Fedorenko's (2023) concept of the composition and affinities of the subgenus *Phonias*. Although *Pterostichus lutschniki* was described in the subgenus *Pledarus* Motschulsky, 1866, the structure of the prosternal process, the presence of two dorsolateral sulci on the segments of the middle and hind tarsi, and the position of the posterior discal pore at the 2nd elytral stria support its placement in the subgenus *Phonias*, suggested by Fedorenko (2023). In the shape of the endophallus and position of the gonopore *P. lutschniki* is similar to *P. (Phonias) eobius* (Tschitschérine, 1899).

Pterostichus (Phonias) lutschniki Jedlička, 1962

Fig. 1

Material. *Primorskii Terr.* Khankaiskii Nature Reserve, Luzanova Sopka Hill, 8 km N of Sivakovka Vill., 18.VI.2000 (V. Medvedev), 1 ♂ (FEB). Lazovskii Distr.; Kievka River mouth, coastal marshy meadows, 30.VI.2022 (Yu. Sundukov, L. Sundukova), 1 ♀ (FEB); lower course of Malaya Klyopochnaya River near Razdol'noye Vill., 5.IX.2019 (Yu. Sundukov, L. Sundukova), 1 ♂ (FEB). Nadezhdinskii Distr.: Suifun (= Razdol'naya) River mouth, left bank, 14.IV.1968 (G. Lafer), 1 ♂ (ZISP). Khasanskii Distr.: Kedrovaya Pad' Nature Reserve, Kedrovaya River mouth, 43°04'47"N, 131°36'42"E, marsh, 1.VI.2019 (K. Makarov), 1 ♂ (MPU); 2.5 km SE of Ryazanovka Vill., Ryazanovka River flood plain at the mouth, 42°47'05"N, 131°16'32"E, h ~20 m, 21.V.2023 (K. Makarov), 1 ♀ (MPU); Ryazanovka River mouth, 21.V.2023 (Yu. Sundukov), 1 ♀ (FEB); 3.5 km NNW of Andreyevka Vill., Lake Utinoye bank, 42°40'28"N, 131°06'41"E, 27.V.2022 (K. Makarov, A. Matalin), 1 ♂ (MPU); 7.5 km SE of Khasan Vill., 42°24'47"N, 130°44'12"E, 24–25.V.2022 (K. Makarov, A. Matalin), 5 ♂, 4 ♀ (MPU, ZMUM, ZISP); Golubinyi Utyos, at night on the sea shore, 22.V.2022 (Yu. Sundukov), 1 ♂ (FEB); 6 km E of Khasan Vill., 42°25'06"N, 130°43'37"E, 16.V.2023 (K. Makarov), 1 ♀ (MPU); as above, 16.V.2023 (Yu. Sundukov), 1 ♀ (FEB); Golubinyi Utyos, 2–2.5 km



Fig. 1. *Pterostichus (Phonias) lutschniki* Jedlička, male (1, 2, 4–12) and female (3): (1, 3) dorsal habitus; (2) ventral habitus; (4) right paramere; (5) left paramere; (6) penis; (7) genital sclerite; (8–10) variations of the shape of penis apex; (11, 12) fully everted endophallus, ventral and lateral views.

on road to Khasan Vill., at night, 25.V.2022 (Yu. Sundukov), 1 ♂, 1 ♀ (FEB); sea shore near Korean border, 14.V.2023 (Yu. Sundukov), 1 ♀ (FEB); Khasan Vill., at light, 25.VII.1970 (Yu.N. Nazarov), 2 ♂, 2 ♀ (ZISP); Khasan Vill., 25.VII.1970 (Yu. Nazarov), 2 ♂ (DUBC); 7–9 km E of Khasan Vill., env. of Golubinyi Utyos, 42°24.45'N, 130°45.27'E, 12–15.VI.2022 (B. Kataev), 1 ♀ (ZISP).

Comparative material. Japan. Honshu: Hirotuka, Kanagawa-Ken, 23.VII.1958 (S. Nomura), 3 ♂ (HNHM).

Description. Body length 7.9–8.6 mm. Black; tibiae, tarsi, mandibles, bases of antennal segments, and lateral margin of pronotum brownish (Fig. 1, 1–3).

Head small, with uniform fine punctation dorsally. Eyes large, hemispherical. Temples very short. Pronotum subquadrate or slightly oblong, very weakly convex before hind angles. Anterior margin weakly trapeziform concave, anterior angles weakly protruding. Posterior angles obtuse, rounded apically, forming no denticle. Basal foveae moderately deep, marginated posteriorly; inner fovea narrow, about twice as long as outer fovea, less than one-third length of pronotum; outer fovea separated from lateral margin by rather broad weakly convex area. Disc strongly convex up to the narrowly explanate lateral edge at pronotal mid-length, widely flattened at anterior angles and along basal half of median line. Punctation present only at basal foveae (Fig. 1, 1, 3).

Elytra long, narrow, parallel-sided, widest just behind middle. Humeri not projecting, widely rounded, without denticle. Striae straight, shallow, impunctate. First–third intervals weakly convex in anterior half, rest intervals flat along their entire lengths. Third interval with one, the posterior, discal pore situated at 2nd stria. Scutellar striole long, situated in 2nd interval, with a subscutellar pore at base. Apical situation very shallow (Fig. 1, 1, 3). Microsculpture subtle, consisting of very fine, subisodiametric or weakly transverse meshes.

Hind wings developed.

Proepipleura smooth, impunctate. Metepisterna long, strongly narrowing posteriorly, impunctate. Prosternal process not bordered, rounded apically (Fig. 1, 2).

Legs slender, rather long. Middle and hind femora with two setae at posterior margin. Hind trochanter with one seta. Hind coxa with two setae. Tarsi without longitudinal sulcus dorsally. Tarsal claw-segment with short, fine setae ventrally in apical half.

Penis symmetrical, with simple short, widely rounded lamella; right paramere of ordinary structure. Everted endophallus tubular, strongly curved leftward (Fig. 1, 11, 12), with microsculpture strongly developed in the area of the laterobasal lobes and in apical half. Ventrobasal lobe small, left laterobasal lobe larger than right one, conical. Apical lobes not expressed, gonopore situated on the concave part of apical bend.

Distribution. East Asian nemoral species: Russia (southern Primorskii Territory), Japan (Honshu).

Bionomy. Hygrophilic species with spring reproduction. Inhabits open biotopes: swamps and wet sedge-moss, reed-moss, and sedge meadows; adults are active in the dark. Males are only slightly smaller than females, weighing 17.1–18.2 mg as opposed to 21.1–24.3 mg in females. Oviposition in laboratory was recorded on June 4–11. Duration of the development of the I, II, and III instar larvae was 6 (5–7), 7 (5–9), and 12 (7–15) days, respectively. Adults and larvae do not manifest particular food preferences.

Note. The species was first recorded from Russia quite recently (Makarov and Sundukov, 2022).

Anchomenus leucopus Bates, 1873

Fig. 2

Material. *Primorskii Terr.* Krasnoarmeiskii Distr., Dersu Vill. vicinity, Bol'shaya Ussurka River flood plain, 1–8.VI.2023 (M. Sergeev), 1 ♂ (FEB). Yakovlevskii Distr.: 5–6 km N of Bel'tsovo Vill., left bank of Ussuri River (1.5–2 km downstream of the mouth of Arsen'yevka River), 29.VII.2003 (Yu. Sundukov, V. Shokhrin), 2 ♂, 4 ♀ (FEB); 1 km N of Bel'tsovo Vill., lower course of Arsen'yevka River, right bank, 28.VII.2003 (Yu. Sundukov, V. Shokhrin), 2 ♂, 2 ♀ (FEB). Anuchinskii Distr., Il'makovka Vill. vicinity, 21.VI.2009 (S. Ivanov), 1 ♂ (cSIV). Chernigovskii Distr., Merkushyovka Vill. vicinity, 10.VII.2015 (S. Ivanov), 1 ♂ (cSIV). Khasanskii Distr.: Gusevskii cordon, Gryaznaya River valley, 1.VI.2021 (Yu. Sundukov), 4 ♂, 2 ♀ (FEB); as above, upstream of Gu-

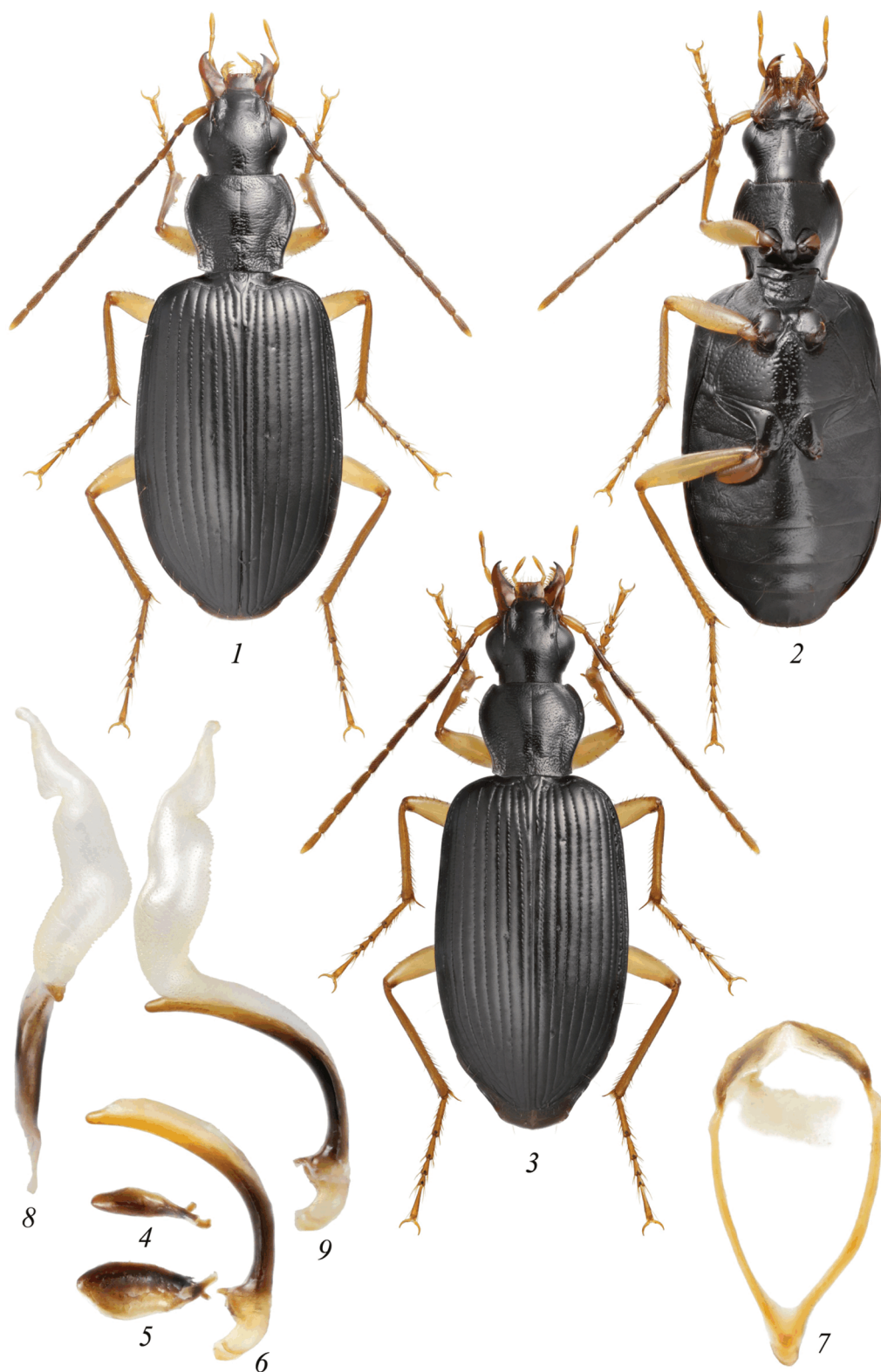


Fig. 2. *Anchomenus leucopus* Bates, female (1, 2) and male (3–9): (1, 3) dorsal habitus; (2) ventral habitus; (4) right paramere; (5) left paramere; (6) penis; (7) genital sclerite; (8, 9) fully everted endophallus, ventral and lateral views.

sevskii cordon, 2.VI.2021 (Yu. Sundukov), 4 ♂, 5 ♀ (FEB); as above, at night, 2.VI.2021 (Yu. Sundukov), 2 ♂ (FEB); same locality, 3.VI.2022 (Yu. Sundukov), 4 ♂, 3 ♀ (FEB); 26.V.2023 (Yu. Sundukov), 1 ♂, 3 ♀ (FEB).

Distribution. East Asian nemoral species: Russia (southern Buryatia and Amurskaya Province, Primorskii Territory), Eastern China (Shandong Province), Taiwan, South Korea (Jeju I. (Yahiro and Lee, 1995)), Japan (all main islands, Tsushima I.).

Bionomy. Occurs on banks of mountain rivers under bark of fallen dead trees, under large pebbles or in debris on steep banks; active predominantly at night. Males are considerably smaller than females, weighing 15.2–21.6 mg as opposed to 20.2–30.1 mg in females. Species with summer reproduction; oviposition was observed in the last ten days of July. Total duration of development 31 days; of these, the development of the I instar larvae takes 4–6 days, II instar, 4–5, III instar, 13–28, and the pupa, 5–8 days. Adults and larvae do not manifest particular food preferences.

Note. The species is fairly rare in collections, in the Russian Far East it was recorded only from Amurskaya Province (Rogatnykh, 2007).

Euplynes batesi Harold, 1877

Material. *Primorskii Terr.* Khankaishii Distr., 20 km WNW of Spassk-Dal'nii City, Lake Khanka, Khankaishii Nature Reserve, Vostochnyi cordon, 3–8.VI.2008 (A. Napolov), 1 ♂ (MPU). Chernigovskii Distr., Merku-shyovka Vill. vicinity: 3–6.VI.2013 (S. Ivanov), 1 ♂ (cSIV); 12–20.VII.2014 (S. Ivanov), 1 ♂, 1 ♀ (cSIV); 2–11.VII.2021 (S. Ivanov), 2 ♀ (cSIV). Ussuriiskii Distr., Gornotayozhnoye Vill.: 6–7.VII.2013 (S. Ivanov), 2 ♀ (cSIV); 29.VI–06.VII.2015 (S. Ivanov), 2 ♀ (cSIV); 23–25.VI.2021 (V. Ustinov), 1 ♂ (MPU); Kamenushka Vill., 17.VII.2010 (S. Ivanov), 1 ♂ (cSIV). Lazovskii Distr., Lazo Vill., at light, 16.VII.2011 (A. Prosvirov), 1 ♀ (FEB). Khasanskii Distr.: ~12 km WNW of Barabash Vill., 43°13'55.5"N, 131°21'22.8"E, h = 81 m, 13–20.VII.2023 (A. Prosvirov), 1 ♀ (MPU); Andreyevka Vill., 10–30.VII.1986 (S. Nikireyev), 1 ♀ (MPU).

Distribution. East Asian nemoral species: Russia (southern Primorskii Territory), South-Eastern China

(Fujian Province), Taiwan, South Korea, Japan (all main islands).

Bionomy. All the specimens were collected at light of electric lamps in the valley broadleaf and conifer-broad-leaf forests.

Notes. The species was previously known from Russia based on two specimens from Lake Khanka and southern Sikhote-Alin (Makarov and Sundukov, 2011). The material reported here shows that in the recent years *Eu. batesi* has become fairly common in the south of Primorskii Territory.

Chlaenius (Eochlaenius) suvorovi Semenov, 1912

Fig. 3

Material. *Primorskii Terr.* Chuguyevskii Distr., Sarmarka Vill., II.1992 (A. Tomyshev), 1 ♂ (cESH). Yakovlevskii Distr., 1 km N of Bel'tsovo Vill., lower course of Arsen'yevka River, right bank, 28.VII.2003 (Yu. Sundukov, V. Shokhrin), 1 ♀ (FEB). Ussuriiskii Distr., Gornotayozhnoye Vill., 1.V.2022 (M. Sergeev), 1 ♂, 1 ♀ (FEB). Khasanskii Distr.: Barabashevka River, ~2 km upstream of Ovchinnikovo cordon, 28.V.2021 (K. Makarov), 12 ♂, 18 ♀ (MPU, ZISP, ZMUM); as above, at night, 22.V.2023 (Yu. Sundukov), 5 ♂, 1 ♀ (FEB); 6.5 km ESE of Khasan Vill., strait bank, 42°25'07"N, 130°43'36"E, 14.V.2023 (K. Makarov), 4 ♂, 8 ♀ (MPU, ZISP); as above, 14.V.2023 (Yu. Sundukov), 3 ♂, 7 ♀ (FEB); as above, at night, 16.V.2023 (Yu. Sundukov), 1 ♂ (FEB).

Distribution. East Asian nemoral species: Russia (Primorskii Territory), Japan (Honshu).

Bionomy. Occurs in various moderately wet biotopes: seashore and flood-plain meadows, banks of rivers and channels, at the margins of grassy marshes, peaty bogs and edges of flood-plain forests. Reproduction in spring and summer, oviposition recorded in second and third ten days of June. Similarly to the majority of *Chlaenius* Bonelli, 1810 species (Claassen, 1919; King, 1919; Tanaka, 1956; Cárdenas et al., 1999; Sasakawa, 2017, 2023; our data), places eggs into mud capsules on the surface of plant remnants, etc. (Fig. 3, 11, 12). Egg development lasts for 6–8 days. Freshly hatched I instar larvae have long legs and long, movable urogomphs. The larvae rejected all the offered food (mollusks, earthworms, various insect larvae) and

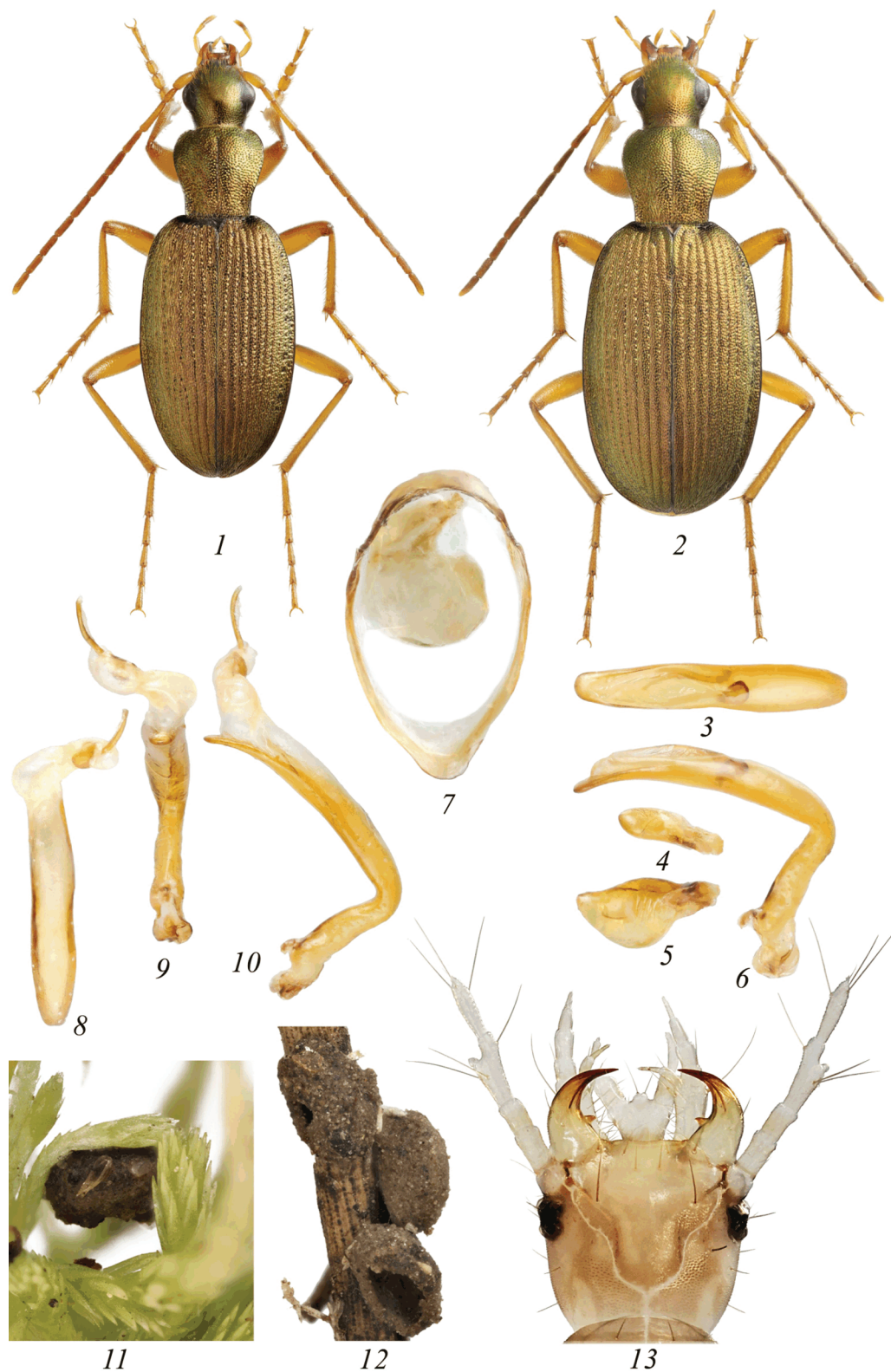


Fig. 3. *Chlaenius* (*Eochlaenius*) *suvorovi* Semenov, male (1, 3–10), female (2), and I instar larva (13): (1, 2) dorsal habitus; (3) penis, dorsal view; (4) right paramere; (5) left paramere; (6) penis, lateral view; (7) genital sclerite; (8–10) fully everted endophallus, dorsal, ventral and lateral views; (11, 12) egg capsules attached to moss and plant debris; (13) head, dorsal view.

died in a few days. Larvae of *Ch. suvorovi* differ from those of the other known *Chlaenius* in a long epicranial suture, broad nasale with the median tooth decreased and lateral teeth strongly shifted laterally, and in the characteristic mandible with the strongly curved distal part and the dorsal cutting edge shifted onto the dorsal surface. Such a combination of characters is never found in other species and may imply an unusual trophic specialization of *Ch. suvorovi*. Its other specific features are strongly developed protective glands, whose excretion is toxic for amphibians: frogs and toads with the body mass 0.65–0.95 g placed in a cage with the carabids, died within a day and a night; larger animals (1.1–1.4 g), within two days. Amphibians with similar weight (0.9–1.0 g), placed in a cage with the larger *Pterostichus mukdenensis* Breit, 1933, not only remained alive at least for a week, but intensely fed on the carabids. One may assume that the trophic specialization is one of the reasons of the rareness of this species and its sporadic occurrence.

Chlaenius suvorovi is included in the Red Data Book of Japan in the category of Threatened IB Endangered (EN) (RDB, 2023).

Notes. This species was considered very rare in the Russian Far East until recently. It was described from the environs of Ussuriisk City and from the middle course of the Ussuri River (Semenov, 1912), reported also from the western shore of Lake Khanka and from the Arsen'yevka River flood plain (Kryzhanovskii, 1976; Sundukov, 2005). The population numbers of this species have noticeably increased in recent years, which has no explanation so far.

Family SILVANIDAE

Silvanolomus brevis (Wollaston, 1873)

Fig. 4

Material. *Primorskii Terr.* Khasanskii Distr., 17 km SSW of Barabash Vill., Sinii Utyos cordon, 43°03'44"N, 131°21'20"E, h ~50 m, at light, 21–24.VII.2023 (A. Prosvirov), 1 ♂ (MPU).

Notes. This species was recorded only for Japan within the genus *Leucohimatium* Rosenhauer, 1856 in the Catalog of the Palaearctic Coleoptera (Węgrzynowicz, 2007) and subsequently transferred to the genus *Silvanolomus* Reitter, 1912 (Hirano, 2010). In Japan it is

known from the islands of Honshu, Shikoku, and Kyushu (Hirano, 2010; Saito et al., 2017). Until now (Krivolutskaya, 1992; Halstead et al., 2007), in the Russian Far East a different species, *Silvanolomus denticollis* (Reitter, 1876), was known. In the key to silvanids of the Far East (Krivolutskaya, 1992), the characters of the genus *Silvanolomus* include mostly specific features of *S. denticollis*; so we propose here changes to the key to genera and provide a key to *Silvanolomus* species from the Russian Far East.

Couplet 3 of the key to genera should read as follows.

3. Sides of pronotum with 10 small or with 6 or 7 well developed, rather large teeth bearing thick, curved setae apically.

—Sides of pronotum smooth or finely serrate, in the latter case lateral denticles lacking thick setae.

KEY FOR DIFFERENTIATION OF *SILVANOLOMUS* SPECIES IN THE SOUTH OF THE RUSSIAN FAR EAST

1. Base of pronotum not margined; disc coarsely punctate (no punctures present between setae); sides with 6 large teeth. Sides of elytra subparallel; male hind tibia not incurved apically, without apical spine *S. denticollis* (Reitter, 1876).
- Base of pronotum narrowly margined; disc finely irregularly punctate (with two or three punctures between the setae); each side with 10 fine denticles. Elytra widening in posterior half; male hind tibia incurved apically, with obtused apical spine *S. brevis* (Wollaston, 1873).

Family EROTYLIDAE

Tritoma gangwonensis Jung, 2019

Fig. 5

Material. *Primorskii Terr.* Khasanskii Distr., middle course of Kedrovaya River, 8.5 km SSE of Barabash Vill., flood-plain forest, 43°06'24"N, 131°32'16"E, h ~100 m, flight intercept traps (FIT), 23–30.V.2015 (K. Makarov, A. Zaitsev), 1 ♂ (MPU).

Notes. This species was recently described from South Korea (Jung, 2019), recaptured there in 2022 (Kwon, 2022), and not known outside Korea. It clearly differs from all the species of *Tritoma* Fabricius, 1775

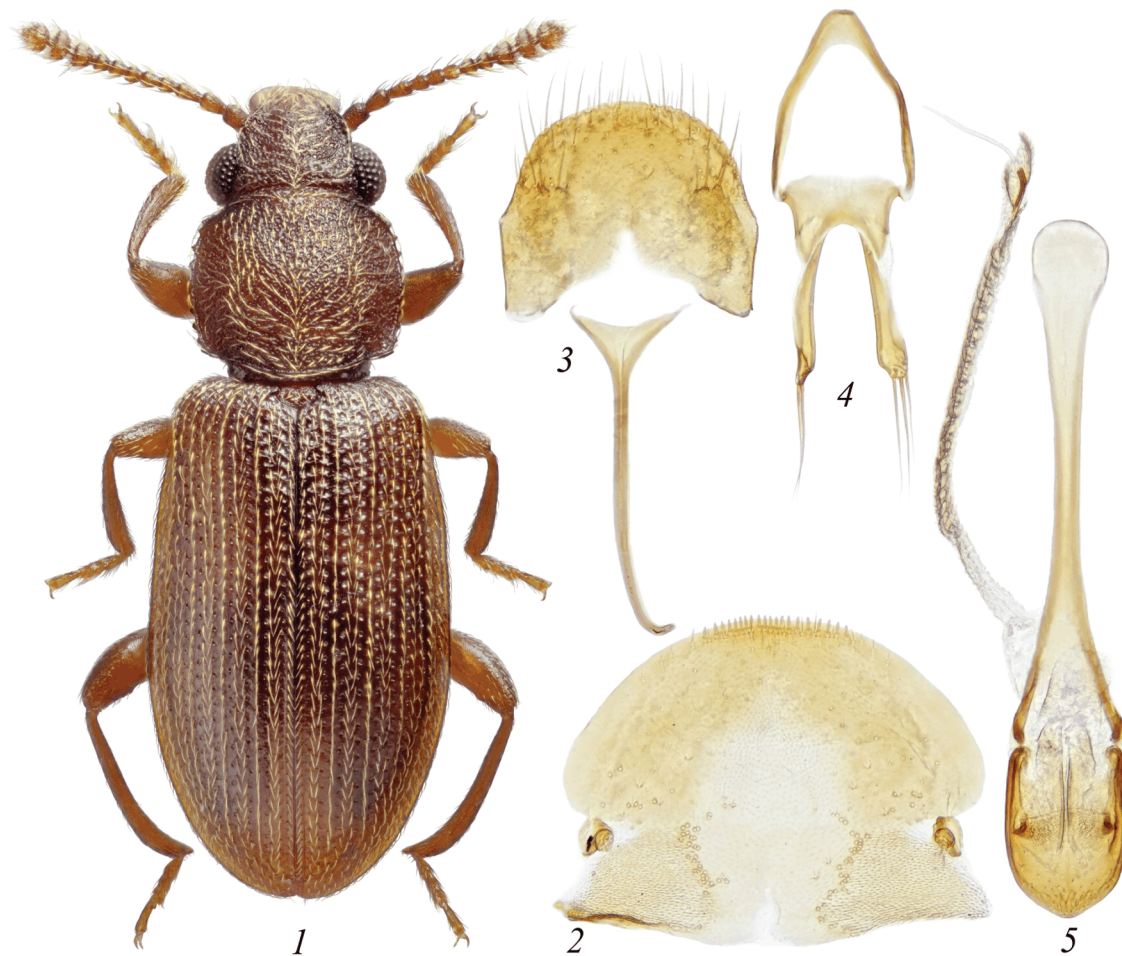


Fig. 4. *Silvanolomus brevis* (Wollaston, 1873), male: (1) dorsal habitus; (2) VIII abdominal segment, tergite; (3) IX abdominal segment, tergite and sternite; (4) parameres; (5) penis and endophallus.

known from the Primorye area in light coloration and in the penis shape.

Family COCCINELLIDAE

Genus *Serangium* Blackburn, 1889 is the only representative of the subfamily Sticholotidinae J. Weise, 1901 in the fauna of the Russian Far East. By now, only a single species was known from this territory, *Serangium lygaeum* Iablokov-Khnzorian, 1972, described from Vladivostok suburbs (Iablokov-Khnzorian, 1972) and widely distributed in the south of Primorskii Territory (Kuznetsov, 1992). In the material collected in Primorskii Territory in the recent years, the second species of this genus was found, *Serangium contortum* Wang et

Ren, 2011, described from Southern and Eastern China, the provinces of Yunnan, Guangxi and Hebei (Wang et al., 2011). These two species are similar in the body shape and coloration: the body is black, the head is often reddish yellow in front of the eyes, and the antennae and legs are yellow, but *S. contortum* on the average is smaller (1.9–2.1 mm), and *S. lygaeum* is slightly larger (2.0–2.3 mm). The external differences are subtle: in *S. contortum* the pronotum is densely and finely punctate and covered with light setae, whereas in *S. lygaeum* punctures are larger and sparser, and the vestiture is sparser. These differences although small are, however, consistent across the examined material. In addition, the venter between hind coxae is considerably more densely

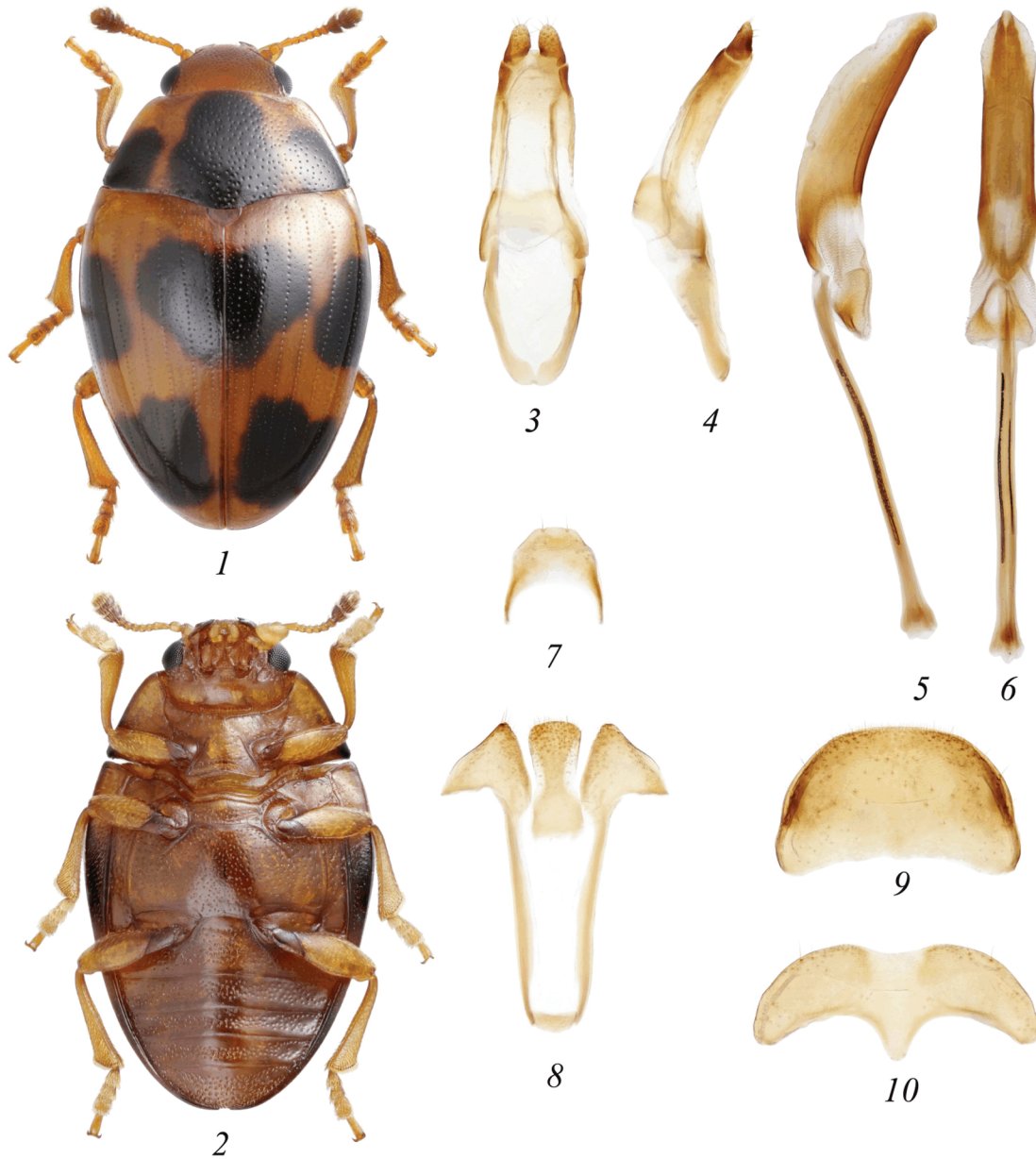


Fig. 5. *Tritoma gangwonensis* Jung, male: (1) dorsal habitus; (2) ventral habitus; (3) tegmen, ventral view; (4) tegmen, lateral view; (5) penis, lateral view; (6) penis, ventral view; (7) IX abdominal segment, tergite; (8) IX abdominal segment, sternite; (9) VIII abdominal segment, tergite; (10) VIII abdominal segment, sternite.

punctate in *S. contortum* (this character being more variable).

Examination of the genital structures is necessary for reliable identification of these two species. In *S. contortum* the penis tube is thicker, sharply narrowed and bent near apex; the left paramere is short, triangular,

with narrowly rounded apex; the tergite of segment VIII with long apodemes, regularly rounded apically; sternite IX is broad, with apodemes free along their entire lengths. The penis of *S. lygaeum* is narrower, regularly curved; the left paramere is long, with widely rounded apex; the tergite of segment VIII with short apodemes, blunted apically; sternite IX narrow, with apodemes ap-

proximate and fused at base. The females of these two species differ in the spermatheca structure and in the shape of the tergite of segment VIII.

Distribution. The ranges of these species widely overlap in the Primorye area: both occur in southern Sikhote-Alin, whereas only *S. lygaeum* has been so far known from the extreme south-west of the Primorskii Territory.

KEY FOR DIFFERENTIATION OF SPECIES OF THE GENUS *SERANGIUM* IN THE SOUTH OF THE RUSSIAN FAR EAST

1. On average larger (body length 2.0–2.3 mm), pronotum sparsely punctate and sparsely setulose. Left paramere long, with wide, rounded apex and smooth margins *S. lygaeum* Iablokov-Khnzorian, 1972.
- On average smaller (body length 1.9–2.1 mm), pronotum densely punctate and with denser vestiture. Left paramere short, triangular, with pointed apex; its outer surface obtuse-angular at mid-length, with wide, rounded lobe at base *S. contortum* Wang et Ren, 2011.

Serangium lygaeum Iablokov-Khnzorian, 1972

Fig. 6, 2, 8–11, 13; Fig. 7, 2, 4, 8–10, 12, 14

Material. *Primorskii Terr.* Holotype, ♂: “km 27 Lychikhe [River, now Bogataya R. within Vladivostok], 25.VIII.1937” (A. Monchadskii) (ZISP). Vladivostok vicinity, Okeanskaya Stn., 5.VII.1986 (V. Gratshev, V. Zherikhin), 1 ♂, 1 ♀ (ZMUM). Spasskii Distr., Tatyankovka Vill., broadleaf forest, lilac [*Syringa* sp.], 20.VIII.1970 (V. Kuznetsov), 1 ♂ (FEB). Ussuriiskii Distr.: Kamenushka Vill. near Ussuriisk City, 4.VI.1984 (N. Nikitsky), 1 ♀ (ZMUM); as above, 3.VI.1989 (N. Nikitsky), 1 ♀ (ZMUM); Ussuriiski Nature Reserve, 22.VI.1984 (N. Nikitsky), 1 ♀ (ZMUM); Borisovskoye Plateau, Listvennichnaya River downstream of the Kamenisty Creek mouth, h ~400 m, 43°35'47"N, 131°21'53"E, 27.VII.2020 (K. Makarov), 1 ♀ (MPU). Nadezhdinskii Distr., Nadezhdinskaya rail road station vicinity, broadleaf forest, Manchurian walnut tree, 31.VIII.1976 (V. Kuznetsov), 2 ♂, 1 ♀ (FEB). Shkotovskii Distr.: Anisimovka Vill. vicinity, h = 250 m, 43°10'53"N, 132°46'05"E, 22.VI.2021 (A. Prosvirov), 1 ♂ (MPU); as above, but h = 230 m, 43°11'03"N,

132°45'28"E, 11.VII.2021 (A. Prosvirov), 1 ♂ (MPU); as above, 43°10'54"N, 132°46'05"E, h = 248 m, 5.VII.2021 (A. Prosvirov), 1 ♀ (MPU); 11.VII.2021 (A. Prosvirov), 1 ♀ (MPU); Luk'yanovka Vill. vicinity, 43°11'12"N, 132°42'06"E, h = 337 m, 16.VI.2021 (A. Prosvirov), 1 ♀ (MPU). Partizanskii Distr.: Brovnichi Vill., Manchurian walnut tree, 28.VII.1983 (V. Kuznetsov), 1 ♂, 2 ♀ (FEB); Lazovskii Nature Reserve, ~12 km S of Staraya Kamenka Vill., Amerika cordon vicinity, 43°15'N, 134°01'E, 6.VII.2004 (M. Smirnov, L. Smirnova), 1 ♂ (cMS); as above, but Petrova Bay, 5–7.VIII.2008 (V.P. Shokhrin), 1 ♀ (ZMUM); as above, but Prosyolochnyi (=Ta-Chingouza) cordon, 43°00'34"N, 134°07'43"E, 21–25.VII.2008 (Yu. Sundukov), 1 ♂ (MPU). Khasanskii Distr.: 11 km SSW of Barabash Vill., Kedrovyy Vill. vicinity, 43°05'52"N, 131°33'36"E, 28–30.VII.2023 (A. Prosvirov), 1 ♂, 1 ♀ (MPU); 2.5 km WSW of Ovchinnikovo Vill., 43°13'34"N, 131°21'23"E, 23.V.2023 (K. Makarov), 1 ♂ (MPU); Bezmyannyi Creek sources, 43°02'32"N, 131°20'47"E, 31.V.2022 (K. Makarov, A. Matalin), 1 ♀ (MPU); Gamov Peninsula, Vityaz' Vill. vicinity, h = 33 m, at light, 42°35'57"N, 131°11'18"E, 18–19.VII.2022 (A. Prosvirov), 2 ♀ (MPU); as above, but 2 km SW of Vityaz' Vill., h = 160 m, forest, 42°35'30"N, 131°12'16"E, 20.VII.2022 (A. Prosvirov), 1 ♀ (MPU).

Permanent genitalia preparations of 6 males and 9 females have been examined.

Serangium contortum Wang et Ren, 2011

Fig. 6, 1, 3, 4–7, 12; Fig. 7, 1, 3, 5–7, 11, 13

Material. *Primorskii Terr.* Spasskii Distr., Novovladimirovka Vill. vicinity, broadleaf forest, apple-tree [*Malus* sp.], 21.VIII.1970 (V. Kuznetsov), 1 ♂, 1 ♀ (FEB); Ussuriiskii Nature Reserve, Korean pine and broadleaf forest, beeting branches, 3.IX.1982 (V. Kuznetsov), 1 ♂, 2 ♀ (FEB). Ussuriiskii Distr., Gornotayozhnoye Vill. vicinity, 43°41'36"N, 132°09'36"E, h ~110 m, 15–16.VI.2023 (I. Mel'nik), 1 ♀ (MPU). Shkotovskii Distr.: Anisimovka Vill. vicinity, h = 250 m, 43°10'53"N, 132°46'05"E, 22.VI.2021 (A. Prosvirov), 2 ♂, 1 ♀ (MPU); as above, but h = 230 m, 43°11'03"N, 132°45'28"E, 11.VII.2021 (A. Prosvirov), 1 ♂, 1 ♀ (MPU); as above, but h = 420 m, 43°07'45"N, 132°47'55"E, 30.VI.2021 (A. Prosvirov), 1 ♀ (MPU); as above, but 17.VII.2021 (A. Prosvirov), 1 ♂, 2 ♀ (MPU).

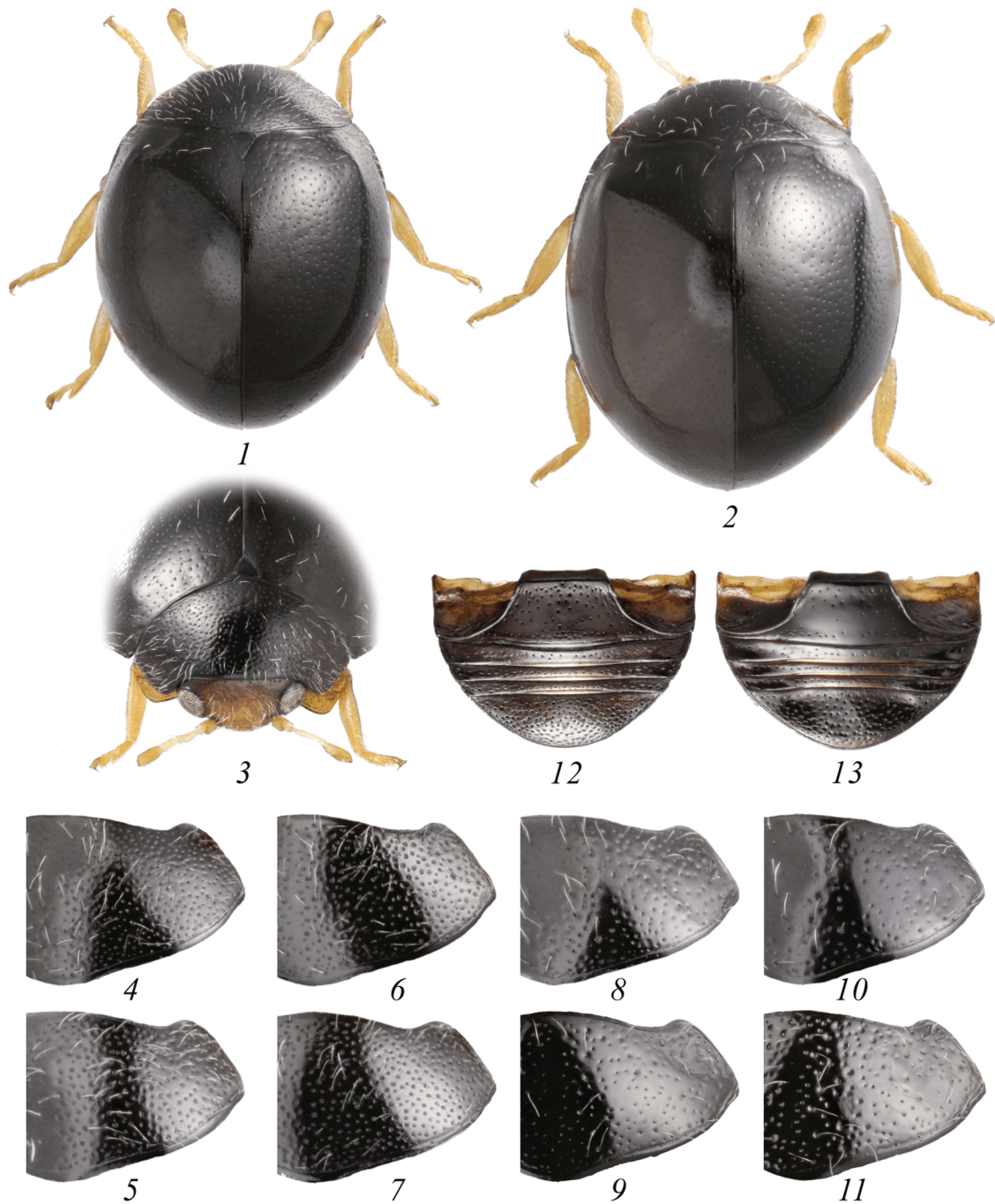


Fig. 6. *Serangium* Blackburn (1, 3, 4–7, 12—*S. contortum* Wang et Ren; 2, 8–11, 13—*S. lygaeum* Iablokov-Khnzorian), female (4, 5, 8, 9) and male (6, 7, 10, 11): (1, 2) dorsal habitus; (3) front habitus; (4–11) right half of pronotum, dorsal view; (12, 13) abdomen, ventral view.

Lazovskii Distr., Lazo Vill. vicinity, 27.V–3.VI.2010 (V. Shokhrin), 1 ♀ (ZMUM).

Permanent genitalia preparations of 4 males and 6 females have been examined.

***Sumnius nigrofuscus* Jing, 1983**

Material. *Primorskii Terr.* Ussuriiski Distr.: Borisovskoye Plateau, northeastern spur of Mt. Valunnaya, 43°34'19"N, 131°20'04"E, h = 590 m, 25.VII.2020



Fig. 7. *Serangium* Blackburn (1, 3, 5–7, 11, 13—*S. contortum* Wang et Ren; 2, 4, 8–10, 12, 14—*S. lygaeum* Iablokov-Khnzorian), male (1–10) and female (11–14): (1, 2, 11, 12) VIII abdominal tergite; (3, 4) IX abdominal sternite; (5, 8) tegmen, ventral view; (6, 9) tegmen, lateral view; (7, 10) penis, lateral view; (13, 14) spermatheca, lateral view.

(K. Makarov), 1 ex. (MPU); as above, but Listvenichnaya River downstream of the Kamenistyi Creek mouth, 43°35'47"N, 131°21'53"E, h = 400 m, 27.VII.2020 (K. Makarov), 1 ex. (MPU). Khasanskii Distr., 2 km ENE of Kraskino Vill., 42°42'42"N, 130°49'24"E, h = 50 m, 24.VI.2023 (I. Mel'nik), 1 ex. (MPU).

Notes. The lady beetle *S. nigrofuscus* was described from Southern China (Yunnan Prov.) and was first recorded in the Primorye area in 1992 from the Ryazanovka Vill. of Khasanskii District (Kuznetsov, 1996); in 2007 it was found in the Lazovskii Nature Reserve

(Kuznetsov and Sundukov, 2009). The species was also recorded from Khabarovsk Territory: Bol'shekhekhtsirskii Nature Reserve, Chirki cordon, rocks on the Ussuri River bank, 23–24.VII.2020 (Dubatolov, 2021).

Family SALPINGIDAE

Seven species from five genera are reliably known in the fauna of Primorskii Territory (Nikitsky, 1992). Most of the species are rarely collected, and their distribution in Primorskii Territory is not known in detail. Below, we first record a representative of the genus *Chilopeltis* Seidlitz, 1916 from Russia and present data on the dis-

tribution of three rare species in the southwestern Primorye area.

Chilopeltis laevipennis (Marseul, 1876)

Fig. 8

Material. *Primorskii Terr.* Khasanskii Distr.: Bezymyannyi Creek sources, 43°02'32"N, 131°20'47"E, 31.V.2022 (K. Makarov), 1 ♀ (MPU); Cape L'va vicinity, h ~12 m, 42°41'18"N, 131°14'51"E, 14.VI.2021 (I. Mel'nik), 3 ♂ (MPU, ZISP, ZMUM); middle section of the Narva River, left bank, bog, 43°04'08"N, 131°19'59"E, 25.V.2021 (K. Makarov), 1 ♂ (MPU).

Bionomy. All specimens were collected in spring and early summer south of Barabash Village in Khasanskii District beating thin dry shrub branches.

Notes. It is the only representative of the genus in the Palaearctic (Pollock and Löbl, 2008). Described from the Japan Islands (Marseul, 1876), to which territory most records are limited (Seidlitz, 1916, 1917; Pic, 1924; Iablokoff-Khnzorian, 1985; Sasaji, 1988; Nakahama et al., 2019; Takigawa and Inoue, 2021). N.B. Nikitsky (1992) included *Ch. laevipennis* in the "Key to Insects of the Far East of the USSR" anticipating its records in the future. This species was erroneously recorded from South Korea (Kim, 2018), which was followed in the Catalog of Palaearctic Coleoptera (Pollock et al., 2020). It was found subsequently that the record was based on a misidentification of *Lissodema plagiata* Lewis, 1895 (Lee and Kim, 2020), thus here we first record this species for continental Asia and for Russia.

Chilopeltis laevipennis differs from all Salpingidae species with serrate sides of pronotum known from Primorskii Territory in the uniformly punctate elytra without any trace of the striae. The coloration is varying, the apical spot often being reduced or absent, occasionally the humeral spot also missing.

Salpingoides thoracicus Nikitsky, 1988

Material. *Primorskii Terr.* Ussuriiski Distr., Borisovskoye Plateau, confluence of the Listvennichnaya River and Kamenisty Creek, h ~430 m, 43°34'49"N, 131°21'22"E, 26–28.VII.2020 (K. Makarov, Yu. Sundukov), 2 ♀ (MPU). Shkotovskii Distr.: Anisimovka Vill. vicinity, 43°08'30"N, 132°47'26"E, h ~350 m, 26.VI.2021 (I. Mel'nik), 1 ♀ (MPU); as above,

43°07'55"N, 132°48'01"E, h ~420 m, FIT, 20–29.VI.2021 (I. Mel'nik), 1 ♀ (MPU). Khasanskii Distr.: 8 km NW of Zanadvorovka Vill., Gryaznaya River flood plain, 43°21'43"N, 131°33'08"E, h ~160 m, FIT, 26.V.2023 (K. Makarov), 6 ♀ (MPU, ZISP); Kedrovaya River valley, h ~70 m, 43°05'53"N, 131°33'10"E, FIT, 30.V.2021 (I. Mel'nik), 2 ♀ (MPU); 11 km SSE of Barabash Vill., 43°05'52"N, 131°33'36"E, h = 46 m, 28–30.VII.2023 (A. Prosvirov), 1 ♀ (MPU); Barabash Vill., Barabashevka River flood plain, 43°11'20"N, 131°30'7"E, 23.V.2021 (K. Makarov), 1 ♀ (MPU); 12.5 km WNW of Barabash Vill., Ovchinnikovo Vill., 43°13'56"N, 131°21'23"E, h ~100 m, at light, 13–20.VII.2023 (A. Prosvirov), 1 ♀ (MPU); 11 km WNW of Barabash Vill., lower course of Artilleriiskii Creek, 43°13'27"N, 131°21'38"E, 30.V.2021 (K. Makarov, Yu. Sundukov), 1 ♀ (MPU); Bezymyannyi Creek sources, 43°02'32"N, 131°20'47"E, 31.V.2022 (K. Makarov), 4 ♀ (MPU, ZMUM).

Bionomy. All the examined specimens are females, males of this species being very rare. Among the specimens collected in spring, teneral individuals with not fully pigmented integument were predominant. Probably the species hibernates at larval stage.

Notes. Described based on six specimens from Amurskaya Province and Primorskii Territory (Nikitsky, 1988). The species was also recorded from the Lazovskii Nature Reserve (Gusakov, 2009) and so far is known only from Russia (Pollock and Löbl, 2008; Pollock et al., 2020). Most of our specimens have been found near the border with China, and capture of this species across it is very likely.

Salpingus depressifrons Nikitsky et Belov, 1983

Material. *Primorskii Terr.* Khasanskii Distr., Bezymyannyi Creek, 43°02'32"N, 131°20'47"E, 26.V.2021 (K. Makarov, Yu. Sundukov), 1 ex. (MPU).

Notes. Described based on a short series from Kamenushka Village in the Ussuriisk District. Known from the Russian Far East, South Korea, and Japan (Masumoto et al., 2016; Kim, 2018; Pollock et al., 2020; Won, 2023). In Russia, in addition to the type locality is reliably known from the Lazovskii Nature Reserve (Gusakov, 2009).

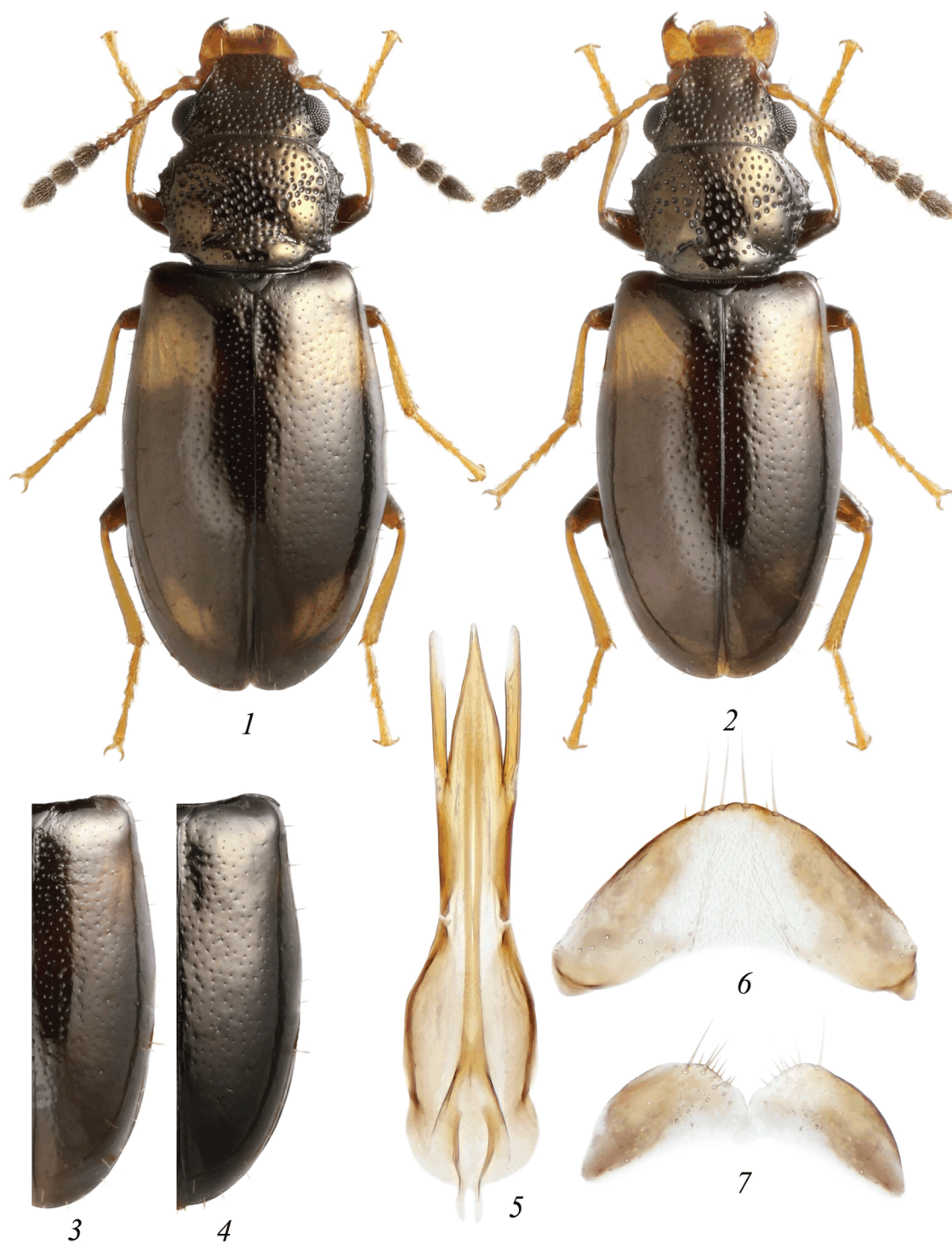


Fig. 8. *Chilopeltis laevipennis* (Marseul), female (1) and male (2–7): (1, 2) dorsal habitus; (3, 4) right elytron, dorsal view; (5) aedeagus and tegmen; (6) VIII abdominal segment, tergite; (7) VIII abdominal segment, sternite.

Lissodema plagiatum Lewis, 1895

Material. *Primorskii Terr.* Ussuriiskii Distr.: Borisovskoye Plateau: Listvennichnaya River downstream of the Kamenistyi Creek mouth, 43°35'28"N, 131°21'34"E, h ~430 m, 27.VII.2020 (K. Makarov), 1 ex. (MPU); Valunnyi Ridge, 43°33'16"N, 131°21'39"E, h ~600 m, 24.VII.2020 (K. Makarov), 8 ex. (MPU, ZMUM, ZISP).

Notes. Known from the Primorye area, Japan (Iablokoff-Khnzorian, 1985; Sasaji, 1988; Pollock et al., 2020) and Korea (Lee and Kim, 2020). Distribution of this species in Primorskii Territory is not known in detail. During the long-term investigation in the southwestern Primorye area we have found *L. plagiatum* only on the Borisovskoye Plateau above 400 m a.s.l.

Family TENEBRIONIDAE

Xanthalia serrifera (Borchmann, 1930)

Material. *Primorskii Terr.* Khasanskii Distr.: Kedrovaya Pad' Nature Reserve, Primorskii cordon, 43.054°N, 131.333°E, 29.VII–1.VIII.2013 (I. Gomyranov, T. Galinskaya), 1 ex. (ZISP); 8 km NW of Zanadvorovka Vill., Gusevskii cordon vicinity, 30.VII.2020 (K. Makarov, Yu. Sundukov), 1 ex. (MPU); as above, 3.VIII.2020 (K. Makarov, Yu. Sundukov), 3 ex. (MPU).

Notes. The species was previously known from North Korea (Borchmann, 1936) and the Chinese provinces of Fujian and Sichuan (Iwan et al., 2020). In the Primorye area it has been found only in the Khasanskii District, in the piedmont forests of the Chyornyye Gory Mountains spurs so far.

Family CURCULIONIDAE

Genus *CAENOCRYPTORRHYNCHUS* Morimoto, 1962

Type species *Caenocryptorrhynchus frontalis* Morimoto, 1962.

The only species of this genus (Morimoto, 1962) is known from Japan and South Korea (Alonso-Zarazaga et al., 2023). The first two authors of this paper, and also I.V. Mel'nik recently found in the south of Primorskii Territory a species very similar to it, differing in the considerably smaller body size, but sharing most of the

external characters, including the most unusual one—the presence of deep sulci over dorsal eye margins, contiguous or nearly so on the forehead. Two additional specimens of this species were found in the ZISP collection among very similar species of the genus *Cryptorrhynchus* Ill. Having no material of *Caenocryptorrhynchus frontalis*, after comparing with the photographs of its type specimens at the site Japanese Weevil Data Base (<http://de05.digitalasia.chubu.ac.jp/search.php?mode=-search&sname=Caenocryptorrhynchus+frontalis+Morimoto%2C+1962>) we still found it possible to attribute the material from Primorskii Territory to a new species, the description of which is given below.

Caenocryptorrhynchus zherichini Korotyaev, sp. n.

Fig. 9, Fig. 10

Material. Holotype, male: **Russia**, *Primorskii Terr.*, Khasanskii Distr., Sinii Utyos hill bottom, 43°03'45"N, 131°21'19"E, h ~36 m—43°03'31"N, 131°20'55"E, h ~140 m, 22–24.VI.2022 (I. Mel'nik) (ZISP). Paratypes. **Russia**, *Primorskii Terr.* Khasanskii Distr.: 1 female, collected together with holotype (ZMUM); 8 km NW of Zanadvorovka Vill., Gusevskii cordon vicinity, 43°21'42"N, 131°33'26"E, h ~210 m, 3–4.VIII.2020 (K. Makarov, Yu. Sundukov), 1 female (ZISP); Partizansk (= Suchan) town, 10.VII.1951 (O.N. Kabakov), 1 female (ZISP); Vladivostok, Shamora Bay, broadleaf forest, beating branches of hawthorn, 16.VI.1971 (V.N. Kuznetsov), 1 female (ZISP).

Description. Male. Rostrum 1.03 times as long as pronotum, 4.29 times as long as broad at base, where it is 1.50 times as wide as at apex; strongly and almost regularly curved, in middle part weakly, toward base and toward apex more strongly flattened dorsoventrally. Width of rostrum at antennal insertions 0.73 width of fore femur. From eyes toward approximately middle of basal half rostrum moderately, then less strongly gently narrowing toward antennal insertions, and only inconspicuously widening apically afterwards. Rostral dorsum in basal half moderately convex in cross-section, with dense, moderately deep, elongate punctures almost until antennal bases. Dorsal margin of antennal scrobe joining with median carina over antennal bases, weakly explanate toward base of rostrum. In apical part rostral dorsum weakly and regularly convex, shining, with sparse small, elongate punctures. Antennae inserted at 0.40 length of rostrum from apex. Scape slender, weakly



Fig. 9. *Caenocryptorrhynchus zherichini* Korotyaev, sp. n., male, holotype (1, 2, 4–7) and female, paratype (3): (1) dorsal habitus; (2, 3) head and anterior margin of pronotum; (4) aedeagus, dorsal view; (6) aedeagus, lateral view; (5) apex of aedeagus, dorsal view; (7) tegmen.

curved, weakly thickened in apical third. Funicle slender, not widening apically. First funicular segment not more than 1.5 times as long as broad, 2nd scarcely shorter than, and about half as broad as 1st, somewhat shorter than 3rd and 4th segments combined; 5th and

6th segments about as long as broad, 7th segment slightly shorter. Club long, 2.6 times as long as broad, noticeably asymmetrical, shortly roundly narrowed at base, weakly widened and scarcely rounded at sides until the end of middle third, and then slightly arcuately



Fig. 10. *Caenocryptorrhynchus zherichini* Korotyaev, sp. n., female, paratype: (1) dorsal habitus; (2) lateral habitus; (3) ventral habitus; (4) VIII abdominal segment, tergite; (5) coxites and styli; (6) VIII abdominal segment, sternite; (7) spermatheca.

narrowing toward the slightly blunted apex. Entire club covered with tomentum of dense fine, very short setae, with sparse fine medium-long (one-third or one-fourth diameter of the club) setae on the ill-defined sutures between segments. Second–seventh funicular segments bearing whorls of long semi-erect dark setae. Eyes almost regularly rounded triangular, weakly convex, large, with dorsal and ventral margins levelling with the respective head surfaces in lateral view. Inner margins of eyes on forehead scarcely rounded, angularly converging and separated by slightly more than half-width of rostrum at base. Forehead almost flat, slightly depressed and rather strongly widened toward base of rostrum, matte, with dense deep punctures. In a beetle spread on card with rostrum pointed anteriorly, the sulci along dorsal eyes margins visible only under apical margin of pronotum and very narrowly separated medially, with a small oblong foveiform puncture in front of their junction (Fig. 9, 1, 2).

Pronotum 1.24 times as broad as long, with base shallowly and unevenly bisinuate—somewhat more strongly produced medially toward scutellum and slightly embracing its rounded anterior margin. Sides weakly and slightly arcuately diverging until approximately mid-length, then more strongly convexly converging toward the shallow apical constriction, separating very short on sides and much longer but weakly separated on disc apical part. Apical margin not raised, with glabrous, shining edge, strongly protruding and rounded medially. Postocular lobes rather large, almost stepwise beginning in dorsal part but weakly rounded, bearing a dense row of very short setae, pointed toward head capsule and inconspicuous. Disc rather strongly and almost regularly convex longitudinally and in cross-section, almost equally sloping toward base and toward apex; somewhat more strongly convex along midline and raised into a narrow, glabrous, and rather high keel, moderately arcuate in lateral view. Two weak obtuse prominences bearing erect dark brown and light brown, truncate apically scales present somewhat distal to mid-length closer to lateral margins than to midline of disc. Punctures on pronotum uniform, large, dense, and deep; narrow spaces between the punctures shining in places.

Scutellum broad-oval, evenly moderately convex, smooth, shining, almost levelling with the neighboring surface of elytral intervals.

Elytra 1.4 times as long as broad; at humeri, 1.33 times as broad as pronotum, in basal half parallel-sided, in apical half strongly roundly converging toward the obtuse, rounded preapical prominences, clearly visible over the contour of the jointly rounded apices. Disc rather strongly convex in cross-section and longitudinally, noticeably flattened at 1st–3rd intervals proximal to mid-length, moderately sloping toward base and strongly arcuately sloping in apical half. Sutural margins of elytra jointly weakly narrowly raised along entire lengths. Striae moderately broad, deep elongate punctures in them separated for almost their lengths by shining, rather high interstices, often levelling with the interstriae. Strial margins in basal part of elytra gently smoothed, striae becoming entire toward apices and half as broad, and their margins sharpening. First stria of each elytron almost semi-roundly turning along scutellum and not reaching basal margin of the elytron. Intervals on disc somewhat broader than striae, coarsely rugosely punctate and bearing small irregular-shaped granules, weakly lustrous; even-numbered intervals flat or scarcely convex, odd-numbered ones noticeably convex. Third interval on a half of the piece before the light oblique band and immediately behind latter with more strongly convex areas densely set with obliquely raised black scales. Fifth interval with a shorter and less convex prominence before the light band.

Legs rather long and slender. Femora weakly differing between pairs in width and shape, except that hind femur noticeably S-curved. Lower (ventral) surface of all femora with shallowly impressed matte stripe, bearing a weak angular prominence at mid-length and a fine denticle in apical part. Rest surface of femora with dense large punctures, narrow intervals between punctures often shining. Tibiae parallel-sided, fore and middle ones straight, hind tibia weakly curved, mainly in basal part, with shallowly bisinuate inner face. Outer face of all tibiae with weak, in places indistinct, matte longitudinal carina; anterior face with varyingly distinct one or two wrinkle-shaped carinae designated by rows of semi-erect scales. All tibiae with large and almost uniform sharp, rather narrow unci. Tarsi of medium proportions; 1st segment slightly more than twice, 2nd segment 1.3 times as long as broad, 3rd about as long, and 1.8 times as broad as 2nd; claw-segment slender, very weakly widened toward mid-length and then parallel-sided, by 0.6 of own length protruding from lobes of 3rd segment. Claws small, simple, fine.

Sulcus for reception of rostrum along its entire length (also on its posterior margin before metasternum) bordered by narrow carinae. Entire underside of thorax matte, densely coarsely punctate. First and 2nd ventrites of abdomen shallowly depressed medially, rest ventrites almost flat, all with smaller and sparser punctures than those on thorax. Aedeagus flat, rather strongly and almost regularly curved dorsoventrally, subparallel-sided along most of own length, weakly narrowed at base, and shortly attenuate into a slightly upcurved prominence at apex (Fig. 9, 4–6). Tegmen as in Fig. 9, 7.

Female. Rostrum as long as pronotum; at antennal insertions, similarly to male, 0.73 times as broad as fore femur. Rostral dorsum only in basal third with obtuse, wide, moderately convex, shining median carina, rapidly widening almost toward lateral margins of rostrum, glabrous and shining along most of own length, with sparse very fine punctures. Antennae inserted scarcely distal to rostrum mid-length. Sulci above dorsal eye margins approximately as in male (Fig. 9, 3). Shape and proportions of the body and legs (Fig. 10, 1, 2) about as those in male except that femoral teeth somewhat less pronounced. Venter not depressed (Fig. 10, 3). Terminalia and genitalia as in Fig. 10, 4–7.

Body length 4.7–5.0 mm.

Body dark brown, occasionally nearly black; rostrum, antennae, tarsi and tibiae apically paler, reddish brown. Pronotum rather sparsely clothed with broad, dull dark brown and light brown scales, protruding from punctures, with two fascicles of lighter scales on the tubercles at sides. Elytra with dense recumbent shorter and broader scales in the striae and on intervals, odd-numbered intervals additionally with a sparse irregular row of short erect, mostly light scales; tubercles with denser black shining scales. Triangular area at elytral base dark, followed by oblique light band and, behind a somewhat darker area, by another, less distinct band; apical area of elytra dark with small paler speckles.

Comparative notes. This species is similar to *Caenocryptorrhynchus frontalis* in the presence of deep sulci above eyes and in other structural features, reported in the descriptions of *C. frontalis* and *C. zherichini* sp. n., but differs in the considerably smaller size (body length in the type species 8–8.5 mm), less strongly and very gently instead of abruptly, beveled apically pronotal disc, and also apparently in a less coarse body

sculpture, narrower legs, and darker scaling of the apical half of the elytra. The structure of the *C. frontalis* genitalia was not described.

Etymology. The new species is named after Vladimir Vasilievich Zherikhin (1946–2001), our untimely perished colleague and good friend, who made a valuable contribution to the knowledge of the weevil fauna of the Far East, particularly to the systematics of the tribe Cryptorhynchini.

Shirahoshizo rufescens (Roelofs, 1875)

Material. *Primorskii Terr.* Khasanskii Distr., Gamov Peninsula, Telyakovskii Bay, 42°35'N, 131°13'E, h ~ 20 m, *Pinus densiflora* forest, at light, 7–8.VII.2016 (S.Yu. Sinev), 1 ♂, 3 ♀ (ZISP).

Distribution. South of the Russian Far East (Primorskii Terr.), northern India, North and South Korea, Hong Kong, Japan (Alonso-Zarazaga et al., 2023). This species was first recorded from the Russian Far East by V.V. Zherichin in his and A.B. Egorov's book (Zherichin and Egorov, 1991) based on two specimens from Primorskii Territory, apparently in the ZMMU collection. There is no other material from Russia in the ZISP collection.

Shirahoshizo egorovi Zherichin, 1991

The holotype of this species is missing from the ZISP collection contrary to the statement in its original description (Zherichin in: Zherichin and Egorov, 1991, p. 106). According to the personal communication of A.B. Egorov in his message to B.A. Korotyaev in November, 2023, at the time of the preparation of the book in which the species was described the material, including types, was stored in V.V. Zherichin collection at the A.A. Borissiak Paleontological Institute, Moscow. After the death of V.V. Zherichin in December 2001, the material was incorporated to the collection of V.G. Grachev, who also worked at this institute. V.G. Grachev died in October 2006, and his collection was donated to the ZMUM, but the holotypes of *Shirahoshizo egorovi* and several other species described in the book by V.V. Zherichin and A.B. Egorov are missing from the collection. Neither are they present in the collection of the former Biology and Soil Institute (now the Federal Scientific Center of East Asia Terrestrial Biodiversity)

(personal communication of M.E. Sergeev, the above-mentioned institution, Vladivostok).

It is noteworthy that the only known specimen of *Sh. egorovi* was found by A.B. Egorov on a dying Manchurian walnut tree (Zherichin in: Zherichin and Egorov, 1991, p. 106), although in the original description it is stated to be very close, also in the very similar aedeagus structure, to *Sh. rufescens*, which develops mostly on conifers (Morimoto, 1994). The reported difference from *Sh. rufescens* in the structure of the scutellum needs to be checked as the fine median carina on scutellum is rarely distinct in the specimens from Primorskii Territory and Japan.

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ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Statement on the welfare of animals. All applicable international, national, and institutional guidelines for the care and use of animals were followed. All procedures performed in studies involving animals were in accordance with the ethical standards of the institution or practice at which the studies were conducted.

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

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