

**Three new species of *Choleva* (Coleoptera: Leiodidae: Cholevinae) from the
Caucasus and Turkey, with a key to species of the *cisteloides* group**

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**Taxonomy, Coleoptera, Leiodidae, Cholevinae, *Choleva*, *cisteloides* group, new species, key,
Caucasus, Turkey**

Abstract. Three new species of *Choleva* from the *cisteloides* group are described and illustrated: *Choleva* (*Choleva*) *sagittaria* sp. n. and *C. (C.) rousi* sp. n., both from the Caucasus, and *C. (C.) fencli* sp. n. from the Caucasus and northeastern Turkey. The description of female of *C. (C.) zolotarevi* Reitter is completed. A key to species of the *cisteloides* group is given. New distributional data are presented for some species.

INTRODUCTION

The genus *Choleva* Latreille, 1796 with nearly fifty known species is distributed mainly in the western Palaearctic region, with only two species known from the Central Asia and a single species from the Oriental region. Their biology is not well known, adults are collected mostly from autumn to spring in tunnels and nests of small mammals, but also in caves and rock debris. Unlike most other small carrion beetles, they are seldom found in pitfall traps. Systematically, the genus is divided into eight species groups.

According to Jeannel (1936), only two species of *Choleva* of the *cisteloides* group had been recorded from the Caucasus: *C. obscuripes* Reitter, 1888 (described from a single male), and *C. zolotarevi* Reitter, 1909. Later Yablokov-Khinzoryan (1963) described a third species, *C. stricta*, from Armenia (based on a single female), and the female of *C. obscuripes*.

In the present paper, three new species of the *cisteloides* group are described, and the description of female of *C. zolotarevi* is completed.

Some distributional remarks concerning other species are also included.

Through the text, the following abbreviations are used: AOLC – coll. Aldo Olexa, Prague; HNHN – Természettudományi Múzeum, Budapest; JFRC – coll. Jürgen Frank, Korb Kleinheppach, Germany; JRUC – author's collection; JVAC – coll. Jiří Vávra, Ostrava; KMVC – Regional museum in Hradec Králové; MNHN – Muséum National d'Histoire Naturelle, Paris; MPRC – coll. Michel Perreau, Paris; NMPC – National Museum, Prague; RROC – coll. Rudolf Rous, Prague.

Choleva (Choleva) sagittaria sp. n.
(Figs 1–9)

DESCRIPTION

Male: Body length 5.3 mm, wings developed. Body slender (Fig. 2). Head and pronotum dark brown to black, elytra flavous with posterior third brown (Fig. 2). Antennae, legs

and mouthparts uniformly flavous. Body covered with short recumbent yellow pubescence.

Head surface finely and sparsely punctate, dull, with distinct isodiametric microsculpture.

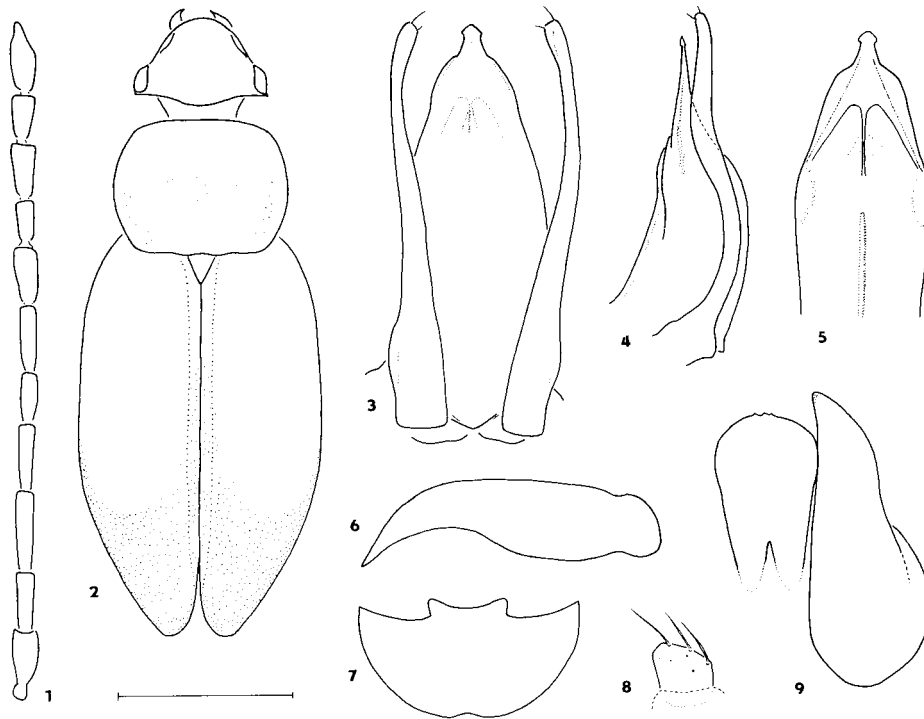
Antenna (Fig. 1) long and slender, about twice as long as pronotal width, all segments longer than wide. The proportions of antennal segments I to XI: 46×16 , 34×14 , 44×13 , 40×14 , 30×13 , 34×13 , 36×16 , 26×13 , 32×16 , 26×19 , 44×20 .

Pronotum 1.25 times as wide as long, 1.4 times as wide as head, widest before middle. Sides curved regularly, hind angle rounded. Surface vaulted regularly, with central shallow depression; laterally, pronotum flattened before posterior angle. Surface punctuation and microsculpture as on head.

Elytra slender, convex, 1.9 times as long as wide, about 3.1 time as long as pronotum. Tip of the elytron rounded regularly. Surface punctuation arranged in irregular transverse rows, microreticulation very fine, surface lustrous.

Abdominal sterna without any impressions in medial parts.

Protarsus long, first segment wider than apical part of protibia. Mesotibia straight, bent slightly only in apical part. Metafemur straight, without tooth at posterior margin. Metatrochanter (Fig. 6) long, apex pointed and slightly bent posteriorly.



Figs 1–9. 1–6 – *Choleva sagittaria* sp. n., holotype ♂; 7–9 – ditto, allotype ♀. 1 – right antenna dorsally; 2 – habitus dorsally; 3 – aedeagus dorsally; 4 – ditto laterally; 5 – ditto ventrally; 6 – right metatrochanter ventrally; 7 – sternum VIII ventrally; 8 – right stylus ventrally; 9 – terga IX and X dorsally. Scale 0.75 mm for Figs 1, 7; 1.5 mm for Fig. 2; 0.5 mm for Figs 3–6, 8–9.

Aedeagus (Figs 3–5) long, flattened dorsoventrally. Tip elongated, apically sagittiform and dilated. Aedeagus, ventrally, with prominent carina in basal part. Apical part, ventrally, with swollen margins, ligulae long and wide. Parameres long, slightly longer than aedeagus, sigmoid in lateral view, each paramere apically with 2 setae.

Female: Body length 5.4 and 5.5 mm, body wider than in male. Antenna only 1.9 times as long as pronotal width. Elytra 1.8 times longer than wide.

Sternum VIII with shallow notch on posterior margin, spiculum ventrale widely notched (Fig. 7). Lateral sclerite of tergum IX longer than tergum X which is shorter and rounded regularly posteriorly (Fig. 9). Stylus (Fig. 8) oblong, with 3 long setae.

MATERIAL EXAMINED: Holotype ♂: "Caucasus c., Verch. Baksan, 3.vii.1974, J. Boháč and P. Werner lgt." (Russia, Kabardino-Balkarsk autonomous region, Verkhniy Baksan, 2,000 m a.s.l., 43°11'N 42°26'E). Allotype: 1 ♀, the same data. Paratype: 1 ♀, the same data. Holotype is deposited in JRUC and will be in NMPC, allotype is deposited in JRUC, paratype in JVAC.

DIFFERENTIAL DIAGNOSIS: *Choleva sagittaria* sp. n. is closely related to *C. bicolor* Jeannel by its bicoloured elytra, long and pointed metatrochanter of the males (Figs 6, 31), notched margin of female sternum VIII (Figs 7, 44), and short tergum X of the females (Figs 9, 53). It differs by the following combination of characters: the apically-dilated aedeagal tip (Figs 3, 5; in comparison with the simple, not apically-dilated in *C. bicolor* – Fig. 36), slender parameres, round in cross-section (robust, flattened in cross-section in *C. bicolor*). Female tergum X regularly rounded on posterior margin (Fig. 9; rhomboidal in *C. bicolor* – Fig. 53).

NAME DERIVATION: The specific name is derived from the Latin sagitta = the arrow, referring to the shape of the aedeagal tip.

The new species was collected in the tunnels of small mammals under stones, in a meadow of the Baksan river below the Verkhniy Baksan village.

DISTRIBUTION (Fig. 55): Russia (Kabardino – Balkarsk autonomous region).

Choleva (Choleva) fencli sp. n.
(Figs 10–14, 16, 18)

DESCRIPTION

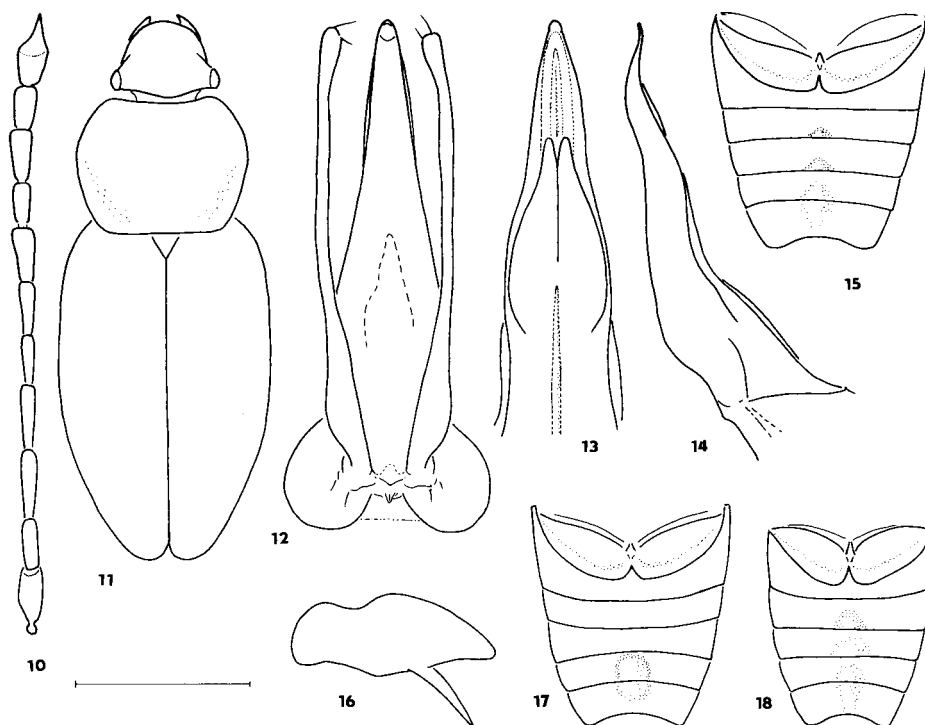
Male: Body length 4.7–5.0 mm (in holotype 4.7 mm), wings developed. Body small and slender (Fig. 11). Head, pronotum and elytra dark brown to black. Antennae, legs and mouthparts uniformly flavous. Body covered with short recumbent yellow pubescence.

Head surface finely and sparsely punctate, with fine distinct microsculpture.

Antenna (Fig. 10) long and slender, 1.9–2.1 times as long as pronotal width; all segments longer than wide. The proportions of antennal segments I to XI: 44 × 16, 32 × 12, 42 × 11, 38 × 12, 32 × 12, 34 × 12, 34 × 16, 24 × 13, 30 × 16, 26 × 18, 44 × 20.

Pronotum 1.20–1.25 times as wide as long, 1.40–1.45 times as wide as head, widest in anterior third. Sides curved regularly, hind angle rounded. Surface vaulted regularly, sometimes with shallow depression in medial part, laterally flattened before posterior angle. Surface punctation fine, denser than on head, microsculpture similar to that on head.

Elytra slender, convex, with shallow depression in basal third. Elytra 1.7–1.9 times as long as wide, 2.8–3.0 times as long as pronotum. Tip of the elytron rounded. Surface punctation coarser than on pronotum, reticulation very fine, surface lustrous.



Figs 10–18. 10–14, 16, 18 – *Choleva fencli* sp. n., holotype ♂; 15 – *C. angustata* (F.); 17 – *C. glauca* Britten, ♂. 10 – left antenna dorsally; 11 – habitus dorsally; 12 – aedeagus dorsally; 13 – ditto ventrally; 14 – ditto laterally; 15, 17, 18 – abdomen ventrally; 16 – left metatrochanter ventrally. Scale 0.75 mm for Fig. 10; 1.5 mm for Figs 11, 15, 17, 18; 0.5 mm for Figs 12–14, 16.

Abdominal sterna IV–VII with shallow round impressions in medial parts (Fig. 18).

Protarsus long, first segment wider than apical part of protibia. Mesotibia straight, slightly bent in apical part only. Metafemur straight, without tooth at posterior margin. Metatrochanter (Fig. 16) short, with round tip, at posterior margin with long slender tooth.

Aedeagus (Figs 12–14) long, slender, tapered gradually to tip in dorsal view, trapezoidal in cross-section, apically sigmoid in lateral view. Tip round, flattened dorsoventrally. Aedeagus, ventrally, with prominent central carina in basal part. Ligulae very long and slender. Apically, aedeagus with prominent central part and swollen margins in lateral view. Internal sac with elongate dent. Parameres long, but not longer than aedeagus, each paramere with 2 setae apically.

Female: Unknown.

MATERIAL EXAMINED: Holotype ♂: "USSR, Georgia-Abkhazia, Avadkhara, 1,800–1,900 m a.s.l., 43°30'N 40°42'E, 3–4.vii.1990, Dr R. Fencel lgt.". Paratypes: 2♂, "Cauc., Kazbegi, 22.vi.1978, A. Olexa lgt." (Georgia, Caucasus, Mt. Kazbek env., Kazbegi vill., 42°24'N 44°24'E); 1♂, "Kaukas, Leder; 3; 112; Muséum Paris, Coll. E. Reitter, 1885"; 1♂, "Turc., entre Hopa et Borcka, 21.vi.1986, T. Deuve and M.

Perreau lgt." (northeastern Turkey, Dogu Karadeniz Daglari Mts.). Holotype is deposited in JRUC and will be in NMPC, paratypes in AOLC, JVAC, MNHN and MPRC.

DIFFERENTIAL DIAGNOSIS: *Choleva fencli* sp. n. is closely related to the European species *C. glauca* Britten and *C. angustata* (F.) by the dentate male metatrochanter (Figs 16, 34, 35). It differs from both of these by the shape of its aedeagus, which is tapered gradually to its tip and sigmoid in lateral view (Figs 12, 14; prolonged to a slender point and straight in lateral view in *C. glauca* and *C. angustata* – Figs 39, 40). Furthermore, *C. fencli* differs from *C. glauca* by possessing shallow impressions on sterna IV–VII (Fig. 18; in comparison with impressions present only on sterna VI and VII in *C. glauca*, Fig. 17; situation in *C. angustata* similar to *C. fencli*, Fig. 15). *C. fencli* differs from *C. angustata* by the long, straight tooth on the male metatrochanter (Fig. 16; short and crooked in *C. angustata* – Fig. 35).

NAME DERIVATION: The new species is named after one of its collectors, Dr Rudolf Fencl.

The holotype specimen was collected under a fallen log at the margin of the coniferous forest on the southern slope. The paratypes from Kazbegi were found under stones on slopes below the village, and the paratype from Turkey was collected in the tunnels of mammals.

DISTRIBUTION (Fig. 55): Georgia, northeastern Turkey.

Choleva (Choleva) rousi sp. n.
(Figs 19–29)

DESCRIPTION

Male: Body length 3.65–4.00 mm (in holotype 3.8 mm), wings developed. Body very small and flat (Fig. 20). Head, pronotum and elytra dark brown. Antennae, legs and mouthparts light brown to brown. Body covered with short recumbent yellow pubescence.

Head surface coarsely and densely punctated, with distinct isodiametric microsculpture.

Antenna (Fig. 19) short, only 1.4–1.5 times as long as pronotal width. The proportions of antennal segments I to XI: 35 × 15, 24 × 10, 32 × 11, 26 × 10, 24 × 11, 22 × 11, 24 × 13, 13 × 12, 18 × 16, 16 × 18, 32 × 18.

Maxillary palpus as in Fig. 24.

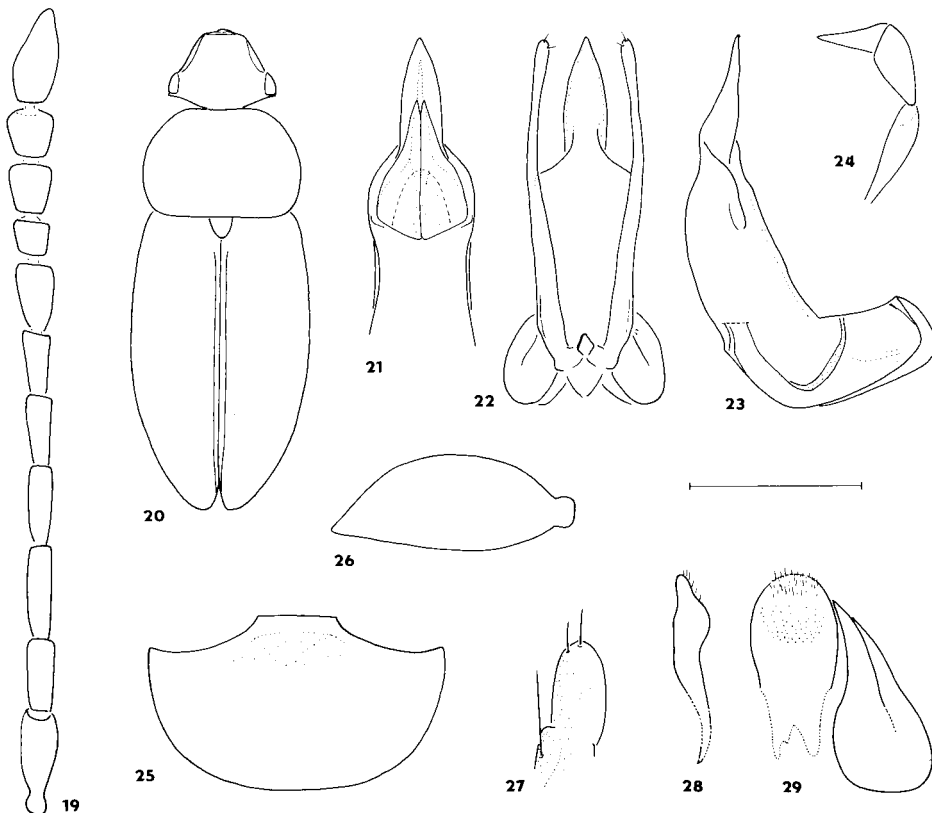
Pronotum 1.4–1.5 times as wide as long, 1.5 times as wide as head, widest behind middle (Fig. 20). Sides curved regularly, hind angle rounded. Surface vaulted only weakly, with shallow, central longitudinal depression. Surface punctation denser than on head, microreticulation distinct as on head.

Elytra 1.65–1.80 times as long as wide, 2.7–2.9 times as long as and 1.15–1.20 times as wide as pronotum. Tip of each elytron rounded regularly. Surface punctation arranged in irregular transverse rows, surface lustrous.

Abdominal sterna without any impressions in medial parts.

Protarsus long, first segment wider than apical part of protibia. Mesotibia bent slightly, apically. Metafemur straight, without tooth at posterior margin. Metatrochanter (Fig. 26) short, oval, blunted apically.

Aedeagus (Figs 21–23) short, flattened dorsoventrally. Apical part pointed simply, narrow, connected with basal part as on Fig. 22. Aedeagus, ventrally, in basal part, without



Figs 19–29. 19–24, 26 – *Choleva rousi* sp. n., holotype ♂; 25, 27–29 – ditto, allotype ♀. 19 – right antenna dorsally; 20 – habitus dorsally; 21 – aedeagus ventrally; 22 – ditto dorsally; 23 – ditto laterally; 24 – right maxillary palpus laterally; 25 – sternum VIII ventrally; 26 – left metatrochanter ventrally; 27 – left stylus ventrally; 28 – tergum X laterally; 29 – terga IX and X dorsally. Scale 0.5 mm for Figs 19, 21–25, 28, 29; 1.5 mm for Fig. 20; 0.25 mm for Figs 26, 27.

distinct carina, apical part hollowed, with low central carina, ligulae long and pointed. The shape of internal sac and its apical dent is reminiscent of that found in *C. cisteloides* (cf. Jeannel, 1923: 15). Parameres only slightly shorter than aedeagus, slightly sigmoid in lateral view, each paramere with 2 setae apically.

Female: Body length 3.8–3.95 mm, elytra 1.7 times as long as wide. Antennal segments slightly wider than in male. Sternum VIII regularly rounded on posterior margin, spiculum ventrale short, oblong, with distinct and blunt corners which are not produced laterally. Tergum X short, oval, rounded regularly on posterior margin, elevated medially in lateral view (Fig. 28), lateral sclerite of tergum IX shorter than the posterior margin of tergum X (Fig. 29). Stylus (Fig. 27) oval, with 2 long setae.

MATERIAL EXAMINED: Holotype ♂: "Caucasus b., Mussatçeri khreb., 3,000 m a.s.l., vi.1976, R. Rous lgt." (Russia, Karachaevo-Cherkessk autonomous region, Khrebet Mussa-Chitara, Chuchkhurskii pereval, 43°12'N 41°42'E); Allotype ♀: the same; Paratypes: 3♂, 1♀: the same; 1♂: the same, but 10.vi.1974. Holotype is deposited in JRUC and will be in NMPC, allotype is deposited in JRUC, paratypes in JFRC (3♂, 1♀) and RROC (1♂).

DIFFERENTIAL DIAGNOSIS: *Choleva rousi* sp. n. belongs to the *cisteloides* group by general shape of its aedeagus and the type of internal sac, but appears not to be closely related to any species of this group. It differs from all species of this group by the following combination of characters: body very small, between 3.65–4.00 mm (over 4.5 mm in the related species, with the exception of *C. glauca* Britten); antenna short, only 1.4–1.5 times as long as pronotal width (1.6–2.15 times as long in the other species); antennal segments wider (Fig. 19): segment VIII 0.9–1.1 times, segment IX 0.95–1.15 times and segment X 0.85–1.05 times as long as wide (segment VIII 1.1–2.25 times, segment IX 1.3–2.05 times and segment X 1.3–1.7 times as long as wide in the other species). The new species has an unusual type of connection between the basal and apical portions of the aedeagus (Figs 21, 22), in the other species the connection is simple – Figs 3, 12, 36–41. Also, the female tergum X differs by its shape and by the elevated central part (Figs 28, 29; tergum X not both rounded posteriorly and elevated centrally in the females of other species – Figs 9, 49–54).

NAME DERIVATION: The new species is named after its collector, Mr Rudolf Rous.

The new species was collected in the tunnels of small mammals, in an alpine meadow, near the snow fields, together with *C. zolotarevi* Reitter. The specimen from 10.vi.1974 is teneral.

DISTRIBUTION (Fig. 55): Russia (Karachaevo-Cherkessk autonomous region).

Choleva (Choleva) zolotarevi Reitter, 1909
(Figs 32, 37, 52)

Reitter, 1909: 55; Jeannel, 1923: 112; Roubal, 1931: 217; Jeannel, 1936: 268, 285.

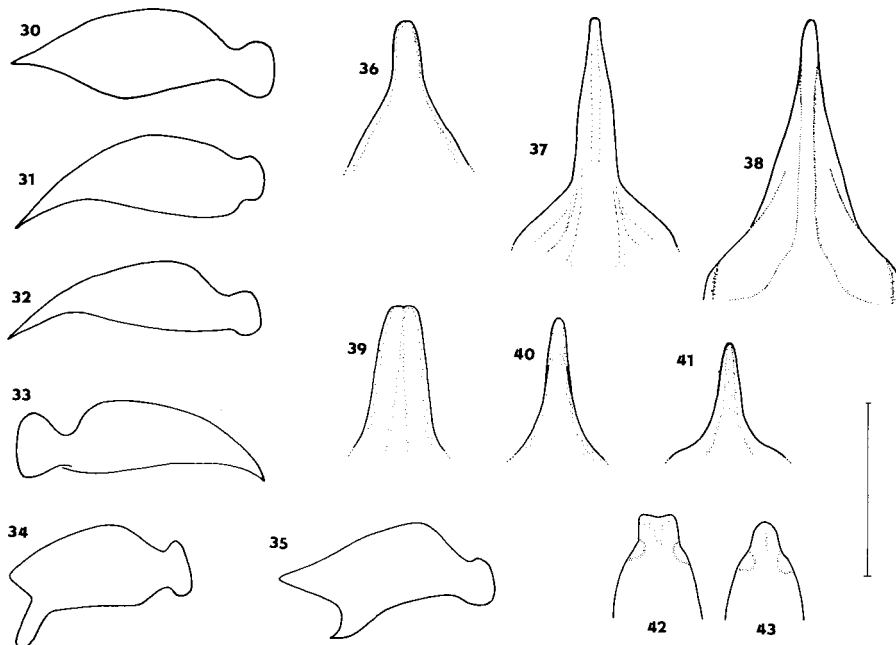
Female: Body length 4.95–5.3 mm (in holotype 4.95 mm). Antennal segment VIII 1.45–1.5 times longer than wide. Pronotum 1.3–1.45 times as wide as long (1.45 times in the holotype). Abdominal sternum VIII centrally with distinct, narrow, deep notch on posterior margin (Fig. 45), spiculum ventrale with rounded angles. Tergum X wide (Fig. 52), widest at anterior third, regularly tapered to apex, anterior part narrow and elevated medially.

MATERIAL EXAMINED: Holotype ♀: “Kasbek, A. Solotarew, coll. Reitter, Ch. Solotarewi m. ♀” [the last handwritten, Reitter’s MS] (Mt. Kazbek in Georgia, about 42°24’N 44°30’E) (HNHM).

FURTHER MATERIAL: 1 ♀, Russia, Karachaevo-Cherkessk autonomous region, Caucasus occ., Khrebet Mussa-Chitara, Chuchkhurskii pereval, 3,000 m a.s.l., 10.vi.1974, 43°12’N 41°42’E, R. Rous lgt. (JRUC); 1 ♂, the same, but vi.1976 (JRUC); 1 ♂, 1 ♀, Russia, Kabardino-Balkarsk autonomous region, Caucasus c., Azau vill., 2,500 m a.s.l., 6.vii.1974, 43°18’N 42°30’E, J. Boháč lgt. (JRUC); 1 ♂, 1 ♀, Russia, Kabardino-Balkarsk autonomous region, Caucasus c., Itkol vill. env., Mt. Cheget, 21.vii.1985, 43°18’N 42°36’E, L. Daněk lgt. (JRUC); 1 ♂, Russia, Karachaevo-Cherkessk autonomous region, Caucasus occ., Teberda env., “Chydžibf”, vi.1912, Roubal lgt. (KMVC).

The specimen from Chuchkhurskii pereval was taken from the tunnels of small mammals, in an alpine meadow, near the snow fields; specimens from Azau were found under stones on the margin of snow fields. Those from Itkol were captured in baited pitfall traps on forested slopes of Mt. Cheget. After Roubal (1931), the specimen from environs of Teberda was taken under a large stone.

DISTRIBUTION (Fig. 55): Georgia; Russia (Karachaevo-Cherkessk autonomous region, Kabardino-Balkarsk autonomous region).



Figs 30–43. 30, 41 – *Choleva cisteloides* (Frölich); 31, 36 – *C. bicolor* Jeannel; 32, 37 – *C. zolotarevi* Reitter, Azau; 33, 38 – *C. obscuripes* Reitter, Amuco; 34, 40 – *C. glauca* Britten; 35, 39 – *C. angustata* (F.); 42, 43 – *C. elongata* Paykull, Bohemia, Bohdaneč, Smetana lgt.; 35 – ditto, Streleckaya steppe. Figs 30–32, 34, 35 – right male metatrochanter ventrally; 33 – left male metatrochanter ventrally; 36–41 – tip of aedeagus dorsally; 42, 43 – ditto ventrally. Scale 0.5 mm for Figs 30–41; 0.25 mm for Figs 42, 43.

Choleva (Choleva) obscuripes Reitter, 1888
(Figs 33, 38)

Reitter, 1888: 151; Jeannel, 1923: 110; Jeannel, 1936: 268, 285; Yablokov-Khinzoryan, 1963: 291.

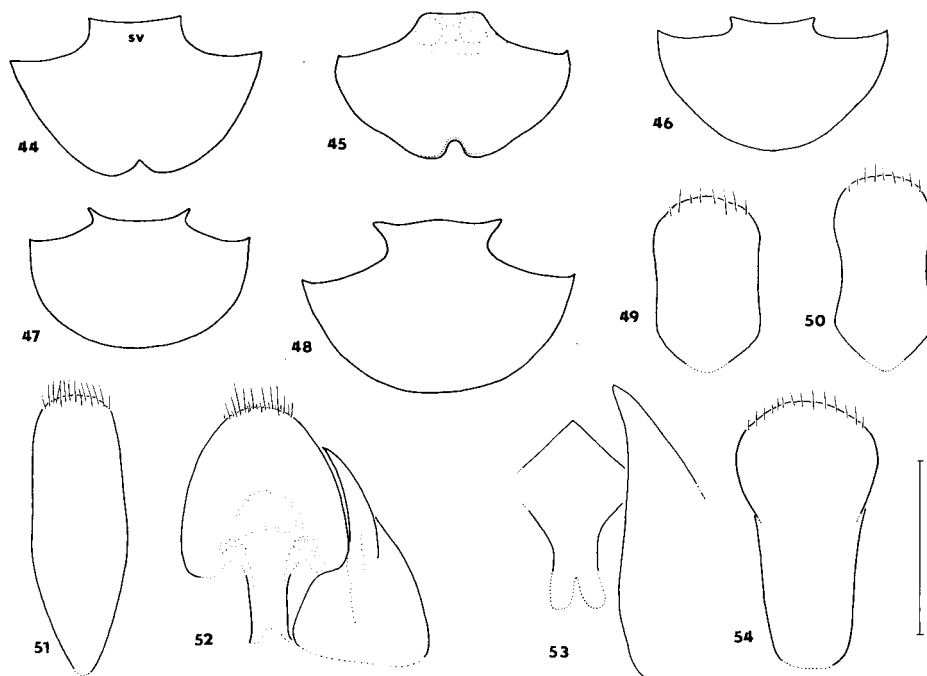
The specimen examined is the only available material of this species. Holotype male from “Abago” was not studied, and it was unknown also for Jeannel (1923: 110). In Jeannel (1936), a specimen from Amuco was mentioned (probably erroneously) as being a “type”. The specimen from Armenia, described insufficiently by Yablokov-Khinzoryan (1963) as female of this species, as well as the female holotype of closely related *C. (C.) stricta* Khinzoryan, 1963, were not available for study (Yablokov-Khinzoryan, pers. comm.).

MATERIAL EXAMINED: 1 ♂: “Caucas. occid., Amuco, 31.vii.[18]88, Starck; *Choleva obscuripes* Reitter [handwritten], coll. Reitter” (a mountain in Russia, Krasnodarsk region, about 43°45′N 39°48′E) (HNHM).

DISTRIBUTION (Fig. 55): Russia (Krasnodarsk region).

Choleva (Choleva) elongata Paykull, 1798
(Figs 42, 43)

MATERIAL EXAMINED: 1 ♂, Russia, Streleckaya steppe, 20 km S of Kursk, v.1981, J. Boháč lgt., tunnels of *Spalax* (JRUC).



Figs 44–54. 44, 53 – *Choleva bicolor* Jeannel; 45, 52 – *C. zolotarevi* Reitter, Chuchkhurskii pereval; 46, 54 – *C. glauca* Britten; 47, 49, 50 – *C. cisteloides* (Frölich); 48, 51 – *C. angustata* (F.). Figs 44–48 – female sternum VIII, sv – spiculum ventrale; 49–51, 54 – female tergum X; 52, 53 – female terga IX and X. Scale 0.75 mm for Figs 44–48; 0.5 mm for Figs 49–54.

This species (a member of the *sturmi* group) is known from central and northern Europe, from isolated localities in Greece and Turkey (Szymczakowski, 1962, 1970) in the southeastern part of its range. It was recorded by Jacobson (1910) from Russia. The male specimen from Streleckaya steppe differs from central European specimens: pronotum distinctly tapered posteriorly (central European specimens are less narrowed), the tip of the aedeagus is narrow and rounded regularly (Fig. 43) (specimens from central Europe have their tips dilated and slightly bilobed, Fig. 42). These differences can be considered as intraspecific variation. Variation in aedeagal shape was noted also by Szymczakowski (1970).

This species has been previously recorded from the tunnels and nests of *Talpa* (Jeannel, 1923; Strejček, 1971).

Choleva (Choleva) reitteri Petri, 1915

MATERIAL EXAMINED: 1 ♂, Greece, Taygetos, Artemisia, 8–11.vi.1980, Bílý and Brodský lgt. (JRUC).

A further record of this species (the sole member of the *reitteri* group) is from northern Greece (Coiffait, 1955) from Thrace, and it is listed from Greece (without further details) also by Szymczakowski (1965).

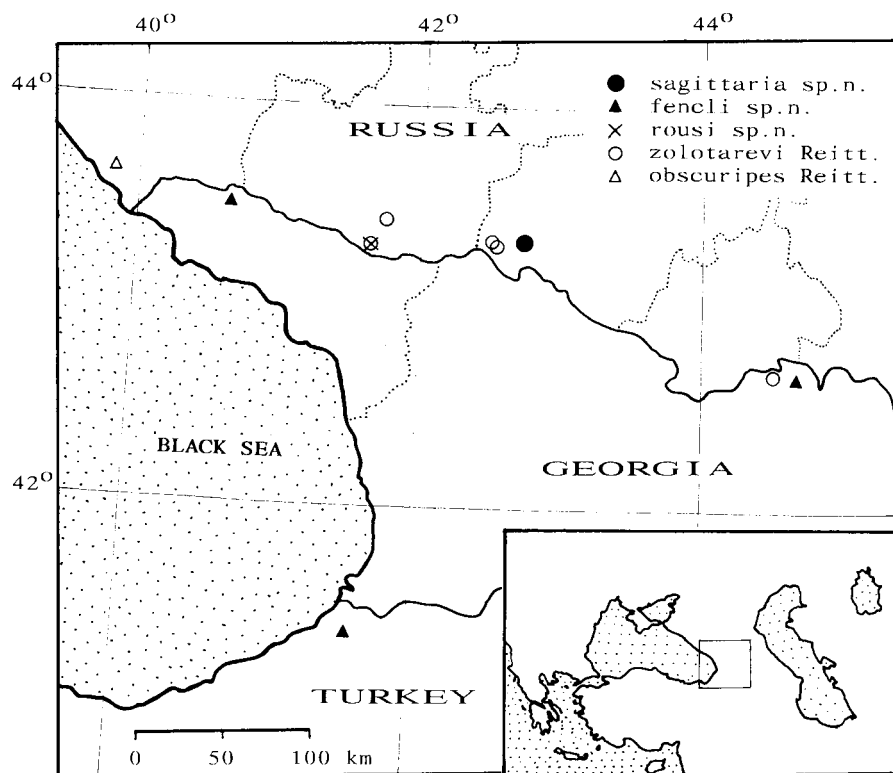


Fig. 55. Known distribution of *Choleva* species of the *cisteloides* group through Caucasus and north-eastern Turkey.

Key to species of *Choleva* of the *cisteloides* group

This group is here accepted in the sense of Jeannel (1923: 24; 1936: 254, 257–258), and is characterized as follows:

MALE: Aedeagus with symmetrically elongated apical part, its tip never emarginate. Endophallus with a pair of longitudinal rows of small dents, with two larger dents and with a main ventroapical dent, which bears an asymmetrical basal emargination and a slender and laterally curved apical process. Metatrochanter moderate to long, with a sharp tip, or shorter, with a posterior indentation.

FEMALE: Each elytron regularly rounded. Spiculum ventrale truncate to produced laterally, genital segment very variable.

MALES

- 1 (6) Metatrochanter short, with one prominent indentation on the posterior margin (Figs 16, 34, 35).
- 2 (3) Metatrochanter with short and angled indentation (Fig. 35). – Aedeagus elongated to a straight tip, with apical portion wider, flattened dorsoventrally (Fig. 39). Sterna IV–VII with shallow impressions (Fig. 15). 4.5–5.0 mm, Europe *C. angustata* (F.)

- 3 (2) Metatrochanter with straight indentation (Figs 16, 34).
- 4 (5) Metatrochanter with short indentation, located more apically (Fig. 34). Aedeagus elongated to a straight slender tip, with pointed apical portion (Fig. 40). Only sterna VI and VII with impressions (Fig. 17). 4.0–5.0 mm, Europe *C. glauca* Britten
[Two closely related species were described from central Europe: *C. vornatscheri* Schweiger, 1950 from Austria and *C. alpicola* Sermet, 1958 from Switzerland; their status is doubtful and both taxa are probably conspecific with *C. glauca*].
- 5 (4) Metatrochanter with longer indentation, located more basally (Fig. 16). Aedeagus tapered gradually to apex, sigmoid in dorsoventral plane (Figs 12–14). Sterna IV–VII with shallow impressions (Fig. 18). 4.7–5.0 mm, Caucasus, northeastern Turkey *C. fencli* sp. n.
- 6 (1) Metatrochanter longer, without any indentation on posterior margin.
- 7 (16) Body length over 4.5 mm. Antennal segment IX 1.3–2.0 times, segment X 1.3–1.7 times as long as wide. Aedeagus with simple connection of apical portion (Figs 3, 36–38, 41).
- 8 (9) Aedeagus with sagittiform dilated tip (Figs 3, 5). Parameres slender, round in cross-section. – Metatrochanter as on Fig. 6. Elytra bicoloured, brown with darker apical part (Fig. 2). 5.3–5.5 mm, Caucasus *C. sagittaria* sp. n.
- 9 (8) Aedeagus with simply rounded tip (Figs 36–38, 41). Parameres flattened in cross-section.
- 10 (11) Metatrochanter rhomboidal, with shorter, wider and straighter apical part (Fig. 30). Aedeagus flattened dorsoventrally, with short and slender apical portion (Fig. 41). Elytra mostly uniformly brown. 4.5–5.2 mm, Europe *C. cisteloides* (Frölich)
- 11 (10) Metatrochanter with longer and slender apical part, sometimes curved posteriorly (Figs 31–33). Aedeagus with wider tip or with longer, keel-shaped, dorsoventrally raised apical portion (Figs 36–38).
- 12 (13) Aedeagus flattened dorsoventrally, with short, widely rounded tip (Fig. 36). Elytra mostly bicoloured, brown with darker apical part. – Metatrochanter as on Fig. 31. 4.5–5.0 mm, western and central Europe *C. bicolor* Jeannel
- 13 (12) Aedeagus with longer, keel-shaped, dorsoventrally raised apical portion (Figs 37, 38). Elytra uniformly brown.
- 14 (15) Metatrochanter with regularly curved apical third (Fig. 32). Aedeagus slender, with slightly raised apical portion (Fig. 37). 4.8–5.6 mm, Caucasus *C. zolotarevi* Reitter
- 15 (14) Metatrochanter straight, only tip curved posteriorly (Fig. 33). Aedeagus wider, with distinctly raised apical portion (Fig. 38). 5.65 mm, western Caucasus *C. obscuripes* Reitter
- 16 (7) Body length only 3.65–4.0 mm, antennal segment IX 0.95–1.15 times, segment X 0.85–1.05 times as long as wide (Fig. 19). Aedeagus with an unusual type of connection between the basal and apical portions (Figs 21, 22). Caucasus *C. rousi* sp. n.

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- 1 (12) Body length over 4.0 mm, antennal segment IX 1.3–2.05 times, segment X 1.3–1.7 times as long as wide. Tergum X not both rounded posteriorly and elevated centrally (Figs 9, 49–54).
- 2 (7) Sternum VIII with notch on posterior margin (Figs 9, 44, 45).
- 3 (4) Terga IX and X of equal length (Fig. 52), elytra uniformly brown. – Spiculum ventrale as on Fig. 45. Caucasus *C. zolotarevi* Reitter
- 4 (3) Tergum IX distinctly longer than X (Figs 9, 53). Elytra mostly bicoloured, brown with darker apical part (as on Fig. 2).
- 5 (6) Sternum VIII with distinct notch on posterior margin (Fig. 44), tergum X rhomboid-shaped (Fig. 53). Europe *C. bicolor* Jeannel
- 6 (5) Sternum VIII with shallow notch on posterior margin (Fig. 7), tergum X rounded regularly on posterior margin (Fig. 9). Caucasus *C. sagittaria* sp. n.
- 7 (2) Sternum VIII rounded regularly on posterior margin, without notch in central part.
- 8 (9) Spiculum ventrale on segment VIII robust, with produced lateral regions (Fig. 48). Tergum X long and slender (Fig. 51). Europe *C. angustata* (F.)
- 9 (8) Spiculum ventrale on segment VIII short, with small lateral regions (Figs 46, 47). Tergum X small or broadened (Figs 49, 50, 54).

- 10 (11) Tergum X small, hexagonal in shape (Figs 49, 50). Sternum VIII as on Fig. 47. Europe
 *C. cisteloides* (Frölich)
- 11 (10) Tergum X long, broadened in apical part (Fig. 54). Sternum VIII as on Fig. 46. Europe
 *C. glauca* Britten
- 12 (1) Body length 3.8–3.95 mm, antennal segment IX 0.95–1.0 times, segment X 0.85–0.9 times as long as wide (as on Fig. 19). Tergum X rounded posteriorly, elevated in central part (Figs 28, 29).
 – Sternum VIII rounded posteriorly, spiculum ventrale as in Fig. 25. Caucasus . . . *C. rousi* sp. n.

Note: Female of *C. fencli* sp. n. is unknown; females of *C. stricta* Khnzoryan (known after female holotype only) and *C. obscuripes* Reitter are only insufficiently described (Yablokov-Khnzoryan, 1963) and thus are not included in the above key.

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