

**Notes on *Rybinskiella* (Coleoptera:
Leiodidae: Cholevinae) with description
of a new species from Kazakhstan**

JAN RŮŽIČKA

Department of Ecology, Faculty of Forestry, Agricultural University,
CZ-165 21 Praha 6, Czech Republic

Accepted March 2, 1994

Abstract: *Rybinskiella murzini* sp. n. from Kazakhstan is described and illustrated, and additional notes are also included for *R. bodoana* Reitter, 1913 and *R. magnifica* (Rybinski, 1902).

The genus *Rybinskiella* Reitter, 1907, is a small group of Cholevinae: Catopina (sensu Newton & Thayer, 1992). It has been revised by Frank (1988), with 9 valid species recognized.

In the present paper, a recently collected small collection is examined. Through the text, the following abbreviations are used: CIJ – collection of Ivo Jeniš, Náklo, Czech Republic; CJP – coll. Jaroslav Prouza, Hradec Králové; CJR – the author's collection; CJT – coll. Jaroslav Turna, Kostelec na Hané, Czech Republic; CJV – coll. Jiří Vávra, Ostrava; CPM – coll. Pavel Moravec, Litoměřice; CSZ – coll. Stefano Zoia, Milano, Italy.

***Rybinskiella murzini* sp. n.**

Material examined: Holotype female, labelled: Kazakhstan, Tyshkan-Tau Mt., river Tyshkan, 1500 m a. s. l. (about 44.56° N 80.30° E), 13. vi. 1992, S. Murzin

Igt. Deposited in CJR. Left antenna missing, right antenna and abdomen detached, mounted on the same card with holotype.

Description:

Female: Length of body 6.0 mm, head 1.4 mm, pronotum 1.1 mm, elytra 4.4 mm and antenna 3.9 mm; width of head 1.1 mm, pronotum 1.6 mm and elytra 2.75 mm. Body very flat (Fig. 1), uniformly reddish brown, dorsal side covered with short recumbent yellow pubescence.

Head (Fig. 5) with surface coarsely and densely punctated, the distance between punctures smaller than diameter of round punctures, surface with distinct isodiametric microsculpture. Eyes very small, each eye built from approximately 20 ommatidium only, horizontal diameter of eye 1.5 times as long as vertical diameter, 1.3 times as short as the distance between anterior margin of eye and antennal insertion. Maxillary palpus with triangular penultimate segment, 1.3 times as long as slender ultimate segment.

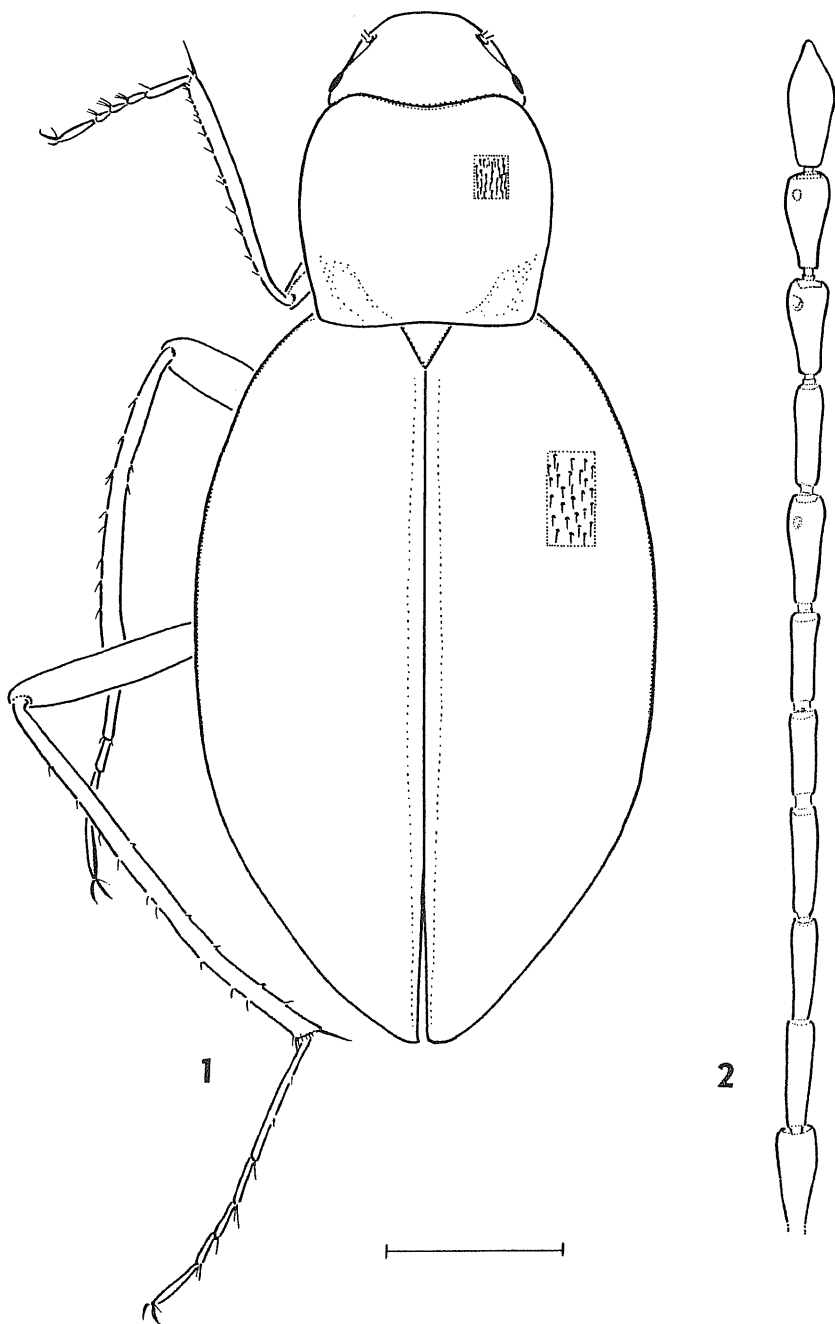
Antenna (Fig. 2) very long and slender. Proportions of antennal segments (I to XI, length x maximum width): 21 x 10, 26 x 7, 25 x 7, 26 x 7, 19 x 7, 22 x 7, 26 x 9, 24 x 7.5, 23 x 10, 22 x 11.5, and 30 x 11.

Pronotum (Fig. 1) small, nearly square, widest before the middle, with shallow depressions lateroposteriorly. Sides regularly rounded anteriorly, straight posteriorly, hind angle widely arched. Hind margin of pronotum sinuous medially. Surface punctation very fine and dense, surface with transverse microsculpture, finer than on head.

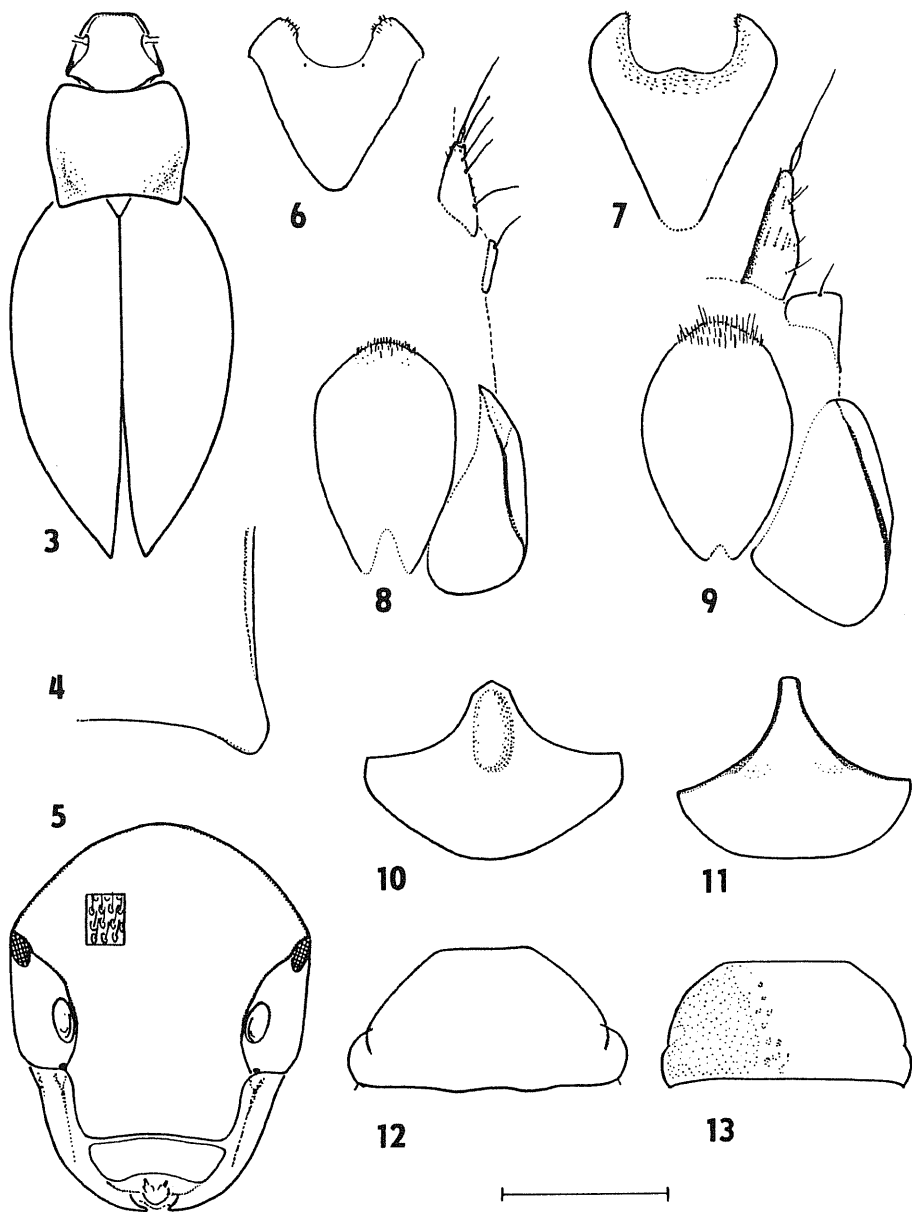
Elytra (Fig. 1) very robust, 4 times as long and 1.7 times as wide as pronotum, widest near the middle. Elytra flat in lateral view, with wide elytral epipleura. Apex of each elytron prolonged to a small rounded projection (Fig. 4). Elytra with only short traces of rows in lateroapical part. Surface punctation about two times as sparse as on pronotum, punctures are shallow, nearly two times as large as on pronotum. Surface lustrous, with only weakly indicated microsculpture. Membraneous wings fully reduced.

Legs: tibia with irregularly distributed thorns on outer margin. Protibia shorter, meso- and metatibia long, slightly curved. Metatibia as long as the maximum elytral width. Protarsus 1.4 times, meso- and metatarsus 1.5 times shorter than pro-, meso- and metatibia, respectively.

Tergum VIII truncate posteriorly (Fig. 12). Sternum VIII regularly rounded posteriorly; spiculum ventrale short and wide, pentagonal in shape, centrally with shallow oval impression (Fig. 10). Female genitalia as on Fig. 8, tergum X with numerous small setae posteriorly. Stylus shorter, finely pubescent on inner margin. Ventromedial sclerite between styli is triangular in shape, roundly emarginate posteriorly, with numerous small sensillae on posterior corners near the emargination (Fig. 6).



Figs 1-2. *Rybinskiella murzini* sp. n., holotype female: 1 – habitus dorsally; 2 – right antenna dorsally. (Scale bars 1 mm for Fig. 1; 0.5 mm for Fig. 2)



Figs 3-13. 4-6, 8, 10, 12 – *Rybinskiella murzini* sp. n., holotype female; 3, 7, 9, 11, 13 – *R. bodoana* Reitter, Terskey Ala-Too Mts., Orta-Kokpan, 10. vii. 1992, female; 3 – habitus dorsally; 4 – tip of left elytron posteriorly; 5 – head anterodorsally; 6, 7 – ventromedial sclerite between styli ventrally; 8, 9 – female genitalia dorsally; 10, 11 – sternum VIII ventrally; 12, 13 – tergum VIII dorsally. (Scale bars 2 mm for Fig. 3; 0.5 mm for Figs 4, 6, 7; 1 mm for Figs 5, 8-13)

Male: unknown.

Differential diagnosis: *Rybinskiella murzini* sp. n. differs from all known species of this genus by the general shape of body which is very flat (much more vaulted in the other species except for *R. magnifica* Ryb. and *R. bodoana* Reitt.). Pronotum is very small and nearly square, hind angles are rounded. Elytra are 4.1 times longer and 1.7 times wider than pronotum. (In the other species of *Rybinskiella* – except for *R. magnifica* – pronotum is wider and/or lateral margins are more rounded. Elytra are 2.5-3.7 times as long and 1.25-1.6 times as wide as pronotum. In *R. magnifica* Ryb., pronotum is also small and nearly square but hind angles are distinctly prolonged posteriorly. For more precise comparison, see Frank, 1988: 265, Figs 2-8).

The new species also differs by short recumbent pubescence of elytra from *R. bodoana* Reitt. and *R. spinosa* Frank (elytra with double – long erected and short recumbent – pubescence in *R. bodoana*, with longer and erected pubescence in *R. spinosa*).

Antennal segment X is 1.9 times as long as wide in *R. murzini* sp. n., nearly as long as wide in the other species (except for *R. bodoana*).

Derivation of name: The new species is named after its collector, Dr Sergey Murzin from Moscow, the well-known specialist in Cerambycidae.

The specimen was collected in the valley of the river Tyshkan, in the level of 1500 m a. s. l. In all finds of the species of *Rybinskiella* in Middle Asia, when the level is mentioned, it fluctuates between 2300-3600 m a. s. l.

Rybinskiella bodoana Reitter, 1913

Material examined: Kyrgyzstan, Tian Shan Mts., NE part of Terskey Ala-Too ridge: Chon-Kyzyl-Suu, 3 000 m a. s. l., about 42.1° N 78.2° E, 25. vii. 1990, Kyncl lgt, 1 male, 1 female (CJV); 20 km SW from Przewalsk, Dzhety-Oguz, 3000-3500 m a. s. l., about 42.2° N 78.3° E, 23-30. vi. 1989, J. Kaláb lgt, 1 female (CIJ); Kasakhstan: Terskey Ala-Too Mts., Orta-Kokpan River, 3200 m a. s. l., 10. vii. 1992, S. Murzin lgt, 1 female (CJR); the same, 12. vii. 1992, 1 female (CJV); the same, 2 400 m a. s. l., 42° 42' N 79° 46'E, 2. vii. 1993, 3 females (CJV); the same, 3 000 m a. s. l., 42° 40' N 79° 48'E, 3. vii. 1993, 1 female (CJV); China: Xinjiang prov., E part of Tian Shan, pass 3500 m a. s. l., road Kuqa – Bayanbulak, 80 km SW of Bayanbulak, about 42.5° N 83.5° E, 10-12. vii. 1993, 5 males, 5 females (CJR, CJT, CSZ).

This species was described by Reitter (1913) from a single specimen from “Chinesisch-Turkestan: Tian-Schan”. Jeannel (1936) noted, that the type specimen is deposited

in the National museum in Budapest. But, as it was pointed out by Frank (1988) and also confirmed by the present author during the visits in Budapest in 1988 and 1993, the specimen have been not recently found in the collections of this museum. The specimens of *Rybinskiella* mentioned above fit well with the original Reitter's description. Because of coming from the same mountain system as the type specimen, they are supposed to be conspecific with the Reitter's species. Some additional notes, not included in the original description, based on this material are presented here:

Length of body 5.85-6.85 mm, pronotum 1.25-1.40 times as wide as long, elytra 1.6-1.7 times as long as wide, 1.35-1.60 times as wide and 2.95-3.50 times as long as pronotum. Body (Fig. 3) flat and slender.

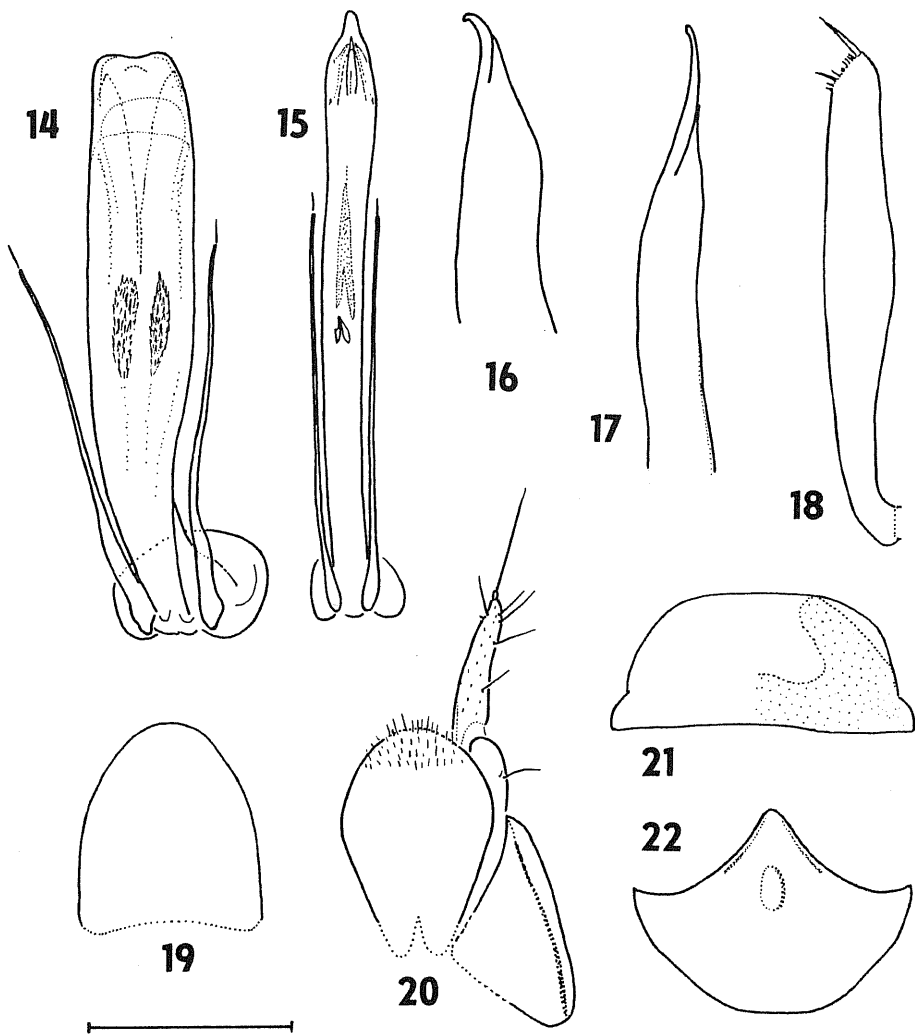
Eyes very small, each eye built from approximately 20-25 ommatidiums only, horizontal diameter of eye 1.3-1.4 times as long as vertical diameter, 0.85-1.15 times as short as the distance between anterior margin of eye and antennal insertion.

Antenna very long and slender, 2.00-2.25 times as long as maximum pronotal width. Proportions of antennal segments (I to XI, length x maximum width) in the specimen from Dzhety-Oguz: 26 x 9, 25 x 8, 31 x 8, 30 x 9, 24 x 8, 25 x 9, 28 x 11, 25 x 8, 23 x 12, 22 x 13, 30 x 13.

Male: Tip of the elytron widely rounded. Protibia expanded on inner margin in central part (Fig. 18). Protarsi with extended segments, basal segment 1.15 times as wide as apex of protibia. Basal mesotarsal segment distinctly extended. Aedeagus extremely long and slender, slightly asymmetrical (Fig. 15). Apical part gradually narrowing to a slender tip, with a minute dorsal tooth (Fig. 17), without any notch in dorsal view as in other known species of *Rybinskiella*. Internal sac with basal pair of large dents and with a sole long apical dent.

Female: Tip of the elytron prolonged to a sharp angle (Fig. 3). Tergum VIII truncate posteriorly, only weakly sclerotized in small lateral area and in wide medial region (Fig. 13). Sternum VIII regularly rounded posteriorly, spiculum ventrale slender in shape (Fig. 11). Female genitalia as on Fig. 9, tergum X with numerous longer setae posteriorly. Stylus longer, finely pubescent on inner margin. Ventromedial sclerite between styli is triangular with deep omega-shaped emargination posteriorly; a few small sensillae are located on posterior corners near the emargination, small asperities are present in posterior part of sclerite (Fig. 7).

In China, the specimens have been found on southern slopes of the pass in 3 500 m a. s. l. singly under stones. The landscape was wet, more specimens have been collected on a slightly drier place under overhanging rock.



Figs 14-22. 15, 17, 18 – *Rybinskiella bodoana* Reitter, China, Bayanbulak env., male; 14, 16 – *R. magnifica* (Rybiński), Hoverla, male; 19-22 – ditto, female; 14, 15 – aedeagus dorsally; 16, 17 – tip of aedeagus laterally; 18 – left protibia dorsally; 19 – ventromedial sclerite between styli ventrally; 20 – female genitalia dorsally; 21 – tergum VIII dorsally; 22 – sternum VIII ventrally. (Scale bars 1 mm for Figs 14, 16-18, 20-22; 0.5 mm for Fig. 19)

Rybinskiella magnifica (Rybiński, 1902)

Material examined: Zakarpatsk Ukraine, Hoverla Mt., 1750-1850 m a. s. l., 1.vii. 1993, P. Moravec lgt, 1 male, 2 females (CJR, CPM); the same, J. Prouza lgt, 2 females (CJP, CJR).

The species was described from a single male specimen by Rybiński (1902), some other specimens were reported by Roubal (1936). Now, when the further material is at disposal, description of some details is added, which are missing in the original description as well as in the papers of Reitter (1913), Szymczakowski (1956) and Frank (1988).

Length of body 5.0-5.7 mm, pronotum 1.37-1.40 times as wide as long, elytra 1.30-1.35 times as long as wide, 1.45-1.55 times as wide and 2.60-2.85 times as long as pronotum. Antenna shorter, only 1.45-1.60 times as long as maximum pronotal width.

Surface coarsely and densely punctated, punctures are round and separated. The distance between punctures more than punctures' diameter on pronotum; smaller on elytra, where the punctures are arranged in irregular transverse rows.

Male: Tip of the elytron very widely rounded. Aedeagus slightly asymmetrical, with dorsally curved tip (Fig. 16). Internal sac with two groups of small dents (Fig. 14).

Female: Tip of the elytron rounded, but more prolonged than in male. Tergum VIII truncate posteriorly, only weakly sclerotized medioapically and laterally (Fig. 21). Sternum VIII regularly rounded posteriorly; spiculum ventrale widely rounded, with small oval impression centrally (Fig. 22). Female genitalia as on Fig. 20, tergum X with numerous small setae posteriorly. Stylus long, with sparse small setae regularly distributed on surface; but without fine pubescence on inner margin. Ventromedial sclerite between styli regularly rounded on posterior margin, without sensillae (Fig. 19).

All the specimens have been collected on the southern slope of Hoverla Mt., in the small pit (diameter ca. 3 m) on the rock debris, composed by flat stones, which are ca. 10-30 cm large. Two beetles have been taken on the underside of human excrement on the surface of the debris; the rest of them have been found sitting on the underside of the flat stones in the bottom of the pit, to the depth ca. 70 cm, together with *Leistus piceus* Frölich and *Duvalius (Duvalidius) roubali* Jeannel. The rock debris is situated under the main snow field on Hoverla Mt. In the beginning of July, the weather was very cold (the day temperatures between 5-7 °C, relentless rain) and the landscape looked that the snow cover had descended only 2 or 3 weeks ago.

Acknowledgements

It is my pleasant duty to thank I. Jeniš (Náklo, Czech Republic), P. Moravec (Litoměřice), Dr S. Murzin (Moscow, Russia), J. Prouza (Hradec Králové), J. Turna (Kostelec na Hané, Czech Republic), Ing. J. Vávra (Ostrava) and Dr S. Zoia (Milano, Italy) who loaned or gave kindly the interesting material of *Rybinskiella* for study, and to Dr M. Brancucci (Naturhistorische Museum Basel, Switzerland) for the loaning of comparative material. I am also very indebted to P. Moravec for providing me with detailed collecting data.

REFERENCES

- Frank J., 1988: Revision der Gattung *Rybinskiella* Reitter, 1907, mit drei neuen Arten aus dem West-Himalaja (Coleoptera, Catopidae). *Entomol. Basil.* 12: 259-278.
- Jeannel R., 1936: Monographie des Catopidae (Insectes Coléoptères). *Mém. Mus. Natl. Hist. Nat., Nouv. Sér.*, 1: 1-433.
- Newton A. F. Jr., & Thayer M. K., 1992: Current classification and family-group names in Staphyliniformia (Coleoptera). *Fieldiana: Zool., N. S.*, No. 67: iv + 92 pp.
- Reitter E., 1913: Übersicht der mir bekannten *Rybinskiella*-Arten (Col. Silphidae, prope Choleva Latr.). *D. Entomol. Z.* 1913: 667-668.
- Roubal J., 1930: Katalog Coleopter (brouků) Slovenska a Podkarpatska I. *Práce Učené společnosti Šafaříkovy v Bratislavě*, Praha, 527 pp.
- Rybiński M. M., 1902: Coleopterorum species novae, minusve cognitae, in Galicia inventae. *Bull. Acad. Sci. Cracov.* 1902: 10-12.
- Szymczakowski W., 1956: Bemerkungen über die systematische Stellung der Gattung *Rybinskiella* Reitt. (Col. Catopidae). *Entomol. Nachrichtenbl. Österr. Schweiz. Entomologen* 8: 10-15.