

RESEARCH ARTICLE

Contribution to the knowledge of Curculionoidea (Insecta: Coleoptera) of the Central Siberia Nature Reserve, Russia

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A preliminary list of Curculionoidea from the Central Siberia Nature Reserve is compiled. 36 species from the families Anthribidae, Rhynchitidae, Attelabidae, Brentidae, Curculionidae and Scolytidae are found. It is the first record of all species for the reserve. *Bagous rufipennis* described from south of Russian Far East and Yakutia is recorded, from Central Siberia. The most northern locality of *Otiorhynchus pullus* is found.

Key words: Insecta, Coleoptera, Curculionoidea, fauna, new records, Krasnoyarskii Krai, Siberia.

The Central Siberia Nature Reserve is located in the central part of the Central Siberian Plateau on Yenisei and Podkamennaya Tunguska Rivers. Information about weevil fauna of the Central Siberia Nature Reserve is absent. In 2017, Dr. A.V. Barkalov and Dr. V.K. Zinchenko from the Institute of Systematics and Ecology of Animals (Novosibirsk) collected different insects in the reserve. Some results was published (Barkalov, Mutin, 2017; Zinchenko, 2017). Present article aims to knowledge of Curculionoidea diversity of this reserve.

Materials and methods

The collection localities are follows: Krasnoyarskii Krai, Central Siberia Nature Reserve, Yenisei River, Turukhansky Dist.: Komsa - "Komsa" cordon, right bank of Yenisei River, 61.84 ° N, 89.45 ° E, h ~ 25–30 m, Startaya Komsa - "Startaya Komsa" cordon, former Komsa village, left bank of Yenisei River, 61.84 ° N, 89.33 ° E, h ~ 27–36 m; Evenkiysky Distr.: Kulingda - "Kulingda" cordon, Stolbovaya River, estuary of Kulingda River, 62.17 ° N, 91.40 ° E, h ~ 52–58 m; Stolbovaya - "Stolbovaya" cordon, Podkamennaya Tunguska River, estuary of Stolbovaya River, 62.11 ° N, 91.50 ° E, h ~ 45–50 m.

Type no. NHRS-JLKB000065408 of *Otiorhynchus pullus* was photographed of by Dr. Johannes Bergsten (© YEAR Naturhistoriska riksmuseet). Original photo cropped and contrast adjusted. Made available by the Swedish Museum of Natural History under Creative Commons Attribution 4.0 International Public License, CC-BY 4.0 [hyperlink to <https://creativecommons.org/licenses/by/4.0/legalcode>].

All specimens collected by A.V. Barkalov and V.K. Zinchenko are kept in the Institute of Systematics and Ecology of Animals of the Siberian Branch, Russian Academy of Sciences (Novosibirsk), type of *Otiorhynchus pullus* in the Swedish Museum of Natural History (Stockholm) - NHRS, and types of *Brachyrhinus irritabilis* in the Museum für Tierkunde, Senckenberg Naturhistorische Sammlungen Dresden - SMTD.

The systematics of studied taxa are from Legalov (2015, 2017a, 2017b, 2018).

Results

Anthribidae

Anthribinae

Anthribini

Anthribus nebulosus Forster, 1770

Material examined: 1 ex., Komsa, 17-19.VI.2016, V.K. Zinchenko.

Rhynchitidae

Rhynchitinae

Deporaini

Deporaus betulae (Linnaeus, 1758)

Material examined: 3 ex., Startaya Komsa, on *Alnus*, 17.VI.2016, V.K. Zinchenko; 9 ex., idem, pitfall traps, 15-17.VI.2016, V.K. Zinchenko; 4 ex., Komsa, pitfall traps, 16-20.VI.2016, V.K. Zinchenko; 32 ex., idem, on *Alnus*, 19-21.VI.2016, V.K. Zinchenko; 1 ex., idem, forest, pitfall traps, 27-30.VI.2016, V.K. Zinchenko.

Bytiscini

Bytiscina

Bytiscus betulae (Linnaeus, 1758)

Material examined: 3 ex., Startaya Komsa, pitfall traps, 15-17.VI.2016, V.K. Zinchenko; 2 ex., Komsa, on *Alnus*, 19.VI.2016, V.K. Zinchenko; 1 ex., idem, 25.VI.2016, V.K. Zinchenko; 4 ex., idem, 19.VI-2.VII.2016, A.V. Barkalov.

Attelabidae

Apoderinae

Apoderini

Apoderina

Apoderus coryli (Linnaeus, 1758)

Material examined: 1 ex., Komsa, on *Alnus*, 21.VI.2016, V.K. Zinchenko; 1 ex., idem, 25.VI.2016, V.K. Zinchenko.

Brentidae

Apioninae

Apionini

Toxorhynchina

Oxystoma opeticum (Bach, 1854)

Material examined: 1 ex., Komsa, willow trees, pitfall traps, 19-22.VI.2016, V.K. Zinchenko.

Curculionidae

Eriirhininae

Eriirhinini

Tournotaris bimaculata (Fabricius, 1787)

Material examined: 1 ex., Komsa, willow trees 16-17.VI.2016, V.K. Zinchenko; 3 ex., idem, 17-19.VI.2016, V.K. Zinchenko; 13 ex., idem, willow trees, pitfall traps, 19-26.VI.2016, V.K. Zinchenko; 1 ex., idem, 30.VI.2016, V.K. Zinchenko; 1 ex., idem, riverbank, 27-30.VI.2016, V.K. Zinchenko; 2 ex., idem, 29.VI.2016, A.V. Barkalov; 4 ex., Startaya Komsa, forest, pitfall traps, 24-27.VI.2016, V.K. Zinchenko.

Bagoiini

Bagous rufipennis Egorov et Gratshev, 1990

Material examined: 1 ex., Komsa, riverbank, pitfall traps, 17-19.VI.2016, V.K. Zinchenko; 2 ex., idem, riverbank, pitfall traps, 23-26.VI.2016, V.K. Zinchenko; 1 ex., idem, pitfall traps, 27-30.VI.2016, V.K. Zinchenko; 3 ex., idem, 24-27.VI.2016, V.K. Zinchenko.

Remarks. The species was described from Amur Oblast' and Yakutia (Egorov, Gratshev, 1990) and recorded for Kamchatka and Mongolia (Egorov, Gratshev, 1990; Caldara, O'Brien, 1995). It is the first record of the species in Central Siberia (Fig. 1).

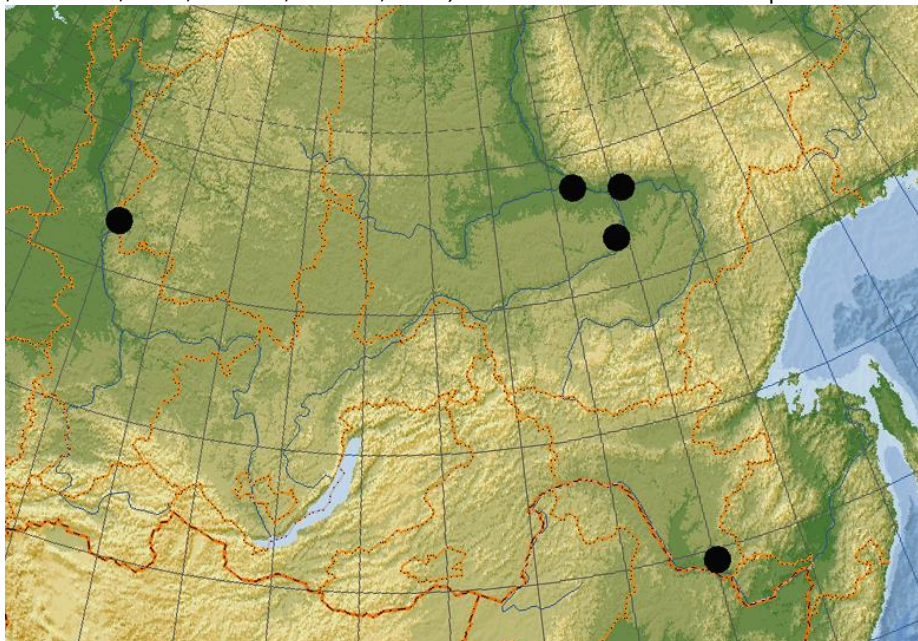


Figure 1. Distribution of *Bagous rufipennis* Egorov et Gratshev, 1990

Bagous lutulentus (Gyllenhal, 1813)

Material examined: 1 ex., Startaya Komsa, pitfall traps, 15-17.VI.2016, V.K. Zinchenko; 4 ex., idem, shingle beds, pitfall traps, 24-27.VI.2016, V.K. Zinchenko; 2 ex., idem, forest, pitfall traps, 24-27.VI.2016, V.K. Zinchenko; 7 ex., Komsa, willow trees 16-17.VI.2016, V.K. Zinchenko; 3 ex., idem, on *Alnus*, 19.VI.2016, V.K. Zinchenko; 4 ex., idem, shingle beds, pitfall traps, 17-26.VI.2016, V.K. Zinchenko; 7 ex., idem, pitfall traps, 17-22.VI.2016, V.K. Zinchenko; 12 ex., idem, willow trees, pitfall traps, 19-22.VI.2016, V.K. Zinchenko; 6 ex., idem, riverbank, pitfall traps, 23-26.VI.2016, V.K. Zinchenko.

Bagous limosus (Gyllenhal, 1827)

Material examined: 3 ex., Komsa, shingle beds, pitfall traps, 17-26.VI.2016, V.K. Zinchenko; 1 ex., idem, willow trees, pitfall traps, 19-22.VI.2016, V.K. Zinchenko; 1 ex., idem, riverbank, pitfall traps, 23-26.VI.2016, V.K. Zinchenko; 1 ex., idem, forest, pitfall traps, 27-30.VI.2016, V.K. Zinchenko.

Molytinae

Molytini

Hylobiina

Hylobius pinastri (Gyllenhal, 1813)

Material examined: 3 ex., Startaya Komsa, pitfall traps, 15-17.VI.2016, V.K. Zinchenko; 2 ex., idem, forest, pitfall traps, 17-24.VI.2016, V.K. Zinchenko; 1 ex., Komsa, 17-19.VI.2016, V.K. Zinchenko; 1 ex., idem, forest, pitfall traps, 23-26.VI.2016, V.K. Zinchenko.

Hylobius abietis (Linnaeus, 1758)

Material examined: 1 ex., Komsa, on *Alnus*, 21.VI.2016, V.K. Zinchenko; 1 ex., idem, pitfall traps, 27-30.VI.2016, V.K. Zinchenko; 1 ex., idem, 19.VI.2016, A.V. Barkalov.

Hylobius excavatus (Laicharting, 1781)

Material examined: 1 ex., Stolbovaya, 18.VII.2016, V.K. Zinchenko.

Lepyriini

Lepyryus volgensis Faust, 1882

Material examined: 3 ex., Komsa, willow trees, 17.VI.2016, V.K. Zinchenko.

Conoderinae

Bariditae

Apostasimerini

Diorymerina

Limnobaris t-album (Linnaeus, 1758)

Material examined: 1 ex., Komsa, 30.VI.2016, V.K. Zinchenko.

Ceutorhynchitae

Phytobiini

Neophytobius quadrinodosus (Gyllenhal, 1813)

Material examined: 1 ex., Komsa, on *Alnus*, 19.VI.2016, V.K. Zinchenko.

Rhinoncus bruchoides (Herbst, 1784)

Material examined: 1 ex., Komsa, on *Alnus*, 19.VI.2016, V.K. Zinchenko; 1 ex., idem, pitfall traps, 17-19.VI.2016, V.K. Zinchenko; 1 ex., idem, riverbank, pitfall traps, 23-26.VI.2016, V.K. Zinchenko; 3 ex., Startaya Komsa, shingle beds, pitfall traps, 24-27.VI.2016, V.K. Zinchenko.

Curculioninae

Rhamphini

Rhamphina

Orchestes stigma (Germar, 1821)

Material examined: 1 ex., Komsa, willow trees, 17.VI.2016, V.K. Zinchenko.

Entiminae

Hyperini

Hyperina

Hypera miles (Paykull, 1792)

Material examined: 6 ex., Komsa, on *Alnus*, 19.VI.2016, V.K. Zinchenko; 6 ex., idem, pitfall traps, 17-19.VI.2016, V.K. Zinchenko; 5 ex., idem, shingle beds, pitfall traps, 19-22.VI.2016, V.K. Zinchenko; 20 ex., idem, willow trees, pitfall traps, 19-26.VI.2016, V.K. Zinchenko; 1 ex., idem, 28.VI.2016, V.K. Zinchenko; 2 ex., idem, riverbank, 27-30.VI.2016, V.K. Zinchenko; 1 ex., Startaya Komsa, shingle beds, pitfall traps, 24-27.VI.2016, V.K. Zinchenko; 5 ex., idem, forest, pitfall traps, 24-27.VI.2016, V.K. Zinchenko; 1 ex., Stolbovaya, 11-12.VII.2016, V.K. Zinchenko; 2 ex., idem, pitfall traps, 15-17.VII.2016, V.K. Zinchenko; 1 ex., idem, on *Sanguisorba*, 24.VII.2016, A.V. Barkalov.

Hypera ornata (Capiomont, 1868)

Material examined: 2 ex., Komsa, on *Alnus*, 19.VI.2016, V.K. Zinchenko; 12 ex., idem, shingle beds, pitfall traps, 17-26.VI.2016, V.K. Zinchenko; 3 ex., idem, willow trees, pitfall traps, 19-22.VI.2016, V.K. Zinchenko; 2 ex., idem, riverbank, pitfall traps, 23-26.VI.2016, V.K. Zinchenko.

Boreohypera diversipunctata (Schränk, 1798)

Material examined: 1 ex., Komsa, pitfall traps, 17-19.VI.2016, V.K. Zinchenko.

Alophini

Trichalophus maklini (Faust, 1890)

Material examined: 2 ex., Komsa, pitfall traps, 16-17.VI.2016, V.K. Zinchenko; 4 ex., idem, forest, pitfall traps, 23-30.VI.2016, V.K. Zinchenko; 3 ex., Kulingda, pitfall traps, 8-9.VII.2016, V.K. Zinchenko.

Sitonini

Sitona lineellus (Bonsdorff, 1785)

Material examined: 1 ex., Komsa, on *Alnus*, 19.VI.2016, V.K. Zinchenko; 2 ex., idem, pitfall traps, 17-22.VI.2016, V.K. Zinchenko; 1 ex., idem, shingle beds, pitfall traps, 23-26.VI.2016, V.K. Zinchenko; 3 ex., idem, riverbank, pitfall traps, 23-26.VI.2016, V.K. Zinchenko.

Sitona cylindricollis Fahraeus, 1840

Material examined: 2 ex., Komsa, riverbank, pitfall traps, 23-26.VI.2016, V.K. Zinchenko.

Tanymerini

Tanymecina

Tanymecus palliatus (Fabricius, 1787)

Material examined: 1 ex., Startaya Komsa, shingle beds, pitfall traps, 24-27.VI.2016, V.K. Zinchenko; 1 ex., Komsa, 29.VI.2016, A.V. Barkalov.

Chlorophanus sibiricus Gyllenhal, 1834

Material examined: 1 ex., Komsa, 29.VI.2016, A.V. Barkalov.

Blosyrini

Dactylotus globosus (Gebler, 1829)

Material examined: 6 ex., Startaya Komsa, pitfall traps, 15-27.VI.2016, V.K. Zinchenko; 1 ex., idem, 15.VI.2016, V.K. Zinchenko; 4 ex., idem, forest, pitfall traps, 17-24.VI.2016, V.K. Zinchenko.

Otiorhynchini

Otiorhynchus grandineus Germar, 1823

Material examined: 2 ex., Startaya Komsa, pitfall traps, 15-26.VI.2016, A.V. Barkalov, V.K. Zinchenko; 15 ex., idem, forest, pitfall traps, 17-24.VI.2016, V.K. Zinchenko.

Otiorhynchus oberti Faust, 1887

Material examined: 1 ex., Komsa, on *Alnus*, 19.VI.2016, V.K. Zinchenko; 1 ex., idem, riverbank, pitfall traps, 23-26.VI.2016, V.K. Zinchenko.

Otiorhynchus ovatus (Linnaeus, 1758)

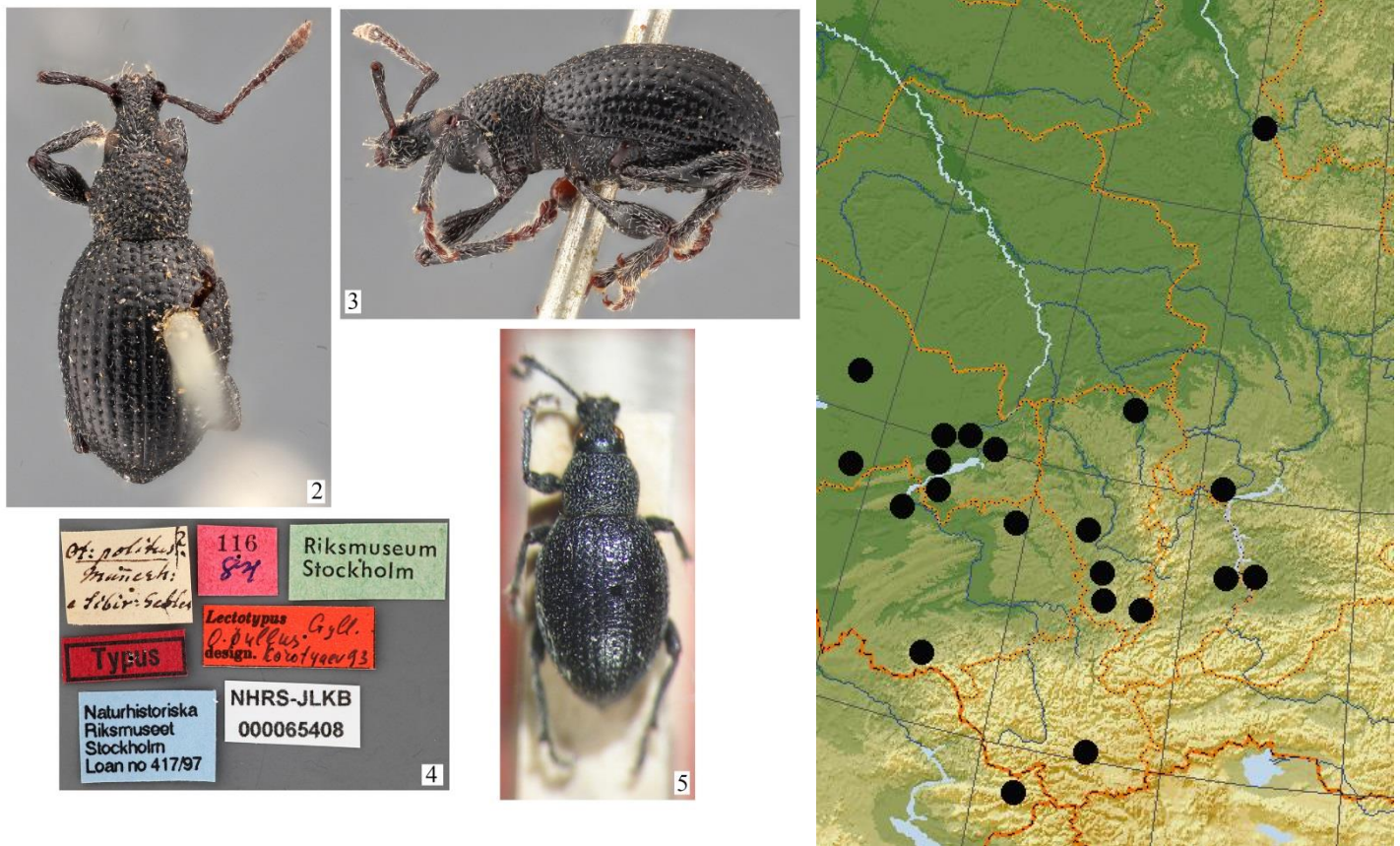
Material examined: 1 ex., Startaya Komsa, forest, pitfall traps, 17-24.VI.2016, V.K. Zinchenko.

Otiorhynchus pullus Gyllenhal, 1834

= *Brachyrhinus irritabilis* Faust, 1887

Material examined: 1 ex., Komsa, 22.VI.2016, A.V. Barkalov.

Remarks. The type of *Brachyrhinus irritabilis* Faust, 1887, p. 154 from SMTD (Fig. 5) and photographs of the lectotype (NHRS-JLKB000065408) of *Otiorhynchus pullus* Gyllenhal, 1834, p. 606 from NHRS (Figs. 2-4) were studied. They belong to one species. The find of *O. pullus* in the reserve is the most northern record of this species (Fig. 6).



Figures 2-5. *Otiorhynchus pullus*. 2 - *O. pullus*, lectotype, dorsally; 3 - *O. pullus*, lectotype, laterally; 4 - *O. pullus*, lectotype, labels; 5 - *Brachyrhinus irritabilis*, type, dorsally. **Figure 6.** Distribution of *Otiorhynchus pullus* Gyllenhal, 1834.

Sciaphilini

Brachysomus echinatus (Bonsdorff, 1785)

Material examined: 14 ex., Startaya Komsa, forest, pitfall traps, 17-24.VI.2016, V.K. Zinchenko.

Phyllobiini

Phyllobius virideaeris (Laicharting, 1781)

Material examined: 1 ex., Startaya Komsa, pitfall traps, 15-17.VI.2016, V.K. Zinchenko; 2 ex., Komsa, on *Alnus*, 19-21.VI.2016, V.K. Zinchenko; 1 ex., Stolbovaya, on *Sanguisorba*, 17.VII.2016, A.V. Barkalov.

Phyllobius thalassinus Gyllenhal, 1834

Material examined: 1 ex., Komsa, on *Alnus*, 19.VI.2016, V.K. Zinchenko; 6 ex., idem, 29.VI-3.VII.2016, A.V. Barkalov; 1 ex., Startaya Komsa, pitfall traps, 29.VI.2016, A.V. Barkalov.

Phyllobius pomaceus Gyllenhal, 1834

Material examined: 3 ex., Kulingda, 8.VII.2016, V.K. Zinchenko, 6 ex., idem, 7.VII.2018, A.V. Barkalov.

Trachyploeini

Cathormiocerus aristatus (Gyllenhal, 1827)

Material examined: 1 ex., Komsa, pitfall traps, 21-22.VI.2016, V.K. Zinchenko.

Scolytidae**Ipini**

Orthotomicus sp.

Material examined: ex., Komsa, 30.VI.2016, V.K. Zinchenko.

Discussion

A preliminary list of 36 species of six families of the superfamily Curculionoidea from the Central Siberia Nature Reserve is compiled for the first time. One species from the family Anthribidae, two species from Rhynchitidae, one species from Attelabidae, one species from Brentidae, 30 species from Curculionidae and one species from Scolytidae are recorded for the reserve.

Acknowledgments

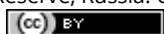
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References

- Barkalov, A.V., Mutin, V.A. (2017). Hover flies (Diptera, Syrphidae) of Tsentral'nosibirskij Reserve in Kasnoyarskii Krai, Russia. *Evrziatskii Entomologicheskii Zhurnal*, 16(1), 10–22. (in Russian). <https://doi.org/10.15298/euroasentj.16.1.04>
- Caldara, R., O'Brien, C.W. (1995). Curculionidae: Aquatic weevils of China (Coleoptera). *Water Beetles of China*. Jäch, M.A., Ji, L. (eds.). Wien, 1, 389-408.
- Egorov, A.B., Gratshev, V.G. (1990). Revision of weevils of the genus *Bagous* Germ, 1863 (Coleoptera, Curculionidae) of the Soviet Far East and adjacent territories. *Novosti sistematiki nasekomykh Dal'nego Vostoka. Vladivostok*, 32-39. (in Russian).
- Faust, J. (1887). Verzeichniss der von den Herren Wilkins und Grumm-Grshimailo in Turkestan, Buchara und im Pamir gesammelten Curculioniden, eingesendet vom Herrn Wladimir Dochturov. *Horae Societatis Entomologicae Rossicae*, 20(3-4), 141-178.
- Gyllenhal, L. (1834). [new taxa]. In: Schoenherr, C.J. *Genera et species curculionidum, cum synonymia hujus familiae. Species novae aut hactenus minus cognitae, descriptionibus a Dom. Leonardo Gyllenhal, C. H. Boheman, et entomologis aliis illustratae. Tomus secundus. Pars secunda*. Parisiis: Roret; Lipsiae.
- Legalov, A.A. (2015). Fossil Mesozoic and Cenozoic weevils (Coleoptera, Obrienoidea, Curculionoidea). *Paleontological Journal*, 49(13), 1442–1513. <https://doi.org/10.1134/S0031030115130067>
- Legalov, A.A. (2017a). Weevils (Coleoptera, Curculionoidea) from plains of Western Siberia, Kazakhstan and Middle Asia. Part 1. *Evrziatskii Entomologicheskii Zhurnal*, 16(3), 259–282. (n Russian). <https://doi.org/10.15298/euroasentj.16.3.10>
- Legalov, A.A. (2017b). Weevils (Coleoptera, Curculionoidea) from plains of Western Siberia, Kazakhstan and Middle Asia. Part 2. *Evrziatskii Entomologicheskii Zhurnal*, 16(4), 360–374. (In Russian). <https://doi.org/10.15298/euroasentj.16.4.11>
- Legalov, A.A. (2018). Annotated key to weevils of the world. Part 1. Families Nemonychidae, Anthribidae, Belidae, Ithyceridae, Rhynchitidae, Brachyceridae and Brentidae. *Ukrainian Journal of Ecology*, 8(1), 780–831. https://doi.org/10.15421/2018_280
- Zinchenko, V.K. (2017). On the fauna of blow flies and flesh flies (Diptera: Calliphoridae and Sarcophagidae) of the Tsentralnosibirskij Nature Reserve, Russia. *Evrziatskii Entomologicheskii Zhurnal*, 16(1), 60–62. (in Russian). <https://doi.org/10.15298/euroasentj.16.1.10>

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