

A Review of the Superfamily Curculionoidea (Coleoptera) Fauna of Kemerovo Province

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Abstract—278 species of the Curculionoidea (except for the Scolytidae) have been revealed in Kemerovo Province. The list comprises 1 species of Urodontidae, 8 species of Rhynchitidae, 8 species of Attelabidae, 38 species of Brentidae, and 229 species of Curculionidae. 28 species are newly recorded from the province. The following new synonymies are established: *Donus sajanicus* Korotyaev, 1998 = *Glanis teletskianus* Legalov, 1999, syn. n.; *Trichalophus biguttatus* (Gebler, 1832) = *T. rufus* (Bohemian, 1840), syn. n.

Publications on the weevil fauna of Kemerovo Province give very incomplete information. No general review of the regional fauna is available. The collection material from this area provides an opportunity to give an outline of its fauna at the beginning of the XXI century with sufficient completeness. Such a characteristic would contribute to the knowledge of how the biological diversity is formed in a particular region. This is also important for elaborating a basis for monitoring the fauna in a territory with heavy anthropogenous impact, which is characteristic of Kuzbass (= Kuznetsk Coal Basin).

Kemerovo Province is situated in the extreme Northwest of the mountains of Southern Siberia, in the zone of their transition to the Western Siberian Plain (Purdik and al., 1997). The territory of the province is subdivided into several large natural areas: intermountain Kuznetsk Depression (KD); Salair Range (S) limiting it from the West; extensive system of Kuznetsk Alatau (KA) and Mountain Shoria (MS) occupying almost half of the province, and southern outskirts of the Western Siberian Plain (WS) (see table).

The vegetation of Kemerovo Province is much diversified. The relatively small territory of the province harbours plant formations typical of the steppe, forest-steppe, and forest zones and alpine areas of Siberian mountains (Kuminova, 1950).

A typical feature of the forest-steppe is the combination of birch and birch-and-aspen forest forming small stands (=kolki) or large woodlands at the edges

of forest-steppe, and upland meadows steppified to varied extent. Forest-steppe occupies largest part of the Kuznetsk Depression. Another forest-steppe massive extends along northern boundary of Kuznetsk Alatau occupying the flat, poorly inclined to the north, piedmont part of the Western Siberian Plain.

No steppe area of considerable size has remained in Kemerovo Province. Small steppe sites are scattered among continuous fields and occur on old fallow. Typical of the Kuznetsk Depression steppe are feather-grass and forb communities. Petrophytic steppe, the most xerophilous type of vegetation in Kemerovo Province, similar to the steppes in the mountain depressions of central Siberia, occurs at edges of the Salair Range and on southern and southwestern slopes of the Tardan and Karakan Mountains in the middle of the Kuznetsk Depression.

Taiga occupies about half the territory of the province. The fir-tree and aspen tall-grass taiga in Kuznetsk Alatau, Mountain Shoria, and Salair Mountain Range is one of the most characteristic and widespread taiga formations in Kemerovo Province. The southern of the Western Siberian Plain is dominated by the polydominant (*Picea obovata*, *Pinus sibirica*, and *Abies sibirica*) taiga. Sandy habitats at the edges of taiga are occupied by pine and birch-and-pine forests.

Of special interest among the deciduous forests are linden woods on western foothills of Kuznetsk Alatau in the basin of right tributaries of the Kondoma River. These forests, dominated by the Siberian linden (*Tilia sibirica*), are the oldest native plant formation

Table (Contd.)

Species	Natural complexes				
	WS	KD	KA	MS	S
Genus <i>Dactylotus</i> Schoenherr, 1847					
<i>globosus</i> (Gebler, 1830)	+		+		
Sciaphilini					
Genus <i>Eudipnus</i> Thomson, 1859					
<i>mollis</i> (Ström, 1768)	+	+	+	+	
Genus <i>Brachysomus</i> Schoenherr, 1826					
<i>chinatus</i> (Bonsdorff, 1785)		+	+		
Genus <i>Parafoucartia</i> Solari, 1948					
<i>quamulata</i> (Herbst, 1795)		+			
Brachyderini					
Genus <i>Pholicodes</i> Schoenherr, 1826					
<i>incurvatus</i> Boheman, 1833	+	+	+	+	
Trachyphloeini					
Genus <i>Trachyphloeus</i> Germar, 1817					
<i>uristatus</i> (Gyllenhal, 1827)		+	+		

* Species, recorded from Kemerovo Province for the first time.

** In the mountains of Kemerovo Province, the recently described rare species *Donus sajanicus* Korotyaev, 1998 probably will be found. An examination of the type material has shown that *D. sajanicus* is a senior synonym of *Glanis teletschanus* Legalov, 1999 (syn. n.) described from Northeastern Altai.

*** In the modern literature, the name *Trichalophus rufus* (Boheman, 1840) is accepted for this species. It is not correct since *Alophus biguttatus* Gebler, 1832 and *A. cirriger* Mannerheim, 1934 are older names. Hence *Trichalophus biguttatus* (Gebler, 1832) = *Alophus cirriger* Mannerheim, 1934 = *A. rufus* Boheman, 1840 (syn. n.).

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REFERENCES

- Alonso-Zarazaga, M.A., Revision of the Supraspecific Taxa in the Palaearctic Apionidae Schoenherr, 1823: 1. Introduction and Subfamily Nanophyinae Seidlitz, 1891 (Coleoptera, Curculionoidea), *Fragm. Entomol.*, 1989, vol. 21, no. 2, pp. 205–262.
- Alonso-Zarazaga, M.A., Revision of the Supraspecific Taxa in the Palaearctic Apionidae Schoenherr, 1823 (Coleoptera, Curculionoidea). 2. Subfamily Apioninae Schoenherr, 1823: Introduction, Keys and Descriptions, *Graellsia*, 1991, vol. 46, pp. 19–156.
- Alonso-Zarazaga, M.A. and Lyal, H.C., *A World Catalogue of Families and Genera of Curculionoidea (Insecta: Coleoptera)*, Barcelona: Entomopraxis, 1999.
- Barannik, A.P., Harmful Insects in Green Plantings of the city of Novokuznetsk, *Nekotorye voprosy geografii, ekonomiki i kultury Kuzbassa* (Some Questions of Geography, Economy and Culture of Kuzbass), Novokuznetsk, 1966, pp. 55–62.
- Barannik, A.P. and Glotov, G.A., *Ozelenenie gorodov Kuzbassa* (Gardening of cities of Kuzbass), Kemerovo, 1984.
- Barrios, H.E., Egorov, A.B., Review of Weevils of the *Magdalalis* Germar, 1817 (Coleoptera, Curculionidae) of the Fauna of the Far East of the USSR. Pt. 2. (Sub *Magdalalis* s.str.), *Rol' nasekomykh v biotsenozakh Dal'nego Vostoka* (Role of Insects in Biocenoses of the Far East), Vladivostok, 1988, pp. 35–47.
- Dieckmann, L., Die westpaläarktischen *Thamiocolus*-Arten, *Beitr. Entomol.*, 1973, vol. 23, nos. 5–8, pp. 245–273.
- Egorov, A.B., Two New Species and a New Section of Weevils of the *Baris* Germar (Coleoptera, Curculionidae) from the Far East of the USSR, *Rastitel'noyadnye nasekomye Dal'nego Vostoka* (Phytophagous Insects of the Far East), L., 1976, pp. 64–69.
- Gebler, F., Catalogus coleopterorum Sibiriae occidentalis et confinis Tartariae, *Lebedour's Reise in das Altai-Gebirge und die Songorische Kirgisensteinsteppe*, Berlin, 1830a, vol. 21, no. 3, pp. 144–177.
- Gebler, F., Notae et additamenta ad catalogum coleopterorum Sibiriae occidentalis et confinis Tartariae, *Lebedour's Reise in das Altai-Gebirge und die*

- Songorische Kirgisiensteppe*, Berlin, 1830b, vol. 2, pp. 19–20.
11. Gebler, F., Bemerkungen über die Insecten Sibiriens vorzüglich des Altai, *Lebedour's Reise in das Altai-Gebirge und die Songorische Kirgisiensteppe*, Berlin, 1830c, vol. 3, pp. 1–228.
 12. Gebler, F., Notae et additamenta ad catalogum coleopterorum Sibiriae occidentalis et confinis Tartariae, C.T. Lebedour's Reise in Altaigebirge und die soongorische Kirgisiensteppe, Berlin, 1830, Theil 2, Bull. Soc. Nat. Mosc., 1833, vol. 6, pp. 262–309.
 13. Gebler, F., Notae et additamenta ad catalogum coleopterorum Sibiriae occidentalis et confinis Tartariae, *Bull. Soc. Nat. Mosc.*, 1841, vol. 14, no. 4, pp. 577–625.
 14. Gebler, F., Verzeichniss der im Kolywano-Woskresenskischen Hüttenbezirke Süd-West-Sibiriens Beobachteten Käfer mit Bemerkungen und Beschreibungen, *Bull. Soc. Nat. Mosc.*, 1848, vol. 20, no. 2, pp. 391–512.
 15. Heyden, L., Catalog der Coleopteren von Sibirien mit Einschluss derjenigen der Turanischen Länder, Turkestan und der chinesischen Grenzgebiete. Curculionidae, Berlin, 1880–1881.
 16. Kippenberg, H., Revision der *Hypera carinicollis*-Verwandtschaft, *Entomol. Blätter*, 1986, vol. 82, nos. 1–2, pp. 23–43.
 17. Korotyaev, B.A., Materials to the Knowledge of Ceutorhynchinae (Coleoptera, Curculionidae) of Mongolia and the USSR, *Nasekomye Mongoli* (Insects of Mongolia), L.: Nauka, 1980, vol. 7, pp. 107–282.
 18. Korotyaev, B.A., Material on the Fauna of Beetles of the Superfamily Curculoidea (Coleoptera) of Mongolia and Adjacent Countries, *Nasekomye Mongoli* (Insects of Mongolia), L.: Nauka, 1990, vol. 11, pp. 216–234.
 19. Korotyaev, B.A. and Krivets, S.A., Materials on the Weevil Fauna (Coleoptera: Apionidae, Curculionidae) of the "Kuznetskii Alatau" Nature Reserve, *Biot-senoticheskie issledovaniya v zapovednike "Kuznetskii Alatau"* (Biocenotic Research in the "Kuznetsk Alatau" Nature Reserve), Novosibirsk, 1996, pp. 35–41.
 20. Krivets, S.A., Species of Weevils (Coleoptera, Curculionidae) New to Western Siberia, *Fauna i ekologiya ras-titel'noykh i khishchnykh nasekomykh Sibiri* (Fauna and Ecology of Phytophagous and Predatory Insects of Siberia), Novosibirsk: Nauka, 1980a, pp. 41–43.
 21. Krivets, S.A., Trophic Relations of the Weevils and Leaf-Rollers in the Foothills of Kuznetsk Alatau, *Materialy regional'noi nauchno-prakticheskoi konferentsii "Molodye uchenye i spetsialisty v razvitiu proizvoditel'nykh sil Tomskoi oblasti* (Proceedings of the Regional Scientific-Practical Conference "Young Scientists and Experts in the Development of Productive Potential of Tomsk Province," Tomsk, 1980b, pp. 68–69.
 22. Krivets, S.A., Weevils of the Subfamily Ceutorhynchinae (Coleoptera, Curculionidae) of Western and Central Siberia, *Entomol. Obozr.*, 1983, vol. 62, no. 4, pp. 708–715.
 23. Krivets, S.A., The Altay and Altay-Sayany Endemics in the Fauna of Weevils of Kuznetsk Alatau, *VIII Vses. zoogeograf. konf. Tezisy dokladov* (VIII All-Union Zoogeographical Conference: Abstracts), Moscow, 1984a, pp. 201–202.
 24. Krivets, S.A., Characteristic Features of the Fauna of Weevils and Leaf-Rollers (Coleoptera, Curculionidae, Attelabidae) of Northern Part of Kuznetsk Alatau, *Nasekomye v ekosistemakh lesnoi zony Sibiri* (Insects in the Ecosystems of the Forest Zone of Siberia), Tomsk, 1984b, pp. 52–61.
 25. Krivets, S.A. and Korotyaev, B.A., New and Little Known Weevils (Coleoptera: Apionidae, Curculionidae) from Southern Siberia, *Entomol. Obozr.*, 1998, vol. 77, no. 4, pp. 836–859.
 26. Krivets, S.A., Ecological-Faunistic Review of Weevils (Coleoptera: Apionidae, Dryophthoridae et Curculionidae) of southeastern Western Siberia, *Cand. Sci. (Biol.) Dissertation*, Tomsk, 1999.
 27. Kuminova, A.V., *Rastitel'nost' Kemerovskoi oblasti* (Vegetation of the Kemerovo Province), Novosibirsk, 1950.
 28. Legalov, A.A., West Siberian Fauna of Weevils and Leaf-Rollers (Coleoptera: Attelabidae, Curculionidae) Feeding on Farm Crops, *Analiz sovremenyykh problem sel'skogo khozyaistva* (Analysis of Current Problems in Agriculture), Novosibirsk, 1995, pp. 95–96.
 29. Legalov, A.A., Fauna of Rhynchophorous Beetles of the Families Nemonychidae, Urodonidae, Anthribidae, Attelabidae, Apionidae and Dryophthoridae of Western Siberia, *Bespozvonochnyie zhivotnyie yuzhnogo Zauralya i sopredel'nykh territorii* (The Invertebrate Animals of the Southern Trans-Urals Region and Neighboring Territories), Kurgan, 1998, pp. 216–221.
 30. Legalov, A.A., Neue Rüsselkäferarten (Coleoptera, Curculionidae) von Sibirien und Kasachstans, *Entomol. Basil.*, 1999a, vol. 22, pp. 375–384.
 31. Legalov, A.A., Two new species of the genus *Donus* Jekel (Coleoptera, Curculionidae, Hyperinae) from the mountains of S-Siberia, *Bull. Inst. Roy. Sci. Nat. Belg. Entomologie*, 1999b, vol. 69, pp. 283–287.
 32. Legalov, A.A., To the knowledge of *Anthonomus rubi* (Coleoptera, Curculionidae) in Asian part of Russia and adjacent territories, *Zool. Zh.*, 2000, vol. 79, no. 2, pp. 375–395.
 33. Legalov, A.A., Revision der holarktischen Auletini (Coleoptera, Attelabidae), *Russ. Entomol. J.*, 2001, vol. 10, no. 1, pp. 33–66.
 34. Opanassenko, F.I., Weevils (Coleoptera, Curculionidae et Rhinomaceridae) of the Conifers of Siberia, *Fauna gel'mintov i chlenistonogikh Sibiri* (Fauna of Helminths and Arthropods of Siberia), Novosibirsk: Nauka, 1974, pp. 223–238.
 35. Opanassenko, F.I., Species of the genus *Curculio* L (Coleoptera) in the South of Western Siberia, *Fauna gel'mintov i chlenistonogikh Sibiri* (Fauna of Helminths

- and Arthropods of Siberia), Novosibirsk: Nauka, 1976b, pp. 239–242.
36. Opanassenko, F.I., Species of the genus *Rhynchaenus* Clairv. (Coleoptera, Curculionidae) in the South of Western Siberia, *Chlenistonogie Sibiri* (Arthropods of the Siberia), Novosibirsk: Nauka, 1978, pp. 93–100.
 37. Opanassenko, F.I., Weevils of the Subfamily Cleoninae in the Fauna of the South of Western Siberia, *Vrednye organizmy kul'turnykh rastenii* (Pests of Cultivated Plants), Novosibirsk, 1990, pp. 66–72.
 38. Opanassenko, F.I. and Legalov, A.A., Review of the Family Attelabidae (Coleoptera) of Western Siberia, *Entomol. Obozr.*, 1996, vol. 75, no. 1, pp. 90–105.
 39. Purdik, L.N., Lysenkova, Z.V. and Bobrov S.V., Physiogeographical Zonation of Kemerovo Province, *Geografiya i prirodopol'zovanie Sibiri* (Geography and Use of Nature of Siberia), Barnaul: Akkem, 1997, pp. 164–177.
 40. Sedel'nikov, V.P., *Vysokogornaya rastitel'nost' Altai-Sayanskoi gornoj oblasti* (High-mountain Vegetation of the Altai-Sayany Mountain Area), Novosibirsk: Nauka, 1988.
 41. Ter-Minassian, M.E., Leaf-Rollers (Attelabidae), *Fauna SSSR, Nasekomye zhestkokrylye* (Fauna of the USSR, Coleoptera), Moscow, 1950, vol. 27, no. 2.
 42. Ter-Minassian, M.E., *Zhuki-dolgonosiki podsemeistva Cleoninae fauny SSSR: Tsvetozhily i stebleyedyi (triba Lixini)* [Weevils of the Subfamily Cleoninae in the Fauna of the USSR (Tribe Lixini)], Leningrad: Nauka, 1967.
 43. Ter-Minassian, M.E., *Zhuki-dolgonosiki podsemeistva Cleoninae fauny SSSR: Kornevye dolgonosiki (triba Cleonini)* [Weevils of the Subfamily Cleoninae in the Fauna of the USSR (Tribe Cleonini)], Leningrad: Nauka, 1988.
 44. Winkler, A., *Catalogus coleopterorum regionis palaearcticae*, Wien, 1930–1932, parts 11–12, pp. 1370–1631.
 45. Zaslavskij, V.A., Review of Species of the Genus *Phytotonomus* Schoenh. (Coleoptera, Curculionidae) in the Fauna of the USSR, *Entomol. Obozr.*, 1961, vol. 40, no. 3, pp. 624–635.
 46. Zherichin, V.V. and Egorov, A.B., *Zhuki-dolgonosiki (Coleoptera, Curculionidae) Dal'nego Vostoka SSSR* [Weevils (Coleoptera, Curculionidae) from the Far East of the USSR], Vladivostok, 1990.