

Faunistic notes on the Hydraenidae, Elmidae, and Dryopidae of the Middle Russian Forest-Steppe Zone (Coleoptera)

Manfred A. JÄCH¹ & A. A. PROKIN²

¹Naturhistorisches Museum, Burgring 7, A–1010 Wien, Austria. E-mail: manfred.jaech@nhm-wien.ac.at

²Voronezh State University, Voronezh, Russia. E-mail: prokina@mail.ru

JÄCH, M.A. & PROKIN, A.A. 2005. Faunistic notes on the Hydraenidae, Elmidae, and Dryopidae of the Middle Russian Forest-Steppe Zone (Coleoptera). *Entomol. Probl.* 35(1): XX–YY. – The Hydraenidae, Elmidae, and Dryopidae of the Middle Russian Forest-Steppe Zone are reviewed faunistically. The occurrence of 11 species of Hydraenidae, five species of Elmidae, and five species of Dryopidae is confirmed herein. The occurrence of two species of Hydraenidae, *Limnebius truncatellus* (THUNBERG, 1794) and *Ochthebius* (s.str.) *pusillus* STEPHENS, 1835, which were recorded from the Middle Russian Forest-Steppe Zone by KHARIN (1928), could not be confirmed by the present study.

Key words: Coleoptera, water beetles, Hydraenidae, Elmidae, Dryopidae, Russia, Middle Russian Forest-Steppe Zone.

Introduction

The Middle Russian Forest-Steppe Zone is characterized by continental climate conditions, which become more pronounced toward the southeast. The average air temperature ranges from 19.5 °C to 21.5 °C in July, and from –10.5 °C to –9 °C in January. Similarly, the average annual precipitation decreases from 550 mm in the northwest to 450 mm in the southeast. The dominant soil is chernozem (black soil), in lowland areas solonetz soils and boggy ground may be encountered. The vegetation cover alternately varies between grassy steppe and forest with Common Oak (*Quercus robur*) and Scots Pine or Common Pine (*Pinus silvestris*) being the dominant tree species.

Most of the streams and rivers flowing through the Middle Russian Forest-Steppe Zone are part of the River Don basin (Fig. 1), while the remaining ones pertain to the Dnieper and the Volga drainage systems.

Further information on the elementary landscapes and the fauna of the Middle Russian Forest-Steppe Zone is provided by BEREZHNOY (1983) and DROZDOV (1991).

Faunistically, certain families of water beetles are still quite inadequately explored. In the present paper we provide a synopsis of faunistic data (literature records and unpublished data) on the Hydraenidae, Elmidae and Dryopidae of the territory of the Middle Russian Forest-Steppe Zone. In addition, for each species the Russian distribution is summarized. Specimens recorded from the Russian part of Fennoscandia by SILFVERBERG (2004) may refer to three administrative areas: Respublika Kareliya, Murmanskaya Oblast', Leningradskaya Oblast'.

Material and methods

All localities from the Middle Russian Forest-Steppe Zone listed herein belong to the following three adminis-

trative regions (Oblast'): Voronezhskaya Oblast' (**VR**), Lipetskaya Oblast' (**LP**), and Kurskaya Oblast' (**KR**). Most specimens were collected in the vicinity of Research Stations: 1) Research-educational biological Center of Voronezh State University “Venevitinovo” in Usman pine-forest, 51°48'N / 39°23'E (VR), 2) sector “Zorinskiy” of “Tsentrālno-Chernozemnyy” Nature Reserve near Zorino, 51°11'N / 36°22'E (KR), and 3) sector “Morozova Gora” of “Galich'ya Gora” Nature Reserve, 52°36'N / 38°55'E (LP).

The majority of the investigated material is kept in the private collection of A.A. Prokin (Voronezh), specimens collected by M.N. Tsurikov are housed in the collection of “Galich'ya Gora” Nature Reserve. Some single individuals are deposited in the Vienna Natural History Museum, Austria (NMW).

HYDRAENIDAE

Hydraena britteni Joy, 1907

VR: Venevitinovo, 24.IX.1999, bog “Klyukvennoe-1”, pool with reeds, 1 ex., leg. Prokin, det. Jäch. This specimen was erroneously listed as *H. palustris* ERICHSON by SILINA & PROKIN (2002b).

Additional distribution in Russia: “Russian Fennoscandia” (= Respublika Kareliya, H. Silfverberg, pers. comm.) (SILFVERBERG 2004), and Kirovskaya Oblast' (YUFEREV 2001). The latter record should be treated with reservation since we have not been able to see any correctly identified specimens from this region.

Hydraena palustris ERICHSON, 1837

VR: Venevitinovo, 5.V.1995, 1 ex., leg. Tsurikov, det. Prokin & Jäch; Zamost'e, 49°59'N / 40°49'E, 15.VIII.2003, marsh, 1 ex., leg. Silina, det. Jäch; **LP:** Morozova Gora, 11.VI.1998, bank of River Don, ground trap, 1 ex., leg. Tsurikov, det. Jäch; **KR:**

Zorino, 7.VII.2001, lake, 1 ex., 24.X.2001, karstic lake, littoral reed vegetation, 3 exs., leg. Prokin, 22.V.2002, karstic lake, *Carex*, 5 exs., littoral moss, 5 exs., *Sphagnum* bog, *Comarum palustre*, 3 exs., leg. Silina, 22.VII.2002, *Sphagnum* bog, pool, 1 ex., 31.X.2002, karstic lake, 2 exs., leg. Prokin, 14.V.2003, *Sphagnum* bog, reed pool, 1 ex., leg. Silina, 28.VII.2003, *Sphagnum* bog, reed pool, 2 exs., *Sphagnum* pool, 18 exs., 29.VIII.2003, *Sphagnum* bog, pool, 12 exs., leg. Prokin, det. Prokin & Jäch.

PROKIN et al. (2002): **VR**: Venevitinovo, 24.IV.1999, forest lake, 1 ex., leg. Prokin, det. Prokin & Jäch.

Additional distribution in Russia: Kaliningradskaya Oblast (ALEKSEEV 2004), "Russian Fennoscandia" (= Respublika Kareliya, H. Silfverberg, pers. comm.) (SILFVERBERG 2004), and Ulanovskaya Oblast (ISAEV & SYSOENKOV 2000). It was recently collected in Volgogradskaya Oblast by J. Bergsten (det. Jäch, unpubl.), and in West Siberia by P.N. Petrov (det. Jäch, unpubl.).

Hydraena riparia KUGELANN, 1794

VR: Kirpichi, 50°28'N / 40°01'E, 24.VII.2003, karstic brook on chalk, aquatic moss, 2 exs., leg. Prokin; **LP**: Skuratovka, 53°31'N / 39°39'E, 24.VII.2003, River Ranova, littoral vegetation, 8 exs., leg. Mokshin (1 – NMW), det. Jäch.

Additional distribution in Russia: This species is very widely distributed from the Kaliningradskaya Oblast through most parts of European Russia (except the south) and Siberia to Sakhalin Island (ALEKSEEV 2004; ISAEV & SYSOENKOV 2000; JÄCH 1988, 2004; SHATROVSKIY 1989; SILFVERBERG 2004).

Limnebius aluta BEDEL, 1881

KR: Zorino, 22.V.2002, karstic lake, littoral moss, 2 exs., *Carex*, 2 exs. (1 – NMW), *Sphagnum* bog, pools in *Carex*, 6 exs., leg. Silina, 23.VII.2002, karstic lake, littoral zone, 4 exs., *Sphagnum* bog, *Sphagnum* pool, 1 ex., leg. Prokin, 30.X.2002, *Sphagnum* bog, reed pool, 4 exs., *Sphagnum* pool, 1 ex., leg. Prokin, 29.VII.2003, *Sphagnum* bog, *Sphagnum* pool, 159 exs., 29.VIII.2003, 14 exs., 3.X.2003, 32 exs., leg. Prokin, det. Prokin & Jäch; **VR**: Venevitinovo, 24.IX.1999, Lake Maklok, *Glyceria*, 2 exs., leg. Prokin, det. Jäch.

SILINA & PROKIN (2002a); PROKIN et al. (2002): **KR**: Zorino, 16.VII.2001, *Sphagnum* bog, *Gypnum* moss in pools, 11 exs., leg. Prokin, 24.X.2001, karstic lake, littoral reed vegetation, 75 exs., leg. Prokin & Silina, det. Prokin & Jäch (4 exs.).

Additional distribution in Russia: "Russian Fennoscandia" (= Leningradskaya Oblast, H. Silfverberg, pers. comm.) (SILFVERBERG 2004), Ulanovskaya Oblast (ISAEV & SYSOENKOV 2000). It was recently collected in the Tyumenskaya Oblast by P.N. Petrov (det. Jäch, unpubl.).

Limnebius atomus (DUFTSCHMID, 1805)

VR: Kirpichi, 50°28'N / 40°01'E, 24.VII.2003, karstic brook on chalk, 4 exs., leg. Prokin (1 – NMW); reserve "Voronezhskiy", near Bolshaya Privalovka, 51°53'N / 39°43'E, 9.VIII.2000, semipermanent lake, *Carex*, 3 exs., leg. Prokin, det. Jäch.

PROKIN et al. (2002): **VR**: Venevitinovo, 24.V.1999, bog "Klyukvennoe-1", reed pool, 5 exs., leg. Prokin; reserve "Voronezhskiy", near Bolshaya Privalovka, 51°53'N / 39°43'E, 6.VI.2000, semipermanent lake, littoral zone, 6 exs., leg. Prokin, det. Prokin & Jäch (3 ex).

Additional distribution in Russia: Ulanovskaya Oblast (ISAEV & SYSOENKOV 2000), Novosibirskaya Oblast (JÄCH 1993).

This species was recently collected in the Volgogradskaya Oblast by A.N. Nilsson (det. Jäch, unpubl.), in the Samarskaya Oblast by I.N. Goreslavets (det. Jäch, unpubl.), and in the Tyumenskaya Oblast by P.N. Petrov (det. Jäch, unpubl.).

Limnebius crinifer REY, 1885

VR: Kirpichi, 50°28'N / 40°01'E, 24.VII.2003, karstic brook on chalk, 6 exs., leg. Prokin (2 – NMW); **KR**: Zapovednyy, 51°34'N / 36°05'E, 16.VII.2001, pasture, metal trough, 2 exs., puddle, 1 ex., leg. Prokin (these specimens were erroneously listed as *L. parvulus* by PROKIN et al. (2002)); sector "Poyma Psla", natural boundary "Plavni" of "Tsentralno-Chernozemnyy" Reserve, 51°10'N / 36°19'E, 23.VI.2003, small artificial reservoir with sand bottom, 1 ex., leg. Prokin, det. Prokin & Jäch.

PROKIN et al. (2002): **VR**: Venevitinovo, 26.VI.2000, seasonal inundated pool of River Usman, 2 exs., leg. Prokin; Petropavlovka, 50°04'N / 40°53'E, 15.VIII.2000, River Kryusha, riparian zone, 1 ex., leg. Rubtsov, det. Prokin & Jäch.

Additional distribution in Russia: Kaliningradskaya Oblast (BERCIO & FOLWACZNY 1979), "Russian Fennoscandia" (= Respublika Kareliya, H. Silfverberg, pers. comm.) (SILFVERBERG 2004), Ulanovskaya Oblast (ISAEV & SYSOENKOV 2000), and Kirovskaya Oblast (YUFEREV 2001). The two latter records should be treated with reservation since we have not been able to see any correctly identified specimens from these regions.

Limnebius papposus MULSANT, 1844

VR: Kirpichi, 50°28'N / 40°01'E, 24.VII.2003, karstic brook on chalk, wood on water surface, 14 exs., leg. Prokin, det. Jäch.

Additional distribution in Russia: Ulanovskaya Oblast (ISAEV & SYSOENKOV 2000), and Kirovskaya Oblast (YUFEREV 2001). These two records should be treated with reservation since we have not been able to see any correctly identified specimens from these regions.

Limnebius parvulus (HERBST, 1797)

(= *L. truncatulus* THOMSON, 1853)

VR: reserve "Voronezhskiy", near Bolshaya Privalovka, 51°53'N / 39°43'E, 9.VIII.2000, semipermanent lake, *Eleocharis*, 1 ex., leg. Prokin; Venevitinovo, 11.IV.1999, seasonal inundated pool at River Usman, 1 ex., 24.IX.1999, Lake Maklok, *Glyceria*, 1 ex., bog "Klyukvennoe-1", reed pool, 5 exs. (1 – NMW), 16.VIII.2000, seasonal pool near Samara marsh, 1 ex., 26.VI.2000, puddle on sand road, 1 ex., leg. Prokin; Zamost'e, 49°59'N / 40°49'E, 15.VIII.2003, Lake Ilmen, 1 ex., leg. Silina; Orlovka, 51°36'N / 39°01'E, 27.IV.2001, puddles on field with rotten hay, 1 ex., leg. Prokin; **LP**: 12 km S Dobrinka, 52°03'N / 40°27'E, 18.VI.1996, Lake "Tsyganskoe", littoral zone, 1 ex., leg. Tsurikov; Morozova Gora, 26.VII.1998, light trap, 1 ex., leg. Tsurikov; **KR**: Zorino, 24.X.2001, karstic lake, littoral reed vegetation, 2 exs., leg. Prokin (1 – NMW), 14.V.2003, *Sphagnum* bog, reed pool, 1 ex., leg. Silina, 29.VII.2003, karstic lake, 3 exs., leg. Prokin, det. Prokin & Jäch.

PROKIN et al. (2002): **VR**: Venevitinovo, 24.V.1999, bog "Klyukvennoe-1", reed pool, 3 exs., leg. Prokin, det. Prokin.

Additional distribution in Russia: Kaliningradskaya Oblast (BERCIO & FOLWACZNY 1979), "Russian Fennoscandia" (= Respublika Kareliya, H. Silfverberg, pers. comm.) (SILFVERBERG 2004), Ulanovskaya Oblast (ISAEV & SYSOENKOV 2000), Kirovskaya Oblast (YUFEREV 2001), and Irkutskaya Oblast (JÄCH

1993). It was recently collected in the Volgogradskaya Oblast by A.N. Nilsson (det. Jäch, unpubl.) and in the Tyumenskaya Oblast by P.N. Petrov (det. Jäch, unpubl.). The records from Ulyanovskaya Oblast (ISAEV & SYSOENKOV 2000) and Kirovskaya Oblast (YUFEREV 2001) should be treated with reservation since we have not been able to see any correctly identified specimens from these regions.

[*Limnebius truncatellus* (THUNBERG, 1794)]

KHARIN (1928): **VR**: inundated lake at River Don, 1.VIII.1926. We have not been able to examine these specimens and to confirm the presence of *L. truncatellus* in the Middle Russian Forest-Steppe Zone.

Additional distribution in Russia: Kaliningradskaya Oblast (ALEKSEEV 2004), “Russian Fennoscandia” (= Respublika Kareliya, H. Silfverberg, pers. comm.) (SILFVERBERG 2004), Ulyanovskaya Oblast (ISAEV & SYSOENKOV 2000), and Kirovskaya Oblast (YUFEREV 2001). Records from Voronezhskaya Oblast (KHARIN 1928), Kirovskaya Oblast (Yuferev 2001), and from Ulyanovskaya Oblast (ISAEV & SYSOENKOV 2000) must be treated with some reservation since we have not been able to see any correctly identified specimens from these regions.

Ochthebius (Asiobates) hungaricus ENDRÖDY-YOUNGA, 1967

VR: Kirpichi, 50°28'N / 40°01'E, karstic brook on chalk, 2 exs., leg. Prokin (1 – NMW); Ternovka, 51°40'N / 41°38'E, 25.–30.VI.1999, artificial small reservoir, 5 exs., leg. Priputnev; Orlovka, 51°36'N / 39°01'E, 27.IV.2001, road puddles with algae, 4 exs., leg. Prokin (1 – NMW); Borovoe, 51°43'N / 39°19'E, 7.IX.1999, inundated pool of River Usman, 1 ex., leg. Prokin; reserve “Voronezhskiy”, near Bolshaya Privalovka, 51°53'N / 39°43'E, 6.VI.2000, bog “Sinyutino”, pools with *Carex*, 2 exs., 9.VIII.2000, semipermanent lake, *Carex* and *Eleocharis*, 3 exs., leg. Prokin; Venevitinovo, 11.IV.1999, seasonal inundated pools of River Usman, 2 exs., 13.IV.1999, bog “Gadyushach’e”, 2 exs., 26.VI.2000, puddle on sand road, 2 exs., 15.VIII.1999, bog “Klyukvennoe-1”, *Sphagnum*-reed pool, 2 exs. (1 – NMW), 24.IV.2001, drainage canal on peatbog, 1 ex., leg. Prokin, det. Jäch; **LP**: Morozova Gora, 20.VI.1996, “migration trap” (sensu Tsurikov & Tsurikov 2001), 1 ex., 28.X.2001, “migration trap” (sensu Tsurikov & Tsurikov 2001) on forest edge, 1 ex., 19.VII.2003, light trap, 1 ex., leg. Tsurikov; Studenovskaya dubrava, 52°37'N / 39°21'E, 9.VI.1996, pond, 2 exs., leg. Tsurikov; 12 km S Dobrinka, 52°03'N / 40°27'E, Lake “Tsyganskoe”, littoral zone, 1 ex., leg. Tsurikov, det. Jäch.

Specimens from Venevitinovo (**VR**) were erroneously listed as *O. minimus* (F.) by PROKIN (2001) and SILINA & PROKIN (2002b).

Additional distribution in Russia: This species is widely distributed in European Russia and Siberia: “Russian Fennoscandia” (= Respublika Kareliya, H. Silfverberg, pers. comm.), Pskovskaya Oblast, Leningradskaya Oblast, Novgorodskaya Oblast, Moskovskaya Oblast, Ulyanovskaya Oblast, Yaroslavskaya Oblast, Respublika Tatarstan (Kazan’), Novosibirskaya Oblast, and Irkutskaya Oblast (JÄCH 1998; ISAEV & SYSOENKOV 2000; SILFVERBERG 2004). It was recently collected in the Tyumenskaya Oblast by P.N. Petrov (det. Jäch, unpubl.).

Ochthebius (Asiobates) minimus (F., 1792)

VR: Kirpichi, 50°28'N / 40°01'E, 24.VII.2003, karstic brook

on chalk, 14 exs., leg. Prokin (1 – NMW); Basovka, 50°26'N / 40°04'E, 25.VII.2003, River Don, littoral vegetation, 3 exs., leg. Prokin; Kolodezhnoye, 50°37'N / 39°52'E, 25.VII.2003, karstic brook on chalk, aquatic moss, 4 exs., leg. Prokin; station “152 km”, 50°57'N / 39°26'E, 2.V.2001, small seasonal reservoirs in steppe, 5 exs., leg. Prokin, det. Jäch.

KHARIN (1928): **VR**: inundated lake at River Don, 1.VIII.1926 (as “*O. impressus* Marsh.”); SILANĀEV (1898): **VR**: Khrenovskoy pine forest, 1894–1896 (as “*O. riparius* Illg.”). We have not been able to examine the specimens listed by KHARIN (1928) and SILANĀEV (1898), which may also belong to *O. hungaricus*.

Specimens from Venevitinovo (**VR**) listed under the name *O. minimus* (F.) by PROKIN (2001) and SILINA & PROKIN (2002b) are in fact belonging to *O. hungaricus*.

Additional distribution in Russia: Kaliningradskaya Oblast (BERCIO & FOLWACZNY 1979), “Russian Fennoscandia” (= Respublika Kareliya and Murmanskaya Oblast, H. Silfverberg, pers. comm.) (SILFVERBERG 2004), and Ulyanovskaya Oblast (ISAEV & SYSOENKOV 2000). Specimens from Leningradskaya Oblast are deposited in the Eläinmuseo (Zoologiska museet), Helsinki. *Ochthebius minimus* was recently collected in the Astrakhanskaya Oblast and Volgogradskaya Oblast by J. Bergsten & A.N. Nilsson (det. Jäch, unpubl.), and in the Samarskaya Oblast by I.N. Goreslavets (det. Jäch, unpubl.). The records from Ulyanovskaya Oblast by ISAEV & SYSOENKOV (2000) should be treated with some reservation, since we have not been able to examine these specimens. The east Russian records by SHATROVSKIY (1989) refer to the *O. rugulosus* species complex, which is clearly demonstrated by the aedeagal illustration (SHATROVSKIY 1989: Fig. 11).

[*Ochthebius* (s.str.) *pusillus* STEPHENS, 1835]

KHARIN (1928): **VR**: inundated lake at River Don, 1.VIII.1926; inundated lake at River Voronezh, 17.VI.1926. We have not been able to examine these specimens and to confirm the presence of *O. pusillus* in the Middle Russian Forest-Steppe Zone.

Additional records from Russia: Kaliningradskaya Oblast (BERCIO & FOLWACZNY 1979), Ulyanovskaya Oblast (ISAEV & SYSOENKOV 2000). We have not been able to confirm these records. A questionable female from Siberia (Lena river, 140 km upstream from Yakutsk, 29.VI.1970, leg. R.B. Angus) has been recorded by Jäch (1992). The records by SHATROVSKIY (1989) and ZASYPKINA & RYABUKHIN (2001) obviously refer to other species (e.g. *O. angusi* JÄCH).

Ochthebius (s.str.) *viridis* PEYRON, 1858 – species complex

VR: Kirpichi, 50°28'N / 40°01'E, 24.VII.2003, karstic brook on chalk, 2 exs., leg. Prokin (1 – NMW), det. Jäch.

Additional distribution in Russia: Astrakhanskaya Oblast (JÄCH 1992). It was recently collected in the Volgogradskaya Oblast by A.N. Nilsson (det. Jäch, unpubl.).

ELMIDAE

Elmis aenea (MÜLLER, 1806)

KR: Zorino, 30.VII.2003, Gnilets brook, submerged wood, 1 ex., leg. Prokin, det. Jäch.

Additional distribution in Russia: Kaliningradskaya Oblast (ALEKSEEV 2004; BERCIO & FOLWACZNY 1979), “Russian Fennoscandia” (= Respublika Kareliya and Murmanskaya Oblast, H. Silfverberg, pers. comm.) (SILFVERBERG 2004), and Respublika Komi (ZAKHARENKO 1962; ROGOVTSOVA 1998, 2001; ROGOVTSOVA & SHUBINA 1998). Some specimens from Murmanskaya Oblast (Kola Peninsula) are deposited in the NMW and in the Zoological Institute (Academy of Sciences), St. Petersburg (det. Jäch).

***Limnius intermedius* FAIRMAIRE, 1881**

SILINA (2004): **VR:** Malyshevo, 51°32'N / 39°04'E, 13.VII.2003, River Don, middle of river bed, 1 ex., leg. Silina, det. Jäch.

This is the only record known from Russia so far.

***Macronychus quadrituberculatus* MÜLLER, 1806**

LP: Morozova Gora, 19.VII.2003, River Don, riparian zone, on submerged snag, 1 ex., leg. Prokin, det. Prokin & Jäch.

Additional distribution in Russia: Kaliningradskaya Oblast (BERCIO & FOLWACZNY 1979), and Chuvashskaya Respublika (EGOROV 2003).

***Oulimnius tuberculatus* (MÜLLER, 1806)**

PROKIN (2002); PROKIN et al. (2002): **VR:** Venevitinovo, 1.VII.2000, River Usman, rapids, 6 exs., leg. Prokin, det. Prokin & Jäch.

Additional distribution in Russia: Kaliningradskaya Oblast (BERCIO & FOLWACZNY 1979), “Russian Fennoscandia” (= Respublika Kareliya and Murmanskaya Oblast, H. Silfverberg, pers. comm.) (SILFVERBERG 2004), and Respublika Komi (ZAKHARENKO 1962; ROGOVTSOVA 1998, 2001; ROGOVTSOVA & SHUBINA 1998). Some specimens from Yaroslavl'skaya Oblast and Murmanskaya Oblast (Kola Peninsula) are deposited in the NMW and in the Zoological Institute (Academy of Sciences), St. Petersburg (det. Jäch).

***Potamophilus acuminatus* (F., 1792)**

VR: Basovka, 50°26'N / 40°04'E, 25.VII.2003, River Don, littoral vegetation, 1 ex., leg. Prokin, Silina, det. Prokin & Jäch; rapids, on *Alnus* roots, 1 larva, riparian zone, 1 larva, leg. Silina, det. Prokin.

PROKIN (2002), PROKIN et al. (2002): **VR:** Novokhopersk, 51°02'N / 41°40'E, VI.1997, River Savala, mouth, 2 exs., leg. Anokhin, det. Prokin.

Additional distribution in Russia: *Potamophilus acuminatus* was recently collected in West Siberia (Chelyabinskaya Oblast, Kizil'skiy Rayon, 5 km SW Cheka Hill, left bank of River Ural, 2.VII.2002, leg. P. Petrov, 3 exs., deposited at Department of Entomology, Moscow State University, Zoological Institute (Academy of Sciences), St. Petersburg, and in coll. V.G. Gratshev, Moscow; unpubl.).

One historical specimen labelled “Petrop.” [= St. Petersburg] is deposited in the Zoological Institute (Academy of Sciences), St. Petersburg.

Potamophilus acuminatus was erroneously recorded from Respublika Kareliya by KIREYTSYUK (2001) (Kireytsyuk, pers. comm.).

DRYOPIDAE

***Dryops anglicanus* EDWARDS, 1909**

KR: Zorino, 18.VII.2001, *Sphagnum* bog, *Gypnum* pool, 3 exs., leg. Prokin, 22.V.2002, *Sphagnum* bog, pools with *Carex*, 38 exs., leg. Silina, 14.V.2003, *Sphagnum* bog, pools with *Carex*, 20 exs., reed pool, 2 exs., *Sphagnum* pool, 1 ex., leg. Silina, det. Jäch & Prokin.

Additional distribution in Russia: “Russian Fennoscandia” (= Respublika Kareliya, H. Silfverberg, pers. comm.) (SILFVERBERG 2004).

***Dryops auriculatus* (GEOFFROY, 1785)**

VR: Kirpichi, 50°28'N / 40°01'E, 24.VII.2003, karstic brook on chalk, 2 exs., leg. Prokin; station “152 km”, 50°57'N / 39°26'E, 2.V.2001, seasonal reservoir in steppe, 1 ex., leg. Prokin, det. Jäch.

TSURIKOV (2004): **VR:** Poymennyy Lug, 31.III.1995, 1 ex. This species was erroneously listed for Voronezhskaya Oblast by PROKIN et al. (2002).

Additional distribution in Russia: Kaliningradskaya Oblast (ALEKSEEV 2004; BERCIO & FOLWACZNY 1979), “Russian Fennoscandia” (= Respublika Kareliya, H. Silfverberg, pers. comm.) (SILFVERBERG 2004), East Siberia (Lena Valley, type locality of *D. argentipilosus* POPPIUS, which is currently regarded as a synonym of *D. auriculatus*) (POPPIUS 1907), Yakutskaya Respublika, south Siberia, and Primorskiy Krai (LAFER 1989).

***Dryops ernesti* GOZIS, 1886**

LP: Gryazi, 52°29'N / 39°56'E, 17.II.2002, boggy meadow, 1 ex., leg. Fursova, det. Tsurikov & Jäch.

PROKIN et al. (2002): **LP:** Dañnyy, 52°57'N / 39°58'E, 14.V.1996, River Vorgol, translocation zone, ground trap, 2 exs., leg. Tsurikov, det. Tsurikov, Prokin & Jäch. Tsurikov (2004): **LP:** Gryazi, 52°29'N / 39°56'E, 17.II.2002, boggy meadow, 1 ex., leg. Fursova, det. Tsurikov & Jäch.

Additional distribution in Russia: Kaliningradskaya Oblast (ALEKSEEV 2004), “Russian Fennoscandia” (= Respublika Kareliya and Murmanskaya Oblast, H. Silfverberg, pers. comm.) (SILFVERBERG 2004), Uslanka Village, River Swir, 29.VI.1993, leg. M. Orlova & A. Bienkowski, 2 exs. (Coll. Bienkowski, Moscow; det. Jäch).

***Dryops griseus* (ERICHSON, 1847)**

VR: reserve “Voronezhskiy”, near Bofshaya Privalovka, 51°53'N / 39°43'E, 6.VI.2000, bog “Sinyutino”, 1 ex., leg. Prokin (this specimen was erroneously listed as *D. auriculatus* by Prokin et al. (2002)); **KR:** Zorino, 22.V.2002, karstic lake, littoral moss, 2 exs., leg. Silina (1 – NMW), det. Jäch.

This species was erroneously listed for Kurskaya Oblast by Prokin et al. (2002).

Additional distribution in Russia: Kaliningradskaya Oblast (BERCIO & FOLWACZNY 1979), and “Russian Fennoscandia” (= Respublika Kareliya, H. Silfverberg, pers. comm.) (SILFVERBERG 2004).

Dryops similaris BOLLOW, 1936

VR: Studenovka, 51°09'N / 39°23'E, 17.IV.2003, inundated marsh of River Khvorostan, 1 ex., leg. Prokin; **LP:** Morozova Gora, 3.VIII.1998, light trap, 1 ex., leg. Tsurikov; 12 km S Dobrinka, 52°03'N / 40°27'E, 28.VI.1996, Lake "Tsyganskoe", littoral zone, 5 exs., leg. Tsurikov (1 – NMW), det. Jäch.

Additional distribution in Russia: Astrakhanskaya Oblast (BOLLOW 1936; HORION 1955), Volgogradskaya Oblast (type locality of *D. omissus* BOLLOW, which is currently regarded as synonym of *D. similaris*; see BOLLOW 1939), and Primorskiy Kray (LAFER 1996). This species was recently collected in the Saratovskaya Oblast (Vołskiy Rayon, near Mayanga, 1.V.1997, River Bolshoy Irgiz, 1 ex. (NMW), leg. Fedorov, det. Jäch, unpubl.).

Acknowledgements

We are grateful to the following persons for sending specimens and/or for their permission to publish their data: V.V. Anokhin, J. Bergsten, A. Bienkowski, D.V. Fedorov, L.A. Fursova, I.N. Goreslavets, A.G. Kireytschuk, P.Y. Mokshin, A.N. Nilsson, P.N. Petrov, T.V. Pripitnev, M.P. Rubtsov, H. Shaverdo, A.E. Silina, M.N. Tsurikov.

H. Shaverdo is sincerely thanked for reviewing the manuscript and for various helpful comments and suggestions and literature translation. M. Cherkasova kindly acted as postman, carrying specimens from Russia to Austria.

The Ministry of education of the Russian Federation is thanked for grant A.03-2.12-33 and A.04-2.12-890 to the junior author.

Thanks are due to J. Bergsten, A.N. Nilsson, P.N. Petrov, H. Shaverdo, and H. Silfverberg for their comments on the manuscript.

References

- ALEKSEEV, V.I. 2004. Fauna i nekotorye ekologicheskie osobennosti vodnykh zhestkokrylykh (Dytiscidae, Noteridae, Hydrophilidae, Spercheidae, Hydrochidae, Hydraenidae, Haliplidae, Gyrinidae, Elmidae, Dryopidae), a takzhe svyazannykh s vodoy vidov semeystv Chrysomelidae i Curculionidae (Coleoptera: Adephega, Polyphaga). Avtoreferat dissertatsii na soiskanie uchenoy stepeni kandidata biologicheskikh nauk, Kaliningrad, 23 pp. (In Russian).
- BEREZHOY, A.V. 1983. Sklonovaya mikrozonalnosc landshaftov srednerusskoy lesostepi. Izdatelstvo VGU [Voronezh State University], Voronezh, 140 pp. (In Russian).
- BERCIO, H. & FOLWACZNY, B. 1979. Verzeichnis der Käfer Preußens. Parzeller & Co, Fulda, 369 pp.
- BOLLOW, H. 1936. Beiträge zur Kenntnis der palaearktischen Dryopidae. I. *Entomologische Blätter. Zeitschrift für Biologie und Systematik der Käfer* 32: 1–7, 52–58, 152–158, 188–195.
- BOLLOW, H. 1939. Monographie der palaearktischen Dryopidae, mit Berücksichtigung der eventuell transgredierenden Arten. (Col.). *Mitteilungen der Münchner Entomologischen Gesellschaft*. V. 28 (3) [1938]: 319–371.
- DROZDOV, K.A. 1991. Elementarnye landschafty srednerusskoy lesostepi. Izdatelstvo VGU [Voronezh State University], Voronezh, 176 pp. (In Russian).



Fig. 1: River Don viewed from cretaceous mountains near Kirpichi (Voronezhskaya Oblast).

- EGOROV, L.V. 2002. Dopolneniya k faune vodnykh zhestkokrylykh (Insecta, Coleoptera) Chuvashii. *Nauchnye trudy GPZ "Prisurskiy"* 10: 80–88. (In Russian).
- HORION, A. 1955. Faunistik der mitteleuropäischen Käfer IV. Band. Entomologische Arbeiten aus dem Museum G. Frey, Tutzing bei München, Sonderband: 1–280, 6 plts.
- ISAEV, A.Y. & SYSOENKOV, D.?. 2000. K poznaniyu vodolyubobraznykh zhukov i vodoborok [vodobrodok] (Coleoptera; Hydrophiloidea: Hydrophilidae, Georyssidae; Staphylinoida: Hydraenidae) Ulyanovskoy oblasti, pp. 17–32. In [unknown] (eds.) *Nasekomye i paukobraznye Ulyanovskoy oblasti*. "Priroda Ulyanovskoy oblasti" 9. publisher unknown, Ulyanovsk, unknown pp. (In Russian).
- JÄCH, M.A. 1988. Revisional notes on the *Hydraena riparia* species complex (Coleoptera: Hydraenidae). *Aquatic Insects* 10 (3): 125–139.
- JÄCH, M.A. 1992. Revision of the Palearctic species of the genus *Ochthebius* Leach VI. the marinus group (Hydraenidae, Coleoptera). *Entomologica Basiliensia* 14 (1991): 101–145.
- JÄCH, M.A. 1993. Taxonomic revision of the Palearctic species of the genus *Limnebius* Leach, 1815 (Coleoptera: Hydraenidae). *Koleopterologische Rundschau* 63: 99–187.
- JÄCH, M.A. 1998. Revision of the Palearctic species of the genus *Ochthebius* Leach XX. The *O. (Asiobates) rugulosus* Wollaston species complex (Coleoptera: Hydraenidae). *Koleopterologische Rundschau* 68: 175–187.
- JÄCH, M.A. 2004. Hydraenidae, pp. 102–122. In: Löbl, I. & Smetana, A. (eds.) *Catalogue of Palearctic Coleoptera*, Vol. 2. Apollo Books, Stenstrup, 942 pp.

- KHARIN [CHARIN], N.N. 1928. K faune presnovodnykh zhukov Voronezhskoy gubernii [German title: Zur Fauna der Süßwasser Coleopteren des Woronesch-Gouvernements]. *Byulleten' obshchestva Estestvoispytateley pri V.G.U. [Voronezhskom Gosudarstvennom Universitete]* 2 (2): 84–88. (In Russian with German summary).
- KIREYTSYUK, A.G. 2001. Semeystvo Elmidae, pp. 334–341, 736–741, 800–801. In: Tsalolikhin, S.J. (ed.) Key to freshwater invertebrates of Russia and adjacent lands, Vol. 5. Nauka, St. Petersburg, 836 pp. (In Russian).
- LAFER, G.S. 1989. 36. Sem. Elmidae. Dopolnenia 1, pp. 449–451. In: Ler, P.A. (ed.) Opredelitel nasekomykh Dalnego Vostoka SSSR, Vol. III (1). Academy of Sciences, Vladivostok, 576 pp. (In Russian).
- LAFER, G.S. 1996. 35. Sem. Dryopidae – Pritsepysy. Dopolnenie 1, p. 421. – In Ler, P.A. (ed.): Opredelitel nasekomykh Dalnego Vostoka SSSR, Vol. III (3). Academy of Sciences, Vladivostok, 556 pp. (In Russian).
- POPPIUS, B. 1907. Beiträge zur Kenntnis der Coleopteren-Fauna des Lena-Thales in Ost-Sibirien. III. Gyrinida, Hydrophilida, Georyssida, Parnida, Heterocerida, Lathridiida und Scarabaeida. *Öfversigt af Finska Vetenskaps-Societetens Förhandlingar* 49 (2) [1905–1906]: 1–17.
- PROKIN, A.A. 2001. Otnositelnaya priurochennost' nekotorykh vidov vodnykh zhestkokrylykh (Coleoptera: Hydraenidae, Hydrophilidae) k soobshchestvam makrozoobentosa bolota "Klyukvennoe-1", pp. 140–145. In: Borisov, I.I. (ed.) Trudy molodykh uchenykh 1. Voronezhskiy gosudarstvennyy universitet, Voronezh. (In Russian).
- PROKIN, A.A. 2002. K faune i ekologii vodnykh zhestkokrylykh (Coleoptera) Tsentralnogo Chernozem'ya [English title: To the knowledge of the fauna and ecology of water beetles (Coleoptera) in the Central Black Soil Region of Russia], pp. 295–296. In: Medvedev, G.S. et al. (eds.) Tezisy dokladov XII S'ezda Russkogo entomologicheskogo obshchestva. Zoologicheskii Institut RAN, St. Petersburg. (In Russian with Russian and English titles).
- PROKIN, A.A., TSURIKOV, M.N., NEGROBOV, V.V. & GRECHANICHENKO, T.E. 2002. Novye dannye po faune vodnykh zhestkokrylykh (Coleoptera) Tsentralnogo Chernozem'ya, pp. 19–54. In: Silina, A.E. & Goncharuk, V.M. (eds.) Gidrobiologicheskie issledovaniya vodoemov Srednerusskoy lesostepi (Trudy laboratorii bioraznoobraziya i monitoringa nazemnykh i vodnykh ekosistem Srednerusskoy lesostepi: sektor gidrobiologicheskogo monitoringa / biotsentr VGU "Venevitinovo"), Vol. 1. Voronezhskiy gosudarstvennyy universitet, Voronezh, 326 pp. (In Russian).
- ROGOVTSOVA, E.K. 1998. Vodnye zhuki (Coleoptera) Respubliki Komi, 138–150. In: Estaf'ev, A.A., Leshko, Y.V., Yushkov, V.F. & Zinkevich, N.V. (eds.) Ekologo-faunisticheskie issledovaniya na evropeyskom Severo-Vostoke Rossii. Trudy Komi nauchnogo tsentra UrO Rossiskoy AN 157, Syktyvkar, 162 pp. (In Russian).
- ROGOVTSOVA, E.K. 2001. Water beetles (Coleoptera) of the Pechora river basin in Russia. *Norwegian Journal of Entomology* 48 (1): 185–190.
- ROGOVTSOVA, E.K. & SHUBINA, V.N. 1998. Vodnye zhuki (Insecta, Coleoptera) rek Urala i Timana, pp. 276–278 [English title: The freshwater beetles (Insecta, Coleoptera) rivers of the Urals and Timan]. In: Utkin, N.A. (ed.) Bespozvonochnye zhivotnye Yushnogo Zauralya i soprodelnykh territoriy. Materialy Vserossiyskoy konferentsii, 14–16 aprelya 1998 goda. Izdatelstvo Kurganskogo universiteta, Kurgan, 368 pp. (In Russian with Russian and English titles).
- SHATROVSKIY, A.G. 1989. 11. Sem. Hydraenidae (Limnebiidae). Vodobrodki, pp. 260–264. In: Ler, P.A. (ed.) Opredelitel nasekomykh Dalnego Vostoka SSSR, Vol. III (1). Academy of Sciences, Vladivostok, 576 pp.
- SILANT'EV, A. 1898. Zoologicheskaya issledovaniya na uchastkakh ekspeditsii Lesnogo Departamenta. 1894–96 godov. Tipografiya E. Evdokimova, St. Petersburg, 180+XL pp. Reprinted in: *Trudy ekspeditsii Lesnogo Departamenta. Nauchnoe otdelenie* 4 (2): 1–23. (In Russian).
- SILFVERBERG, H. 2004. Enumeratio nova Coleopterorum Fennoscandiae, Daniae et Baltiae. *Sahlbergia* 9: 1–111.
- SILINA, A.E. 2004. Sostoyanie makrozoobentosa reki Don v zone vliyaniya Novovoronezhskoy AES v 2003 godu, pp. 103–122. In: Prostakov, N.I. (ed.) Sostoyanie i problemy ekosistem srednerusskoy lesostepi. Trudy biologicheskogo uchebno-nauchnogo tsentra VGU "Venevitinovo" XVII, 168 pp. (In Russian).
- SILINA, A.E. & PROKIN, A.A. 2002a. K izucheniyu makrogidrofayny vodoemov Zorinskogo uchastka Tsentralno Chernozemnogo zapovednika, pp. 112–115. In: Vlasov, A.A., Zolotukhin, N.I., Korolkov, A.K. & Ryzhkov, O.V. (eds.) Izuchenie i okhrana prirody lesostepi: Materialy nauchno-prakticheskoy konferentsii, posvyashchennoy 120-letiyu so dnya rozhdeniya V.V. Alekhina (pos. Zapovednyy, Kurskaya obl., 17 yanvarya 2002 g.). Tsentralno Chernozemnyy gosudarstvennyy zapovednik, Tula, 154 pp. (In Russian).
- SILINA, A.E. & PROKIN, A.A. 2002b. Donnaya makrofauna bolota Klyukvennoe-1 v Usmanskom Boru, pp. 151–220. In: Silina, A.E. & Goncharuk, V.M. (eds.) Gidrobiologicheskie issledovaniya vodoemov Srednerusskoy lesostepi (Trudy laboratorii bioraznoobraziya i monitoringa nazemnykh i vodnykh ekosistem Srednerusskoy lesostepi: sektor gidrobiologicheskogo monitoringa / biotsentr VGU "Venevitinovo"), Vol. 1. Voronezhskiy gosudarstvennyy universitet, Voronezh, 326 pp. (In Russian).
- TSURIKOV, M.N. 2004. K izucheniyu mest zimney lokalizatsii imago vodnykh zhestkokrylykh (Coleoptera) v usloviyakh srednerusskoy lesostepi, pp. 226–233. In: Golub, V.B., Goncharuk, V.M., Prokin, A.A., Prostakov, N.I., Silina, A.E. (ed.) Fauna, voprosy ekologii, morfologii i evolyutsii amfibioteskikh i vodnykh nasekomykh Rossii. Materialy II Vserossiyskogo simpoziuma po amfibioteskim i vodnym nasekomym. Voronezhskiy gosudarstvennyy universitet, Voronezh, 284 pp. (in Russian).
- TSURIKOV, M.N. & TSURIKOV, S.N. 2001. Prirodosberegayushchie metody issledovaniya bespozvonochnykh zhivotnykh v zapovednikakh Rossii: Trudy Assotsiatsii osbo okhranyaemykh prirodnykh territoriy Tsentralnogo Chernozem'ya Rossii 4. Assotsiatsiya osbo okhranyaemykh prirodnykh territoriy Tsentralnogo Chernozem'ya Rossii and Gosudarstvennyy zapovednik "Galich'ya Gora", Tula, 130 pp. (in Russian).
- YUFEREV, G.I. 2001. Otyrad Coleoptera – Zhestkokrylye. In: Alalykina, N.M. (ed.) Zhivotniy mir Kirovskoy oblasti (bespozvonochnye zhivotnye), Vol. 5. Izdatelstvo VGPU, Kirov, 231 pp. (In Russian).
- ZAKHARENKO, V.B. 1962. Vodnye zhuki basseyna r. Usy i ikh znachenie v pitanii ryb, pp. 248–252. In: [unknown] (ed.) Ryby basseyna r. Usy i ikh kormovye resursy. Izdatelstvo Akademii Nayk SSSR, Moskva, Leningrad. (in Russian).
- ZASYPKINA, I.A. & RYABUKHIN, A.S. 2001. Amphibiotic Insects of the Northeast of Asia. Backhuys Publishers and Sofia: Pensoft Publishers, Leiden 183 pp.

Manuscript received: 29. 3. 2005.