

A contribution to the fauna of robber flies (Diptera: Asilidae) of Belarus К фауне ктырей (Diptera: Asilidae) Беларуси

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An annotated list of robber flies (Diptera: Asilidae) occurring in Belarus is presented based on the original material and published data. Totally 36 species are recorded, 35 of them based on the author's material. Ten species are recorded from Belarus for the first time.

На основе собственных сборов и литературных данных приводится аннотированный список ктырей (Diptera: Asilidae) Беларуси. Всего отмечено 36 видов, из которых 35 видов подтверждены сборами автора. Десять видов приводятся впервые для территории Беларуси.

Key words: robber flies, fauna, Belarus, Asilidae, new records

Ключевые слова: ктыри, фауна, Беларусь, Asilidae, новые находки

INTRODUCTION

The robber flies (Asilidae) is one of the largest families of Diptera, with over 7500 species in 555 genera (Pape et al., 2011). Diptera is one of poorly known insect orders in Belarus. The published data on the Asilidae of Belarus are scanty. Seven species of robber flies were listed in the catalog of the insects of Mogilev Province (Arnold, 1901). Birg (1978, 1985) recorded six species of robber flies but did not provide the data on collected specimens. Trojan (1995) recorded only six species from the Berezina Biosphere Reserve. The same number of species is given for the Belarusian part of the Białowieża Primaeval Forest (Gutowski & Jaroszewicz, 2001). So far, 26 species have been found in Belarus including the recent publications by Sakhvon (2014a, 2014b). At the same time, much more species of robber flies are known for territories adjacent to Belarus. For example, 30 species were recorded from Latvia (Karpa, 2008),

35 species from Lithuania (Pakalniškis et al., 2006), and about 50 species from the European part of Russia (Richter, 1969). These data indicate that the fauna of robber flies in Belarus is insufficiently known.

The present paper reviews the data on the species of robber flies and their distribution in Belarus.

The Republic of Belarus is located in the geographical centre of Europe. Most of the territory is represented by lowlands; the highest point is 346 meters above the sea level. The climate is moderate continental with frequent cyclones. Physical and climatic conditions result in the domination of forests (mainly coniferous) and wetlands in the territory. The average annual rainfall is 600–700 mm. The average temperature in January is between –8 and –4.5 °C and in July, is about 17–18.8 °C. Snow cover lies for 75–125 days. In the territory of Belarus two geobotanical regions meet, European broad-leaved and Eurasian coniferous forests (Loginov, 2002).

MATERIAL AND METHODS

The present study is based on the material collected by the author in 2009–2014. Robber flies were collected from eight localities mainly situated in southern and central parts of Belarus from early May to mid-October. The material was collected mostly by sweep net in preferable sites of robber flies. The author's material is deposited at the Department of Zoology of Belarusian State University, Minsk, Belarus. If the depository of the material is not indicated, it means that the specimens are kept at this institution. If the collector is not specified it means that these specimens are collected by the author of this paper. Additionally the collections in the Zoological Museum of Belarusian State University, Minsk, Belarus (ZMBSU), Zoological Institute of Russian Academy of Sciences, St Petersburg, Russia (ZIN), and the Zoological Museum of Moscow State University, Russia (ZMMSU) were examined. The species were identified mostly using the keys by Richter (1969) and Geller-Grimm (2003). The classification and nomenclature follows Geller-Grimm (2013). The new records are asterisked (*).

LIST OF SPECIES

Order DIPTERA

Family ASILIDAE

Subfamily LEPTOGASTERINAE

Leptogaster cylindrica (De Geer, 1776)

Material examined. **Minsk Prov.:** Minsk, near Roshcha railway station, 21 June 2011, 1 female; **Vologhin Distr.:** near Kaldyki vill., 54°08'05.55''N 26°24'29.85''E, wet meadow with *Alnus glutinosa*, on vegetation, 16 July 2014, 1 male; near Zamostyany vill., edge of field and pine forest, 17 July 2014, 3 females.

Distribution. Widely distributed throughout the Palaearctic Region including *Belarus (*Minsk Prov.).

Notes. This species should be distributed in Belarus everywhere. It occurs on upland and lowland meadows.

Leptogaster guttiventris Zetterstedt, 1842

Material examined. **Minsk Prov., Vologhin Distr.:** near Kaldyki vill., 54°08'11.31''N 26°24'08.91''E, pine forest, on vegetation near road, 20 and 27 July 2014, 2 females; same area, 54°08'05.55''N 26°24'29.85''E, wet meadow with *Alnus glutinosa*, on vegetation, 25 July 2014, 1 male, 1 female.

Distribution. Western, central and northern Europe, European part of Russia, Kazakhstan, Altai; Belarus (*Minsk Prov., Vitebsk Prov.).

Notes. This species was previously recorded in the northern part of Belarus (Lehr, 1961). The data on the occurrence of this species are scarce.

Subfamily ASILINAE

Asilus crabroniformis Linnaeus, 1758

Material examined. **Minsk Prov., Soligorsk Distr.:** 1–10 Aug. 198?, 2 males; **Vitebsk Prov., Lepel' Distr.:** Berezina Biosphere Reserve, near Kraytsy vill., 6 Aug. 1969, 1 female; same locality, 18 Aug. 1969 (Antonova leg.), 1 male, 1 female (in copula) (ZMMSU); on sandy road near stream, 18 Aug. 1979 (Pisanenko leg.), 1 male, 1 female (ZMBSU).

Distribution. Widely distributed in Europe, European part of Russia, Caucasus, North Africa; Belarus (Brest Prov., *Minsk Prov., Mogilev Prov., *Vitebsk Prov.).

Notes. This species was previously recorded in western and eastern parts of Belarus (Arnold, 1901; Birg, 1985; Gutowski, 2001) and should be distributed everywhere (Lehr, 1988).

Didymachus picipes (Meigen, 1820)

Material examined. **Brest Prov., Ivatsevichi Distr.:** near Mikhashevo vill., 16 May 2013, 1 female; **Pruzhanj Distr.:** near Oranchitsy vill., young pine forest, 17–18 June 2010, 2 males, 3 females (some in copula); **Minsk Prov.:** **Borisov Distr.:** near Borisov, 5 July 2014, 1 female; **Dzerzhinsk Distr.:** near Stan'kovo vill., dry meadow, 30 June 2010, 3 males; **Molodechno Distr.:** near Radoshkovichy, 28 May 2013, 1 male; 54°12'11.20''N 27°15'22.21''E, pine forest, 25 May 2014, 2 males, 1 female; same area, pine for-

est edge, grass meadow, 19–24 June 2014, 1 male, 2 females; *Minsk*: near Roshcha railway station, 20 June 2011, 2 females; same locality, 1 July 2011, 1 male; *Volozhin Distr.*: near Kaldyki vill., dry meadow near Berezina river, 10 July 2010, 2 males; same locality, pine forest, 15 July 2010, 1 female; near Zamostyany vill., edge of field and pine forest, 10 July 2011, 1 female; 54°07′25.88″N 26°24′41.87″E, edge of grass meadow and young pine forest, 1 July 2014, 3 females.

Distribution. Widely distributed in Europe, Russia (including central Siberia), Transcaucasia and Kazakhstan; Belarus (*Brest Prov.*, **Minsk Prov.*, *Vitebsk Prov.*).

Notes. This species was recorded from Pripyat' Polesye and Berezina Biosphere Reserve (Sakhvon, 2014a, 2014b). It is very common and abundant (Lehr, 1988) and should be distributed in Belarus everywhere. It occurs in young and middle-age pine forests, in upland and lowland meadows.

Echthistus rufinervis (Meigen, 1820)

Material examined. *Vitebsk Prov.*, *Lepel' Distr.*: Berezina Biosphere Reserve, near Domzheritsy, 54°44′32.28″N 28°18′18.70″E, young pine forest, on vegetation, 25 June 2014, 3 males, 2 females.

Distribution. Western and central Europe, European part of Russia, West Siberia (including Altai), Near East; Belarus (*Mogilev Prov.*, *Vitebsk Prov.*).

Notes. This species was previously recorded from eastern parts of Belarus (Arnold, 1901). Apparently, the north-eastern border of range of this species passes through Belarus (Lehr, 1988), but the data about the occurrence and habitat preferences are scarce.

Erax barbatus Scopoli, 1763

Material examined. *Minsk Prov.*, *Molodechno Distr.*: near Radoshkovichi, pine forest, on sandy road, 16–18 May 2012, 4 males.

Distribution. France, Germany, Sweden, Bulgaria, Greece, Czech Republic, Romania, Slovakia, Poland, southern European Russia, Near East; *Belarus (**Minsk Prov.*).

Notes. This record is the most northeastern one of *E. barbatus* (Lehr, 1988).

Eutolmus rufibarbis (Meigen, 1820)

Material examined. *Brest Prov.*, *Pinsk Distr.*: near Pinsk, Pina river bank, 15–25 July 2013 (Lundyshev leg.), 1 male; *Minsk Prov.*: *Logoyshk Distr.*: near Dunai vill., 54°48′27″N 27°48′65″E, forest belt near gravel road, on leaves of *Acer* sp., 2 Aug. 2013, 1 female; *Volozhin Distr.*: near Kaldyki vill., dry meadow near Berezina river, 9–10 July 2010, 4 males, 2 females; near Zamostyany vill., 54°07′25.88″N 26°24′41.87″E, edge of field and pine forest, 12 July 2012, 1 male, 1 female; same locality, 5 July 2013, 1 female; near Krynitsa vill., 54°07′29.43″N 26°26′47.68″E, pine forest, on vegetation, 22 July 2014, 1 female.

Distribution. Widely distributed throughout the Palaearctic Region including Belarus (*Brest Prov.*, **Minsk Prov.*).

Notes. This species was previously recorded in Belarus (Gutowski, 2001; Sakhvon, 2014b). It is common and abundant (Lehr, 1988) and should be distributed in Belarus everywhere. This species occurs on the meadows of different type but is more common on dry ones, and also at the edges of young and middle-age pine and mixed forests. It was found on agricultural fields with grain and other crops.

Machimus arthriticus (Zeller, 1840)

Material examined. *Brest Prov.*, *Baranovichi Distr.*: Lesnaya vill., in garden, 14–15 June 2012 (Balash leg.), 2 males, 1 female; *Minsk Prov.*, *Volozhin Distr.*: near Kaldyki vill., dry meadow near Berezina river, 10 July 2010, 1 male; near Zamostyany vill., 54°07′25.88″N 26°24′41.87″E, dry meadow near Berezina river, 5 July 2013, 2 males; same locality, 1 July 2014, 1 male.

Distribution. Widely distributed in Europe, southern European Russia; *Belarus (**Brest Prov.*, **Minsk Prov.*).

Notes. This record is the most northeastern one of *M. arthriticus* (Lehr, 1988).

Machimus chrysitis (Meigen, 1820)

Material examined. *Brest Prov.*, *Pinsk Distr.*: near Pinsk, Pina river bank, 15–25 July 2013 (Lundyshev leg.), 1 female.

Distribution. Widely distributed in Europe (absent from northern Europe); *Belarus (**Brest Prov.*).

Notes. This record is the most northeastern one for *M. chrysitis* (Lehr, 1988).

***Machimus gonatistes* (Zeller, 1840)**

Material examined. **Brest Prov., Pinsk Distr.:** near Pinsk, Pina river bank, 15–25 July 2013 (Lundyshv leg.), 1 male.

Distribution. Widely distributed in Europe, southern European Russia, Near East, North Africa; *Belarus (*Brest Prov.).

Notes. This record is the most northeastern one for *M. gonatistes* (Lehr, 1988).

***Machimus rusticus* (Meigen, 1820)**

Material examined. **Brest Prov., Baranovichi Distr.:** Lesnaya vill., in garden, 10–22 June 2014 (Balash leg.), 2 females; **Minsk Prov.: Minsk:** near Roshcha railway station, on vegetation along the railway, 25 June 2013, 1 male; same locality, 28 June 2014, 1 male; **Volozhin Distr.:** near Shchelkany vill., dry meadow in the middle of young pine forest, 29 July 2013, 2 females; near Zamostyany vill., 54°07′24.59″N 26°24′46.14″E, dry meadow near Berezina river, 9–10 July 2010, 4 males, 4 females; same locality, on vegetation, 10–13 July 2011, 2 males, 1 male and 1 female (in copula); same locality, edge of field and pine forest, 12 July 2012, 1 male, 1 female; same locality, dry meadow near Berezina river, 5 July 2013, 3 males, 3 females (in copula); same locality, 27 July 2014, 1 male, 1 male and 1 female (in copula).

Distribution. Widely distributed in Europe, southern European Russia, Near East; Belarus (*Brest Prov., *Minsk Prov., Vitebsk Prov.).

Notes. This species was recorded from Berezina Biosphere Reserve (Sakhvon, 2014a). It is common and abundant (Lehr, 1988) and should be distributed in Belarus everywhere. This species occurs on different-type meadows, more common on dry ones. It was found also on agricultural fields with grain and other crops.

***Neoitamus cyanurus* (Loew, 1849)**

Material examined. **Brest Prov., Baranovichi Distr.:** Lesnaya vill., in garden, 14–15 June 2012 (Balash leg.), 1 male; **Luninets Distr.:** near Mikashevichi, floodplain oak forest, on leaves of *Con-*

vallaria majalis, 10 June 2009, 1 male; same locality, on leaves of *Sorbus aucuparia* near forest road, 28 May 2010, 1 female; same locality, on leaves of *Convallaria majalis* and *Corylus avellana*, 3–6 June 2011, 2 females; same locality, on leaves of *Convallaria majalis*, 3 June 2012, 1 male, 4 females; **Minsk Prov.:** *Minsk:* near Roshcha railway station, on window glass indoors, 11 June 2010, 1 male; same locality, on vegetation along railway, 25 June 2013, 1 male; **Volozhin Distr.:** near Kaldyki vill., 54°08′11.31″N 26°24′08.91″E, mixed forest with pine, on leaves of *Corylus avellana*, 8 July 2013, 1 female.

Distribution. Widely distributed throughout the Palaearctic Region; Belarus (Brest Prov., *Minsk Prov., Vitebsk Prov.).

Notes. This species was previously recorded in Belarus (Trojan, 1995; Sakhvon, 2014b). It is common and abundant (Lehr, 1988) and should be distributed in Belarus everywhere. This species occurs at the edges of pine, mixed and deciduous forests.

***Neoitamus socius* (Loew, 1871)**

Material examined. **Brest Prov.:** Baranovichi, on window glass indoors, 29 May 2011, 1 male; **Minsk Prov.: Minsk:** near Roshcha railway station, on vegetation along railway, 20 June 2011, 1 male, 2 females; **Molodechno Distr.:** near Radoshkovichy, 54°12′11.20″N 27°15′22.21″E, pine forest, on vegetation, 27 May 2014, 1 female; same locality, edge of pine forest, on vegetation, 19 June 2014, 2 females; **Smolevichi Distr.:** Smolevichi, on window glass indoors, 23 June 2013, 1 male; **Volozhin Distr.:** near Kaldyki vill., dry meadow near Berezina river, on grass, 17 July 2009, 1 female; same locality, pine forest, on leaves of *Corylus avellana*, 13–15 July 2010, 3 females; same locality, dry meadow near Berezina river, on grass, 18 July 2010, 1 female; same locality, pine forest, on leaves of *Corylus avellana*, 12–13 July 2012, 2 males, 3 females; same locality, pine-deciduous forest, on leaves of *Corylus avellana* and *Urtica* sp., 2–8 July 2013, 3 females; same locality, on leaves of *Corylus avellana*, 26–27 July 2014, 3 males; **Vitebsk Prov., Miory Distr.:** Elnya Landscape Reserve, island of the pine forest on high bog, 7 June 2012 (Lundyshv leg.), 1 male.

Distribution. Widely distributed throughout the Palaearctic Region; Belarus (*Brest Prov., *Minsk Prov., Vitebsk Prov.).

Notes. This species was previously recorded in Belarus (Trojan, 1995). It is common and abundant (Lehr, 1988) and should be distributed in Belarus everywhere. This species occurs at the edges of pine, mixed and deciduous forests.

Neomochtherus pallipes (Meigen, 1820)

Material examined. **Brest Prov., Kobrin Distr.:** near Divin vill., pine forest, on sandy road, 8–10 July 2013, 2 males; **Minsk Prov.: Logoysk Distr.:** near Sutoki vill., pine forest, on pine trunk, 30 Aug. 2012, 1 male; **Volozhin Distr.:** near Kaldyki vill., 54°08'11.31"N 26°24'08.91"E, pine-deciduous forest, on leaves of *Corylus avellana*, 29 July 2014, 1 female.

Distribution. Widely distributed in Europe, southern Russia (including the Middle Urals) and the Nearctic Region; Belarus (Brest Prov., *Minsk Prov.).

Notes. This species was previously recorded in the southern part of Belarus (Lehr, 1996) and should be distributed in Belarus everywhere. Probably this species prefers pine and pine-deciduous forests, mainly the young ones.

Pamponerus germanicus (Linnaeus, 1758)

Material examined. **Brest Prov.: Baranovichi Distr.:** Lesnaya vill., in garden, 14–15 June 2012 (Balash leg.), 1 male; same locality, 10–22 June 2014 (Balash leg.), 1 male, 1 female; **Luninets Distr.:** near Mikashevichi, pine glade, on leaves of *Alnus glutinosa*, 17 and 26 May 2011, 2 males, 2 females (in copula); same locality, floodplain oak forest, on trunk of *Corylus avellana*, 4 June 2011, 1 female; **Minsk Prov., Molodechno Distr.:** near Radoshkovichi, 54°12'11"N 27°15'22"E, pine forest, on vegetation, 22 and 25 May 2014, 2 males, 1 female.

Distribution. Widely distributed in Europe, Russia (including Transbaikalia), Near East; Belarus (*Brest Prov., *Minsk Prov., Mogilev Prov.).

Notes. This species was previously recorded in Belarus (Arnold, 1901; Birg, 1985). It is common and abundant (Lehr, 1988) and should be distributed in Belarus everywhere. This species occurs at the edges of different-type forests.

Philonicus albiceps (Meigen, 1820)

Material examined. **Brest Prov.: Luninets Distr.:** near Mikashevichi, glade in pine forest, on sandy road, 31 July 2010, 1 female; same locality, pine forest, on sandy road, 30 July–6 Aug. 2011, 3 males, 4 females; near Sitnitsa vill., on sandy road near stream, 10 June 2012, 1 male, 1 female; **Pinsk Distr.:** near Pinsk, Pina river bank, 15–25 July 2013 (Lundyshev leg.), 1 male; **Minsk Prov.: Minsk:** near Roshcha railway station, 9 July 2013, 1 male; **Volozhin Distr.:** near Krynitsa vill., 54°07'29.43"N 26°27'47.68"E, young pine forest, on sandy road, 22 July 2014, 1 male; near Zamostyany vill., 54°07'25.88"N 26°24'41.87"E, dry meadow near Berezina river, on sandy road, 27 July 2014, 1 female.

Distribution. Widely distributed throughout the Palaearctic Region; *Belarus (*Brest Prov., *Minsk Prov.).

Notes. It is common and abundant (Lehr, 1988) and should be distributed in Belarus everywhere. This species occurs at the edges of and roads in pine forests, and also occurs but rare in mixed forests and in upland meadows.

Rhadiurgus variabilis (Zetterstedt, [1838])

Material examined. **Brest Prov.: Luninets Distr.:** near Mikashevichi, pine clearing, on pine logs, 8 Aug. 2010, 1 male; same locality, pine clearing, on pine logs, 17–24 May 2011, 6 males, 1 female; same locality, floodplain oak forest, 3 June 2012, 1 female; **Pruzhanjy Distr.:** near Oranchitsy vill., edge of pine forest, on pine logs, 18 June 2010, 1 male; **Minsk Prov.: Logoysk Distr.:** near Sutoki vill., pine forest, on sandy road, 2 June 2013, 1 male, 1 female (in copula); **Minsk:** near Roshcha railway station, on window glass indoors, 17–20 June 2011, 2 males, 1 female; **Molodechno Distr.:** near Radoshkovichi, pine clearing, on pine logs, 24 May 2010, 3 males, 1 female; same locality, dry meadow, on vegetation, 28 May 2013, 1 female.

Distribution. Boreal zone of the Holarctic Region; Belarus (Brest Prov., *Minsk Prov.).

Notes. This species was previously recorded in Belarus (Gutowski, 2001). It is common and abundant (Lehr, 1988) and should be distributed in Belarus everywhere. This species occurs at the edges of

pine forests, pine clearings, and is rare in mixed and deciduous forests.

Tolmerus atricapillus (Fallén, 1814)

Material examined. **Brest Prov.:** *Luninets*, 22 July 2013 (Lundyshev leg.), 1 male; *Luninets Distr.:* near Mikashevichi, edge of pine forest, on pine logs and leaves of *Betula* sp., 28 July – 10 Aug. 2010, 4 males, 3 females; same locality, floodplain oak forest, on leaves of *Quercus robur*, 8 Sept. 2012, 1 male; same locality, glade in pine forest, on leaves of *Alnus glutinosa*, 10 Aug. 2014, 1 female; **Minsk Prov.:** *Dzerzhinsk Distr.:* near Stan'kovo vill., 53°35'32.94''N 27°15'54.86''E, pine forest, on pine logs, 10 Sept. 2013, 1 male; *Logoysk Distr.:* near Sutoki vill., 54°11'59.49''N 28°5'12.03''E, pine forest, on stem of pine, 30 Aug. 2012, 3 males; same locality, pine forest, on road and pine logs, 7 Sept. 2014, 3 males; *Minsk:* near Roshcha railway station, on window glass indoors, 17 June 2011, 1 male; *Smolevichi Distr.:* Smolevichi, on window glass indoors, 27 July 2010, 1 male; same locality, on window glass indoors, 25 July 2011, 1 male; *Volozhin Distr.:* near Kaldyki vill., pine forest, on leaves of *Corylus avellana*, 15 July 2010, 1 female; same locality, pine forest, on leaves of *Corylus avellana*, 10 July 2011, 1 male; same locality, pine forest, on leaves of *Corylus avellana*, 12 July 2012, 1 male; same locality, pine forest, on leaves of *Corylus avellana*, 20–27 July 2014, 2 males, 2 females.

Distribution. Widely distributed throughout the Palaearctic Region; Belarus (Brest Prov., *Minsk Prov., Vitebsk Prov.).

Notes. This species was previously recorded in Belarus (Trojan, 1995). It is common and abundant (Lehr, 1988) and should be distributed in Belarus everywhere. This species occurs at the roads and edges of different-type of forests, mainly in mixed and pine ones.

Tolmerus cingulatus (Fabricius, 1781)

Material examined. **Brest Prov., Pinsk Distr.:** near Pinsk, Pina river bank, 15–25 July 2013 (Lundyshev leg.), 2 males, 2 females; **Minsk Prov., Volozhin Distr.:** near Shchelkany vill., dry meadow in the middle of young pine forest, 29 July 2013, 1 female; **Vitebsk Prov., Lepel' Distr.:** Berezina Biosphere Reserve, near Kraytsy vill., 9 Aug. 1969 (Antonova leg.), 1 female (ZMMSU).

Distribution. Widely distributed in Europe, European part of Russia, Caucasus, Near East; *Belarus (*Brest Prov., *Minsk Prov., *Vitebsk Prov.).

Notes. It is common and abundant (Lehr, 1988) and should be distributed in Belarus everywhere. Probably, this species prefers pine and pine-deciduous forests, mainly the young ones.

Tolmerus pyragra (Zeller, 1840)

Material examined. **Brest Prov.:** *Luninets Distr.:* near Mikashevichi, 52°13'30.72''N 27°30'25.92''E, two-year pine clearing, on pine logs, 20 Sept. 2014, 2 males, 1 female; *Stolin Distr.:* Olmanskie Bolota Landscape Reserve, island of pine forest on high bog, 6 Aug. 2011 (Lundyshev leg.), 1 male.

Distribution. Western and central Europe, European part of Russia, Caucasus; Belarus (*Brest Prov., Vitebsk Prov.).

Notes. This species was previously recorded in Berezina Biosphere Reserve (Trojan, 1995). It is common and abundant (Lehr, 1988) and should be distributed in Belarus everywhere. Probably, this species prefers young pine forests and pine clearings.

Subfamily LAPHRIINAE

Andrenosoma albibarbe (Meigen, 1820)

Material examined. **Brest Prov., Luninets Distr.:** near Mikashevichi, pine clearing, on pine logs, 30 July 2010, 2 males; same locality, pine clearing, on pine logs, 17–31 May 2011, 5 males, 4 females (some in copula).

Distribution. Widely distributed throughout the Palaearctic Region (excluding northern regions); Belarus (Brest Prov.).

Notes. The robber fly is not abundant, probably should be distributed in Belarus everywhere (Lehr, 1988). This species occurs at the edge of pine forests and pine clearings.

Andrenosoma atrum (Linnaeus, 1758)

Material examined. **Brest Prov.:** *Baranovich Distr.:* Lesnaya vill., July 2009 (Balash leg.), 1 male; *Luninets Distr.:* near Mikashevichi, pine

clearing, on pine logs, 30 July – 2 Aug. 2010, 3 males, 4 females (some in copula); same locality, pine clearing, on pine logs, 6 Aug. 2011, 1 female; same locality, pine clearing, on pine logs, 14 Oct. 2012, 1 male (in copula); 52°13'30.35''N 27°30'25.58''E, two-year pine clearing, on pine logs, 20 Sept. 2014, 2 males; **Vitebsk Prov.**, *Lepel' Distr.*: Berezina Biosphere Reserve, near Kraytsy vill., 23 Aug. 1969 (Antonova leg.), 1 male, 1 female (in copula) (ZMMSU).

Distribution. Widely distributed in Europe, European part of Russia, Caucasus, Near East, North Africa; Belarus (Brest Prov., *Vitebsk Prov.).

Notes. It is common and abundant (Lehr, 1988) and should be distributed in Belarus everywhere. This species occurs at the edge of pine forests and pine clearings.

Choerades amurensis (Hermann, 1914)

Material examined. **Brest Prov.**, *Luninets Distr.*: near Mikashevichi, floodplain oak forest, on leaves of *Corylus avellana*, 4–6 June 2011, 3 males; same locality, floodplain oak forest, on leaves of *Corylus avellana* and *Urtica dioica*, 1–9 June 2012, 6 males, 3 females (some in copula).

Distribution. Russia (Central European part, West and East Siberia, Far East); *Belarus (*Brest Prov.).

Notes. This record is the westernmost one for this species (Lehr, 1988). *Choerades amurensis* occurs in Belarus at the edges of old floodplain oak forests and is common in these habitats.

Choerades fimbriata (Meigen, 1820)

Material examined. **Minsk Prov.**, *Volozhin Distr.*: near Kaldyki vill., edge of pine forest, on stone, 13 July 2010, 1 male.

Distribution. Widely distributed in Europe, European part of Russia, Caucasus, Near East; Belarus (*Minsk Prov., Vitebsk Prov.).

Notes. This species was previously recorded in Belarus (Trojan, 1995). It is rare in Belarus.

Choerades gilva (Linnaeus, 1758)

Material examined. **Brest Prov.**: *Baranovichi Distr.*: Lesnaya vill., July 2009 (Balash leg.), 1

female; *Luninets Distr.*: near Mikashevichi, pine clearing, on pine logs, 1–8 Aug. 2010, 4 males, 6 females (some in copula); same locality, pine clearing, on pine logs, 6 Aug 2011, 1 male.

Distribution. Widely distributed throughout the Palaearctic and Nearctic regions; Belarus (Brest Prov., Mogilev Prov.).

Notes. This species was previously recorded in Belarus (Arnold, 1901). It is common and abundant (Lehr, 1988) and should be distributed in Belarus everywhere. This species occurs on the pine clearings without undergrowth, and is rare at edges of pine forests.

Choerades ignea (Meigen, 1820)

Material examined. **Brest Prov.**, *Luninets Distr.*: near Mikashevichi, 52°13'30.35''N 27°30'25.58''E, two-year pine clearing, on pine logs, 20 Sept. 2014, 2 females; **Minsk Prov.**, *Logoyisk Distr.*: near Sutoki vill., 54°11'59.49''N 28°5'12.03''E, middle-year pine forest, on pine trunk, 7 Sept. 2014, 1 male, 2 females; **Vitebsk Prov.**, *Lepel' Distr.*: Berezina Biosphere Reserve, near Kraytsy vill., 23 Aug. 1969 (Antonova leg.), 2 females (ZMMSU).

Distribution. Widely distributed throughout the Palaearctic Region; *Belarus (*Brest Prov., *Minsk Prov., *Vitebsk Prov.).

Notes. It is common and abundant (Lehr, 1988) and should be distributed in Belarus everywhere. This species occurs at the edges of pine forests and pine clearings.

Choerades marginata (Linnaeus, 1758)

Material examined. **Brest Prov.**, *Pruzhanyny Distr.*: near Oranchitsy vill., pine clearing, on leaves of *Betula* sp., 16 June 2010, 1 male; **Minsk Prov.**: *Minsk Distr.*: near Priluki, edge of pine forest, 15 July 2014 (Buga leg.), 1 female; *Molodechno Distr.*: near Radoshkovich, 54°12'11.20''N 27°15'22.21''E, pine forest, on sandy road, 19 June 2014, 2 females; *Soligorsk Distr.*: 1–10 Aug. 198?, 1 female; *Volozhin Distr.*: near Kaldyki vill., 54°8'11.31''N 26°24'8.91''E, pine forest, on pine trunks and leaves of *Quercus robur*, 26–29 July 2014, 2 males, 2 females; **Vitebsk Prov.**, *Lepel' Distr.*: Berezina Biosphere Reserve, near Kraytsy vill., 16 and 23 Aug. 1969 (Antonova leg.), 2 males, 1 female (ZMMSU).

Distribution. Widely distributed in Europe, Russia (including the Urals); *Belarus (*Brest Prov., *Minsk Prov., *Vitebsk Prov.).

Notes. It is common and abundant (Lehr, 1988) and should be distributed in Belarus everywhere. This species prefers the edges of pine, mixed and deciduous forests, and also pine clearings.

Laphria flava (Linnaeus, 1761)

Material examined. **Brest Prov.:** *Baranovich* Distr.: Lesnaya vill., June 2009 (Balash leg.), 1 male, 1 female; *Luninets* Distr.: near Mikashevichi, pine clearing, on pine logs, 22–23 May 2011, 3 males, 1 female; same locality, pine clearing, on pine logs, 31 May 2012, 1 males, 2 females; *Pruzhany* Distr.: near Oranchitsy vill., pine clearing, on pine logs, 16 June 2010, 1 male; **Vitebsk Prov.,** *Miory* Distr.: near Novy Pogost vill., 8 June 2012 (Lundyshev leg.), 1 male.

Distribution. Widely distributed throughout the Palaearctic Region, North Africa; Belarus (Brest Prov., Mogilev Prov., *Vitebsk Prov.).

Notes. This species was previously recorded in Belarus (Arnold, 1901; Birg, 1985). It is common and abundant (Lehr, 1988) and should be distributed in Belarus everywhere. The species occurs in the pine clearings and pine forests; it is rare in mixed forests.

Laphria gibbosa (Linnaeus, 1758)

Material examined. **Brest Prov.,** *Baranovich* Distr.: Lesnaya vill., July 2009 (Balash leg.), 2 males; **Minsk Prov.:** *Minsk:* near Roshcha railway station, spruce-dominated forest, July 2012, 1 male; same locality, spruce-dominated forest, 6–20.VII.2013 (Sautkin leg.), 1 male; *Molodechno* Distr.: near Radoshkovichi, pine forest, 10 July 2014, 1 male, 1 female (in copula); *Volozhin* Distr.: near Sedlishche vill., pine glade, 3 July 2010, 1 male, 1 female (in copula); **Vitebsk Prov.,** *Lepel'* Distr.: Berezina Biosphere Reserve, near Kraysy vill., 11–23 Aug. 1969 (Antonova leg.), 2 females, 2 males (ZMMSU).

Distribution. Widely distributed throughout the Palaearctic Region; Belarus

(Brest Prov., *Minsk Prov., Mogilev Prov., *Vitebsk Prov.).

Notes. This species was previously recorded in Belarus (Arnold, 1901; Birg, 1985). It is common but not abundant. The species occurs at the edges of different-type old-growth forests, mainly in pine forests, and also in forest clearings.

Subfamily **DIOCTRIINAE**

Dioctria atricapilla Meigen, 1804

Material examined. **Brest Prov.:** *Luninets* Distr.: near Mikashevichi, pine glade, on leaves of *Carex* sp., 3 June 2011, 1 male; near Sitnitsa vill., on *Carex* sp. near stream, 10 June 2012, 1 male; *Pruzhany* Distr.: near Oranchitsy vill., pine forest, on leaves of *Quercus robur*, 18 June 2010, 1 female; **Minsk Prov.:** *Minsk:* near Roshcha railway station, 21 June 2004, 1 female; same locality, 29 June 2008, 1 female; same locality, 21 June 2011, 1 male, 1 female; *Molodechno* Distr.: near Radoshkovichi, 54°11'58.59''N 27°15'34.34''E, meadow in the middle of young pine forest, on vegetation, 19–24 May 2014, 2 males, 3 females.

Distribution. Widely distributed throughout the Palaearctic Region; Belarus (Brest Prov., *Minsk Prov., Mogilev Prov.).

Notes. This species was previously recorded in Belarus (Arnold, 1901). It is common and abundant (Lehr, 1988) and should be distributed in Belarus everywhere. This species occurs at the edges of different-type forests, mainly of young ones, and also in lowland meadows, often near water.

Dioctria cothurnata Meigen, 1820

Material examined. **Brest Prov.,** *Luninets* Distr.: near Mikashevichi, pine forest, on leaves of *Rubus caesius* near road, 4 Aug. 2011, 1 male; **Minsk Prov.:** *Minsk:* near Roshcha railway station, oak-spruce forest, 15 and 25 July 2008, 1 male, 2 females; same locality, ?.2012, 2 male; same locality, 25 June 2013, 1 male; *Volozhin* Distr.: near Kaldyky vill., 54°8'5.55''N 26°24'29.85''E, wet meadow with *Alnus glutinosa*, 15–25 July 2014, 3 males, 4 females; **Vitebsk Prov.:** *Dokshitsy* Distr.: near Rechnye vill., 18 June 2011, 1 male; *Lepel'* Distr.: Berezina Biosphere Reserve, near Kraysy vill., 14 Aug. 1969

(Antonova leg.), 1 female (ZMMSU, misidentified as *Dioctria flavipennis* Meigen, 1820).

Distribution. Central and northern Europe, Russia (including Buryatia); Belarus (Brest Prov., *Minsk Prov., *Vitebsk Prov.).

Notes. This species is common, but not abundant. It inhabits the edges of different-type forests, mainly of young ones.

Dioctria hyalipennis (Fabricius, 1794)

Material examined. **Brest Prov.:** *Luninets Distr.:* near Mikashevichi, mixed forest, on leaves of *Corylus avellana*, 6 June 2011, 1 male; *Pruzhaný Distr.:* near Oranchitsy vill., pine forest, on leaves of *Quercus robur*, 18 June 2010, 2 males, 1 female; **Minsk Prov.:** *Minsk:* near Roshcha railway station, 23–24 June 2008, 2 females; same locality, 20–21 June 2011, 1 male, 2 females; *Molodechno Distr.:* near Radoshkovichi, on window glass indoors, 24 May 2010, 1 male; *Smolevichi Distr.:* Smolevichi, on window glass indoors, 12 June 2010, 1 female; *Volozhin Distr.:* near Kaldyki vill., pine forest, on leaves of *Corylus avellana*, 6 and 18 July 2011, 1 male, 1 female; same locality, pine forest, on leaves of *Corylus avellana*, 14–27 July 2014, 2 females; **Vitebsk Prov., Lepel' Distr.:** Berezina Biosphere Reserve, near Krayttsy vill., 5 Aug. 1969 (Antonova leg.), 1 female (ZMMSU, misidentified as *Dioctria flavipennis* Meigen, 1820).

Distribution. Widely distributed in Europe, European part of Russia, North Africa, Nearctic Region; Belarus (Brest Prov., *Minsk Prov., Vitebsk Prov.).

Notes. This species was previously recorded in Belarus (Trojan, 1995; Gutowski, 2001). It is common and abundant (Lehr, 1988) and should be distributed in Belarus everywhere. This species occurs at the edges of different-type forests.

Dioctria oelandica (Linnaeus, 1758)

Material examined. **Brest Prov., Luninets Distr.:** near Mikashevichi, pine clearing, on leaves of *Rubus caesius*, 28 July 2010, 1 male.

Distribution. Western, central and northern Europe, European part of Russia; Belarus (Brest Prov.).

Notes. The data on the distribution and habitat preferences this species are scarce, probably it is rare in Belarus.

Dioctria rufipes (De Geer, 1776)

Material examined. **Vitebsk Prov., Lepel' Distr.:** Berezina Biosphere Reserve, near Domzheritsy, 54°44'32.28''N 28°18'18.70''E, young pine forest, on vegetation, 25 June 2014, 1 male.

Distribution. Western, central and northern Europe, European part of Russia, Caucasus, Kazakhstan, Kyrgyzstan, Near East; Belarus (Brest Prov., Vitebsk Prov.).

Notes. This species was previously recorded in Belarus (Birg, 1978; Gutowski, 2001). The data on the distribution of this species are scarce.

Subfamily STICHOPOGONINAE

Lasiopogon cinctus (Fabricius, 1781)

Material examined. **Brest Prov., Luninets Distr.:** near Mikashevichi, pine forest, on sandy road, 17 May 2011, 4 males, 3 females; 52°13'43.68''N 27°31'49.98''E, glade in pine forest, 28 April 2014, 1 male, 2 females; **Minsk Prov., Molodechno Distr.:** near Radoshkovichi, pine forest, on sandy road, 23 May 2010, 1 male, 1 female; same locality, glade in pine forest, 16–19 May 2012, 7 males, 7 females (some in copula); same locality, 17 May 2013, 1 male, 1 female (in copula); same locality, 24–25 May 2014, 3 males, 3 females (some in copula).

Distribution. Widely distributed in Europe, European part of Russia, Caucasus; Belarus (Brest Prov., *Minsk Prov.).

Notes. This species was previously recorded from Belarus (Gutowski, 2001). It is common and abundant (Lehr, 1988) and should be distributed in Belarus everywhere. This species occurs at the edges of pine and mixed forests, mainly in young ones.

DISCUSSION

Totally 35 species are listed above. Among them, ten species are newly recorded from Belarus: *Erax barbatus*, *Machimus arthriticus*, *M. chrysitis*, *M. gonatistes*, *Neomochtherus pallipes*, *Tolmerus cingula-*

tus, *Choerades amurensis*, *C. ignea*, *C. marginata* and *Leptogaster cylindrica*. One more species, *Antipalus varipes* (Meigen, 1820), should be included in the list based on the published data (Lehr, 1996), bringing the species number to 36. In addition, there are published records of *Cyrtopogon luteicornis* (Zetterstedt, 1842) (Trojan, 1970) and *Dioctria linearis* (Fabricius, 1787) (Birg, 1985) from Belarus, but they need confirmation. Based on the species richness of Asilidae in the neighbouring countries (Richter, 1969; Trojan, 1970; Lehr, 1988; Pakaliniškis et al., 2006; Karpa, 2008) at least ten additional species can be found in Belarus.

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