



A contribution to the knowledge of robber fly (Diptera: Asilidae) fauna of Poland based on the collection of the Upper Silesian Museum in Bytom

Przyczynek do poznania łowikowatych (Diptera: Asilidae) Polski na podstawie zbiorów Muzeum Górnośląskiego w Bytomiu

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ABSTRACT. For the purposes of this scientific publication, specimens of the family Asilidae collected in Poland and deposited in the Upper Silesian Museum in Bytom (USMB) were studied. Nearly 2,400 specimens representing 56 species were examined and identified (as of December 31, 2024). The collection comprises a series of specimens from various locations, with a notable number of individuals from Upper Silesia, the vicinity of Toruń, and the Nida River Valley. The material includes some rarely observed species, such as *Choerades amurensis*, *Ch. fuliginosa*, *Dysmachus fuscipennis*, *Holopogon fumipennis*, *Leptarthrus brevirostris*, and *Stilpnogaster aemula*. The occurrence of *Dioctria longicornis* was confirmed in Poland. *Choerades castellanii* and *Laphria empyrea* are reported from Poland for the first time.

KEY WORDS. *Choerades castellanii*, *Dioctria longicornis*, faunistics, *Laphria empyrea*, new records, type material, USMB.

INTRODUCTION

Robber flies (Diptera: Asilidae) are a diverse family with 14 subfamilies, over 550 genera and 7200 species described (Cohen, 2020). These flies are mostly thermophilic, which makes their fauna particularly rich in warm temperate and tropical climate zones (Wood, 1981). Therefore, Poland, located in a rather cold temperate climate, is not particularly rich in this family of flies.

The robber fly fauna of Poland is still insufficiently recognized. Despite more than 150 faunistic papers where information on Asilidae could be found, the occurrence of a dozen or so species is not properly documented. Some of the species were recorded once or were observed only at the turn of the 19th and 20th centuries, thus require confirmation through new observations. Moreover, some species have an uncertain taxonomic status and should likely be considered synonyms. Thus, although more than 90 species are reported in the literature (Trojan, 2007; Szczepański & Palaczyk, 2022; Sychalski & Giłka, 2023), the actual number of Asilidae species in Poland is likely lower.

To supplement the knowledge of the robber fly family in Poland, in addition to new materials and observations, it is necessary to review museums' collections in the first place. Therefore, the collection of the Upper Silesian Museum in Bytom was examined, and the results are here presented.

THE UPPER SILESIA MUSEUM IN BYTOM – A SHORT HISTORY

The Upper Silesian Museum in Bytom (USMB) has a rich and complex history. Its origins date back to 1910, and it carries the heritage and collections of two significant institutions: the Upper Silesian National Museum in Bytom and the Silesian Museum in Katowice (established in 1929 and moved to Bytom after World War II). The Natural History Department was included in the Museum in 1937, after acquiring a large collection of animal specimens from Eberhard Drescher (1872-1938), a landowner near Ligota Wielka, who actively collected in Upper Silesia (Drescher, 1928). The Museum was formally nationalised in 1949 and fell under the administration of the Minister of Culture and Art. By the Minister's decree, the traditional name of the museum was changed to the present name (Droń, 2011). Further details on the history of USMB can be found in Dobosz and Żyła (2001), Dobosz (2011), Droń (2011), and Taszakowski *et al.* (2019).

The Department of Natural History of USMB has the largest natural history collections among the institutions under the Ministry of Culture and National Heritage. The collection consists of approximately two million specimens (based on current data) and is comparable to the collections of the Polish Academy of Sciences and some of the University Museums of Natural History (Dobosz, 2011).

Unfortunately, in contrast to other orders of invertebrates such as Coleoptera, Lepidoptera, Hymenoptera and Neuroptera, the Diptera collection in USMB did not constitute a significant

share of deposited most valuable historical collections. The approach to building the Diptera collection, including Asilidae, began to change relatively recently, starting in the early 1990s.

MATERIAL AND METHODS

The USMB collection includes Asilidae specimens collected by more than fifty specialists or entomology enthusiasts. Most of them have been or are currently associated with the Silesian Entomological Society (established in 1992 and affiliated with the Department). The list of most of the collectors, along with the abbreviations used in the text, in alphabetical order, is as follows: AD – Antoni Drozda, AG – Andrzej Grzywacz, AL – Adam Larysz, ALs – Andrzej Lasoń, AM – Adam Malkiewicz, AMr – Andrzej Mrowicki, AT – Artur Taszakowski, BP – Bartłomiej Pacuk, CB – Cezary Bystrowski, CG – Czesław Greń, DŻ – Dagmara Żyła, ED – Eberhard Drescher, ES – Ewa Szałaszewicz, FK – Franz Kirsch, GG – Grzegorz Gawlik, GJ – Grzegorz Jarosiewicz, HN – Hans Nowotny, HS – Henryk Szoltys, JB – Jacek Betleja, JG – Janusz Grzywocz, JK – Jan Kowalewski, JM – Janusz Mędzikowski, JS – Jacek Szwedo, KC – Kamil Chrul, KS – Krzysztof Szpila, LK – Lech Kruszelnicki, MA – Michał Argasiński, MB – Marian Bielewicz, MBo – Marek Borowy, MK – Maciej Krzyżyński, MS – Maksymilian Syrratt, PW – Fr. Paweł Wycisło, RD – Roland Dobosz, RK – Roman Królik, SC – Szymon Czerwiński, TB – Tadeusz Bziuk, TK – Tomasz Kościelny, TP – Tadeusz Pawlikowski, TS – Tadeusz Spaltenstein, WN – Włodzimierz Nowakowski, WS – Wiesław Szczepański, WTS – Wojciech Szczepański and WŻ – Waldemar Żyła.

The presented material also includes specimens whose data have already been published. The material from the vicinity of Toruń, which was previously presented by Krzyżyński and Szpila (2016), was recently deposited in the USMB collection and, after additional verification, is hereby included as part of the entire material and presented on the distribution map. Similarly, part of the specimens from Bory Tucholskie, collected by M. Borowy and listed in Banaszak *et al.* (2002) without detailed data, have also been included. Moreover, most of the records for both *Dasypogon* Meigen, 1803 species were recently provided by Szczepański (2023).

The specimens were examined under a PROLAB MSZ Stereo Microscope at $\times 7$ – $\times 90$ magnifications. Species were identified by the first author using the keys of Trojan (1970), Weinberg and Bächli (1995), Geller-Grimm (2003), and Wolff *et al.* (2018).

The localities of examined specimens are assigned using zoological regionalization proposed in the Catalog of Fauna of Poland (e.g. Burakowski *et al.*, 1973). The names of the regions are arranged in alphabetical order and indicated in bold. Within each zoological region localities are also listed in alphabetical order. The label data are presented in the following order: locality (in the case of historical records, additionally with former name in square brackets), UTM grid code in square brackets, colon, number of specimens including sex, en dash, date in the day-month-year format, ecological data (optional), and the abbreviation of a collector. In addition to the above-mentioned abbreviations, the following are also used in the text: env. – environs, Res. – Nature Reserve, LP – Landscape Park, NP – National Park.

The photographs of the presented species habitus were taken with a Canon EOS 550D digital camera equipped with a Canon EF 100mm f/2.8L Macro IS USM lens. The images were stacked, aligned, and combined using Helicon Focus software (www.heliconsoft.com). The maps of Poland with records distribution were generated in the non-commercial MapaUTM ver. 5.4 software by G. Gierlasiński (<https://www.heteroptera.us.edu.pl/mapautm.html>).

RESULTS

A total of nearly 2,400 specimens of Asilidae collected in Poland are deposited in the USMB (as of December 31, 2024). The specimens represent 56 species, and their share in particular subfamilies is as follows: Asilinae – 24, Brachyrhopalinae – 6, Dasypogoninae – 2, Dioctriinae – 9, Laphriinae – 12, Leptogastrinae – 2, Stichopogoninae – 1. The following list of species is organized alphabetically by subfamily. Within each subfamily, the species are also listed in alphabetical order. Comments are provided only to selected species.

Asilinae Latreille, 1802

Antipalus sinuatus (Loew, 1854)

Material examined: **Wielkopolska-Kujawy Lowland:** Toruń, Kępa Bazarowa [CD37]: 1 ♀ – 03.07.2006, leg. MK; 1 ♂, 2 ♀♀ – 17.07.2011, leg. MK.

Antipalus sinuatus is a rare, xerothermic species listed in the Polish Red Data Book of Animals (Palaczyk 2004) with a VU (vulnerable) status. The presented locality was already reported by Krzyżyński and Szpila (2016).

Antipalus varipes (Meigen, 1820)

Material examined: **Baltic Coast:** Smołdzino, Słowiński NP [XA45]: 1 ♀ – 29.07.2004, coniferous forest, leg. WŻ; **Pomeranian Lake District:** Ocypel-Zimne Zdrój, Bory Tucholskie [CE16]: 1 ♀ – 07.07.200[?], *Quercus roboris-Pinetum*, leg. MB; **Upper Silesia:** Lubliniec [CB31]: Bytom [Beuthen] [CA48]: 1 ♀ – 28.08.1933, leg. n/a; 1 ♂ – 18.06.1994, leg. RD; **Wielkopolska-Kujawy Lowland:** Mosina [XT38]: 1 ♀ – 21.06.2024, leg. GJ; Toruń, military training ground [CD37]: 1 ♂ – 17.06.2022, leg. KS; Toruń, airfield [CD37]: 1 ♂ – 15.06.2001, leg. KS; 1 ♀ – 26.07.2001, leg. KS; 1 ♀ – 11.06.2011, leg. MK; Toruń-Bielany [CD37]: 1 ♀ – 24.08.[19]84, leg. TP; Toruń-Glinki [CD37]: 1 ♀ – 26.06.1997, *Sedo-Sclerantha*, leg. KS; Toruń-Stawki [CD47]: 1 ♂ – 11.06.2013, leg. KS; Toruń-Glinki, military training ground [CD37]: 1 ♀ – 14.06.2011, leg. MK; 1 ♀ – 26.08.2011, leg. MK.

Asilus crabroniformis Linnaeus, 1758

Material examined: **Masurian Lake District:** Czarny Bryńsk [DD19]: 1 ♂ – 23.08.1996, leg. KS; Górznieńsko-Lidzbarski LP [DD19]: 1 ♂ – 30.08.2008, leg. MK; Malesowizna, Turtul [FF11]: 1 ♀ – 29.07.2002, fresh meadow, leg. ES; Okalewko [DD08]: 1 ♀ – 09.08.1996, *Sedo-Sclerantha*, leg. KS; Szelment lake, Krasawa bay [FF20]: 1 ♀ – 08.08.2002, leg. ES; **Upper Silesia:** Gliwice-Brzezinka [CA27]: 2 ♀♀ – 20.08.1934, leg. ED; **Western Sudety Mts.:** Szklarska Poręba [WS32]: 1 ♂ – 1970, leg. TS.

Didymachus picipes (Meigen, 1820)

Material examined: Kraków-Wieluń Upland: Kraków env. [DA14]: 2021, leg. MS; **Lower Silesia:** Ligota Wielka [=Ellguth Ottmachau] [XR59]: 1 ♀ – 05.07.1912, leg. ED; **Małopolska Upland:** Grabowiec Res. [DA69]: 1 ♀ – 17.06.1995, leg. RD; Kalina-Lisowiec Res. env. [DA47]: 1 ♂, 3 ♀♀ – 02.06.2022, leg. WTS; Krzyżanowice Res. [DA68]: 2 ♂♂, 2 ♀♀ – 16.06.1995, leg. RD; 2 ♂♂ – 10.06.1998, leg. RD; 1 ♀ – 16.06.1999, leg. RD; Polana Polichno Res. [DA69]: 1 ♂ – 02.06.2022, leg. WTS; Skowronno Res. [DA69]: 2 ♀♀ – 18.06.1995, leg. RD; 1 ♂, 3 ♀♀ – 20.06.1995, leg. WŻ; Szczaworyż [DA88]: 2 ♂♂, 1 ♀ – 21.06.1995, steppe, leg. RD; **Masurian Lake District:** Głądy, gm. Górowo Iławeckie [DF60]: 1 ♂ – 09.06.2023, leg. WTS; Górzno [DD19]: 1 ♂ – 26.06.1995, *Carpinion-betuli*, leg. KS; Kobyłty [EE06]: 1 ♂ – 31.05.2024, leg. WTS; Turtul, n. Czarna Hańcza, Suwalski LP [FF11]: 1 ♂ – 02.07.1997, leg. RD; **Podlasie:** Doktorce [FD46]: 1 ♀ – 31.05.2024, leg. ALs; Jeńki [FD27]: 1 ♀ – 14.06.2024, leg. ALs; Stara Dębina Res. env., Puszcza Knyszyńska LP [FD59]: 1 ♀ – 19.06.2020, leg. RD; **Upper Silesia:** Bytom [Beuthen] [CA48]: 1 ♀ – 10.06.1932, leg. FK; 1 ♀ – 22.6.[19]32, leg. FK; 1 ♂ – 14.06.1933, leg. FK; Bytom, Segiet Res. env. [CA48]: 1 ♂ – 06.06.1992, leg. WŻ; 1 ♀ – 26.05.1993, leg. RD; 1 ♀ – 29.06.1995, leg. WŻ; Bytom, Hałda Popłuczkowa [CA48]: 1 ♂ – 20.06.2023, leg. AL; **Western Beskidy Mts.:** Paweł Mała [CA70]: 1 ♀ – 21.05.2024, leg. GJ; Potrójna Mt. [CA81]: 1 ♀ – 03.07.2022, leg. WTS; **Wielkopolska-Kujawy Lowland:** Kulin Res. ad Włocławek, Zbocza Kulińskie [CD73]: 1 ♂, 2 ♀♀ – 21.05.2011, leg. MK; Zbocza Płutowskie Res. [CE20]: 2 ♂♂ – 05.06.1997, *Festuco-Brometea*, leg. KS; 3 ♂♂, 1 ♀ – 10.05.2000, leg. KS; 1 ♂ – 07.06.2001, leg. KS; 1 ♀ – 21.05.2011, leg. MK.

Dysmachus fuscipennis (Meigen, 1820)

Material examined: Małopolska Upland: Krzyżanowice [DA68]: 2 ♀♀ – 16.06.1995, leg. RD; Kików [DA98]: 1 ♀ – 19.06.1995, leg. RD; Skowronno [DA69]: 1 ♀ – 20.06.1995, leg. RD; 1 ♀ – 20.06.1995, leg. WŻ; Szczaworyż [DA88]: 1 ♀ – 19.06.1995, leg. RD; 1 ♂ – 21.06.1995, steppe, leg. RD; **Wielkopolska-Kujawy Lowland:** Zbocza Płutowskie Res. [CE20]: 1 ♀ – 28.05.1996, leg. KS; 2 ♂♂, 3 ♀♀ – 05.06.1997, *Festuco-Brometea*, leg. KS; 1 ♀ – 21.06.2001, leg. KS.

Dysmachus trigonus (Meigen, 1804)

Material examined: Baltic Coast: Czołpinio [XA46]: 3 ♂♂ – 25.05.2024, leg. WTS; Hel, Bór [CF55]: 1 ♂, 1 ♀ – 20.06.1998, *Cladonio-Pinetum*, leg. RD; 1 ♂ – 21.06.1998, *Cladonio-Pinetum*, leg. RD; 1 ♂ – 28.06.1998, dunes area, leg. RD; Jastarnia [CF46]: 1 ♂ – 20.06.1998, coniferous forest, leg. RD; Jastrzębia Góra [CF28]: 1 ♂ – 16.06.1996, Lisi Jar, leg. RD; 4 ♂♂, 4 ♀♀ – 24.06.1996, leg. RD; Karwia [CF28]: 2 ♂♂ – 17.06.1996, leg. RD; 1 ♂ – 18.06.1996, leg. RD; Kuźnica [CF46]: 1 ♂ – 25.06.1996, leg. RD; Sulicice [CF27]: 1 ♂, 2 ♀♀ – 27.06.1996, leg. RD; Świnoujście [VV47]: 1 ♂ – 28.06.2023, forest near the military shooting range, leg. MS; **Małopolska Upland:** Brzezie ad Piotrków Trybunalski [DB37]: 1 ♂, 2 ♀♀ – 26.06.2023, xerothermic grasslands, leg. WTS; Kików [DA98]: 1 ♂ – 19.06.1995, leg. RD; **Masurian Lake District:** Biebrza NP, buffer zone (S) [FD09]: 1 ♂ – 28.05.2000, leg. KS; Dwórzno, gm. Górowo Iławeckie [DF61]: 1 ♀ – 10.06.2023, leg. WTS; Głądy, gm. Górowo Iławeckie [DF60]: 1 ♂, 1 ♀ – 09.06.2023, leg. WTS; Górzno [DD19]: 1 ♂ – 21.06.1996, *Festuco-Brometea*, leg. KS; 1 ♂, 1 ♀ – 05.07.1998, *Artemisietea*, leg. KS; Klonowo Res. [DE10]: 1 ♀ – 14.07.1996, *Trifolio-Geraniotea*, leg. KS; Okalewko [DD08]: 1 ♂ – 09.08.1996, *Peucedano-pinetum*, leg. KS; Turtul, n. Czarna Hańcza, Suwalski LP [FF11]: 1 ♀ – 02.07.1997, leg. RD; **Podlasie:** Białystok [FD48]: 1 ♂ – 29.06.2023, leg. ALs; Stójka env., „Grąd Leszczynowe” Biebrza NP [FE00]: 1 ♂ – 28.05.2000, leg. KS; **Pomeranian Lake District:** Kasparus, Bory Tucholskie [CE25]: 1 ♀ – 12.07.2001, *Epilobietea angustifolii*, leg. MBo; Michale [CE42]: 1 ♂ – 04.06.1995, leg. KS; **Upper Silesia:** Lubliniec [CB31]:

5 ♂♂ – 26.06.1994, leg. RD; 2 ♂♂ – 12.06.1994, leg. RD; 3 ♂♂ – 14.06.1994, leg. RD; 2 ♂♂ – 22.06.1994, leg. RD; 1 ♂ – 02.06.1999, leg. RD; Ruda Śląska-Wirek [CA47]: 1 ♂ – 20.06.2002, leg. JG; **Wielkopolska-Kujawy Lowland:** Buczkowo [CD26]: 1 ♀ – 03.07.1997, *Sedo-Scierantheta*, leg. KS; Toruń [CD37]: 1 ♂ – 22.05.1995, leg. KS; 1 ♂, 2 ♀♀ – 24.05.1995, leg. KS; Toruń, Góra Żymierskiego, military training ground [CD37]: 1 ♀ – 24.06.2005, leg. KS; Toruń, airfield [CD37]: 1 ♂ – 11.06.2011, leg. MK; 1 ♂, 1 ♀ – 27.06.2011, leg. MK; Toruń-Glinki [CD37]: 1 ♂ – 14.06.2011, leg. MK; Toruń, military training ground [CD37]: 1 ♂ – 19.06.2012, leg. MK; Toruń, Fort VII [CD37]: 1 ♂ – 14.06.07, leg. MK; Zbocza Płutowskie Res. [CE20]: 1 ♂, 1 ♀ – 05.06.1997, *Festuco-Brometea*, leg. KS.

***Echthistus rufinervis* (Meigen, 1820)**

Material examined: **Baltic Coast:** Karwia [CF28]: 1 ♂ – 26.06.1996, leg. RD; **Lower Silesia:** Kunice [WS87]: 1 ♂ – 27.06.2021, gravel pit, leg. AM; **Małopolska Upland:** Brzezcie ad Piotrków Trybunalski [DB37]: 1 ♂, 2 ♀♀ – 26.06.2023, xerothermic grasslands, leg. WTS; **Masurian Lake District:** Antonia, gm. Łyse [EE32]: 1 ♀ – 12.06.2023, leg. WTS; Dłużec, gm. Piecki [EE15]: 1 ♀ – 18.06.2023, leg. WTS; Klon, gm. Rozogi [EE12]: 1 ♀ – 12.06.2023, leg. WTS; Kowalik, gm. Rozogi [EE32]: 1 ♂ – 16.06.2023, leg. WTS; Spychowo, gm. Świętajno [EE23]: 1 ♀ – 17.06.2023, leg. WTS; Szymany, gm. Szczytno [DE92]: 1 ♂ – 17.06.2023, leg. WTS; Użranki, gm. Mrągowo [EE12]: 1 ♂ – 14.06.2023, leg. WTS; Wielki Głębozeczek [XU62]: 1 ♂ – 15.05.2000, leg. KS; **Pomeranian Lake District:** Wda, Bory Tucholskie [CE26]: 1 ♀ – 24.07.2001, *Sedo-Scleranthetalia*, leg. MBo; **Upper Silesia:** Bytom [Beuthen] [CA48]: 1 ♀ – 15.06.1928, leg. FK; Bukowno ad Olkusz [CA96]: 1 ♀ – 19.07.1994, leg. WŻ; 1 ♀ – 09.06.1996, leg. JG; Gogolin [BA89]: 1 ♀ – 06.06.2020, leg. JG; Pyrzowice [CA69]: 1 ♀ – 22.05.2011, forest edge, leg. RD; Stanica [Stanitz] [CA26]: 1 ♀ – 06.1933, leg. ED; Szczedrzyk [BB92]: 1 ♂ – 11.07.2010, leg. JG; **Wielkopolska-Kujawy Lowland:** Toruń, military training ground [CD37]: 1 ♂ – 17.06.2002, leg. KS; 1 ♂, 5 ♀♀ – 14.06.2011, leg. MK; 8 ♂♂, 2 ♀♀ – 19.06.2012, leg. MK; 5 ♂♂, 3 ♀♀ – 05.07.2012, leg. MK; Toruń, airfield [CD37]: 1 ♀ – 19.07.2001, leg. KS; 1 ♂ – 2.06.2011, leg. KS; 1 ♂ – 27.06.2011, leg. MK; Toruń-Glinki [CD37]: 1 ♂, 1 ♀ – 26.06.1997, *Sedo-Sclerantha*, leg. KS; 1 ♀ – 04.05.1999, leg. KS; 2 ♀♀ – 14.06.2011, leg. MK; Toruń-Góra Żymierskiego, military training ground [CD37]: 1 ♂ – 24.06.2005, *Sedo-Sclerantha*, leg. KS; 1 ♀ – 22.06.2011, leg. AG; Toruń-Stawki [CD47]: 1 ♂ – 11.06.2013, leg. KS.

***Eutolmus rufibarbis* (Meigen, 1820)**

Material examined: **Baltic Coast:** Karwia [CF28]: 1 ♂ – 26.06.1996, leg. RD; **Kraków-Wieluń Upland:** Balice-Podkamycze [DA14]: 1 ♂ – 04.07.2021, leg. MS; **Masurian Lake District:** Klonowo Res. [DE10]: 1 ♂ – 14.07.1996, forest Edge, *Trifolio-Geraniotea*, leg. KS; **Upper Silesia:** Konopiska ad Częstochowa [CB62]: 1 ♀ – 21.06.2019, leg. TK; 1 ♂ – 10.07.2019, leg. TK; **Wielkopolska-Kujawy Lowland:** Krośnice [XT60]: 1 ♂ – 28.06.2016; leg. Katarzyna Moczyróg; 1 ♀ – 04.07.2017, leg. Karolina Ryka; 1 ♂ – 21–30.06.2024, 1 ♀ – 28.06.2024, leg. J. Hysa; Mosina [XT38]: 3 ♂♂ – 21.06.2024, leg. GJ; Toruń, airfield [CD37]: 1 ♀ – 25.06.2001, leg. KS; Toruń-Bielany [CD37]: 1 ♂, 1 ♀ – 24.08.[19]84, leg. TP; Toruń, Kępa Bazarowa [CD37]: 4 ♂♂, 4 ♀♀ – 17.07.2011, leg. MK; 1 ♀ – 18.08.2011, leg. MK; Toruń, military training ground [CD37]: 1 ♂ – 05.07.2011, leg. MK; Zbocza Płutowskie Res. [CE20]: 1 ♀ – 25.07.1997, leg. KS; 2 ♂♂ – 28.07.1997, *Festuco-Brometea*, leg. KS; 1 ♀ – 22.07.1998, leg. KS; 1 ♂ – 08.07.1999, leg. KS; 1 ♀ – 13.07.1999, *Arrhenatherion-elatioris*, leg. KS; Poznań [XU20]: 1 ♀ – 08.07.2024, garden, leg. JM.

Machimus arthriticus (Zeller, 1840)

Material examined: **Baltic Coast:** Czołpinio [XA46]: 1 ♀ – 25.05.2024, leg. WTS; **Lower Silesia:** Ligota Wielka [Ellguth Ottmachau] [XR59]: 1 ♀ – 07.1912, leg. ED; **Małopolska Upland:** Skowronno Res. [DA69]: 1 ♂ – 18.06.1995, leg. RD; 1 ♀ – 20.06.1995, leg. RD; Grabowiec Res. [DA79]: 1 ♂ – 18.06.1997, leg. WŻ; **Masurian Lake District:** Gutowo [DE10]: 1 ♀ – 16.07.1997, *Sedo-Sclerantheta*, leg. KS; **Pomeranian Lake District:** Wda, Bory Tucholskie [CE26]: 1 ♀ – 27.06.2001, *Sedo-Sclerantheta*, leg. MBo; **Upper Silesia:** Bytom [Beuthen] [CA57]: 1 ♀ – 21.06.1937, Pingen [=heap], leg. HN; **Wielkopolska-Kujawy Lowland:** Krośnice [XT60]: 1 ♀ – 21–30.06.2024, leg. D. Palinker.

Machimus gonatistes (Zeller, 1840)

Material examined: **Baltic Coast:** Hel Bór [CF55]: 1 ♀ – 20.06.1998, sands area, leg. RD; 2 ♂♂ – 21.06.1998, *Empetro nigri-Pinetum*, leg. RD; Jastarnia [CF46]: 1 ♂ – 20.06.1998, coniferous forest, leg. RD; Pasturka [DA69]: 1 ♀ – 13.07.1996, leg. WŻ; Piaski II, Mierzeja Wiślana [DF03]: 1 ♀ – 15.07.2009, ad lucem, leg. RD; Rowy [XA35]: 1 ♀ – 31.07.2004, grey dune, leg. WŻ [prey *Anomala dubia* (Scopoli, 1763)]; **Małopolska Upland:** Kików [DA98]: 1 ♂ – 14.07.1994, steppe, leg. RD; 1 ♂ – 14.07.1996, leg. RD; **Wielkopolska-Kujawy Lowland:** Toruń, military training ground [CD37]: 1 ♂ – 17.06.2002, *Sedo-Sclerantheta*, leg. KS; 1 ♂, 2 ♀♀ – 17.08.2011, leg. MK; Toruń, airfield [CD37]: 1 ♂ – 25.06.2001, leg. KS; 3 ♂♂, 2 ♀♀ – 11.06.2011, leg. MK; 5 ♂♂ – 27.06.2011, leg. MK.

Machimus rusticus (Meigen, 1820)

Material examined: **Kraków-Wieluń Upland:** Balice-Podkamycze [DA14]: 1 ♀ – 29.07.2021, leg. MS; Olsztyn ad Częstochowa [CB72]: 1 ♀ – 13.07.2022, leg. LK; **Lower Silesia:** Gogolin [BA89]: 1 ♂ – 15.07.2023, quarry, UV light, leg. JG; Kunice [WS87]: 1 ♀ – 27.06.2021, gravel pit, leg. AM; **Małopolska Upland:** Góra Zelejowa Res. [DB62]: 1 ♂ – 14.08.2001, leg. KS; Krzyżanowice Res. [DA68]: 2 ♂♂, 3 ♀♀ – 13.07.1994, leg. RD; 1 ♀ – 16.06.1995, leg. RD; 5 ♂♂, 1 ♀ – 16.06.1999, leg. RD; 1 ♂, 3 ♀♀ – 04.08.2022, leg. WTS; Krzyżanowice Res. [DA68]: 1 ♂ – 13.07.1996, leg. WŻ; 1 ♂ – 20.06.1997, leg. RD; 1 ♂ – 10.06.1998, leg. RD; Pasturka [DA69]: 1 ♀ – 13.07.1996, leg. JS; 2 ♂♂, 1 ♀ – 13.07.1996, leg. RD; 1 ♂ – 13.07.1996, leg. WŻ; Pińczów [DA69]: 1 ♂ – 08.07.1999, xerotherm, leg. JS; Skotniki Górne Res. [DA78]: 1 ♂, 1 ♀ – 14.07.1996, leg. RD; Skowronno Res. [DA69]: 3 ♂♂, 1 ♀ – 15.07.1994, leg. RD; 1 ♀ – 18.06.1995, leg. RD; 3 ♂♂, 2 ♀♀ – 20.06.1995, leg. RD; 2 ♀♀ – 20.06.1995, leg. WŻ; 4 ♀♀ – 15.07.1996, leg. RD; 1 ♀ – 09.06.1998, leg. RD; Winiary Zagojskie Res. [DA78]: 2 ♂♂ – 15.07.1996, leg. RD; **Masurian Lake District:** Borki Rozowskie, gm. Rozogi [EE32]: 1 ♂, 1 ♀ – 14.06.2023, leg. WTS; Czerwony Krzyż [FE48]: 1 ♀ – 26.06.2019, xerotherm, leg. AL; Głady, gm. Górowo Iławeckie [DF60]: 2 ♀♀ – 09.06.2023, leg. WTS; Krzywe, Wigry NP [FE39]: 1 ♂ – 27.07.2001, leg. WŻ; Plutki, gm. Dywity [EE67]: 1 ♂ – 12.06.2023, leg. WTS; Turtul, Suwalski LP [FF11]: 1 ♂ – 04.07.1997, leg. RD, 1 ♀ – 05.07.1997, leg. RD; Zatoka Słupiańska, Wigry NP [FE38]: 1 ♂ – 27.07.2001, leg. WŻ; **Pomeranian Lake District:** Grupa [CE43]: 1 ♂ – 24.07.1995, leg. KS; 1 ♀ – 13.07.1998, leg. KS; Ocypel-Zimne Zdrój, Bory Tucholskie [CE16]: 1 ♂ – 05.08.2001, *Artemisieta* and other, leg. MBo; Sokole Kuźnica [XV92]: 1 ♀ – 06.06.2000, leg. TP; **Upper Silesia:** Bytom [CA47]: 1 ♀ – 14.07.1994, leg. WŻ; 2 ♂♂, 3 ♀♀ – 14.07.1994, leg. RD; Bytom-Szombierki [CA47]: 1 ♀ – 01.07.1996, leg. WŻ; Bytom [Beuthen] [CA48]: 1 ♂ – 06.07.1937, leg. FK; Grabówka [CA07]: 1 ♂ – 21.07.2020, sandpit, leg. RD; Ligota Dolna [BA99]: 1 ♀ – 02–03.08.2018, leg. A., JG; Ruda Śląska [CA46]: 1 ♀ – 22.07.1996, leg. JG; Ruda Śląska-Bielszowice [CA47]: 2 ♀♀ – 03.08.2001, heap, leg. JG; Ruda Śląska-Wirek [CA47]: 1 ♂, 1 ♀ – 12.07.2001, leg. JG; Siemianowice Śląskie-Michałkowice [CA57]: 1 ♀ – 17.06.2024, leg. WS; Strzyżowice [CA68]: 1 ♀ – 03.08.2011, leg. JG; Zabrze-Rokitnica [Rokittnitz] [CA48]: 1 ♀ – 04.08.1926, leg. n/a; **Wielkopolska-Kujawy Lowland:** Toruń, airfield [CD37]: 1 ♂ – 25.06.2001, leg. KS; 1 ♂ –

27.06.2011, leg. MK; Toruń, military training ground [CD37]: 1 ♀ – 05.07.2012, leg. MK; Toruń, Rubinkowo [CD47]: 1 ♀ – 21.06.2011, leg. Michał Wódecki; Zbocza Płutowskie Res. [CE20]: 1 ♂, 2 ♀♀ – 16.07.1996, leg. KS; 1 ♂, 2 ♀♀ – 10.08.1997, *Festuco-Brometea*, leg. KS.

Neopitripts setosulus (Zeller, 1840)

Material examined: **Kraków-Wieluń Upland:** Olsztyn ad Częstochowa [CB72]: 1 ♂, 1 ♀ – 04.08.2023, leg. WTS; **Małopolska Upland:** Krzyżanowice Res. [DA68]: 1 ♂ – 16.06.1999, leg. RD; Skotniki Górne Res. [DA78]: 1 ♂ – 14.07.1996, leg. WŻ; **Masurian Lake District:** Czarny Bryńsk [DD19]: 1 ♀ – 14.08.1997, *Sedo-Sclerantheta*, leg. KS; **Podlasie:** Stójka env., „Grąd Leszczynowe” Biebrza NP [FE00]: 2 ♂♂ – 28.05.2000, leg. KS; **Upper Silesia:** Grabówka [CA07]: 1 ♂ – 17.08.2018, leg. JG; **Wielkopolska-Kujawy Lowland:** Toruń, airfield [CD37]: 1 ♂ – 23.07.2001, leg. KS; 1 ♂, 1 ♀ – 23.08.2011, leg. MK; 1 ♂ – 26.08.2012, leg. MK; Toruń-Glinki [CD37]: 3 ♂♂, 3 ♀♀ – 04.08.1999, leg. KS; Zbocza Płutowskie Res. [CE20]: 2 ♂♂, 1 ♀ – 25.07.1997, *Festuco-Brometea*, leg. KS; 1 ♀ – 10.08.1997, leg. KS; 2 ♂♂ – 24.08.1997, *Festuco-Brometea*, leg. KS; 2 ♂♂, 1 ♀ – 03.08.1998, leg. KS; 1 ♀ – 11.08.1998, leg. KS; 3 ♀♀ – 13.07.1999, *Festuco-Brometea*, leg. KS.

Neoitamus cothurnatus (Meigen, 1820)

Material examined: **Białowieża Primeval Forest:** Białowieża Forest [FD85]: 1 ♀ – 14.07.1995, leg. RD; **Małopolska Upland:** Pasturka [DA69]: 1 ♂ – 19.06.1997, leg. RD; **Masurian lake District:** Górzno [DD19]: 1 ♂ – 03.07.1997, *Carpinion-betuli*, leg. KS; Klonowo Res. [DE10]: 1 ♀ – 05.07.1997, *Carpinion-betuli*, leg. KS; Spaliny Małe. gm. Rozogi [EE32]: 2 ♂♂ – 14.06.2023, leg. WTS; Suwalski LP [FF11]: 1 ♂ – 14.07.07, leg. MK; Szumny Zdrój Res. [DD19]: 1 ♂ – 05.07.1996, *Carpinion-betuli*, leg. KS; **Podlasie:** Stójka env., „Grąd Leszczynowe” Biebrza NP [FE00]: 2 ♀♀ – 28.05.2000, leg. KS.

Neoitamus cyanurus (Loew, 1849)

Material examined: **Baltic Coast:** Hel Bór [CF55]: 2 ♂♂, 1 ♀ – 20.06.1998, *Cladonio-Pinetum*, leg. RD; Jastarnia [CF46]: 1 ♂ – 20.06.1998, coniferous forest, leg. RD; Jastrzębia Góra [CF27]: 1 ♂ – 21.06.1993, leg. RD; Kluki [XA46]: 1 ♂ – 25.05.2024, leg. WTS; Kuźnica [CF46]: 1 ♀ – 18.06.1996, leg. RD; 1 ♀ – 24.06.1996, leg. RD; Świnoujście, Świdne Bagno [VV47]: 1 ♀ – 28.06.2023, leg. MS; Władysławowo [CF37]: 1 ♂ – 07.06.1993, leg. RD; **Białowieża Primeval Forest:** Białowieża Forest [FD83/FD84]: 1 ♂ – 19.06.–03.07.1994, leg. JG; Białowieża Forest [FD85]: 2 ♀♀ – 15.07.1995, leg. RD; 1 ♀ – 18.07.1995, leg. RD; **Bieszczady Mts.:** Patoka ad Ciasna [CB32]: 1 ♂ – 13.06.1996, leg. RD; **Kraków-Wieluń Upland:** Jaworzno ad Wieluń [CB35]: 1 ♀ – 05.05.–26.06.2012, Moericke trap, leg. WTS; **Lower Silesia:** Las Oławski [XS64]: 1 ♀ – 28.05.–13.06.2015, Moericke trap, leg. WTS; **Małopolska Upland:** Grabowiec Res. [DA79]: 1 ♂, 2 ♀♀ – 18.06.1995, leg. RD; Skowronno Res. [DA69]: 1 ♂ – 18.06.1995, leg. RD; **Masurian Lake District:** Czarny Bryńsk [DD19]: 1 ♀ – 22.07.1995, *Carpinion-betuli*, leg. KS; Górzno [DD19]: 2 ♂♂, 3 ♀♀ – 21.06.1996, *Carpinion-betuli*, leg. KS; Klonowo Res. [DE10]: 1 ♀ – 14.07.1996, *Trifolio-Geraniotea*, leg. KS; 2 ♂♂ – 15.07.1997, *Carpinion-betuli*, leg. KS; Kobyły [EE06]: 1 ♀ – 31.05.2024, leg. WTS; Słupie, Wigry PN [FE38]: 1 ♂, 1 ♀ – 25.06.2019, Wigry Lake env., at light, leg. ALs; Spaliny Małe. gm. Rozogi [EE32]: 1 ♀ – 14.06.2023, leg. WTS; Szumny Zdrój Res. [DD19]: 1 ♂ – 16.07.1997, *Carpinion-betuli*, leg. KS; Widryny [EE18]: 1 ♀ – 29.05.2024, leg. WTS; Zelki [EE77]: 1 ♀ – 29.05.2024, leg. WTS; **Mazowiecka Lowland:** Ostrów Mazowiecka [ED64]: 1 ♂, 1 ♀ – 20.06.1995, leg. CB; **Podlasie:** Białystok [FD48]: 1 ♂ – 12.06.2023, leg. ALs; 1 ♀ – 06.07.2023, leg. ALs; Las Zwierzyniecki: 2 ♂♂ – 15.05.2024, leg. ALs; Grobla Honeczarowska, Biebrza NP [FE00]: 2 ♀♀ – 28.05.2000, leg. KS; Międzyrzecze Res., Knyszyńska Forest [FE60]: 1 ♀ – 30.07.2022, leg. ALs; Woronicza Res., Knyszyńska Forest [FE60]: 1 ♂, 1 ♀ – 30.07.2022,

leg. ALs; **Pomeranian Lake District:** Czarne, Bory Tucholskie [XV25]: 1 ♂ – 07.07.2001, *Molinio-Arrhenatheretea*, leg. MBo; Przyrzecze ad Świdyn [WV55]: 1 ♀ – 14.06.2023, leg. MA; Sidłowo ad Sławoborze [WV57]: 1 ♂, 1 ♀ – 15.06.2023, leg. MA; Sonino ad Świdyn [WV54]: 1 ♂ – 13.06.2023, leg. MA; **Upper Silesia:** Brynek [CA39]: 1 ♀ – 01–10.06.1994, leg. HS; 1 ♀ – 28.07.1994, leg. WŻ; Bytom, Segiet Res. env. [CA48]: 1 ♂ – 02.06.1993 leg. RD; 1 ♂ – 18.06.1994, leg. WŻ; 1 ♀ – 09.08.1997, leg. WTS; Bytom [CA57]: 1 ♀ – 20.06.2022, muzeum, leg. KC; Imielin [CA75]: 1 ♂ – 25.05.2023, leg. AT; Kokotek ad Lubliniec [CB30]: 1 ♀ – 26.05.1994, leg. RD; Konopiska ad Częstochowa [CB62]: 1 ♀ – 21.06.2019, leg. TK; 1 ♂ – 28.06.2019, leg. TK; Ligota Dolna [BA99]: 1 ♂ – 30.06.2019, leg. JG; Lubliniec [CB31]: 2 ♂♂ – 22.06.1994, leg. RD; 1 ♂ – 26.06.1996, leg. RD; 1 ♀ – 01.06.1999, leg. RD; Łęczok Res. [CA05]: 1 ♀ – 16–30.06.2023, light trap, leg. GG; Pogrzebień n. Rybnik [CA04]: 1 ♀ – 11.06.1932, leg. PW; Ruda Śląska-Wirek [CA47]: 1 ♂ – 04.06.1999, Szpitalna env., leg. JG; 1 ♂ – 11.06.2001, leg. JG; 2 ♀♀ – 03.06.2005, Łąki Wireckie, leg. JG; 1 ♀ – 17.06.2005, "Tele", leg. JG; 1 ♂ – 06.2012, leg. JG; 1 ♀ – 20.06.2017, Szpitalna env., leg. JG; 2 ♀♀ – 23.06.2022, Szpitalna env., UV trap, leg. JG; 1 ♀ – 27.06.2022, "Minerwa", UV light, leg. JG; 1 ♀ – 02.06.2023, leg. JG; 1 ♂ – 17.08.2024, UV trap, leg. JG; Ruda Śląska [CA56]: 1 ♂, 1 ♀ – 19.06.2022, UV trap, leg. TB; Rudziniec [CA18]: 1 ♀ – 17.06.2022, leg. KC; **Western Beskidy Mts.:** Kocierz Mt. [CA71]: 1 ♀ – 03.07.2022, leg. WTS; **Wielkopolska-Kujawy Lowland:** Dobięgniewo [CD83]: 1 ♀ – 22.05.2011, leg. MK; Toruń, airfield [CD37]: 1 ♀ – 05.06.2002, leg. KS; Toruń, Las Piwnicki [CD38]: 1 ♀ – 13.06.2011, leg. AG; 1 ♀ – 27.06.2011, leg. AG; Zbocza Płutowskie Res. [CE20]: 1 ♂, 1 ♀ – 07.06.2001, leg. KS; 1 ♂ – 04.06.2003, leg. KS.

Neotamus socius (Loew, 1871)

Material examined: **Baltic Coast:** Czołpinio [XA46]: 1 ♀ – 25.05.2024, leg. WTS; Sarbinowo [WA61]: 1 ♀ – 08–18.08.1995, leg. JB; **Białowieża Primeval Forest:** Białowieża Forest [FD85]: 1 ♂, 2 ♀♀ – 15.07.1995, leg. RD; **Bieszczady Mts.:** Balnica [EV84]: 1 ♀ – 17.07.2022, leg. WTS; **Eastern Beskidy Mts.:** Pikulice [FA21]: 1 ♀ – 06.07.1995, leg. RD; **Eastern Sudety Mts.:** Bielice [XR47]: 1 ♀ – 15.08.2021, leg. KC; **Małopolska Upalnd:** Lubień, Szczebel Mt. [DA20]: 1 ♂ – 04.08.2021, leg. MS; 2 ♀♀ – 07.08.2021, wet meadow, leg. MS; 1 ♂ – 09.08.2021, wet meadow, leg. MS; 1 ♂ – 15.07.2022, leg. MS; Polana Polichno Res. [DA69]: 1 ♂ – 17.06.1995, leg. RD; 1 ♂ – 15.07.1996, leg. RD; 1 ♀ – 15.06.1999, leg. RD; Skowronno Res. [DA69]: 1 ♂ – 18.06.1995, leg. RD; 1 ♀ – 20.06.1995, leg. RD; **Masurian Lake District:** Czarny Bryńsk [DD19]; 1 ♀ – 08.08.1996, *Carpinion-betuli*, leg. KS; Spaliny Małe. gm. Rozogi [EE32]: 1 ♂ – 14.06.2023, leg. WTS; **Nowy Targ valley:** Zakopane [DV25]: 1 ♂ – 27.07.2023, 900-910m, leg. MS; **Podlasie:** Doktorce [FD46]: 2 ♀♀ – 08.05.2024, leg. ALs; 19.06.2024, leg. ALs; **Pomeranian Lake District:** Bachorze [XV66]: 1 ♂ – 17.07.1991, leg. KS; **Sandomierska Lowland:** Brzoza Królewska [EA96]: 1 ♂ – 09–10.07.2023, leg. TB; **Upper Silesia:** Bytom [CA48]: 1 ♂ – 30.06.1994, leg. RD; Bytom, Segiet Res. env. [CA48]: 1 ♀ – 19.07.1993, leg. RD; 1 ♀ – 19.07.2011, leg. RD; 1 ♂, 1 ♀ – 20.07.2022, leg. WTS; Grabowiec Res. [DA79]: 1 ♂ – 18.06.1995, leg. WŻ; Grabówka [CA07]: 1 ♀ – 10.07.2021, sandpit, leg. JG; Katowice-Borki [CA67]: 1 ♂ – 22.06.2024, leg. AL; Łęczok Res. [CA05]: 1 ♂ – 08.06.2018, leg. JG; 2 ♂♂, 6 ♀♀ – 16–30.06.2023, light trap, leg. GG, 3 ♂♂, 1 ♀ – 07.2023, light trap, leg. GG; Mysłowice-Ćmok [CA66]: 1 ♀ – 27.05.2018, UV bulb, leg. AL; Pusta Kuźnica [CB30]: 1 ♂ – 24.06.2023, UV trap, leg. TB.; Ruda Śląska, Bielszowice Forest [CA47]: 1 ♂ – 11.07.2004, leg. JG; 1 ♂, 1 ♀ – 18.07.2004, leg. JG; Ruda Śląska, Halemba Forest [CA46]: 1 ♀ – 07.07.2001, leg. JG; Ruda Śląska-Wirek [CA47]: 1 ♀ – 12.06.2022, Szpitalna env., leg. JG; 1 ♂, 1 ♀ – 15.06.2022, UV trap, Szpitalna env., leg. JG; 1 ♂ – 24.06.2022, UV trap, leg. JG; 3 ♀♀ – 29.05.2024, Szpitalna, UV trap, leg. JG; 1 ♀ – 26.06.2024, Szpitalna, UV trap, leg. JG; 1 ♀ – 28.06.2024, UV trap, leg. JG; 1 ♀ – 17.08.2024, UV trap, leg. JG; Rudziniec [CA18]: 1 ♂ – 17.06.2022, leg. KC; Tarnowskie

Góry-Repty [CA48]: 2 ♀♀ – 29.07.1993; leg. RD; Tworóg [CB30]: 1 ♂, 1 ♀ – 07.07.2006, leg. HS; **Western Beskidy Mts.:** Skrzyczne Mt. [CA50]: 3 ♂♂, 3 ♀♀ – 06.07.2024, leg. WTS; Węgierska Górka [CV69]: 1 ♂ – 12.06.2024, leg. GJ; Wisła [CA40]: 1 ♂, 2 ♀♀ – 01–08.08.1994, leg. WŻ; Kocierz Mt. [CA71]: 4 ♂♂ – 03.07.2022, leg. WTS; **Western Sudety Mts.:** Karlów env., Lisia Przełęcz [WR99]: 2 ♂♂, 1 ♀ – 14.08.2023, clearing, leg. WTS; Karpacz [WS52]: 4 ♂♂, 2 ♀♀ – 21.07.2022, UV trap, leg. Zespół UAM w Poznaniu; Śnieżka Mt. [WS52]: 1 ♂ – 25.07.2022, UV trap, leg. Zespół UAM w Poznaniu; **Wielkopolska-Kujawy Lowland:** Cierpice-Kąkol, Zielona Struga [CD27]: 1 ♀ – 05.07.2022, leg. MS; Toruń, airfield [CD37]: 1 ♂ – 13.06.2001, leg. KS; Toruń, military training ground [CD37]: 1 ♂ – 14.06.2012, leg. MK.

Neomochtherus geniculatus (Meigen, 1820)

Material examined: **Baltic Coast:** Sarbinowo [WA61]: 1 ♂ – 08–18.08.1995, leg. JB; **Małopolska Upland:** Grabowiec Res. [DA79]: 2 ♀♀ – 12.07.1996, leg. RD; Lubień, Szczebel Mt. [DA20]: 1 ♀ – 09.08.2021, wet meadow, leg. MS; **Masurian Lake District:** Czarny Bryńsk [DD19]: 1 ♀ – 22.08.1996, *Quercus roboris-pinetum*, leg. KS; Stoczek Klasztorny [DE89]: 1 ♀ – 23.07.2022, leg. WS; **Upper Silesia:** Bytom [CA57]: 1 ♀ – 25.07.2022, USMB, leg. KC; 1 ♀ – 12.07.2024, USMB, on window, leg. WTS; Bytom, Segiet Res. env. [CA48]: 1 ♀ – 28.07.2021, Hałda Popłuczkowa, leg. WTS; 1 ♀ – 20.07.2022, leg. WTS; Łęczok Res. [CA05]: 1 ♂ – 07.2023, light trap, leg. GG; Mikołeska [CB40]: 1 ♀ – 15.08.2022, leg. WŻ; Sączów [CA58]: 1 ♀ – 17.07.2022, leg. WS; **Western Beskidy Mts.:** Palenica [DV67]: 1 ♂ – 06.08.2024, leg. WS; Żywiec, Moszczenica [CA70]: 1 ♀ – 18.08.2023, leg. GJ; **Western Sudety Mts.:** Jagniątków [WS43]: 1 ♂ – 12-13.08.2020, UV trap, leg. Zespół UAM w Poznaniu; Śnieżka Mt. [WS52]: 2 ♂♂, 1 ♀ – 25.07.2022, UV trap, leg. Zespół UAM w Poznaniu; **Wielkopolska-Kujawy Lowland:** Poznań [XU20]: 1 ♂ – 08.07.2024, garden, leg. JM.

Neomochtherus pallipes (Meigen, 1820)

Material examined: **Baltic Coast:** ad Gardno Lake [XA36]: 1 ♀ – 20.08.2024, viewing platform, leg. WS; **Masurian Lake District:** Krzywe, Wigry NP [FE39]: 1 ♀ – 01.08.2002, leg. DŻ; **Podlasie:** Anusin [FD40]: 1 ♂ – 11.06.2016, leg. ALs; **Pomeranian Lake District:** Bory Tucholskie [CE27]: 1 ♀ – 08.07.2001, *Sedo-Sclerantheta*, leg. MBo; Grupa [CE43]: 1 ex. – 24.07.1995, leg. KS; **Upper Silesia:** Konopiska ad Częstochowa [CB62]: 1 ♂ – 10.07.2019, leg. TK; **Wielkopolska-Kujawy Lowland:** Kostrzyń nad Odrą [VU72]: 1 ♀ – 05–06.08.2011, leg. MK; Toruń, airfield [CD37]: 1 ♀ – 11.07.2001, leg. KS; 1 ♀ – 13.07.2001, leg. KS; 1 ♂ – 16.07.2001; leg. KS; Toruń-Bielany [CD37]: 1 ♂ – 04.07.2011, leg. BP; 1 ♀ – 05.07.2011, leg. BP; 1 ♂ – 07.07.2011, leg. BP; Toruń-Stare Miasto [CD37]: 1 ♂ – 31.07.2011, leg. MK; 1 ♀ – 04.07.2022, leg. MS; Toruń-Wrzosy [CD37]: 1 ♂ – 14.07.2003, leg. KS; Toruń, Góra Żymierskiego, military training ground [CD37]: 1 ♂ – 22.06.2011, leg. AG; 2 ♂♂ – 27.06.2011, leg. AG; Toruń, Las Piwnicki [CD38]: 1 ♂ – 19.06.2011, leg. MK.

Pamponerus germanicus (Linnaeus, 1758)

Material examined: **Baltic Coast:** Czolpinio [XA46]: 1 ♂, 3 ♀♀ – 25.05.2024, leg. WTS; Hel Bór [CF55]: 1 ♂ – 20.06.1998, *Cladonio-Pinetum*, leg. RD; Kluki [XA46]: 2 ♂♂ – 25.05.2024, leg. WTS; Międzyzdroje [VV67]: 1 ♂ – 03.06.1998, leg. HS; **Małopolska Upland:** Polana Polichno Res. [DA69]: 1 ♀ – 17.06.1995, leg. RD; 1 ♀ – 02.06.2022, leg. WTS; **Masurian Lake District:** Bratian ad Nowe miasto Lubawskie [DE02]: 1 ♀ – 15.05.2000, leg. KS; Dwórzno, gm. Górowo Iławeckie [DF61]: 2 ♀♀ – 10.06.2023, leg. WTS; Górzno [DD19]: 1 ♀ – 30.06.1995, leg. KS; 1 ♀ – 29.05.1996, leg. KS; Nosek [DD19]: 1 ♂ – 03.06.1997, leg. KS; Rogówko [EE99]: 1 ♀ – 28.05.2024, leg. WTS; **Upper Silesia:** Bojszowy Nowe ad Pszczyna [CA54]: 1 ♀ – 02.07.2022, leg. LK; Brzękowiec-Wał [CA48]: 1 ♀ –

25.05.2002, leg. JG; Bytom [Beuthen] [CA48]: 1 ♀ – 11.06.1929, leg. FK; 1 ♀ – 10.06.1932, leg. FK; Kalety-Drutarnia [CB40]: 1 ♀ – 15.06.2002, leg. JG; Kośmidry [CB21]: 1 ♂ – 14.05.1994, leg. WS; Ligota Tworkowska [CA04]: 1 ♀ – 13.06.1953, leg. AD; Łącza [CA17]: 1 ♀ – 27.05.2023, leg. KC; Pyrzowice [CA69]: 1 ♀ – 01.06.2022, leg. LK; Ruda Śląska, Halemba Forest [CA46]: 1 ♂ – 27.06.2004, leg. JG; 1 ♀ – 30.05.2004, leg. JG; Świerklaniec [CA58]: 1 ♂ – 23.05.2010, leg. WTS; **Wielkopolska-Kujawy Lowland**: Toruń-Glinki [CD37]: 1 ♀ – 26.06.1997, leg. KS; Toruń-Góra Żymierskiego, military training ground [CD37]: 1 ♀ – 24.06.2005, *Sedo-Sclerantha*, leg. KS.

***Philonicus albiceps* (Meigen, 1820)**

Material examined: **Baltic Coast:** Kuźnica [CF46]: 1 ♂, 1 ♀ – 25.06.1996, leg. RD; Piaski II, Mierzeja Wiślana [DF03]: 1 ♂, 1 ♀ – 15.07.2009, at light, leg. RD; Rowy [XA35]: 1 ♀ – 31.07.2004, pine forest, gray dune, leg. WŻ; 1 ♂, 1 ♀ – 31.07.2006, coastal dune, leg. WŻ; Sarbinowo [WA61]: 1 ♀ – 08–18.08.1995, leg. JB; Unieście [WA71]: 2 ♀♀ – 21–25.08.1995, leg. JB; Wicie, 4 km W of [WA94]: 1 ♀ – 23.07.2004, overgrowing dune, leg. WŻ; 1 ♂ – 25.07.2004, overgrowing dune, leg. WŻ; Wiselka ad Wolin [VV67]: 2 ♂♂, 1 ♀ – 17–25.07.1997, leg. RD; Władysławowo [CF37]: 1 ♀ – 06–23.06.1993, leg. RD; **Białowieża Primeval Forest:** Białowieża Forest [FD85]: 1 ♀ – 16.07.1995, leg. RD; **Kraków-Wieluń Upland:** Pustynia Błędowska, Klucze env. [CA97]: 3 ♂♂, 3 ♀♀ – 12.08.2023, on sand, leg. WTS; **Małopolska Upland:** Gaj ad Przedbórz [DB25]: 1 ♂, 1 ♀ – 09.08.1997, leg. WŻ; Kików [DA98]: 3 ♀♀ – 14.07.1996, leg. RD; Pasturka [DA69]: 1 ♂ – 13.07.1996, leg. WŻ; Szczaworyż [DA88]: 5 ♂♂, 2 ♀♀ – 19.06.1995, leg. RD; **Masurian Lake District:** Czarny Bryńsk [DD19]: 1 ♂ – 14.08.1997, *Sedo-Sclerantha*, leg. KS; Przerośl [FF01]: 1 ♀ – 03.08.2002, sandpit, leg. WŻ; **Podlasie:** Międzyrzecze Res., Knyszynska Forest [FE60]: 1 ♂, 1 ♀ – 30.07.2022, leg. ALs; **Upper Silesia:** Brusiek [CB40]: 1 ♂ – 04.08.2023, leg. WS; Bukowno ad Olkusz [CA86]: 1 ♀ – 19.07.1994, leg. WŻ; Bytom-Bobrek [CA47]: 1 ♂ – 19.08.1938, leg. MB; Bytom [Beuthen] [CA48]: 1 ♀ – 27.6.[19]37, leg. FK; Góra Wawrzyńca [CA45]: 1 ♂ – 18.07.2019, at light, leg. JG; Grabówka [CA07]: 1 ♂ – 15.08.2022, leg. WTS; 2 ♂♂, 1 ♀ – 23.07.2024, [prey: *Enallagma cyathigerum* (Charpentier, 1840)], leg. WŻ; Jamna Stream Valley [CA56]: 1 ♂, 1 ♀ – 05.08.1998, leg. JG; Łącza, Pustynia Łączańska [CA17]: 1 ♂, 2 ♀♀ – 15.08.2022, leg. WTS & KC; Ruda Śląska-Halemba [CA46]: 3 ♂♂, 1 ♀ – 29.07.2001, sedimentation tank env., leg. JG; Rybnik-Piaski [CA25]: 1 ♀ – 26.08.1964, leg. AD; **Wielkopolska-Kujawy Lowland:** Buczkowo [CD26]: 3 ♂♂, 1 ♀ – 24.08.1996, *Sedo-Scierantha*, leg. KS; Bydgoszcz-Wyspa Młyńska [YU09]: 1 ♂ – 01.07.2022, leg. MS; Mosina [XT38]: 1 ♀ – 21.06.2024, leg. GJ; Toruń, military training ground [CD37]: 3 ♂♂, 7 ♀♀ – 26.08.2011, leg. MK; 12 ♂♂, 5 ♀♀ – 17.08.2011, leg. MK; 1 ♂ – 05.07.2012, leg. MK; Toruń, airfield [CD37]: 1 ♂ – 11.06.2011, leg. MK; 1 ♂ – 27.06.2011, leg. MK; 2 ♀♀ – 14.08.2011, leg. MK; Toruń, Las Piwnicki [CD38]: 19.07.2011, leg. MK; Toruń, Kępa Bazarowa [CD37]: 1 ♂, 3 ♀♀ – 18.08.2011, leg. MK; Toruń-Wrzosy [CD37]: 1 ♀ – 23.08.2003, leg. KS; Zbocza Płutowskie Res. [CE20]: 1 ♂, 1 ♀ – 25.07.1997, *Festuco-Brometea*, leg. KS; 2 ♂♂ – 10.08.1997, *Festuco-Brometea*, leg. KS; 1 ♂ – 16.07.1998, leg. KS; 1 ♀ – 22.07.1998, leg. KS; 1 ♀ – 16.07.1999, *Arrhenatherion-elatioris*, leg. KS; 1 ♀ – 09.08.1999, *Rhamno-Prunetea*, leg. KS; 1 ♀ – 18.08.1999, leg. KS.

***Rhadiurgus variabilis* (Zetterstedt, 1838)**

Material examined: **Masurian Lake District:** Ostróda [DE35]: 1 ♀ – 06.1996, leg. KS; **Upper Silesia:** Lubliniec [CB31]: 1 ♀ – 27.06.1994, leg. RD; **Wielkopolska-Kujawy Lowland:** Dobięgniewo [CD83]: 1 ♂ – 22.05.2011, leg. MK; Toruń, airfield [CD37]: 1 ♀ – 31.05.1995, leg. KS; 1 ♀ – 08.05.2000, leg. KS; 24.05.2001, leg. KS; Toruń, Las Piwnicki [CD38]: 1 ♀ – 19.06.2011, leg. MK; Toruń-Stawki [CD47]: 1 ♀ – 11.06.2013, leg. KS.

Stilpnogaster aemula (Meigen, 1820)

Material examined: Western Beskidy Mts.: Babia Góra Mt., Górny Płaj [CV99]: 1 ♂ – 15.07.1989, leg. RD.

Stilpnogaster aemula is a rare, mountainous species. In Poland was recorded mostly in the second half of the 19th century in Karkonosze (Scholtz, 1851; Schneider, 1853; Riedel, 1930) and Tatra Mountains (Nowicki, 1867; Loew, 1870). Due to their location, the records from the Hel Peninsula by Enderlein (1908) seem unreliable. The most recent information was given by Palaczyk and Klasa (2003) from the Babia Góra mountain range.

Tolmerus atricapillus (Fallén, 1814)

Material examined: Baltic Coast: ad Gardno Lake [XA36]: 1 ♂ – 20.08.2024, viewing platform, leg. WS; Rowy [XA35]: 1 ♂ – 24.08.2024, leg. WS; Smołdzino, Słowiński NP [XA45]: 1 ♀ – 29.07.2004, coniferous forest, leg. WŻ; Wydma Łącka [XA67]: 1 ♂, 1 ♀ – 19.08.2024, leg. WS; **Białowieża Primeval Forest:** Białowieża Forest [FD84]: 1 ♂ – 14.09.1997, 494C, leg. RD; Białowieża Forest [FD95]: 1 ♂ – 15.09.1997, 229B, leg. Daniel Kubisz; **Bieszczady Mts.:** Procisne [FV25]: 8 ♂♂, 1 ♀ – 05.08.2022, meadow in the San valley, leg. WTS; Ustajowa Górna, Holica Mt. [FV17]: 1 ♂ – 07.08.2022, leg. WTS; **Eastern Beskidy Mts.:** Brelików [FV18]: 1 ♀ – 08.08.2022, leg. WTS; **Eastern Sudety Mts.:** Złoty Stok, Hałda Storczykowa [XR38]: 1 ♀ – 27.08.2022, leg. KC; **Kraków-Wieluń Upland:** Klucze env., Pustynia Błędowska [CA97]: 1 ♀ – 11.08.2023, leg. WTS; Złota Góra, Ojców NP [DA16]: 1 ♂, 2 ♀♀ – 12.08.1996, leg. RD; **Małopolska Upland:** Grabowiec Res. [DA79]: 1 ♀ – 12.07.1996, leg. RD; Grabowiec Res. [DA69]: 1 ♂ – 16.06.1999, leg. RD; Krzyżanowice Res. [DA68]: 1 ♀ – 13.07.1996, leg. RD; Lubień, Szczebel Mt. [DA20]: 1 ♀ – 02.08.2021, forest Edge, leg. MS; Skorocice [DA78]: 1 ♀ – 14.07.1996, leg. RD; Skotniki Górne Res. [DA78]: 4 ♀♀ – 14.07.1996, leg. RD; **Masurian Lake District:** Czarny Bryńsk [DD19]: 1 ♀ – 22.08.1996, *Artemisietea*, leg. KS; Gutowo [DE10]: 2 ♀♀ – 12.08.1997, *Sedo-Sclerantheta*, leg. KS; Okalewko [DD08]: 2 ♂♂ – 09.08.1996, *Quercus roboris-Pinetum*, leg. KS; 1 ♀ – 09.08.1996, *Peucedano-Pinetum*, leg. KS; **Nowy Targ valley:** Murzasichle [CV36]: 2 ♀♀ – 14.07.2024, leg. WS; Zakopane [DV25]: 1 ♀ – 24.07.2023, 900-910m, leg. MS; **Podlasie:** Białystok [FD48]: 1 ♀ – 01.09.2023, leg. ALs; Doktorce [FD46]: 1 ♀ – 05.09.2024, leg. ALs; **Pomeranian Lake District:** Grupa [CE43]: 1 ♂ – 24.07.1995, leg. KS; 1 ♂ – 12.08.1997, *Sedo-Sclerantheta*, leg. KS; Ocypl-Osowo Leśne, Bory Tucholskie [CE27]: 1 ♂, 1 ♀ – 02.07.2001, *Artemisietea* and other, leg. MBo; Zabijak [CE44]: 1 ♂ – 28.07.1999, leg. KS; **Sandomierska Lowland:** Wierzchosławice ad Tarnów [DA84]: 1 ♂, 2 ♀♀ – 27.08.1994, leg. WŻ; **Świętokrzyskie Mountains:** Świętokrzyski NP, o.o. Jastrzębi Dół [DB93]: 1 ♀ – 15.07.-03.09.2009, oddz. 181d, pheromone trap IBL2, leg. ŚPN; **Upper Silesia:** Brusiek [CB40]: 1 ♂ – 04.08.2023, leg. WS; Bytków [CA57]: 1 ♀ – 02.09.2022, leg. LK; Bytom, Hałda popłuczkowa [CA48], 3 ♂♂, 1 ♀ – 29.09.2023, leg. WTS; Bytom-Szombierki [CA47]: 1 ♂, 1 ♀ – 20.08.1995, leg. WŻ; Bytom-Szombierki [CA57]: 1 ♂ – 19.08.2001, leg. WŻ; Bytom, Segiet Res. env. [CA48]: 4 ♂♂, 3 ♀♀ – 20.07.2022, leg. WTS; 1 ♂ – 05.08.2022, leg. WŻ; 2 ♂♂, 2 ♀♀ – 12.08.2022, leg. WŻ; 1 ♀ – 25.07.2022, leg. JG; Bytom, L. Stolarzowice [CA48]: 2 ♂♂ – 20.08.2023, forest edge, leg. WŻ; 1 ♂ – 12.08.2023, railway embankment, leg. WŻ; Bytom [CA58]: 1 ♂, 1 ♀ – 13.08.2022, leg. WTS; Chorzów, Park Śląski [CA57]: 1 ♂ – 21.08.2017, leg. A. Masłowski; 1 ♂ – 10.07.2022, leg. WS; Chorzów, open-air museum [CA57]: 1 ♀ – 26.07.2024, leg. WTS; Chorzów, Las Załęski, Uroczysko Buczyna env. [CA56]: 1 ♀ – 30.07.2023, leg. WTS; Grabówka [CA07]: 2 ♀♀ – 17.08.2018, leg. JG; Imielin [CA75]: 1 ♂, 1 ♀ – 16.08.2023, leg. AT; Konopiska ad Częstochowa [CB62]: 1 ♂, 1 ♀ – 16.08.2018, leg. TK; 1 ♂, 2 ♀♀ – 18.09.2019, leg. TK; Katowice, Murcki [CA66]: 1 ♂ – 06.09.2023, leg. LK; Kopanina [CA49]: 1 ♂ – 11.09.2016, leg. A., JG; Korzonek [CA07]: 1 ♂ – 23.07.2024, leg. WŻ;

Lubliniec [CB31]: 1 ♂ – 23.07.1994, leg. RD; 2 ♂♂, 1 ♀ – 07.08.1994, leg. RD; 1 ♂ – 06.07.1996, leg. RD; Łącza, Pustynia Łączańska [CA17]: 1 ♂, 2 ♀♀ – 15.08.2022, leg. WTS & KC; Łęczok Res. [CA05]: 1 ♀ – 07.2023, light trap, leg. GG; Nakło-Chechło [CA59]: 1 ♂ – 22.08.1996, leg. WŻ; Nakło-Chechło Lake env. [CA59]: 1 ♂, 1 ♀ – 17.08.2022, leg. WTS; Ruda Śląska-Wirek [CA47]: 1 ♂ – 12.08.2000, "Tele", leg. JG; 1 ♀ – 25.08.2011, Szpitalna env., leg. JG; 1 ♀ – 07.08.2017, Szpitalna env., leg. JG; 1 ♂ – 12.09.2017, Szpitalna env., leg. JG; Ruda Śląska, Bielszowice Forest [CA47]: 1 ♂ – 19.09.2004, leg. JG; Ruda Śląska, Halemba Forest [CA46]: 1 ♂, 1 ♀ – 15.08.2001; leg. JG; Ruda Śląska-Wirek [CA47]: 1 ♀ – 26.07.2001; leg. JG; 1 ♂, 1 ♀ – 23.07.2003, Szpitalna env. leg. JG; 1 ♂ – 09.08.2003; leg. Teresa & Horst Grzywocz; 1 ♀ – 03.09.2004, Szpitalna env., leg. JG; 1 ♂ – 09.2005, Szpitalna, leg. JG; Rudziniec, Łaskarzewka Forestry [CA18]: 4 ♂♂ – 26.09.2021, leg. KC; Rudziniec [CA18]: 1 ♂ – 27.08.2022, leg. KC; Siemianowice Śląskie-Michałkowice [CA57]: 1 ♀ – 24.08.2022, leg. WS; 1 ♂ – 29.07.2024, leg. WS; Siemianowice Śląskie, Bażantarnia [CA57]: 1 ♂ – 20.09.2022, leg. WS; Siemianowice Śląskie-Bytków [CA57]: 1 ♂ – 17.08.2024, leg. LK; Stanica [Stanitz] [CA26]: 1 ♂ – 06.1933, leg. ED; Świerklaniec, Zalew Chechło-Nakło [CA59]: 1 ♀ – 18.08.2023, leg. WŻ; Zabrze-Rokitnica [Rokittnitz] [CA48]: 1 ♀ – 04.08.1926, leg. n/a; Żabie Doły [CA57]: 1 ♀ – 05.09.2021, leg. WS; Zabrze, Makoszowy Forest [CA47]: 1 ♂, 1 ♀ – 12.08.2001, leg. JG; **Western Beskidy Mts.:** Cieńków [CV59]: 1 ♀ – 01.08.1995, 800 m a.s.l., leg. WŻ; Palenica [DV67]: 2 ♂♂, 1 ♀ – 06.08.2024, leg. WS; Ustroń-Jaszowiec [CA40]: 1 ♂ – 09.08.2024, leg. WS; Węgierska Górka [CV69]: 1 ♂ – 02.08.2023, leg. GJ; Wisła [CA40]: 2 ♂♂, 1 ♀ – 01–08.08.1994, leg. WŻ; 1 ♂, 1 ♀ – 08.08.1996, leg. WŻ; Wisła-Malinka [CV59]: 1 ♂ – 31.07.1996, leg. WŻ; 1 ♂ – 09.08.1996, leg. WŻ; 1 ♂ – 28.08.2022, leg. WŻ; Wisła-Czarne [CV59]: 1 ♀ – 02.08.1996; leg. WŻ; 2 ♂♂, 1 ♀ – 08.08.1996, leg. WŻ; **Western Sudety Mts.:** Karłów env. [WR99]: 2 ♂♂ – 14.08.2023, clearing, leg. WTS; 3 ♂♂, 5 ♀♀ – 14.08.2023, meadow, leg. WTS; Karpacz [WS52]: 1 ♀ – 08.2021, leg. MS; 1 ♂ – 21.07.2022, UV trap, leg. Zespół UAM w Poznaniu; Wambierzyce env. [XR09]: 1 ♀ – 15.08.2023, forest edge, leg. WTS; **Wielkopolska-Kujawy Lowland:** Bydgoszcz-Fordon [CD09]: 1 ♂ – 02.08.2022, Nowy Fordon, dry meadow, leg. WŻ; Kulin Res. ad Włocławek [CD73]: 1 ♂ – 02.08.1999, leg. KS; 1 ♂, 1 ♀ – 03.06.2007, leg. MK; Toruń, airfield [CD37]: 1 ♀ – 23.08.2011, leg. MK; Toruń-Bielany [CD37]: 1 ♀ – 14.07.2011, leg. BP; Toruń, military training ground [CD37]: 1 ♀ – 17.08.2011, leg. MK; 3 ♂♂, 2 ♀♀ – 26.08.2011, leg. MK; Toruń, Las Piwnicki [CD38]: 1 ♀ – 19.07.2011, leg. MK; 1 ♂, 1 ♀ – 27.08.2011, leg. MK; Toruń, Góra Żymierskiego, military training ground [CD37]: 1 ♀ – 22.06.2011, leg. AG; Zbocza Płutowskie Res. [CE20]: 1 ♀ – 10.08.1997, leg. KS; 1 ♂ – 28.07.1997, *Festuco-Brometea*, leg. KS; 1 ♂ – 20.08.1999, *Festuco-Brometea*, leg. KS.

Tolmerus cingulatus (Fabricius, 1781)

Material examined: **Białowieża Primeval Forest:** Białowieża Forest [FD85]: 2 ♂♂ – 16.07.1995, leg. RD; 1 ♂ – 20.07.1995, leg. RD; **Kraków-Wieluń Upland:** Olsztyn ad Częstochowa [CB72]: 1 ♀ – 13.07.2022, leg. LK; **Lublin Upland:** Nałęczów [EB88]: 1 ♂, 1 ♀ – 29.07.2023, leg. CG; **Małopolska Lowland:** Góry Pieprzowe [EB51]: 1 ♂ – 13.08.2001, leg. KS; **Masurian Lake District:** Czarny Bryńsk [DD19]: 1 ♂, 2 ♀♀ – 22.08.1996, leg. KS; Gutowo [DE10]: 2 ♂♂ – 12.08.1997, *Sedo-Sclerantheta*, leg. KS; **Mazowiecka Lowland:** Lipiny-Cebulówka [EB29]: 1 ♂, 2 ♀♀ – 30.07.2021, leg. WTS; **Podlasie:** Białystok [FD48]: 2 ♂♂, 3 ♀♀ – 01.07.2020, flower meadows, leg. ALs; 2 ♂♂, 2 ♀♀ – 27.07.2020, flower meadows, leg. ALs; 1 ♂ – 10.07.2024, leg. ALs, 2 ♂♂ – 31.07.2024, leg. ALs; 1 ♀ – 01.08.2024, leg. ALs; Jeńki [FD27]: 2 ♀♀ – 21.07.2022, leg. ALs; 1 ♂ – 26.06.2024, leg. ALs; Osowiec Twierdza [FE02]: 1 ♀ – 05.07.2011, leg. MK; **Pomeranian Lake District:** Dragacz [CE42]: 1 ♂ – 20.08.1995, leg. KS; Grudziądz [CE52]: 1 ♂ – 05.08.1996, leg. KS; Ocypel-Klaniny, Bory Tucholskie [CE16]: 1 ♀ – 12.07.2001, *Pinus sylvestris* forest, leg. MBo; 1 ♀ – 20.07.2001, *Pinus sylvestris* forest, leg. MBo; **Upper**

Silesia: Bytom, L. Stolarzowice [CA48]: 1 ♀ – 20.08.2023, forest edge, leg. WŻ; Chorzów, open-air museum [CA57]: 2 ♂♂, 1 ♀ – 12.08.2021, leg. WTS; 1 ♂, 1 ♀ – 25.08.2023, leg. LK; 1 ♂, 2 ♀♀ – 26.07.2024, leg. WTS; Imielin [CA75]: 1 ♀ – 16.08.2023, leg. AT; Lubliniec [CB31]: 1 ♀ – 15.08.1995, leg. RD; 22.08.1996, leg. RD; Mikołów-Borowa Wieś [CA46]: 4 ♀♀ – 09.08.2001, leg. JG; Mikołów, Fiołkowa Góra [CA46]: 1 ♀ – 01.07.1995, leg. JG; Mikołowska [CB40]: 2 ♀♀ – 15.08.2022, leg. WŻ; Nakło-Chechło Lake env. [CA59]: 3 ♀♀ – 17.08.2022, leg. WTS; 1 ♂ – 10.08.2014, leg. WŻ; Ruda Śląska-Wirek [CA47]: 1 ♀ – 03.07.2018, Szpitalna env., leg. JG; 1 ♂ – 15.08.2001, leg. JG; 11.08.2006, Szpitalna, leg. JG; Stolarzowice Forestry [CA48]: 1 ♂ – 27.07.2024, leg. WŻ; Świerklaniec, Zalew Chechło-Nakło [CA59]: 1 ♀ – 18.08.2023, leg. WŻ; **Wielkopolska-Kujawy Lowland:** Dziekanowice, open-air museum [XU62]: 1 ♂, 1 ♀ – 13.07.2021, leg. MS; Kulin Res. ad Włocławek [CD73]: 1 ♀ – 02.08.1999, leg. KS; Poznań [XU20]: 1 ♀ – 08.07.2024, garden, leg. JM; Toruń, Kępa Bazarowa [CD37]: 1 ♀ – 17.07.2011, leg. MK.

***Tolmerus pyragra* (Zeller, 1840)**

Material examined: **Baltic Coast:** Wisiełka ad Wolin [VV67]: 1 ♂, 1 ♀ – 17–25.07.1997, leg. RD; **Kraków-Wieluń Upland:** Pustynia Błędowska, Klucze env. [CA97]: 1 ♂, 2 ♀ – 07.08.2023, leg. WS; 4 ♂♂, 4 ♀♀ – 12.08.2023, on sand, leg. WTS; **Pomeranian Lake District:** Grupa [CE43]: 1 ♀ – 24.07.1995, leg. KS; Ocypeł-Klaniny, Bory Tucholskie [CE16]: 1 ♂ – 14.07.2001, *Pinus sylvestris* forest, leg. MBo; **Upper Silesia:** Dąbrowa Górnicza env.; Pogoria I [CA77]: 1 ♂ – 14.09.2023, leg. LK; Gliwice-Brzezinka [CA27]: 1 ♂ – 21.08.1934, leg. A. Kuntze; **Wielkopolska-Kujawy Lowland:** Lubsko [VT93]: 1 ♂ – 17.08.1995, leg. KS; Toruń-Wrzosy [CD37]: 1 ♂ – 14.07.2023, [leg. KS]; Toruń, Las Piwnicki [CD38]: 1 ♂ – 19.07.2011, leg. MK.

Brachyrophalinae Hardy, 1926

***Cyrtopogon lateralis* (Fallén, 1814)**

Material examined: **Białowieża Primeval Forest:** Białowieża Forest [FD85]: 1 ♀ – 18.07.1995, leg. RD; **Eastern Beskidy Mts.:** Makowa ad Przemyśl [FV19]: 1 ♀ – 07.07.1995, leg. RD; **Masurian Lake District:** Górzno [DD19]: 1 ♀ – 21.06.1996, *Epilobietea angustifolii*, leg. KS; **Nowy Targ valley:** Małe Ciche [DV36]: 1 ♂ – 19.07.2024, leg. WS; **Podlasie:** Krasny Las env., Knyszyn Forest LP [FD59]: 1 ♀ – 18.06.2020, wood pile, leg. RD; **Tatra Mts.:** Toporowa Cyrchla [DV25]: 1 ♂ – 18.07.2024, leg. WS; **Upper Silesia:** Brynek [CA39]: 1 ♂ – 12.06.1997, leg. RD; Bytom [Beuthen] [CA48]: 1 ♂ – 06.06.1890, leg. ED; 1 ♀ – 12.06.1930, leg. n/a; 1 ♀ – 25.06.1930, leg. n/a; 1 ♀ – 15.06.1935, leg. FK; Bytom-Miechowice [CA48]: 1 ♀ – 25.05.2011, leg. AL.; 2 ♂♂ – 25.05.2011, forest, leg. WŻ; Bytom, Segiet Res. [CA48]: 1 ♀ – 07.06.2011, buffer zone, leg. WŻ; Dobieszowice, Las Wymysłowski [CA68]: 2 ♂♂ – 14.05.2023, leg. WTS; Krywałd [CB40]: 2 ♂♂ – 27.05.2023, leg. WS; Lubliniec [CB31]: 1 ♀ – 22.06.1994, leg. RD; 1 ♂ – 04.05.1995, leg. RD; 1 ♂ – 25.05.1995, leg. RD; Pyrzowice [CA69]: 1 ♂ – 17.05.1995, leg. RD; Tworóg [CB30]: 1 ♂ – 19.06.2005, leg. HS; **Western Beskidy Mts.:** Kocierz Mt. [CA71]: 4 ♂♂ – 03.07.2022, leg. WTS; Potrójna Mt. [CA81]: 1 ♂ – 03.07.2022, leg. WTS; Skrzyczne Mt. [CA50]: 1 ♂ – 06.07.2024, leg. WTS; **Western Sudety Mts.:** Karłów env. [WR99]: 1 ♀ – 14.08.2023, leg. WTS; Lubień, Szczel Mt. [DA20]: 1 ♀ – 03.08.2021, leg. MS.

***Holopogon dimidiatus* (Meigen, 180)**

Material examined: **Małopolska Upland:** Krzyżanowice Res. [DA68]: 2 ♂♂, 4 ♀♀ – 11.07.1994, leg. RD; 1 ♂ – 13.07.1994, leg. RD; 13 ♂♂, 5 ♀♀ – 16.06.1995, leg. RD; 28 ♂♂, 17 ♀♀ – 21.06.1995, leg. RD; 1 ♂, 2 ♀♀ – 21.06.1995, steppe, leg. WŻ; 16 ♀♀ – 13.07.1996, steppe, leg. RD; 4 ♂♂, 2 ♀♀ –

20.06.1997, leg. RD; 4 ♂♂, 4 ♀♀ – 10.06.1998, south slope, leg. RD; 3 ♂♂, 2 ♀♀ – 04.07.1998, leg. RD; 9 ♂♂, 3 ♀♀ – 10.06.1999, leg. RD; 7 ♂♂, 6 ♀♀ – 16.06.1999, leg. RD; Skotniki Górne Res. [DA78]: 4 ♂♂, 3 ♀♀ – 14.07.1996, leg. RD; Skorocice [DA78]: 1 ♀ – 14.07.1996, leg. RD; Skowronno Res. [DA69]: 1 ♂ – 18.06.1995, leg. RD; 2 ♂♂, 2 ♀♀ – 15.07.1996, leg. RD.

***Holopogon fumipennis* (Meigen, 1820)**

Material examined: Małopolska Upland: Kików [DA98]: 2 ♂♂, 1 ♀ – 14.07.1996, leg. RD.

Holopogon fumipennis is a xerothermic species, known only from single localities in south and central Poland: environs of Poznań (Loew, 1840), Głogów (Zeller, 1840), Strzegom (Schneider, 1852), Pepper Mountains in env. of Sandomierz (Noskiewicz, 1953), Kamieńczyce and Jarosław (Noskiewicz, 1959). The record given by Nowicki (1873) is probably situated beyond the current Polish borders.

***Holopogon nigripennis* (Meigen, 1820)**

Material examined: Małopolska Upland: Kików [DA98]: 1 ♀ – 19.06.1995, leg. RD; 1 ♀ – 14.07.1996, leg. RD; Skorocice [DA78]: 1 ♀ – 14.07.1996, leg. RD; 1 ♂ – 19.07.2020; leg. KS; Skowronno Res. [DA69]: 6 ♂♂, 8 ♀♀ – 18.06.1995, leg. RD; 1 ♂ – 20.06.1995, leg. RD; 1 ♂, 1 ♀ – 12.07.1996, leg. JG; 1 ♂ – 10.06.1998, leg. RD; **Pomeranian Lake District:** Grudziądz [CE42]: 1 ♀ – 28.06.2002, leg. KS; **Wielkopolska-Kujawy Lowland:** Unisław [CD29]: 1 ♀ – 21.08.2001, leg. KS; Zbocza Płutowskie Res. [CE20]: 1 ♂, 2 ♀♀ – 16.07.1998, leg. KS; 1 ♀ – 03.08.1998, leg. KS; 1 ♂ – 08.07.1999, *Rhamno-Prunetea*, leg. KS; 3 ♂♂, 4 ♀♀ – 13.07.1999, *Festuco-Brometea*, leg. KS; 1 ♂ – 21.06.2001, leg. KS; 1 ♀ – 12.07.2001, leg. KS; 2 ♀♀ – 20.06.2002, leg. KS; 1 ♂ – 22.05.2002, leg. KS; 1 ♂ – 30.06.2006, leg. KS; 1 ♂ – 24.06.2012, leg. Piotr Olszewski.

***Holopogon priscus* (Meigen, 1820)**

Material examined: Małopolska Upland: Kików [DA98]: 1 ♂, 1 ♀ – 19.06.1995, leg. RD; Murawy Dobromierskie Res. [DB25]: 1 ♀ – 22.06.2021, leg. KS; Pasturka [DA69]: 1 ♀ – 19.06.1997, leg. WŻ; 4 ♂♂, 5 ♀♀ – 19.06.1997, leg. RD; 1 ♀ – 10.06.1998, sands, leg. RD; Pińczów, Góry Pińczowskie [DA69]: 1 ♂, 4 ♀♀ – 02.06.2022, leg. WTS; **Mazowiecka Lowland:** Wizna [ED99]: 2 ♂♂ – 29.05.2000, leg. KS; **Podlasie:** "Kiślaki" dune, Narew valley [FD19]: 3 ♀♀ – 28.05.2000, leg. KS; **Wielkopolska-Kujawy Lowland:** Dobiegniewo [CD83]: 1 ♀ – 15-16.06.2013, leg. KS; Toruń, airfield [CD37]: 1 ♀ – 02.06.2001, leg. KS; 1 ♂ – 24.05.2001, leg. KS; 1 ♂ – 25.06.2001, leg. KS; 1 ♂ – 05.06.2002, leg. KS; 1 ♀ – 11.07.2005, leg. KS; 1 ♂ – 22.05.2013, leg. AG; Toruń-Glinki [CD37]: 1 ♂, 1 ♀ – 26.06.1997, *Sedo-Sclerantheta*, leg. KS; 1 ♀ – 11.06.2013, leg. KS; Toruń, military training ground [CD37]: 1 ♀ – 31.05.2011, leg. AG; 8 ♂♂, 11 ♀♀ – 14.06.2011, leg. MK; 3 ♂♂, 1 ♀ – 19.06.2012, leg. MK; 1 ♂ – 05.07.2012, leg. MK.

***Leptarthrus brevirostris* (Meigen, 1804)**

Material examined: Podlasie: Stójka env., „Grąd Leszczynowe” Biebrza NP [FE00]: 1 ♂, 2 ♀♀ – 28.05.2000, leg. KS.

Leptarthrus brevirostris primarily inhabits mountainous areas but is also found in lower-lying locations. Its distribution in Poland is poorly documented, with most records dating back to the second half of the 19th century, from the Karkonosze Mountains (Zeller, 1841; Scholtz, 1851; Schneider, 1852) and the Tatra Mountains (Nowicki, 1867; Loew, 1870; Bobek, 1890). Recently, the species has been recorded only in the Babia Góra mountain range (Palaczyk & Klasa, 2021).

The newly reported locality in Biebrza NP represents just the second lowland record, with the first being from the Tuchola Forest, as reported by Rübsaamen (1901).

Dasypogoninae Macquart, 1838

***Dasypogon diabolicus* Szczepański, 2023**

Material examined: Małopolska Upland: Krzyżanowice Res. [DA68]: 4 ♂♂, 2 ♀♀ – 11.07.1994, leg. RD; 1 ♂ – 13.07.1994, leg. RD; 1 ♂ – 29.07.1997, leg. HS; 1 ♂, 1 ♀ – 26.07.1998, leg. JG; 1 ♂, 1 ♀ – 20.07.2020, leg. KS; 7 ♂♂, 4 ♀♀ – 04.08.2022, leg. WTS; 4 ♂♂ – 29.07.1997, leg. JG; Skotniki Res. [DA78]: 1 ♂ – 14.07.1996, leg. JG; Skowronno Res. [DA69]: 1 ♂ – 15.07.1996, leg. RD.

Dasypogon diabolicus is a recently described species. The holotype and 24 paratypes of the species are deposited in USMB (Szczepański, 2023).

***Dasypogon diadema* (Fabricius, 1781)**

Material examined: Kraków-Wieluń Upland: Krzczów ad Wieluń [CB47]: 1 ♂ – 01.07.2018, sandy fallow, leg. AM; **Lower Silesia:** Kunice [WS87]: 2 ♀♀ – 19.07.2021, gravel pit, leg. AM; 1 ♂ – 27.06.2021, gravel pit, leg. AM; **Wielkopolska-Kujawy Lowland:** Bydgoszcz-Fordon [CD09]: 1 ♂ – 11.07.1995, leg. TP; 1 ♀ – 15.07.2003, leg. KS; 8 ♂♂, 3 ♀♀ – 02.08.2022, dry meadow, Nowy Fordon, leg. WŻ; Krośnice [XT60]: 1 ♂ – 21.06. – 30.06.2024, leg. N. Tułodziecka; 1 ♂ – 28.06.2024, leg. J. Hysa.

Diocriinae Enderlein, 1936

***Dioctria atricapilla* Meigen, 1804**

Material examined: Baltic Coast: Jastrzębia Góra [CF27]: 1 ♀ – 16.06.1996, leg. RD; Kluki [XA46]: 2 ♂♂, 1 ♀ – 25.05.2024, leg. WTS; 2 ♂♂, 1 ♀ – 25.05.2024, leg. RD; Sulicice [CF27]: 1 ♂ – 21.06.1996, leg. RD; 1 ♂, 1 ♀ – 27.06.1996, leg. RD; **Białowieża Primeval Forest:** Białowieża Forest [FD83/FD84]: 2 ♀♀ – 19.06.–03.07.1994, leg. JG; **Eastern Beskidy Mts.:** Makowa ad Przemyśl [FV19]: 1 ♂ – 07.07.1995, leg. RD; **Kraków-Wieluń Upland:** Balice-Podkamycze [DA14]: 1 ♀ – 19.06.2021, leg. MS; **Lower Silesia:** Popielowska Kolonia, Klink [XS93]: 8 ♂♂, 8 ♀♀ – 19.05.2022, leg. WTS; **Małopolska Upland:** Grabowiec Res. [DA79]: 2 ♂♂, 4 ♀♀ – 18.06.1995, leg. RD; Kików [DA98]: 1 ♂ – 19.06.1995, leg. RD; Krzyżanowice Res. [DA68]: 3 ♂♂, 2 ♀♀ – 16.06.1995, steppe, leg. RD; 1 ♀ – 16.06.1999, leg. RD; 1 ♂ – 15.05.2009, leg. RD; Polana Polichno Res. [DA69]: 3 ♂♂, 3 ♀♀ – 15.06.1995, leg. RD; 7 ♂♂, 1 ♀ – 17.06.1995, leg. RD; 1 ♀ – 20.06.1995, leg. WŻ; 3 ♂♂, 5 ♀♀ – 20.06.1995, leg. RD; 1 ♀ – 19.06.1997, leg. RD; 3 ♂♂ – 09.06.1998, leg. RD; 1 ♀ – 02.06.2022, leg. WTS; Skowronno Res. [DA69]: 1 ♂, 4 ♀♀ – 18.06.1995, leg. RD; 1 ♀ – 20.06.1995, leg. WŻ; 1 ♀ – 10.06.1999, leg. RD; Szczaworyż [DA88]: 1 ♀ – 19.06.1995, leg. RD; **Masurian Lake District:** Czerwonka [FF30]: 1 ♂ – 29.05.2004, leg. ES; Jajkowo [DE00]: 3 ♂♂ – 30.05.1996, slope, southern exhibition, leg. KS; Kobyłty [EE06]: 2 ♂♂ – 31.05.2024, leg. WTS; Nosek [DD19]: 4 ♀♀ – 03.06.1997, leg. KS; Widryny [EE18]: 2 ♂♂, 1 ♀ – 29.05.2024, leg. WTS; **Podlasie:** 1 ♀ – Supraśl, Puszcza Knyszyńska [FD59]: 19–20.05.2023, dolina rzeki Supraśl, leg. RD; **Pomeranian Lake District:** Grudziądz [CE52]: 1 ♀ – 11.06.1995, leg. KS; Michale [CE42]: 1 ♂ – 04.06.1995, leg. KS; **Upper Silesia:** Bojszowy Nowe ad Pszczyna [CA54]: 1 ♀ – 02.07.2022, leg. LK; Bytom [Beuthen] [CA48]: 1 ♂ – 22.06.1932, leg. FK; 1 ♂ – 29.06.1933, leg. FK; Bytom-Miechowice [CA48]: 2 ♂♂, 2 ♀♀ – 31.05.1995, leg. RD; Bytom, Segiet Res. env. [CA48]: 2 ♂♂ – 30.05.1995, leg. WŻ; 2 ♂♂, 3 ♀♀ – 30.05.1995, leg. RD; Grabówka [CA07]: 1 ♀ – 16.05.2022, leg.

JG; Imielin-Gołcówka [CA75]: 1 ♂, 1 ♀ – 06.05.2020, leg. AL; Lubliniec [CB31]: 1 ♂ – 30.05.1993, leg. RD; 1 ♀ – 12.06.1994, leg. RD; 1 ♂ – 14.06.1994, leg. RD; 2 ♀♀ – 22.06.1994, leg. RD; 1 ♂, 1 ♀ – 27.06.1994, leg. RD; Mikołów-Paniowy [CA46]: 1 ♀ – 10.06.1996, leg. JG; Patoki ad Ciasna [CB32]: 1 ♀ – 13.06.1996, leg. RD; Ruda Śląska, Halemba Forest [CA46]: 1 ♂ – 15.04.2016, leg. JG; Ruda Śląska-Wirek [CA47]: 1 ♂ – 30.05.2005, leg. JG; Stanica [Stanitz] [CA26]: 1 ♂ – 27.06.1933, leg. ED; Zbrosławice [CA48]: 1 ♂ – 06.06.1996, leg. JG; **Western Beskidy Mts.:** Pilsko Mt. [CV78]: 1 ♂, 1 ♀ – 06.07.1994, leg. HS; Babia Góra Mt., Klekociny pass [CV99]: 1 ♀ – 05.07.1995, leg. HS; **Wielkopolska-Kujawy Lowland:** Toruń, military training ground [CD37]: 2 ♂♂, 5 ♀♀ – 19.06.2012, leg. MK; Zbocza Płutowskie Res. [CE20]: 1 ♂, 1 ♀ – 05.06.1997, *Festuco-Brometea*, leg. KS; 3 ♂♂ – 10.05.2000, leg. KS.

***Dioctria cothurnata* Meigen, 1820**

Material examined: **Białowieża Primeval Forest:** Białowieża Forest [FD85]: 3 ♂♂, 2 ♀♀ – 14.07.1995, leg. RD; 6 ♂♂, 3 ♀♀ – 15.07.1995, leg. RD; 1 ♂, 1 ♀ – 16.07.1995, leg. RD; 3 ♂♂, 2 ♀♀ – 18.07.1995, leg. RD; 5 ♀♀ – 19.07.1995, leg. RD; 3 ♂♂, 1 ♀ – 20.07.1995, leg. RD; 1 ♂ – 21.07.1995, leg. RD; **Kraków-Wieluń Upland:** Balice-Podkamycze [DA14]: 1 ♂ – 19.06.2021, leg. MS; 1 ♂ – 04.07.2021, leg. MS; 1 ♂ – 29.07.2021, leg. MS; Dolina Sąpowska, Ojców NP [DA16]: 1 ♀ – 11.08.1996, leg. RD; Szczyglice [DA14]: 1 ♀ – 29.07.2021, leg. MS; **Małopolska Upland:** Polana Polichno Res. [DA69]: 2 ♂♂ – 11.07.1996, leg. RD; Skorocice [DA78]: 1 ♀ – 14.07.1996, leg. RD; **Masurian Lake District:** Turtul, Suwałki LP [FF11]: 1 ♂, 1 ♀ – 04.07.1997, leg. RD; **Western Beskidy Mts.:** Jeleśnia [CA70]: 1 ♂ – 04.07.1994, leg. HS; **Wielkopolska-Kujawy Lowland:** Mosina [XT38]: 2 ♀♀ – 21.06.2024, leg. GJ.

***Dioctria humeralis* Zeller, 1840**

Material examined: **Małopolska Upland:** Szczaworyż [DA88]: 2 ♂♂ – 19.06.1995, leg. RD; 1 ♀ – 21.06.1995, leg. RD; Skotniki Górne Res. [DA78]: 1 ♂, 2 ♀♀ – 14.07.1996, leg. RD; 6 ♂♂, 1 ♀ – 15.07.1996, leg. RD.

***Dioctria hyalipennis* (Fabricius, 1794)**

Material examined: **Baltic Coast:** Hel, Bór [CF55]: 3 ♂♂, 2 ♀♀ – 20.06.1998, dunes area, leg. RD; Jastarnia [CF46]: 1 ♂ – 20.06.1998, coniferous forest, leg. RD; Kołczewo ad Wolin env. [VV77]: 1 ♀ – 10.07.2009, leg. RD; Sulicice [CF27]: 1 ♀ – 21.06.1996, leg. RD; 1 ♀ – 27.06.1996, leg. RD; Świnoujście [VV47]: 2 ♀♀ – 28.06.2023, leg. MS; Świnoujście, Park Zdojowy [VV57]: 1 ♀ – 26.06.2023, leg. MS; Świnoujście, Karsiborska Kępa [VV56]: 1 ♀ – 29.06.2023, leg. MS; Wiselka ad Wolin [VV67]: 1 ♀ – 17–25.07.1997, leg. RD; **Białowieża Primeval Forest:** Białowieża Forest [FD83/FD84]: 1 ♀ – 19.06.–3.07.1994, leg. JG; Białowieża Forest [FD85]: 1 ♂, 4 ♀♀ – 15.07.1995, leg. RD; 1 ♀ – 16.07.1995, leg. RD; **Kraków-Wieluń Upland:** Klucze-Osada [CA97]: 1 ♀ – 05.07.2021, leg. MS; Peperówka, OPN buffer zone [DA16]: 1 ♂, 1 ♀ – 28.06.2021, leg. MS; Stodoliska gorge, OPN buffer zone [DA15]: 1 ♀ – 27.06.2021, leg. MS; **Masurian Lake District:** Górzno [DD19]: 1 ♂ – 21.06.1996, *Carpinion-betuli*, leg. KS; 1 ♂ – 03.07.1997, *Carpinion-betuli*, leg. KS; Grzędy, Biebrza NP [FE24]: 1 ♂ – 13.07–10.08.2020, unburned grassland, leg. research team of Forest Research Institute; Hermanowa Wola [EE47]: 3 ♀♀ – 29.05.2024, leg. WTS; Turtul, n. Czarna Hańcza, Suwałki LP [FF11]: 1 ♀ – 02.07.1997, leg. RD; Zatoka Słupiańska, Wigry NP [FE38]: 1 ♀ – 22.07.2001, leg. DŻ; **Podlasie:** Stójka env., „Grząd Leszczynowe” Biebrza NP [FE00]: 2 ♂♂, 1 ♀ – 28.05.2000, leg. KS; **Pomeranian Lake District:** Czarne, Bory Tucholskie [XV25]: 1 ♂ – 04.07.2001, *Molinio-Arrhenatheretea*, leg. MBo; **Upper Silesia:** Brynek [CA39]: 1 ♂, 1 ♀ – 02.07.1994, leg. WŻ; 1 ♀ – 14.06.2005, leg. HS; Bytom-Miechowice [CA47]: 1 ♂, 1 ♀ – 31.05.1995, leg. RD; Bytom-Szombierki, Fazaniec Park [CA47]: 1 ♀ – 16.06.2018, leg. WŻ;

Grabówka [CA07]: 1 ♂, 1 ♀ – 01.06.2024, leg. JG; Lubliniec [CB31]: 1 ♀ – 14.06.1994, leg. RD; 1 ♀ – 22.06.1994, leg. RD; 2 ♀♀ – 27.06.1994, leg. RD; Ruda Śląska, Bielszowice Forest [CA47]: 2 ♀♀ – 11.07.2004, leg. JG; **Western Beskidy Mts.:** Kocierz Mt. [CA71]: 1 ♀ – 03.07.2022, leg. WTS; Skrzyczne Mt. [CA50]: 3 ♂♂, 2 ♀♀ – 06.07.2024, leg. WTS; **Western Sudety Mts.:** Lubień, Szczebel Mt. [DA20]: 1 ♀ – 07.08.2021, leg. MS; Wambierzyce env. [XR09]: 2 ♀♀ – 15.08.2023, forest edge, leg. WTS; **Wielkopolska-Kujawy Lowland:** Buczkowo [CD26]: 1 ♀ – 28.07.1996, *Carpinion-betuli*, leg. KS; Krośnice [XT60]: 1 ♀ – 04.07.2017, leg. Szewczyk; Toruń, airfield [CD37]: 1 ♂ – 06.06.2001, leg. KS; Zbocza Płutowskie Res. [CE20]: 1 ♀ – 05.06.1997, *Festuco-Brometea*, leg. KS.

***Dioctria lateralis* Meigen, 1804**

Material examined: **Eastern Beskidy Mts.:** Pikulice [FA21]: 1 ♀ – 05.07.1995, leg. RD; **Lower Silesia:** Gogolin [BA89]: 1 ♀ – 10.07.2020, leg. JG; **Małopolska Upland:** Krzyżanowice Res. [DA68]: 1 ♂ – 11.07.1994, leg. RD; 3 ♂♂, 2 ♀♀ – 16.06.1995, steppe, leg. RD; 9 ♂♂, 10 ♀♀ – 21.06.1995, steppe, leg. RD; 2 ♂♂, 1 ♀ – 10.06.1996; 1 ♂, 1 ♀ – 13.07.1996, leg. RD; 2 ♂♂, 1 ♀ – 16.06.1999, leg. RD; Łódź, Las Łagiewnicki [CC94]: 1 ♀ – 25.06.1997; leg. RD; Skowronno Res. [DA69]: 2 ♂♂, 2 ♀♀ – 14.07.1996, leg. RD; 4 ♂♂, 4 ♀♀ – 18.06.1995, leg. RD; **Upper Silesia:** Ruda Śląska-Wirek [CA47]: 1 ♂ – 17.08.2024, CA47, leg. JG; **Wielkopolska-Kujawy Lowland:** Zbocza Płutowskie Res. [CE20]: 1 ♀ – 22.07.1998, leg. KS; 1 ♀ – 03.08.1998, leg. KS; 1 ♂, 1 ♀ – 07.06.2001, leg. KS; 2 ♂♂ – 12.07.2001, leg. KS; 2 ♂♂ – 09.07.2002, leg. KS.

***Dioctria linearis* (Fabricius, 1787)**

Material examined: **Kraków-Wieluń Upland:** Kraków, Przegorzały [DA24]: 1 ♀ – 1.06.2023, leg. MS; Kraków, Uroczysko Podgólogórze ecological site [DA14]: 1 ♂ – 02.07.2021, leg. MS; Kraków, Uroczysko w Rząsce ecological site [DA15]: 1 ♀ – 19.06.2022, leg. MS; Peperówka, OPN buffer zone [DA16]: 1 ♂, 1 ♀ – 28.06.2021, leg. MS; **Lower Silesia:** Wojsławice ad Niemcza [XS31]: 1 ♀ – 31.05.2011, arboretum, leg. RD; **Małopolska Upland:** Grabowiec Res. [DA79]: 1 ♂, 2 ♀♀ – 18.06.1995, DA79, leg. RD; 1 ♂ – 12.07.1996, DA79, leg. RD; Łódź, Łagiewniki Forest [CC94]: 1 ♂ – 25.06.1997, leg. RD; Polana Polichno Res. [DA69]: 1 ♀ – 20.06.1995, leg. RD; 1 ♀ – 09.06.1998, leg. RD; **Mazowiecka Lowland:** Płock [DD12]: 1 ♀ – 28.05.2016, leg. n/a; **Pomeranian Lake District:** Grudziądz [CE52]: 1 ♂ – 11.06.1995, leg. KS; **Upper Silesia:** Bytom, Segiet Res. env. [CA48]: 1 ♂ – 20.07.2022, leg. WTS; Mikołów-Mokre [CA46]: 1 ♀ – 27.06.2020, leg. JG; **Western Beskidy Mts.:** Lubień, Szczebel Mt. [DA20]: 1 ♀ – 13.07.2022, leg. MS; Żywiec [CA70]: 1 ♀ – 17.06.2023, leg. GJ; **Wielkopolska-Kujawy Lowland:** Toruń, Las Piwnicki [CD38]: 2 ♀♀ – 26.06.2011, leg. MK; Zbocza Płutowskie Res. [CE20]: 1 ♀ – 21.06.2001, leg. KS.

***Dioctria longicornis* Meigen, 1820 (Fig. 1)**

Material examined: **Małopolska Upland:** Polana Polichno Res. [DA69]: 2 ♂♂ – 15.06.1995, leg. RD; 2 ♂♂, 1 ♀ – 17.06.1995, leg. RD; 2 ♂♂, 1 ♀ – 20.06.1995, leg. RD; 1 ♂, 1 ♀ – 20.06.1995, leg. WŻ; 1 ♀ – 19.06.1997, leg. RD.

In Poland, the species was recorded only once, in the environs of Przemyśl (Bobek, 1894). The presented locality confirms its occurrence in the country. Polana Polichno is a floristic reserve characterized by a unique habitat of steppe flora. The dominant vegetation consists of xerothermic plants, with forest species encroaching into the clearing from the surrounding oak-hornbeam forests.

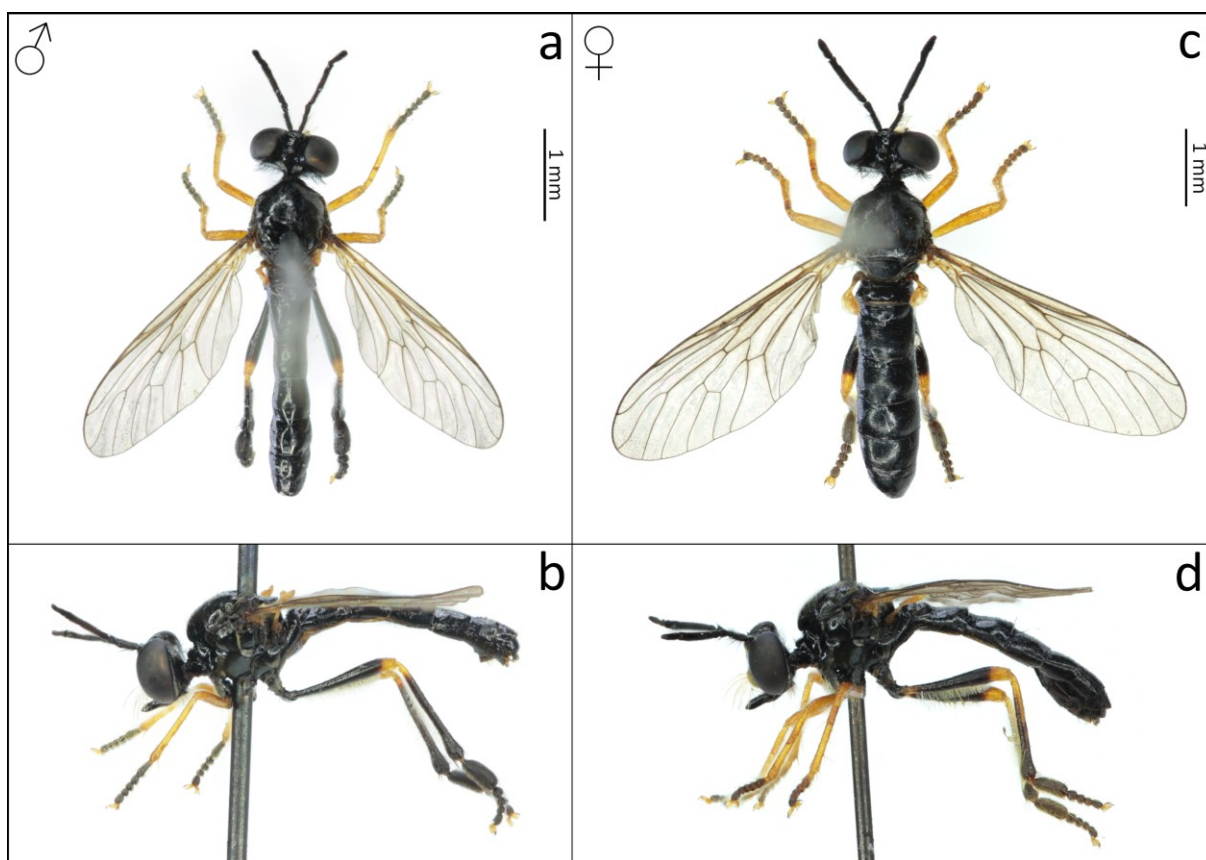


Fig. 1. Habitus of *Dioctria longicornis*, (a) male, dorsal, (b) male, lateral, (c) female dorsal, (d) female, lateral.

Dioctria oelandica (Linnaeus, 1758)

Material examined: **Kraków-Wieluń Upland:** Jaworzno ad Wieluń [CB35]: 1 ♂ – 16.06.2012, leg. WTS; **Lower Silesia:** Ligota Wielka [=Ellguth Ottmachau] [XR59]: 1 ♂ – 23.05.1923, leg. ED; **Małopolska Upland:** Grabowiec Res. [DA79]: 1 ♀ – 18.06.1995, leg. RD; **Masurian Lake District:** Puszcza Borecka [EE79]: 1 ♀ – 03.07.1996, leg. KS; **Upper Silesia:** Bytom, Segiet Res. env. [CA48]: 1 ♂, 1 ♀ – 18.06.1994, leg. WŻ; Ruda Śląska-Bielszowice [CA47]: 1 ♀ – 23.05.2001, heap, leg. JG; Ruda Śląska, Halemba Forest [CA46]: 1 ♀ – 30.05.2004, leg. JG; 1 ♀ – 27.06.2004, leg. JG; 1 ♂ – 15.04.2016, leg. JG; Ruda Śląska-Kochłowice [CA56]: 1 ♂ – 17.06.1983, leg. JK; **Western Sudety Mts.:** 1 ♂ – Sobieszów [WS43]; 23.06.[19]71 leg. n/a; **Wielkopolska-Kujawy Lowland:** Toruń, Kępa Bazarowa [CD37]: 1 ♂ – 31.05.2011, leg. MK.

Dioctria rufipes (De Geer, 1776)

Material examined: **Bieszczady Mts.:** Wołosate [FV23]: 1 ♀ – 05.06.1999, near stream, leg. RD; Wołosate, Kiczera Mt. [FV23]: 1 ♀ – 06.06.1999, leg. RD; **Kraków-Wieluń Upland:** Kraków, Łęg w Przegorzałach [DA24]: 1 ♂ – 01.06.2023, leg. MS; Wierzchowie [DA16]: 1 ♀ – 05.06.2005, leg. JG; **Małopolska Upland:** Polana Polichno Res. [DA69]: 1 ♀ – 09.06.1998, leg. RD; Krzyżanowice Res. [DA68]: 1 ♂ – 16.06.1999, leg. RD; **Masurian Lake District:** Głądy, gm. Górowo Haweckie [DF60]:

1 ♂ – 09.06.2023, leg. WTS; Jajkowo [DE00]: 3 ♀♀ – 30.05.1996, slope, southern exhibition, leg. KS; Plutki, gm. Dywity [EE67]: 2 ♀♀ – 12.06.2023, leg. WTS; Szczepki [FE28]: 1 ♀ – 27.05.2024, leg. WTS; **Nowy Targ valley**: Czarny Dunajec env. [DV17]: 1 ♀ – 04.06.2016, leg. RD; **Pieniny**: Cisowiec Duży i Mały, Pieniny NP [DV57]: 1 ♂ – 05.06.1997, rock scree, leg. RD; **Podlasie**: Stójka env., „Grąd Leszczynowe”, Biebrza NP [FE00]: 1 ♂ – 28.05.2000, leg. KS; **Upper Silesia**: Bytom [Beuthen] [CA48]: 1 ♀ – 14.06.1939, leg. FK; Bytom, Segiet Res. env. [CA48]: 1 ♀ – 02.06.1993, leg. RD; 1 ♀ – 14.05.1994, leg. WŻ; 1 ♀ – 30.05.1996, leg. RD; 1 ♀ – 26.05.2010, leg. AL; 1 ♂ – 07.06.2011, leg. AL; Chorzów, open-air museum [CA57]: 1 ♀ – 25.05.2001, sunlit slope, leg. WŻ; Chorzów, Żabie Doły [CA57]: 1 ♀ – 12.05.1993, leg. RD; 1 ♂, 1 ♀ – 18.05.1993, leg. RD; Gogolin [BA89]: 1 ♀ – 06.06.2000, quarry, leg. JG; Grabowiec Res. [DA79]: 3 ♂♂, 3 ♀♀ – 18.06.1995, leg. RD; 2 ♀♀ – 18.06.1997, leg. WŻ, [prey: *Symphyta*]; Grabówka [CA07]: 1 ♂ – 01.06.2024, leg. JG; Mikołów [CA56]: 1 ♀ – 23.05.1993, leg. JG; Mysłowce-Ćmok [CA66]: 1 ♀ – 27.05.2023, leg. AL.; Ruda Śląska [CA46]: 1 ♀ – 30.06.1995, leg. AMr; Ruda Śląska, Halemba Forest [CA46]: 1 ♀ – 30.05.2004, leg. JG; **Western Beskidy Mts.**: Babia Góra Mt., Klekociny pass [CV99]: 1 ♂ – 05.07.1995, leg. HS; Zwardoń-Gomółka [CV58]: 1 ♂ – 04.06.2023, leg. GJ; **Wielkopolska-Kujawy Lowland**: Puszcza Bydgoska [CD17]: 1 ♀ – 22.06.1995, leg. CB; Toruń, Góra Żymierskiego, military training ground [CD37]: 1 ♀ – 14.05.2007, leg. KS; Toruń, airfield [CD37]: 1 ♂ – 31.05.1995, leg. KS; 1 ♂ – 14.05.2002, leg. KS; Zbocza Płutowskie Res. [CE20]: 2 ♂♂, 1 ♀ – 05.06.1997, *Festuco-Brometea*, leg. KS; 1 ♀ – 03.05.1998, *Festuco-Brometea*, leg. KS; 1 ♂ – 21.05.2001, leg. KS.

Laphriinae Macquart, 1838

Andrenosoma atrum (Linnaeus, 1758)

Material examined: Lower Silesia: Bardo [Wartha] [XR29]: 1 ♂ – 20.07.1930, leg. FK; **Małopolska Upland**: Cudnów [EB29]: 1 ♂, 1 ♀ – 30.07.2021, leg. WTS; **Pieniny**: Krościenko [DV57]: 1 ♀ – 20.07.1958, leg. MB; **Pomeranian Lake District**: 1 ♀ – Ocypel-Zimne Zdrój, Bory Tucholskie [CE16]: 1 ♀ – 12.07.2001, *Quercus roboris-Pinetum*, leg. MBo; **Upper Silesia**: Bytom [Beuthen] [CA48]: 1 ♂ – 16.07.1929, leg. FK; 1 ♀ – 01.07.1931, leg. FK; 1 ♂ – 10.07.1931, leg. FK; 1 ♀ – 08.09.1932, leg. FK; 2 ♀♀ – 04.08.1934, leg. FK; Bytom-Miechowice [Miechowitz] [CA48]: 1 ♀ – 14.07.1928, leg. FK; Pogrzebień n. Rybnik [CA04]: 1 ♀ – 12.08.1939, leg. PW; Świerkianiec [Neudeck] [CA58]: 1 ♂ – 13.07.1941, leg. FK; Zabrze-Rokitnica [Rokittnitz] [CA48]: 1 ♂ – 28.06.1932, leg. ED; 1 ♀ – 07.10.1931, leg. ED; 1 ♀ – 06.10.1931, leg. ED; **West Beskid Mts.**: Kamesznica [CV59]: 1 ♂, 1 ♀ – 27.07.1959, leg. MB; **Wielkopolska-Kujawy Lowland**: Samostrzel, Szubin forest district [XU68]: 1 ♀ – 23.08.2007, 162a, leg. KS; Toruń-Glinki [CD37]: 2 ♂♂, 1 ♀ – 04.08.1999, leg. KS; Toruń, Góra Żymierskiego, military training ground [CD37]: 1 ♀ – 21.08.2007, leg. KS.

Choerades amurensis (Hermann, 1914)

Material examined: Białowieża Primeval Forest: Białowieża Forest [FD83/FD84]: 1 ♂ – 19.06.–03.07.1994, leg. JG.

The species is widely distributed in the Palearctic Region. It has been recently reported from eastern Poland (Tatur-Dytkowski & Mielczarek, 2020) and southern Germany (Wolff *et al.*, 2021), where its western distribution range reaches. The known localities of *Choerades amurensis* in Poland include the Bieszczady Mountains, the Low Beskids, and the Białowieża Forest (Tatur-Dytkowski & Mielczarek, 2020). The species inhabits well-preserved beech forests

as well as subcontinental oak-hornbeam forests (Tatur-Dytkowski & Mielczarek, 2020). The species' distribution in Europe suggests that it could be considered a relic of primeval forests.

Choerades castellanii (Hradský, 1962) (Fig. 2)

Material examined: Bieszczady Mts.: Muczne, trail to Bukowe Berdo Mt. [FV24]: 1 ♀ – 06.08.2022, leg. WTS.

Choerades castellanii is a rare species, so far recorded only from several localities in Slovakia (Remetské Hámre, Zvolen and Trenčín) (Hradský, 1962), Germany (Bienwald) (Geller-Grimm *et al.*, 2003) and Hungary (Latorpuszta, Soponya, Bélavár) (Boeraeve *et al.*, 2019). This is the first record of this species in Poland.

The species is most similar to *Choerades fimbriata* (Meigen, 1820). Males are relatively easy to identify by the shape of the genitalia and the presence of two characteristic projections on the posterior margin of the last visible tergite. Females, however, are much more challenging to identify. Nevertheless, some distinct morphological characteristics appear to facilitate identification of this species, i.e. the shape of proboscis (more tapered at the apex), the facial gibbosity more developed, the density of setae on anepisternum (sparser than in *Ch. fimbriata*), the presence of long, downward-directed setae beneath the antennae (absent in *Ch. fimbriata*) (Fig. 2). The specimen was also sampled for DNA barcoding. Notably, the COI gene exhibits significant divergence from that of *Ch. fimbriata*, with an approximate difference of 12%. This genetic distinction provides additional support for the species' identification.

Little is known about the biology of the species. The collected female was observed on the trunk of a living, well-sunlit beech *Fagus sylvatica* L. within a low montane beech forest.

Choerades femorata (Meigen, 1804)

Material examined: Bieszczady Mts.: Procisne Forestry [FV24]: 1 ♂, 2 ♀♀ – 25.07.2020, leg. WŻ; Widelki [FV24]: 1 ♀ – 24.07.2020, leg. WŻ; **Eastern Beskidy Mts.:** Makowa ad Przemyśl [FV19]: 1 ♀ – 07.07.1995, leg. RD; **Kraków-Wieluń Upland:** Biały Kościół-Kresy, OPN buffer zone [DA16]: 1 ♂ – 27.06.2021, leg. MS; **Małopolska Upland:** Polana Polichno [DA69]: 1 ♂ – 23.06.2021, leg. KS; **Masurian Lake District:** Czarny Bryńsk [DD19]: 1 ♂ – 22.07.1995, *Carpinion betuli*, leg. KS; 1 ♀ – 28.07.1996, *Carpinion betuli*, leg. KS; Górzno [DD19]: 1 ♀ – 29.06.1995, *Carpinion betuli*, leg. KS; 1 ♂ – 28.06.1995, *Carpinion betuli*, leg. KS; 1 ♀ – 05.07.1996, *Carpinion betuli*, clearing, leg. KS; Klonowo Res. [DE10]: 1 ♀ – 03.07.1997, leg. KS; **Pieniny:** Wyżny Łazek pass, Pieniny NP [DV57]: 2 ♀♀ – 17.07.[19]77, leg. TP; **Pomeranian Lake District:** Fialki [DD19]: 1 ♀ – 04.07.1997, *Carici elogatae-Alnetum*, leg. KS; **Upper Silesia:** Brynek [CA39]: 1 ♀ – 21.05.2007, leg. HS; Bytom [Beuthen] [CA48]: 1 ♀ – 20.03.1931, ex cult., leg. FK; Bytom-Szombierki, Fazaniec Park [CA47]: 1 ♂ – 04.06.2011, leg. WŻ; Bytom, Segiet Res. env. [CA48]: 1 ♂ – 20.07.2022, leg. WTS; Bytom [CA57]: 1 ♂ – 28.07.2021, inside USMB building, leg. WTS; Krywałd [CB40]: 1 ♀ – 12.09.2023, on wood fence, leg. WS; Mikołów, Borowa Wieś Forest [CA46]: 1 ♂ – 29.08.2004, leg. JG; **Wielkopolska-Kujawy Lowland:** Toruń, airfield [CD37]: 1 ♀ – 23.07.2001, leg. KS; Toruń, Las Piwnicki [CD38]: 1 ♀ – 13.06.2011, leg. MK; Zbocza Płutowskie Res. [CE20]: 1 ♀ – 21.05.2001, leg. KS.

In Poland, the species was first reported from the vicinity of Toruń by Krzyżyński and Szpila (2016), and then from many locations in Eastern Pomerania (Żóralski *et al.*, 2021; Spsychalski & Giłka, 2023). *Choerades femorata* is likely common throughout the country, similar to *Ch. marginata* (Linnaeus, 1758), and all earlier records of the latter should be reviewed. Records of *Choerades dioctriaeformis* (Meigen, 1820) summarized by Trojan (1970) probably also should be assigned to this species.

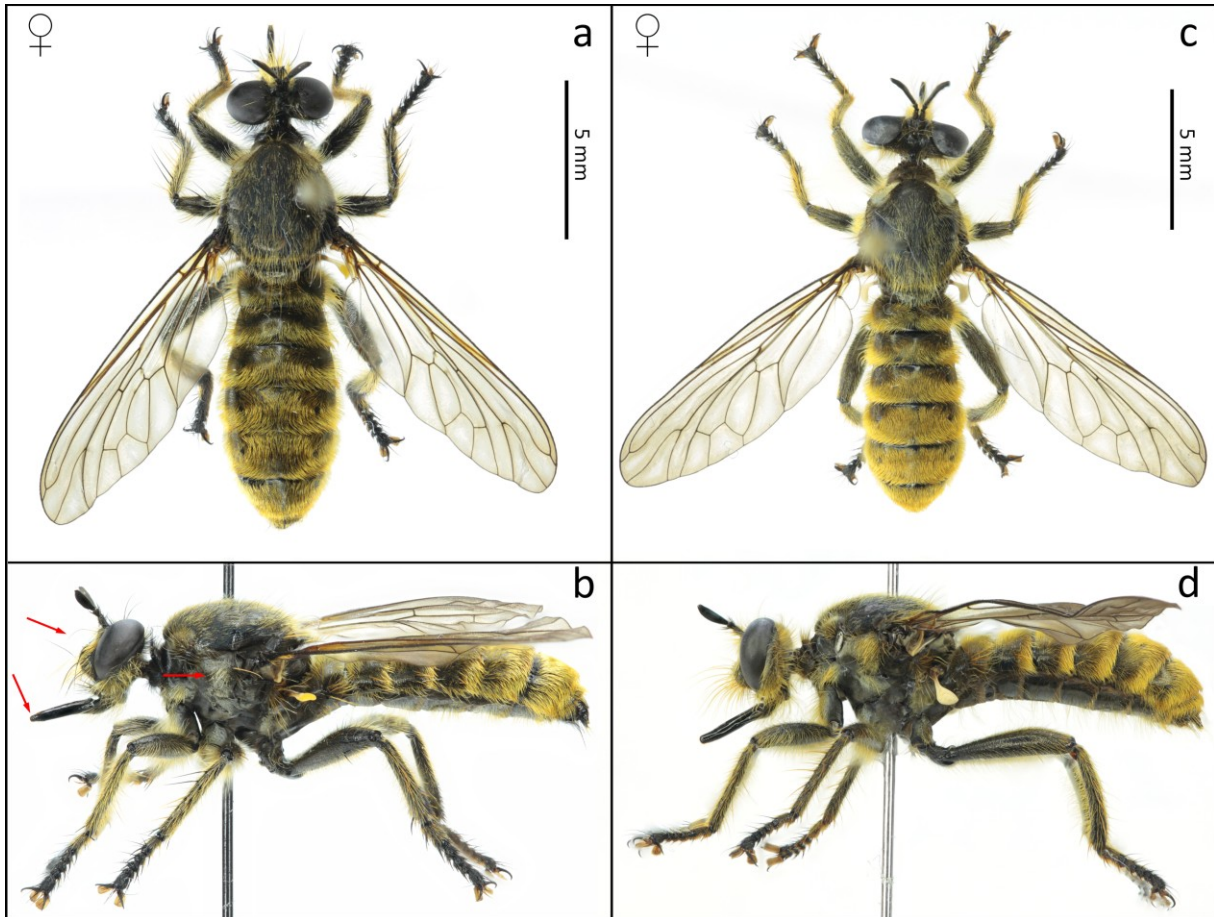


Fig. 2. Comparison of the females of *Choerades castellanii* (Poland) (a, b) and *Choerades fimbriata* (Slovakia) (c, d), with red arrows indicating diagnostic morphological characters.

Choerades fuliginosa (Panzer, 1798)

Material examined: Eastern Beskidy Mts.: Barwinek [EV57]: 1 ♀ – 02.07.1996, leg. RD; Western Beskidy Mts.: Brenna, Hołcyna Valley [CA50]: 1 ♀ – 19.06.2005, leg. JG.

Choerades fuliginosa is known only from single, scattered localities in Poland. The species inhabits mostly montane altitudes, however was also found in lowlands. The known localities are in Karkonosze Mts. (Zeller, 1840; Schneider, 1852; Riedel, 1930), Baltic coast (Riedel, 1901), Puławy env. (Trojan, 1961) and Pieniny Mts. (Trojan, 1961; Szadziewski *et al.*, 1973). This is the first record in both regions of Beskidy Mts.

Choerades gilva (Linnaeus, 1758) (Fig. 3)

Material examined: **Białowieża Primeval Forest:** Białowieża Forest [FD85]: 1 ♂ – 15.07.1995, leg. RD; 1 ♀ – 16.07.1995, leg. RD; **Lower Silesia:** Bardo [Wartha] [XR29]: 1 ♀ – 20.07.1930, leg. FK; Góry Sowie [Eulengebirge] [XS10]: 1 ♀ – 07.1919, leg. ED; Srebrna Góra [Silberberg] [XS10]: 1 ♀ – 07.1888, leg. ED; 1 ♀ – 07.1933, leg. ED; **Pomeranian Lake District:** Grupa [CE43]: 1 ♀ – 24.07.1995, forest, *Epilobietea angustifolii*, leg. KS; **Upper Silesia:** Bytom [Beuthen] [CA48]: 2 ♀♀ – 28.08.1927, leg. n/a; 1 ♀ – 14.6.1933, leg. FK; 1 ♂ – 07.06.1937, leg. FK; Bytom-Stroszek-Dąbrowa Miejska [Städtisch-Dombrowa] [CA48]: 1 ♂ – 14.07.1928, leg. FK; Gliwice-Łabędy [=Laband] [CA37]: 1 ♂ – 08.08.1926, leg. n/a; Jeleniak-Mikuliny Res. [CB40]: 1 ♀ – 22.07.2006, leg. JG; Kościeliska [Hedwigstein] [CB25]: 1 ♀ – 09.1937, leg. HN; Lubliniec [CB31]: 1 ♂ – 22.06.1994, leg. RD; Mikołów-Jamna [CA56]: 1 ♀ – 18.08.1972, leg. JK; Oświęcim [Auschwitz] [CA74]: 1 ♂ – leg. n/a; Pogrzebień n. Rybnik [CA04]: 1 ♂ – 18.06.1932, leg. PW; Przezchlebie [Preschlebie] [CA38]: 2 ♀♀ – 13.06.1929, leg. FK; Radomierowice ad Kluczbork [BB94]: 1 ♀ – 24.08.1998, leg. CG; Rudziniec [CA18]: 1 ♂ – 06.06.1993, leg. JG; 1 ♂ – 26.07.1994, leg. HS; Sieraków [CB23]: 1 ♂ – 12.10.1957, leg. MB; Tworóg [CB30]: 1 ♀ – 29.05.2005, leg. HS; 1 ♀ – 16.06.2012, leg. HS; Zabrze [CA37]: 1 ♂ – 09.06.1920, leg. PW; **Western Beskidy Mts.:** Kolisty Groń Mt. [CV99]: 1 ♀ – 07.07.1995, leg. HS; **Western Sudety Mts.:** Karlów env., Lisia Przełęcz [WR99]: 1 ♂ – 15.08.2023, clearing, leg. WTS; **Wielkopolska-Kujawy Lowland:** Toruń, military training ground [CD37]: 1 ♀ – 19.06.2012, leg. MK.



Fig. 3. The oldest Asilidae specimen in the USMB collection – a female of *Choerades gilva*, collected in 1888 in Srebrna Góra [Silberberg] by E. Drescher.

Choerades ignea (Meigen, 1820)

Material examined: **Baltic Coast:** Rowy [XA35]: 1 ♂ – 20.08.2024, leg. WS; **Lower Silesia:** Góry Sowie [Eulengebirge] [XS10]: 1 ♀ – 08.1924, leg. ED; Wrocław [XS46]: 1 ♀ – 1958, leg. TS; Wrocław-Zakrzów [XS46]: 1 ♀ – 1968, leg. TS; **Masurian Lake District:** Czarny Bryńsk [DD19]: 2 ♀♀ – 28.07.1996, *Epilobietea angustifolii*, leg. KS; 2 ♀♀ – 12.08.1997, *Epilobietea angustifolii*, leg. KS; **Pomeranian Lake District:** Grupa [CE43]: 1 ♀ – 24.07.1995, forest, *Epilobietea angustifolii*, leg. KS; Wda, Bory Tucholskie [CE26]: 1 ♂ – 01.07.2001, *Sedo-Scleranthetea*, leg. MBo; **Upper Silesia:** Bażany ad Kluczbork [CB04]: 1 ♂, 1 ♀ – 27.08.1997, leg. RK; Boruszowice ad Tarnowskie Góry [CA49]: 1 ♂ – 21.07.1994, leg. WŻ; Bytom [Beuthen] [CA48]: 1 ♂ – 15.05.1938, ex cult, leg. FK; Jasienie ad Kluczbork [CB04]: 1 ♀ – 12.08.1996, leg. RK; Łącza, Pustynia Łączańska [CA17]: 1 ♂, 1 ♀ – 15.08.2022, leg. WTS & KC; Nakło-Chechło Lake env. [CA59]: 2 ♂♂ – 17.08.2022, leg. WTS; Zawadzkie [Zawatzki] [CB20]: 1 ♀ – 16.02.1928, ex cult., leg. FK; 1 ♂ – 21.03.1928, ex cult, leg. FK; **Wielkopolska-Kujawy Lowland:** Milicz [XT50]: 1 ♂ – 09.1970, leg. TS.

Choerades marginata (Linnaeus, 1758)

Material examined: **Baltic Coast:** Rowy, Słowiński NP [XA46]: 1 ♂ – 31.07.2005, leg. WŻ; Smołdzino, Słowiński NP [XA45]: 1 ♀ – 29.07.2004, coniferous forest, leg. WŻ; Wiselka ad Wolin [VV67]: 1 ♀ – 17–25.07.1997, leg. RD; **Białowieża Primeval Forest:** Białowieża Forest [FD85]: 1 ♀ – 15.07.1995, leg. RD; 1 ♀ – 16.07.1995, leg. RD; 3 ♂♂, 1 ♀ – 18.07.1995, leg. RD; 1 ♂, 1 ♀ – 19.07.1995, leg. RD; 1 ♂ – 21.07.1995, leg. RD; Bałowieża [FD94]: 18.07.1972, leg. MB; **Bieszczady Mts.:** Muczne, trail to Bukowe Berdo [FV24]: 2 ♂♂ – 06.08.2022, leg. WTS; Ustajowa Góra, Holica Mt. [FV17]: 1 ♂, 1 ♀ – 07.08.2022, leg. WTS; **Kraków-Wieluń Upland:** Dolina Sąspowska, Ojców NP [DA16]: 1 ♂ – 11.08.1996, leg. RD; Ojców, Ojców NP [DA16]: 1 ♂ – 11.08.1996, leg. RD; **Małopolska Upland:** Lipiny-Cebulówka [EB29]: 1 ♂, 1 ♀ – 30.07.2021, leg. WTS; **Podlasie:** Knyszyńska Forest, Woronicza Res. [FE60]: 1 ♂ – 30.07.2022, leg. ALs; **Pomeranian Lake District:** Ocypel-Osowo Leśne, Bory Tucholskie [CE27]: 1 ♂ – 28.06.2001, *Artemisietea* and other, leg. MBo; **Roztocze:** Majdan Kasztelański [FA49]: 1 ♀ – 05.07.2018, meadow, leg. WŻ; **Upper Silesia:** Brynek [CA39]: 1 ♂ – 28.07.1995, leg. HS; 1 ♀ – 09.06.2007, leg. HS; Bytom, Segiet Res. env. [CA48]: 1 ♂ – 20.07.2022, leg. WTS; Chorzów, Park Śląski [CA57]: 1 ♂ – 2022, ex cult., leg. LK; Chorzów, open-air museum [CA57]: 1 ♀ – 11.08.2021, leg. WTS; Jasienie ad Kluczbork [CB04]: 1 ♂ – 12.08.1996, leg. RK; Książenice n. Racibórz [CA25]: 13.06.1966, leg. AD; Lubliniec [CB31]: 1 ♂ – 26.06.1996, leg. RD; Bytom, Stolarzowice Forestry [CA48]: 1 ♂ – 18.08.2020, leg. WŻ; **Western Beskidy Mts.:** Cięcina, Kotlina Żywiecka [CV69]: 2 ♂♂, 1 ♀ – 05.09.2022, leg. GJ; Kocierz Mt. [CA71]: 1 ♂ – 03.07.2022, leg. WTS; Lubień, Szczebel Mt. [DA20]: 1 ♀ – 04.08.2021, leg. MS; 1 ♂ – 07.08.2021, leg. MS; Piwniczna-Zdrój [DV77]: 1 ♂ – 01.09.2024, leg. LK; Ponice ad Rabka [DV29]: 1 ♂ – 10.08.2000, leg. WŻ; Skrzyczne Mt. [CA50]: 1 ♀ – 06.07.2024, leg. WTS; Wisła [CV59]: 2 ♂♂ – trail to Wyśnim, leg. WŻ; Wisła-Czarne [CV49]: 1 ♂ – 28.07.2018, leg. WŻ; Wisła-Malinka [CV59]: 1 ♀ – 02.08.1996, leg. WŻ; **Western Sudety Mts.:** Karłów env., Lisia Przełęcz [WR99]; 2 ♂♂ – 14.08.2023, clearing, leg. WTS; 2 ♂♂ – 15.08.2023, clearing, leg. WTS; Wambierzyce env. [XR09]: 1 ♀ – 15.08.2023, forest edge, leg. WTS; **Wielkopolska-Kujawy Lowland:** Toruń, Las Piwnicki [CD38]: 1 ♂ – 13.06.2011, leg. MK.

Laphria empyrea Gerstaecker, 1861 (Fig. 4a–c)

Material examined: **Białowieża Primeval Forest:** Białowieża Forest [FD85]: 1 ♂ – 15.07.1995, leg. RD.

In Poland, the genus *Laphria* Meigen, 1803 was represented so far by 3 species: *Laphria ephippium* (Fabricius, 1781), *Laphria flava* (Linnaeus, 1761), and *Laphria gibbosa* (Linnaeus,

1758) (Szczepański & Palaczyk, 2022). The taxonomic status of *Laphria vulpina* Meigen, 1820, which was mentioned only once from Poland by Sack (1925), is considered a synonym of *L. flava*; however, the species' status has not been officially approved.

The given locality in Białowieża Forest is the first record of *Laphria empyrea* in Poland. Moreover, it is the northernmost locality of the species in its range. The species is known only from several records: Greece (no specific locality) (Gerstaecker, 1861), Croatia (Plitvice) (Szilády, 1943 – as *Laphria nagy* Szilády, 1943), Slovakia (Kraľovany, Baláže) (Hradský, 1985; Kupec & Kizek, 2022) and Ukraine (Dilove) (Hradský, 1985).

The distribution of *L. empyrea* suggests that it is a boreal-mountain species, which inhabits probably only well-preserved forests. The habitats where the species was found strongly indicate that it should be considered a relic of primeval forests, which was already mentioned by Kupec and Kizek (2022). The authors have also suggested that *L. vulpina* in Trojan's (1970) key is, in fact, *L. empyrea*. However, Trojan (1970) distinguished *L. vulpina* by the presence of yellow hairs exclusively on the scutum. The examined specimen of *L. empyrea* has both black and yellow hairs on the scutum, in contrast to some examined specimens of *L. flava* from Poland, which based on this character could be assigned to *L. vulpina*.

The males of *L. empyrea* are easy to identify, by characteristic genitalia (Hradský, 1985), as well as based on the absence of spine on the apex of hind tibiae (Fig. 4c), which is present in all other three *Laphria* species (Fig. 4d) distributed in Poland. In the examined specimen, the presence of an additional crossvein in r5 is also noteworthy, however, this feature is considered taxonomically irrelevant.

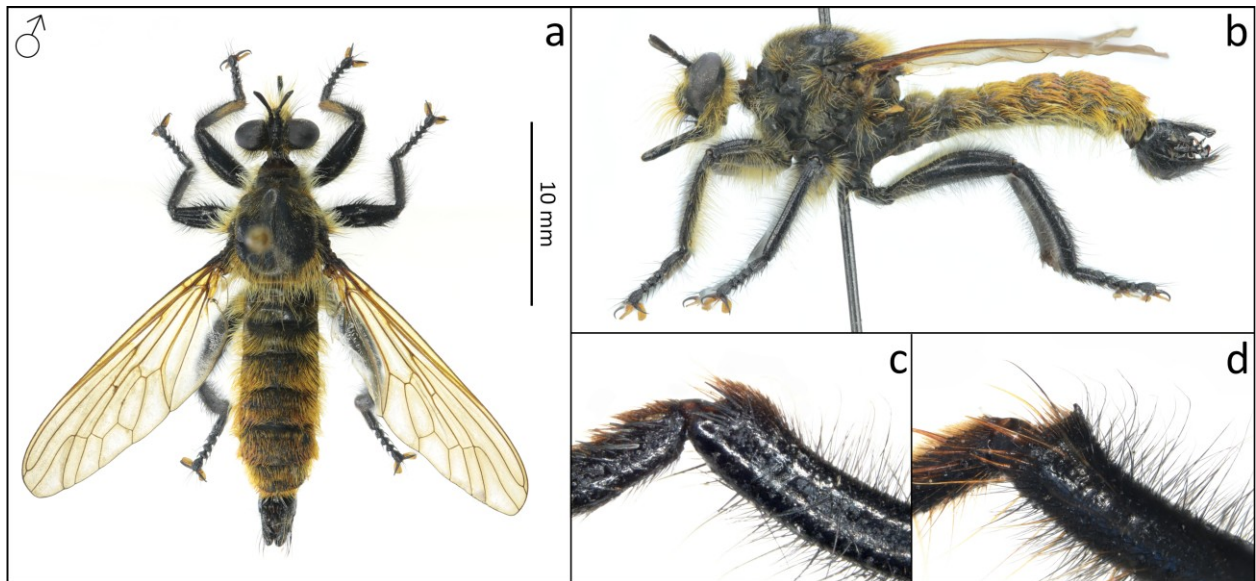


Fig. 4. Male of *Laphria empyrea* (a–c), habitus, dorsal (a), habitus, lateral (b), apical part of male hind tibia (c); *Laphria flava* (d), apical part of male hind tibia (d).

Laphria ephippium (Fabricius, 1781)

Material examined: **Białowieża Primeval Forest:** Białowieża Forest [FD85]: 1 ♂ – 20.07.1995, leg. RD; **Bieszczady Mts.:** Jabłonki ad Lesko [EV95]: 4 ♂♂, 1 ♀ – 20–30.07.1965, leg. MB; 2 ♂♂, 1 ♀ – 15–25.07.1966, leg. MB; 1 ♂ – 25.08.1966, leg. MB; 1 ♂ – 15.07.1967, leg. MB; 2 ♂♂ – 15–25.07.1967, leg. MB; 2 ♂♂, 2 ♀♀ – 20–30.07.1967, leg. MB; 2 ♂♂ – 10–25.08.1967, leg. MB; 1 ♂, 1 ♀ – 15.08.1967, leg. MB; 2 ♂♂ – 08.06.1968, leg. MB; 1 ♂ – 07.07.1968, leg. AD; 2 ♂♂ – 08.07.1968, leg. AD; 1 ♂ – 17.07.1968, leg. MB; 1 ♂ – 20.08.1970, leg. J. Czarnecki; Mików [EV86]: 1 ♂ – 24.06.2012, leg. WTS; Nasiczne [FV14]: 1 ♂ – 22.07.2003, leg. Jarosław Buszko; Stuposiany, Procisne Forestry [FV24]: 2 ♂♂ – 26.07.2020, leg. WŻ; Wetlina ad Lesko [FV04]: 2 ♂♂ – 27.07.1961, leg. MB; **Lower Silesia:** Bardo [Wartha] [XR29]: 1 ♀ – 20.07.1930, leg. FK; **Masurian Lake District:** Puszcza Borecka [EE79]: 1 ♂ – 10.06.1996, leg. Konrad Maciejewski; **Western Beskidy Mts.:** Wisła-Czarne [CV59]: 1 ♂ – 16.07.1994, leg. HS; Wisła-Malinka [CV59]: 1 ♂ – 02.08.1996, leg. WŻ; Wisła-Malinka [CA50]: 1 ♂ – 18.07.2003, leg. WŻ.

Laphria flava (Linnaeus, 1761)

Material examined: **Baltic Coast:** Czolpino [XA46]: 1 ♂ – 25.05.2024, leg. WTS; Lubiatowo [XA87]: 1 ♀ – 07–15.07.1997, leg. SC; Wiselka ad Wolin [VV67]: 1 ♂ – 17–25.07.1997, leg. RD; **Białowieża Primeval Forest:** Białowieża Forest [FD83/FD84]: 1 ♂ – 19.06.–03.07.1994, leg. JG; Białowieża Forest [FD85]: 2 ♂♂, 1 ♀ – 15.07.1995, leg. RD; 1 ♀ – 18.07.1995, leg. RD; 1 ♂, 1 ♀ – 20.07.1995, leg. RD; 1 ♂ – 21.07.1995, leg. RD; Topiło [FD73]: 1 ♀ – 13.08.2003, forest edge, leg. RD; **Bieszczady Mts.:** Jabłonki ad Lesko [EV95]: 3 ♀♀ – 20–30.07.1965, leg. MB; 1 ♀ – 10.06.1966, leg. MB; 2 ♂♂, 1 ♀ – 15–25.07.1966, leg. MB; 1 ♂ – 25.08.1966, leg. MB; 1 ♂ – 12.07.1967, leg. MB; 2 ♂♂ – 15–25.07.1967, leg. MB; 1 ♀ – 19.07.1967, leg. MB; **Eastern Sudety Mts.:** Kłodzko [XR18]: 1 ♂ – 04.08.1927, leg. ED; **Lower Silesia:** Bardo [Wartha] [XR29]: 2 ♀♀ – 20.07.1930, leg. FK; Góry Sowie [Eulengebirge] [XS10?]: 1 ♀ – 01.08.1919, leg. ED [prey *Leiopus taeniatus* Gmelin, 1790]; **Małopolska Upland:** Pasturka [DA69]: 1 ♂ – 15.07.1996, leg. WŻ; **Masurian Lake District:** Czarny Bryńsk [DD19]: 1 ♂, 1 ♀ – 28.07.1996, *Epilobietea angustifolii*, leg. KS; Hermanowa Wola [EE47]: 1 ♂ – 29.05.2024, leg. WTS; Kazimierówka [FF21]: 1 ♀ – 22.05.2002, leg. ES; Nosek [DD19]: 1 ♂ – 24.07.1996, *Artemisietea*, leg. KS; Smolniki, Suwałki LP [FF21]: 1 ♂ – 03.07.1997, leg. RD; Sówki Forestry, Płaska Forest District, Puszcza Augustowska [FE57]: 1 ♂ – 03.07.2024, oddz. 363a-99, on *Pinus* log, leg. Radosław Plewa; Zatoka Słupiańska, Wigry NP [FE38]: 1 ♀ – 29.06.2003, lake env., leg. WŻ; **Nowy Targ valley:** Nowy Targ [DV38]: 1 ♂ – 14.07.1992, leg. WŻ; **Pieniny:** Kosarzyska [DV77]: 1 ♀ – 17.07.[19]71, leg. TP; Limbargowy Potok, Pieniny NP [DV57]: 1 ♂ – 08.06.1997, leg. RD; Szopka pass, Pieniny NP [DV57]: 1 ♂ – 17.07.[19]71, leg. TP; **Pomeranian Lake District:** Kasparus, Bory Tucholskie [CE25]: 1 ♂ – 07.07.2001, *Epilobietea angustifolii*, leg. MBo; 1 ♂ – 23.07.2001, *Epilobietea angustifolii*, leg. MBo; Kocury ad Połczyn-Zdrój [WV74]: 2 ♂♂, 1 ♀ – 05.08.2022, forest, pheromone trap, leg. MA; Popówka, Bory Tucholskie [XV88]: 1 ♂ – 26.05.2011, leg. MK; **Roztocze:** Majdan Kasztelański [FA49]: 1 ♂ – 06.06.2019, leg. WŻ; **Tatra Mts.:** Dolina Lejowa [DV15]: 1 ♀ – 29.07.1960, leg. MB; road to Hala Gąsienicowa, Tatra NP [DV25]: 1 ♂ – 19.07.2022, 1360 m a.s.l., leg. RD; **Upper Silesia:** Brynek [CA39]: 1 ♀ – 04.05.1927, leg. n/a; 1 ♀ – 28.07.1995, leg. HS; Bytom [Beuthen] [CA48]: 1 ♂ – 15.05.1928, leg. FK; 1 ♀ – 16.07.1928, leg. FK; 1 ♂ – 15.06.1941, leg. FK; Bytom, Segiet Res. [CA48]: 1 ♂ – 05.06.1995, leg. WŻ; Bytom-Szombierki [CA57]: 1 ♀ – 30.05.2004, leg. WŻ [prey: *Actenicerus sjaelandicus* (O.F. Müller, 1764)]; Dziergowice [CA07]: 2 ♂♂ – 30.05.2002, leg. JG; Lubliniec [CB31]: 1 ♂ – 30.05.1993, leg. RD; 1 ♂ – 01.06.1994, leg. RD; 1 ♂ – 08.06.1994, leg. RD; 1 ♂ – 22.06.1994, leg. RD; Oświęcim [Auschwitz] [CA74]: 1 ♀, leg. n/a; Pogrzebień n. Rybnik [CA04]: 1 ♂ – 16.06.1931, leg.

PW; 1 ♀ – 15.07.1932, leg. PW; Przechlebnie [Preschlebie] [CA38]: 1 ♂ – 13.06.1929, leg. FK; Ruda Śląska-Halemba [CA46]: 1 ♀ – 26.06.1999, leg. AMr; Stanica [Stanitz] [CA26]: 1 ♂ – 10.1935, leg. ED; Kluczbork env., Święciny Forestry [YS04], 1 ♂ – 05.06.1999, leg. RK; **Western Beskidy Mts.:** Babia Góra Mt. [CV99]: 1 ♀ – 27.07.1988, Gubernasówka, leg. RD; Barania Góra Mt. [CV59]: 1 ♂ – 28.07.1995, leg. WŻ; 1 ♂, 1 ♀ – 07.08.2024, leg. WS; Brenna, Hołcyna Valley [CA50]: 1 ♂ – 24.07.2005, leg. JG; Hala Lipowska [CV78]: 1 ♂ – 09.09.2021, leg. WS; Kocierz Mt. [CA71]: 3 ♂♂ – 03.07.2022, leg. WTS; Pilsko Mt. [CV78]: 1 ♂ – 06.07.1994, leg. HS; Potrójna Mt. [CA81]: 3 ♂♂ – 03.07.2022, leg. WTS; Skrzyczne Mt. [CA50]: 1 ♂ – 06.07.2024, leg. WTS; Wisła-Soszów [CA40]: 1 ♂ – 24.07.2016, leg. WŻ; Wisła [CA40]: 1 ♀ – 29.07.1996, leg. WŻ; 2 ♂♂, 1 ♀ – 31.07.1996, leg. WŻ; Wisła-Czarne [CV59]: 1 ♂ – 30.06.1997, leg. HS; Wisła-Malinka [CV59]: 2 ♂♂ – 08.08.1996, leg. WŻ; 1 ♂ – 09.08.1996, leg. WŻ; **Western Sudety Mts.:** Duszniki-Zdrój [Rainerz] [WR98]: 1 ♀ – 12.09.1919, leg. ED; Wielka Sowa [Hohe Eule] [XS01]: 1 ♂, 1 ♀ – 30.07.1919, leg. ED; Szklarska Poręba [WS32]: 1 ♂ – 21.06.2023, leg. WS; **Wielkopolska-Kujawy Lowland:** Dobiegniewo [CD83]: 1 ♂ – 12.06.2010, leg. MK; 1 ♂, 1 ♀ – 22.05.2011, leg. MK; 1 ♂ – 15–16.06.2013, leg. KS; Suchatówka, gm. Gniewkowo [CD36]: 1 ♀ – 21.06.1984, leg. TP; Toruń-Stawki [CD47]: 1 ♀ – 11.06.2013, leg. KS.

Laphria gibbosa (Linnaeus, 1758)

Material examined: **Baltic Coast:** Lubiatowo [XA87]: 1 ♀ – 07–15.07.1997, leg. SC; 1 ♀ – 01.08.2024, leg. SC; **Białowieża Primeval Forest:** Białowieża Forest [FD85]: 1 ♂ – 23.07.1995, leg. RD; **Kraków-Wieluń Upland:** Zawiercie [CA89]: 1 ♂, 1 ♀ – 22.07.1996, leg. WN; 1 ♀ – 20.07.2010, leg. WN; **Mazowiecka Lowland:** Szumin [ED42]: 1 ♂ – 28.07.1996, leg. Tomasz Majewski; **Pomeranian Lake District:** Ocypel-Klaniny, Bory Tucholskie [CE16]; 1 ♂ – 07.07.2001, *Pinus sylvestris* forest, leg. MBo; Pięcmorgi, Bory Tucholskie [CE33]: 1 ♂ – 25.06.2005, leg. KS; **Roztocze:** Józefów Roztoczański [FA49]: 1 ♂ – 04.07.2018, leg. WŻ; **Upper Silesia:** Jesiona [Jasten] [CA39]: 1 ♀ – 09.07.1931, leg. n/a; **Wielkopolska-Kujawy Lowland:** Bydgoszcz [CD09]: 1 ♀ – 1973, leg. Henryk Ziółkowski; Dobiegniewo [CD83]: 1 ♀ – 17.06.2001, leg. TP; Zielonka forestry, Cierpiszewo forest district [CD27]: 1 ♂ – 20.06.2007, leg. KS.

Leptogastrinae Schiner, 1862

Leptogaster cylindrica (De Geer, 1776)

Material examined: **Baltic Coast:** Łącko [XA04]: 1 ♂ – 28.07.2006, leg. WŻ; Świnoujście [VV47]: 1 ♂, 1 ♀ – 28.06.2023, forest near the military shooting range, leg. MS; Świnoujście, Karsiborska Kępa [VV56]: 2 ♂♂ – 29.06.2023, leg. MS; Zalew Kamieński, Wyspa Chrząszczewska [VV87]: 2 ♂♂ – 01.07.2023, salt springs, leg. MS; **Białowieża Primeval Forest:** Białowieża Forest [FD85]: 1 ♂, 1 ♀ – 14.07.1995, leg. RD; 1 ♂, 1 ♀ – 16.07.1995, leg. RD; 1 ♂ – 18.07.1995, leg. RD; 1 ♀ – 20.07.1995, leg. RD; **Eastern Beskidy Mts.:** Bartne [EV29]: 1 ♂, 1 ♀ – 07.08.2016, pasture, leg. KN Faunatycy; Barwinek [EV57]: 1 ♂ – 02.07.1996, leg. RD; Bednarka, Cieklinka Mt. [EV29]: 1 ♂, 2 ♀♀ – 17.07.2024, netting, leg. RD; Makowa ad Przemyśl [FV19]: 3 ♂♂, 2 ♀♀ – 07.07.1995, leg. RD; Pikulice [FA21]: 1 ♀ – 05.07.1995, leg. RD; 1 ♂ – 06.07.1995, leg. RD; **Kraków-Wieluń Upland:** Balice-Podkamycze [DA14]: 1 ♀ – 04.07.2021, leg. MS; Kraków, „Uroczysko w Rząsce” ecological site [DA15]: 1 ♀ – 25.07.2021, meadow, leg. MS; **Lower Silesia:** Ligota Wielka [=Ellguth Ottmachau] [XR59]: 1 ♀ – 22.07.1919, leg. ED; 1 ♀ – 08.1921, leg. ED; **Małopolska Upland:** Gacki [DA79]: 1 ♀ – 16.06.1995, leg. RD; Grabowiec Res. [DA79]: 1 ♂, 1 ♀ – 18.06.1995, leg. RD; Kików [DA98]: 1 ♂ – 19.06.1995, leg. RD; Krzyżanowice Res. [DA68]: 3 ♀♀ – 16.06.1995, leg. RD; 3 ♂♂, 1 ♀ – 21.06.1995, leg. RD; Krzyżanowice Res. [DA68]: 1 ♂ – 10.06.1996, south slope, leg. RD; 1 ♂ – 13.07.1996, leg. RD; Lubień,

Szczebel Mt. [DA20]: 1 ♂ – 12.07.2022, meadow, leg. MS; Pastrurka [DA69]: 1 ♀ – 19.06.1997, leg. RD; Polana Polichno Res. [DA69]: 2 ♂♂ – 17.06.1995, leg. RD; 3 ♀♀ – 20.06.1995, leg. RD; 1 ♂, 1 ♀ – 09.06.1998, leg. RD; 2 ♀♀ – 02.06.2022, leg. WTS; Skorocice [DA78]: 1 ♀ – 14.07.1996, leg. RD; 1 ♀ – 14.07.1996, leg. RD; Skotniki Górne Res. [DA78]: 2 ♂♂ – 15.07.1996, leg. RD; Skowronno Res. [DA69]: 2 ♂♂, 1 ♀ – 10.07.1994, leg. RD; 1 ♀ – 15.07.1994, leg. RD; 10 ♂♂, 19 ♀♀ – 18.06.1995, leg. RD; 2 ♂♂, 4 ♀♀ – 19.06.1995, leg. RD; 2 ♂♂, 2 ♀♀ – 19.06.1995, leg. WŻ; Szczaworyż [DA88]: 1 ♂, 1 ♀ – 14.07.1994, leg. RD; 2 ♂♂, 5 ♀♀ – 19.06.1995, leg. RD; **Masurian Lake District:** Górzno [DD19]: 1 ♂ – 30.06.1995, Mollinietalia, leg. KS; Puszcza Borecka [EE79]: 1 ♀ – 02.07.1996, leg. KS; **Nowy Targ Valley:** Ludźmierz [DV27]: 1 ♂ – 31.07.1998, leg. WŻ; Zakopane [DV25]: 1 ♀ – 27.07.2023, 900-910m, leg. MS; **Pomeranian Lake District:** Czarne, Bory Tucholskie [XV25]: 1 ♂ – 13.07.2001, *Molinio-Arrhenatheretea*, leg. MBo; Fialki [DD19]: 1 ♀ – 04.07.1997, *Festuco-Brometea*, leg. KS; **Upper Silesia:** Boruszowice ad Tarnowskie Góry [CA49]: 1 ♂ – 21.07.1994, leg. WŻ; Bytom [CA57]: 1 ♀ – 30.06.1994, leg. RD; Bytom, Segiet Res. [CA48]: 2 ♂♂ – 19.07.1993, leg. RD; 1 ♂ – 29.06.1995, leg. WŻ; Ligota Dolna [BA99]: 1 ♂ – 02.08.2017, leg. JG; Lubliniec [CB31]: 1 ♂ – 09.06.1995, leg. RD; 1 ♀ – 14.06.1994, leg. RD; 1 ♀ – 22.06.1994, leg. RD; 1 ♂ – 27.06.1994, leg. RD; Mikołów, Fiołkowa Góra [CA46]: 1 ♂ – 2016, leg. JG; Mikołów-Mokre [CA46]: 1 ♂ – 29.06.2018, leg. JG; Ruda Śląska, Bielszowice Forest [CA47]: 1 ♀ – 18.07.2004, leg. JG; Ruda Śląska-Wirek [CA47]: 2 ♀♀ – 12.07.2001, leg. JG; 1 ♀ – 29.05.2018, "Tele", leg. JG; **Western Beskidy Mts.:** Paweł Wielka [CA80]: 3 ♀♀ – 30.07.2023, leg. GJ; **Wielkopolska-Kujawy Lowland:** Biskupin ad Gniezno [XU85]: 1 ♂, 1 ♀ – 02.07.2022, leg. MS; Inowrocław, Mątwy [CD14]: 1 ♀ – 24.06.2002, leg. Tomasz Konefał; Toruń, airfield [CD37]: 2 ♂♂ – 27.06.2011, leg. MK; Toruń, Kępa Bazarowa [CD37]: 1 ♂, 3 ♀♀ – 17.07.2011, leg. MK; Zbocza Płutowskie Res. [CE20]: 1 ♀ – 22.07.1998, leg. KS; 1 ♂ – 08.07.1999, *Festuco-Brometea*, leg. KS; 1 ♂ – 24.05.2000, *Festuco-Brometea*, leg. KS; 1 ♂ – 17.06.2000, *Festuco-Brometea*, leg. KS.

***Leptogaster guttiventris* Zetterstedt, 1842**

Material examined: **Białowieża Primeval Forest:** Białowieża Forest [FD85]: 1 ♀ – 15.07.1995, leg. RD; **Eastern Beskidy Mts.:** Makowa ad Przemyśl [FV19]: 1 ♀ – 07.07.1995, leg. RD; **Małopolska Upland:** Skowronno Res. [DA69]: 1 ♂ – 18.06.1995, leg. RD; 1 ♂ – 19.06.1995, leg. RD; 1 ♀ – 20.06.1995, leg. RD; **Wielkopolska-Kujawy Lowland:** Toruń, Las Piwnicki [CD38]: 1 ♀ – 19.07.2011, leg. MK.

Stichopogoninae Hardy, 1930

***Lasiopogon cinctus* (Fabricius, 1781)**

Material examined: **Baltic Coast:** Czolpinio [XA46]: 1 ♀ – 25.05.2024, leg. RD, 2 ♂♂, 4 ♀♀ – 25.05.2024, leg. WTS; Karwia [CF27]: 2 ♀♀ – 17.06.1996, leg. RD; **Masurian Lake District:** Górzno [DD19]: 1 ♀ – 19.05.1997, *Artemisietea*, leg. KS; Gutowo [DE10]: 1 ♂ – 19.05.1997, *Artemisietea*, leg. KS; Iława [DE03]: 1 ♀ – 26.05.1995, mixed forest, leg. KS; Jasne Res. [DE05]: 1 ♂ – 08.05.2001, leg. KS; **Pomeranian Lake District:** Ocypel-Osowo Leśne, Bory Tucholskie [CE27]: 1 ♂ – 14.07.2001, *Artemisietea* and other, leg. MBo; **Upper Silesia:** Brynek [CA39]: 1 ♀ – 19.05.1994, leg. RD; 1 ♂ – 20.04.2009, pitch, leg. RD; Chorzów, Żabie Doły [CA57]: 1 ♂ – 03.05.1993, leg. RD; Dobieszowice, Las Wymysłowski [CA68]: 1 ♀ – 14.05.2023, leg. WTS; Grabówka [CA07]: 2 ♀♀ – 14.04.2018, leg. JG; Gliwice-Łabędy [Laband] [CA37]: 1 ♂ – 29.04.1928, leg. FK; Lubliniec [CB31]: 2 ♂♂ – 30.04.1994, leg. RD; 1 ♂, 3 ♀♀ – 03.05.1994, leg. RD; 1 ♀ – 01.06.1994, leg. RD; 1 ♀ – 12.06.1994, leg. RD; 4 ♂♂, 2 ♀♀ – 22.06.1994, leg. RD; 1 ♂ – 12.05.1997, leg. RD; 1 ♂ – 23.04.2000, leg. RD; Łącza [CA17]:

2 ♂♂, 2 ♀♀ – 27.05.2023, leg. KC; Ruda Śląska, Bielszowice Forest [CA47]: 1 ♀ – 11.07.2004, leg. JG; Ruda Śląska, Halemba Forest [CA46]: 1 ♂ – 30.05.2004, leg. JG; Rusinowice ad Lubliniec [CB31]: 1 ♀ – 03.05.1999, leg. RD; **Wielkopolska-Kujawy Lowland:** Krobia ad Toruń [CD47]: 1 ♂ – 06.05.2010, leg. KS; Toruń [CD37]: 2 ♀♀ – 22.05.1995; K, leg. KS; 1 ♂ – 24.05.1995, leg. KS; Toruń, military training ground [CD37]: 6 ♂♂, 5 ♀♀ – 30.04.2011, leg. MK; Toruń, airfield [CD37]: 1 ♀ – 16.05.1996, leg. KS; 3 ♂♂, 2 ♀♀ – 06.05.2011, leg. MK; 1 ♂ – 11.06.2011, leg. MK; Toruń, Góra Żymińskiego [CD37]: 1 ♀ – 14.05.2007, leg. KS; Toruń, Las Piwnicki [CD38]: 2 ♂♂ – 10.05.2011, leg. AG; 1 ♀ – 11.05.2011, leg. AG; Zbocza Płutowskie Res. [CE20]: 2 ♂♂, 1 ♀ – 14.05.1997, leg. KS; 1 ♀ – 05.06.1997, *Festuco-Brometea*, leg. KS; 1 ♀ – 27.04.2000, *Festuco-Brometea*, leg. KS.

DISCUSSION

The first specimens of robber flies in the collection of USMB were collected by the forerunner of the Nature Department – Eberhard Drescher. There are 23 specimens from his collection preserved, the oldest being *Choerades gilva*, caught in 1888 in Srebrna Góra (Fig. 3). Until the beginning of the 1990s, only single specimens of robber flies were collected and deposited in USMB. They come from the historical collections of various entomologists, including notable figures such as Franz Kirsch, Hans Nowotny, Fr. Paweł Wyciło, Jan Kowalewski, Tadeusz Spaltenstain, and Marian Bielewicz. Thus, the specimens collected before 1994 represent only a small part of the collection – 170 exx. (circa 7%). After this date, Asilidae were more frequently collected and in greater numbers, particularly during research conducted in the Nida Valley in the 1990s by USMB staff and collaborators. A significant part of the collection includes specimens collected in Toruń (partly published in Krzyżyński & Szpila 2016) and its surrounding areas. Thanks to focusing on this group of insects, an increase in the number of deposited specimens is also noticeable in recent years (Fig. 5).

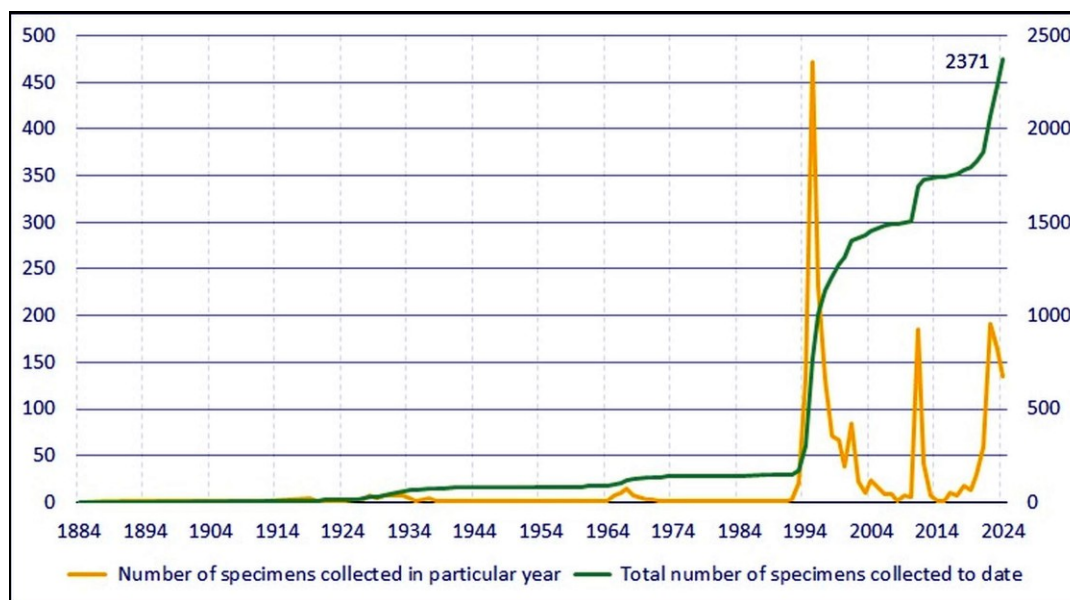


Fig. 5. The number of specimens in the collection of USMB in a timeline.

The presented material undoubtedly enhances our understanding of the distribution of robber fly species in Poland. Specimens were collected in various parts of the country (245 UTM squares) and represent all zoogeographical regions except the Trzebnica Hills (Figs 6, 7). Insects were most frequently collected in the Upper Silesia region, the vicinity of Toruń, xerothermic habitats in the Nida Valley region, and more sporadically in such touristically attractive places as the Baltic Coast, Bałowieża Primaeval Forest and mountain regions in south Poland. The substantial number of collecting localities in the Silesian region is unsurprising, given the proximity of the Museum to this area.

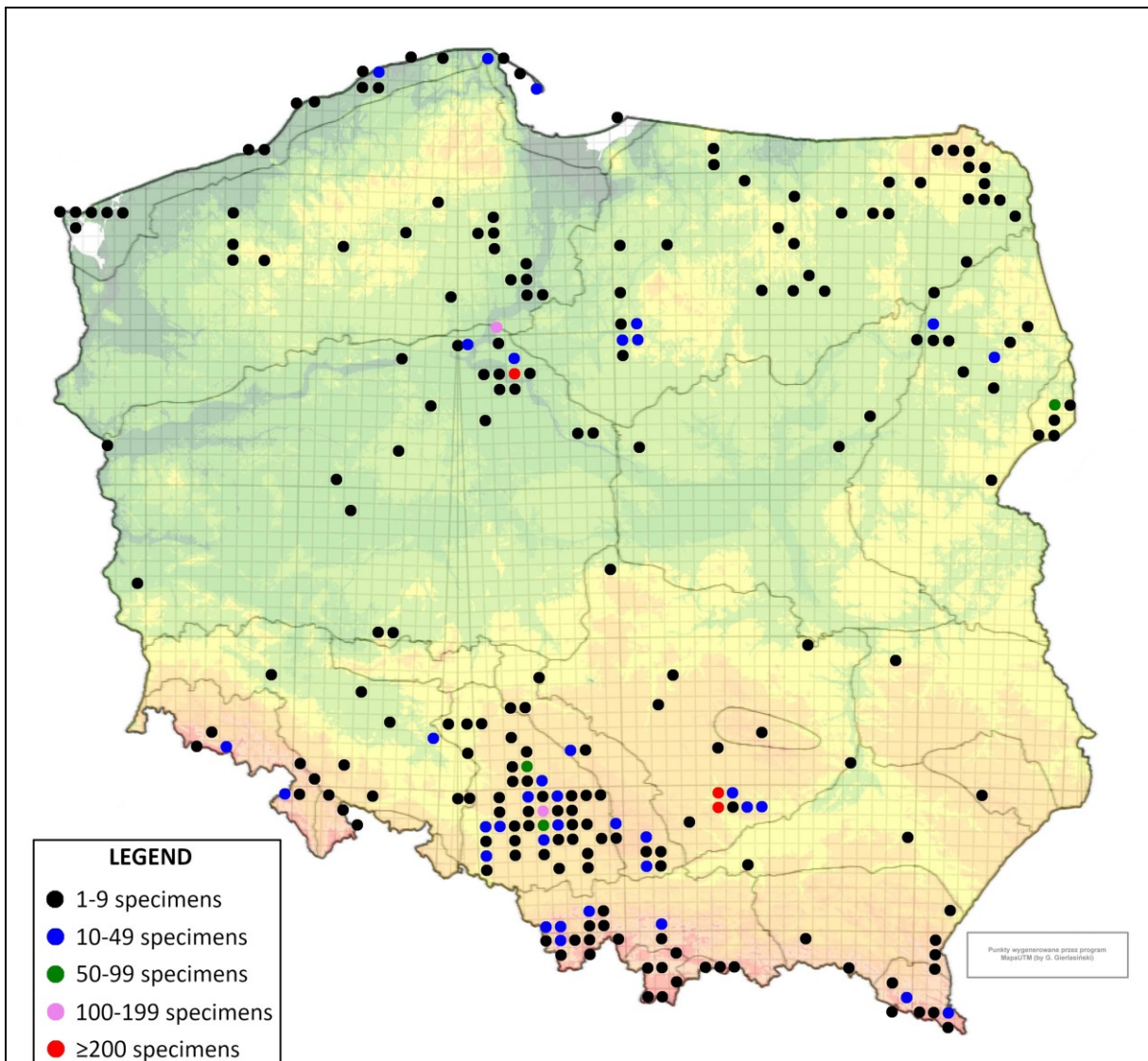


Fig. 6. The map of Poland with marked UTM squares where specimens were collected, including the number of specimens collected in a particular square.

The large number of species in some of the UTM squares is primarily due to the intensive research conducted in these regions. In three UTM squares, more than 20 species were collected: DA69 – 27 species in xerothermic nature reserves in Nida Valley, CD37 – 27 species in the vicinity of Toruń, and CA48 – 24 species in the environs of Bytom. Other locations with a significant number of species are: CE20 – 18 species in Zbocza Płutowskie Res., FD85 – 15 species in a single square in Białowieża Forest, DD19 – 15 species in forest areas around Czarny Bryńsk, Nosek, Górzno and Fialki, CB31 – 15 species in the environs of Lubliniec, and CA46 – 14 species in the area of Dąbrowa Górnicza and Mikołów (Fig. 7).

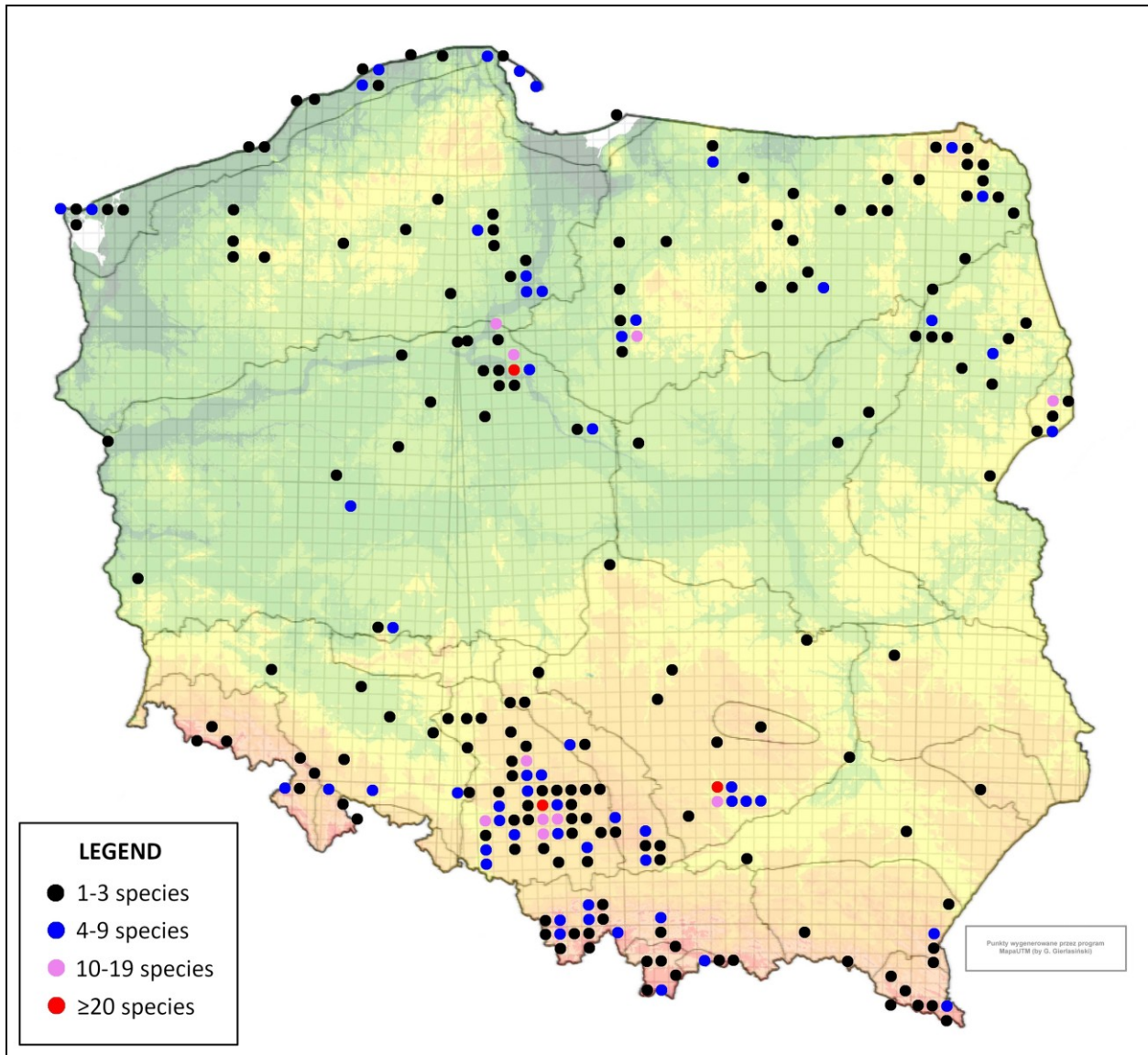


Fig. 7. The map of Poland with marked UTM squares where specimens were collected, including the number of species collected in a particular square.

In the USMB collection, the largest share of specimens belongs to the following species: *Tolmerus atricapillus* (184 exx.), *Leptogaster cylindrica* (148), *Holopogon dimidiatus* (148), *Dioctria atricapilla* (141), *Philonicus albiceps* (112), *Laphria flava* (102), *Neoitamus socius* (103), *Neoitamus cyanurus* (95), *Machimus rusticus* (93), *Lasiopogon cinctus* (77), *Dysmachus trigonus* (71), *Tolmerus cingulatus* (70) and *Dioctria hyalipennis* (65). Importantly, the collection includes rare species, such as *Antipalus sinuatus*, *Choerades amurensis*, *Ch. fuliginosa*, *Holopogon fumipennis*, *Leptarthrus brevirostris* and *Stilpnogaster aemula*. Furthermore, based on the collection, the occurrence of *Dioctria longicornis* in Poland was confirmed, and two species – *Choerades castellanii* and *Laphria empyrea* – were reported for the first time.

It is worth noting that specimens collected in Poland constitute only about half of the USMB Asilidae collection. The remaining specimens document extensive field studies conducted in diverse regions, including Cyprus, Georgia, Greece, Iran, Italy, New Caledonia, Kyrgyzstan, Morocco, Namibia and Turkey. The Museum actively expands its entomological collections through systematic collaboration with collectors and scientific institutions across Europe and globally.

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REFERENCES

- Banaszak, J., Kriger, R., Wendzonka, J. (2002). Przegląd badań nad owadami i pajakami Borów Tucholskich. In: Banaszak, J., Tobolski, K. (Eds), Park Narodowy „Bory Tucholskie” na tle projektowanego rezerwatu biosfery (pp. 229–242). Charzykowy, Park Narodowy „Bory Tucholskie”.
- Boeraeve, M., Soltész, Z., & Tamsyn, W. (2019). *Choerades castellanii*, new to Hungary (Diptera: Asilidae). *Folia Entomologica Hungarica*, 80, 327–330. <http://doi.org/10.17112/FoliaEntHung.2019.80.327>
- Bobek, K. (1890). Przyczynek do fauny muchówek tatrzańskich. *Sprawozdania Komisji Fizyjograficznej*, 25, 218–242.
- Bobek, K. (1894). Przyczynek do fauny muchówek okolicy Przemyśla. *Sprawozdania Komisji Fizyjograficznej*, 29, 142–167.
- Burakowski, B., Mroczkowski, M., & Stefańska, J. (1973). *Katalog Fauny Polski*, 23(2). *Chrzęszcze – Coleoptera. Biegaczowate – Carabidae*, część 1. Państwowe Wydawnictwo Naukowe.

- Cohen, C. M. (2020). Robber Flies of the World. Species Catalog. Internet: <https://www.robberfliesoftheworld.com/Catalog/Catalog.php> (accessed: 30.12.2024).
- Dobosz, R. (2011). Geneza, rozwój i znaczenie zbiorów przyrodniczych. In: M. Dobkowski, J. Drabina (Eds), *Muzeum Górnośląskie w Bytomiu. 100 lat dziejów* (pp. 243–276). Bytom, Upper Silesian Museum.
- Dobosz, R., Żyła, W. (2001). Zbiory Działu Przyrody Muzeum Górnośląskiego – przeszłość, teraźniejszość, przyszłość. *Kosmos*, 70(2), 215–227.
- Drescher, E. (1928). Das Gebiet Ellguth, Kreis Grottkau O/S. I Teil: Flora und Fauna des Wassers. Sondernabdruck der Wissenschaftlichen Sonderbeilage zum 39. Bericht den Wissenschaftlichen Gesellschaft „Philomathie“ in Neisse, pp. viii + 120.
- Droń, M. (2011). Muzeum Śląskie i Muzeum Górnośląskie w Bytomiu 1945-1991. In: Dobkowski, M., Drabina, J. (Eds), *Muzeum Górnośląskie w Bytomiu: 100 lat dziejów* (pp. 45–66). Bytom, Upper Silesian Museum.
- Enderlein, G. (1908). Moor – u. Dünen Studien. Ein Beitrag zur Kenntnis biosynöcischer Regionen in Westpreußen. *Bericht des Westpreussischen Botanisch-Zoologischen Vereins*, 30, 54–238.
- Geller-Grimm, F. (2003). Photographic atlas and identification key to the robber flies of Germany (Diptera: Asilidae). Internet: <https://www.robberflies.info/keyger/html/key.html> (accessed: 30.12.2024)
- Geller-Grimm, F., Dikow, T. & Niehuis, M. (2003). Raubfliegen vom Roßstein bei Dörscheid (Mittelrheintal, Rheinland-Pfalz) nebst Anmerkungen zur Verbreitung in Rheinland-Pfalz (Diptera: Asilidae). *Fauna und Flora in Rheinland-Pfalz, Zeitschrift für Naturschutz* (GNOR), 10, 85–98.
- Gerstaecker, A. (1861). Untitled. Introduced by: Hr. W. Peters legte eine Mittheilung des Hrn. Dr. Gerstäcker über eine Sammlung von Raubfliegen (Diptera, Asilina) aus Griechenland vor, welch das zoologische Museum neuerdings von Hrn. Dr. Krüper erworben hat. *Monatsberichte der Königlich Preussische Akademie des Wissenschaften zu Berlin*. 1861, Zweite Hälfte, 1010–1013.
- Hradský, M. (1962). Deux espèces nouvelles d'asilides de la Tchécoslovaquie. Diptera, Asilidae. *Bollettino dell'Associazione Romana di Entomologia*, 17(1), 7–11.
- Hradský, M. (1985). *Choerades mouchai* sp.n. aus Südosteuropa und *Laphria empyrae* Gerst., 1861, neu für die Tschechoslowakei (Diptera, Asilidae). *Reichenbachia, Schriftenreihe für taxonomische Entomologie*, 23(4), 13–15.
- Krzyżyński, M., Szpila, K. (2016). The faunistic study on robber flies (Diptera: Asilidae) of Toruń. *Dipteron*, 32, 50–59.
- Kupec, M., Kizek, T. (2022). Muchárka pralesná (*Laphria empyrea*) po 160 rokoch. *Entomofauna carpathica*, 34(1), 71–90.
- Loew, H. (1840). Ueber die im Grossherzogthum Posen aufgefundenen Zweiflügler. *Isis*, 1840(VII-VIII), 512–584.

- Loew, H. (1870). Ueber die bisher auf der galizischen Seite des Tatragebirges beobachteten Dipteren, Jahrbuche der K.K. *Gelehrten Gesellschaft in Krakau*, 41, 1–19.
- Noskiewicz, J. (1953). Fauna łowikowatych (Asilidae, Diptera) Gór Pieprzowych pod Sandomierzem. *Polskie Pismo Entomologiczne*, 23, 145–164.
- Noskiewicz, J. (1959) Nowe dla fauny Polski gatunki błonkówek (Hymenoptera) i muchówek (Diptera) i nowe stanowiska gatunków rzadko obserwowanych. *Polskie Pismo Entomologiczne*, 29(1), 201–214.
- Nowicki, M. (1867). Zapiski z fauny tatrzańskiej. *Sprawozdania Komisji Fizyograficznej*, 1(9), 179–206.
- Nowicki, M. (1873). Beiträge zur Kenntnis der Dipterenfauna Galiziens, Selbstverlag von Jagellonische Universität-Buchdruckerei, Krakau.
- Palaczyk, A. (2004). *Antipalus sinuatus*. In: Głowaciński, Z., Nowacki, J. (Eds), *Polska Czerwona Księga zwierząt. Bezkręgowce*. IOP PAN, AR w Poznaniu, Kraków – Poznań.
- Palaczyk, A., Klasa, A. (2003). Muchówki (Diptera) Masywu Babiej Góry. In: Wołoszyn, B.W., Celary, W. (Eds), *Monografia fauny Babiej Góry. Publikacje Komitetu Ochrony Przyrody PAN* (pp. 305–357), Kraków.
- Palaczyk, A., Klasa, A. (2021). Muchówki (Diptera) masywu Babiej Góry, II uzupełnienia, nowe dane i przegląd gatunków. In: Celary, W., Wołoszyn, B. (Eds), *Monografia Fauny Babiej Góry* (pp. 239–285). Publikacje Komitetu Ochrony Przyrody PAN, Kraków.
- Riedel, M.P. (1901). Beiträge zur Kenntnis der Dipteren-Fauna Hinterpommerns II. *Allgemeine Zeitschrift für Entomologie (Breslau)*, 6, 151–153.
- Riedel, M.P. (1930). Die subalpine Fliegenfauna von Reinerz (Glatzer Gebirge, Schlesien). *Zeitschrift für Wissenschaftliche Insektenbiologie*, 25(3/5), 71–81.
- Rübsaamen, E.H. (1901). Bericht über meine Reisen durch die Tucheler Heide in den Jahren 1896 und 1897. *Schriften der Naturforschenden Gesellschaft in Danzig*, 10, 79–148.
- Sack, P. (1925). Die Zweifluger des Urwaldes von Bialowies-Beitrage zur natur und Kulturgeschichte Lithaunens und angrenzender Gebiete. *Abhandlungen der Bayerischen Akademie der Wissenschaften, suppl., München*, 5, 259–277.
- Schneider, W.G. (1852). Die in Schlesien einheimischen Gattungen und Arten der Dipteren-Familie Asilica. *Jahresbericht der Schlesische Gesellschaft für Vaterländische Cultur*, 1852, 95–97.
- Schneider, W.G. (1853). Die schlesische Arten der Dipteren-Familie Asilica. *Jahresbericht der Schlesische Gesellschaft für Vaterländische Cultur*, 31, 178–180.
- Scholtz, H. (1851). Beiträge zur Kunde der schlesischen Zweiflügler. *Zeitschrift für Entomologie (Breslau)*, 4(16), 35–40; 5 (17), 41–48; 5 (19), 49–60.
- Spychalski, W., Giłka, W. (2023). Łowikowate (Diptera: Asilidae) pogranicza Pojezierza Starogardzkiego i Borów Tucholskich. *Dipteron*, 39(04), 38–58.
- Szadziewski, R., Pawlikowski, T., Buszko, J. (1973). Nowe gatunki muchówek (Diptera), błonkówek (Hymenoptera) i motyli (Lepidoptera) dla Pienin. *Przegląd Zoologiczny*, 17(2), 192–195.

- Szczepański, W.T. (2023). A new species of *Dasyopogon* (Diptera: Asilidae) from Central Europe. *Zootaxa* 5230 (3), 367–380. <https://doi.org/10.11646/zootaxa.5230.3.6>
- Szczepański, W.T., Palaczyk, A. (2022). Digital Catalogue of Biodiversity of Poland - Animalia: Arthropoda: Hexapoda: Insecta: Diptera: Brachycera: Asiloidea. Version 1.4. Polish Biodiversity Information Network. Checklist dataset: <https://doi.org/10.15468/jgcch4> accessed via GBIF.org (accessed 30.12.2024).
- Szilády, Z. (1943). Zwei neue Arten aus der Dipterensammlung von Ignaz Nagy. *Folia entomologica hungarica / Rovartani közlemények*, 8, 15–17.
- Taszakowski, A., Dobosz, R., Szwedo, J. (2019). The Hemiptera Collection of Department of Natural History, Upper Silesian Museum in Bytom. *Monographs of the Upper Silesian Museum*, 10, 131–146. <https://doi.org/10.5281/zenodo.3600362>
- Tatur-Dytkowski, J., Mielczarek, Ł. (2020). *Choerades amurensis* (Hermann, 1914) (Diptera: Asilidae), nowy gatunek łowika w faunie Polski z uwagami o jego biologii. *Wiadomości Entomologiczne*, 39(4), 1–4.
- Trojan, P. (1961). Łowiki (Diptera, Asilidae) stanowisk kserotermicznych Polski. *Fragments Faunistica*, 9(19), 109–121.
- Trojan, P. (1970). *Klucze do oznaczania owadów Polski. Część XXVIII Muchówki – Diptera. Zeszyt 27. Łowiki – Asilidae*. PWN, Warszawa.
- Trojan, P. (2007). Łowiki (Asilidae). In: Bogdanowicz, W., Chudzicka, E., Pilipiuk, I., Skibińska, E. (Eds), *Fauna Polski – charakterystyka i wykaz gatunków* (pp. 87–89, 178–179). Muzeum i Instytut Zoologii PAN, Warszawa.
- Weinberg, M., Bächli, G. (1995). Diptera, Asilidae. *Insecta Helvetica Fauna*, 11, 124 pp.
- Wolff, D., Gebel, M., Geller-Grimm, F. (2018). *Die Raubfliegen Deutschlands: Entdecken - Beobachten - Bestimmen*. Wiebelsheim, Quelle & Meyer Verlag.
- Wolff, D., Doczkal, D., Gebel, M., Voith, J., Glaß, M. (2021). *Choerades amurensis* (Hermann), *Pogonosoma minor* Loew und *Lasiopogon immaculatus* Strobl - drei Arten der deutschen Raubfliegenfauna, neu bzw. bestätigt (Diptera: Asilidae). *Nachrichtenblatt der Bayerischen Entomologen*, 070, 35–48.
- Wood, G.C. (1981). Asilidae. In: McAlpine, J.F., Peterson, B.V., Shewell, G.E., Teskey, H.J., Vockeroth, J.R., Wood, D.M. (Eds), *Manual of Nearctic Diptera* (pp. 549–573). Ottawa, Agriculture Canada Research Branch, Monograph 27.
- Zeller, P.C. (1840). Beitrag zur Kenntnis der Dipteren aus den Familien der Bombylier, Anthracier und Asiliden. *Isis*, 1840(1), 10–78.
- Zeller, P. C. (1841). Nachricht über die Seefelder bei Reinerz in entomologischer Beziehung. *Stettiner Entomologische Zeitung*, 2, 171–182.
- Żóralski, R., Kowalczyk, J.K., Marynkiewicz, Z., Spychalski, W., Giłka, W. (2021). Łowikowate (Diptera: Asilidae) wschodniego Pomorza Polski. *Dipteron*, 37(07), 436–473.

STRESZCZENIE

W niniejszej pracy przeanalizowano okazy z rodziny łowikowatych (Diptera: Asilidae) zebrane na terenie Polski i zdeponowane w Muzeum Górnośląskim w Bytomiu (USMB). Zbadano i oznaczono niemal 2400 okazów reprezentujących 56 gatunków (stan na 31 grudnia 2024 roku). Kolekcja obejmuje serie okazów pochodzących z różnych lokalizacji (245 kwadratów UTM), w tym szczególnie z Górnego Śląska, okolic Torunia oraz regionu Doliny Nidy. Materiał zawiera kilka rzadko obserwowanych gatunków: *Choerades amurensis*, *Ch. fuliginosa*, *Dysmachus fuscipennis*, *Holopogon fumipennis*, *Leptarthrus brevirostris* oraz *Stilpnogaster aemula*. Ponadto potwierdzono występowanie *Dioctria longicornis*, a *Choerades castellanii* i *Laphria empyrea* zostały po raz pierwszy odnotowane w faunie Polski.



<https://pte.up.poznan.pl/pte/dipteron/redakcja.htm>

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