

**Faunistic review of Polish Micropeplinae
(Coleoptera: Staphylinidae)**

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ABSTRACT. The distributions of the Micropeplinae (Staphylinidae) within the present-day territory of Poland are summarized on the basis of surveys of the literature and collections. An updated and annotated checklist of Polish micropeplines is given, comprising two genera and seven species. *Micropeplus staphylinoides* (MARSHAM) has been removed from the list; the occurrence of *M. caelatus* ERICHSON and *M. longipennis* KRAATZ, reported by previous authors, needs to be confirmed with new findings. *Micropeplus latus* HAMPE is reported for the first time from Poland, based on a specimen collected in the Małopolska Upland, close to the Świętokrzyskie Mts. An updated identification key for Polish *Micropeplus* spp. is presented and habitus photographs of *M. latus* are provided.

KEY WORDS: Coleoptera, Staphylinidae, Micropeplinae, *Micropeplus latus*, new record, Poland.

INTRODUCTION

The Micropeplinae are a relatively small group of staphylinids associated with moist forest floor litter, water margins, plant debris or nests of mammals; they feed on mould spores and hyphae (reviewed by CAMPBELL 1968; LÖBL & BURCKHARDT 1988; NEWTON 1991; THAYER 2005). Despite their distinctive morphology, these small beetles have been inadequately studied, and even knowledge of the distributions of species occurring in Central Europe is rather fragmentary. Most of the Micropeplinae inhabiting this region are

relatively rare and usually only small numbers of specimens are collected. Remarkable exceptions were reported for *Micropeplus marietti* DUVAL: RENNER (2001) collected nearly 300 males in Baden, Germany, using a car-netting method on a 2.5-km stretch of road, and KANIA (1994) found nearly 200 individuals in a heap of decomposing hay in the Polish Sudetes Mts.

In Poland, the Micropeplinae have never been the subject of a comprehensive faunistic revision, and data on the distribution of these interesting beetles are exceptionally scarce. Literature records provide evidence for the occurrence of two genera and seven species. However, because of missing voucher specimens in old museum collections it is not possible to verify a significant part of previously published data. Moreover, recent collecting efforts have not yielded any new findings of some previously reported species. The existing checklists of Micropeplinae in Poland (MROCKOWSKI & STEFAŃSKA 1991; BOGDANOWICZ et al. 2004; SMETANA 2004) require corrections. The present paper summarizes and comments on all available literature records, and additional findings of Micropeplinae are provided.

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MATERIALS AND METHODS

The data presented below are based on comprehensive surveys of the literature, and of specimens deposited in the Museum of Natural History, University of Wrocław, Wrocław, Poland (MNHW), the private collections of Andrzej MELKE, Kalisz, Poland (PCAM) and Paweł JAŁOSZYŃSKI, Wrocław, Poland (PCPJ), and the collection of the Upper Silesian Museum, Bytom, Poland (USM). The abbreviations used in the text are as follows: for. comp. – forest compartment ("oddział leśny"); for. distr. – forest district ("leśnictwo"); nat. res. – natural reserve; p. u. – protective unit (in national parks); vic. – vicinity. The faunistic division of Poland is adopted from BURAKOWSKI et al. (1978); the names of regions are highlighted in bold characters.

The material from the Świętokrzyski National Park (2009) was collected in modified flight intercept traps (mFIT) with pheromones for collecting bark beetles, primarily *Trypodendron* spp. (the commercially available trap IBL-2 "Trypodor") used for the permanent monitoring of several scolytine spp. and associated fauna in selected sites and forest types.

REVIEW OF POLISH MICROPEPLINAE

***Arrhenopeplus tesserula* (CURTIS, 1828)**

New records: Białowieża Primeval Forest: for. comp. 454 (FD94), 1 ex., 25 V 1999, leg. M. Gutowski (PCAM); Western Sudetes Mts.: Kaczawskie Mts., Góra Zamkowa near Wleń (WS45), 1 ex., 1 V 1998, leg. M. Wanat (MNHV); Bieszczady Mts.: Olszyna Łęgowa Nat. Res. in Kalnica (FV04), 1 ex., 27 VI 2008, leg. M. Wanat (MNHV).

Previously known from: Pomeranian Lakeland: Puszcza Człuchowska (SZUJECKI 1995); Białowieża Primeval Forest: Polana Białowieska (BOROWIEC et al. 1992; KUBISZ 2001); Upper Silesia: Brynek (SZOŁTYS 1994); Eastern Sudetes Mts.: Międzygórze near Bystrzyca Kłodzka (POLENTZ 1944), and recorded from several regions without exact localities being given: Western Sudetes Mts. (GERHARDT 1910ab, PAX 1921); Western Beskid Mts. (WANKA 1927, SZUJECKI 1969); Silesia (REITTER 1909, KUHN 1912, HORION 1951); Galicia (JAKOBSON 1908). Twice recorded generally from Poland without any further data (ŁOMNICKI 1913, HORION 1963).

***Micropeplus caelatus* ERICHSON, 1839**

Recorded from: Baltic Coast: Zaleskie near Słupsk (LÜLLWITZ 1914, 1916; HORION 1963), Gdańsk (HORION 1963); Wielkopolska-Kujawy Lowland: Głogów (LETZNER 1873, 1876, 1883, 1888; GERHARDT 1910a; HORION 1963); and from several unclearly defined regions, without exact localities: Pomorze (KERSTEN 1944; HORION 1951), Prussia (SCHILSKY 1888, 1909; ŁOMNICKI 1913; HORION 1951), East Prussia (SEIDLITZ 1888, NOHEL 1973), Silesia (KUHN 1912; ŁOMNICKI 1913; HORION 1951).

All the records listed above remain unverified; the authors know of no correctly identified specimens of *M. caelatus* from Poland. The occurrence of this species in Poland thus requires verification.

***Micropeplus fulvus fulvus* ERICHSON, 1840**

New records: Wielkopolska-Kujawy Lowland: Poznań-Cytadela (XU31), 1 ex. sifted from decaying poplar sawdust, 21 IV 2001, leg. P. Jałoszyński (PCPJ); Kościelna Wieś near Kalisz (BC94), 1 ex. sifted from hay, 28 V 1995, leg. A. Melke (PCAM); Mazovian Lowland: Świder near Otwock (EC17), 1 ex., 13 VII 1901, leg. W. Mączyński (USM); Białowieża Primeval Forest: Orzeszkowo (FD74), 1 ex., 5 VIII 1992, leg. W. Wanat (PCPJ); Lower Silesia: Chrzastawa Wielka (XS66), 7 ex., 1 V 1992, leg. M. Wanat (MNHV, PCPJ); Świętokrzyskie Mts.: Świętokrzyski Nat. Park: Klonów Range, Smuga near Ciekoty (DB84), for. comp. 133, 1 ex. sifted from debris accumulated in a wildlife feeder, 7 VII 2007, leg. M. Wanat (MNHV).

Previously recorded from: Baltic Coast: Gdańsk (HORION 1963); Pomeranian Lakeland:

Kaczynos near Malbork (LENTZ 1876, HORION 1963); Lower Silesia: Legnica (KOLBE 1914, HORION 1963); Upper Silesia: Brynek (SZOŁTYS 1994); Eastern Beskid Mts.: Przemyśl vic. (TRELLA 1930); Western Sudetes Mts.: Dziwiszów (KOLBE 1921); Eastern Sudetes Mts.: Góry Kłodzkie (KOLBE 1913); Międzygórze near Bystrzyca Kłodzka (POLENTZ 1944); from Western Beskid Mts. without exact localities (REITTER 1870, LETZNER 1871, 1888, GERHARDT 1910a); and from large, inexactly defined areas: Prussia (LENTZ 1879, SCHILSKY 1888, KUHNT 1912, ŁOMNICKI 1913, TENENBAUM 1923); East Prussia (SEIDLITZ 1888, JAKOBSON 1908); Silesia (KUHN 1912, ŁOMNICKI 1913, TENENBAUM 1923, WANKA 1927); Galicia (JAKOBSON 1908, TENENBAUM 1923).

***Micropeplus latus* HAMPE, 1861**

(Figs. 1-4)

New record: Małopolska Upland: Świnia Góra Nat. Res. (DB75), 1 ex. sifted from leaf litter in a mixed *Fagus-Abies* forest, 19 IX 2010, leg. M. Wanat (MNHV).

Micropeplus latus is known from scattered and very scarce findings in only seven or eight European countries. The type locality of this species is the vicinity of Zagreb, Croatia (HAMPE 1861); the Catalogue of Palaearctic Coleoptera (SMETANA 2004) also lists Greece, Slovakia and Sweden, but previously SMETANA (1966) mentioned Krain (i.e., Carniola in Slovenia); KAPP (2003) recently found it in Österreich; and TRONQUET (2008) gave the first record for France and mentioned the occurrence of this species in Italy. The closest finding to the Polish locality is Banská Štiavnica in Central Slovakia (SMETANA 1966), about 250 km to the south-west.

Micropeplus latus was not included in the key for Micropeplinae of Poland published by SZUJECKI (2008); it can be identified using the amply illustrated key given by TRONQUET (2008). This species belongs to a distinct group of *Micropeplus* characterized by two dorsal longitudinal carinae (and three interspaces) on each elytron visible between the scutellum and humerus, while other species have three carinae (and four interspaces). *Micropeplus latus* differs from all other Central European congeners in its very stout body and the arrangement of the elytral carinae. In *M. latus* the lateral elytral interspace is about as wide as the combined width of the two remaining interspaces, while in all other species it is much narrower.

***Micropeplus longipennis* KRAATZ, 1859**

Recorded from: Eastern Beskid Mts.: Przemyśl vic. (TRELLA 1930); and from two areas without exact localities: Silesia (SCHILSKY 1888, JAKOBSON 1908, REITTER 1909, KUHNT 1912, TENENBAUM 1923); and Northern Carpathians (HORION 1963).

The occurrence of this species in Poland must be confirmed by new findings.



Figs. 1-3. *Micropeplus latus* HAMPE; habitus – dorsal (1), ventral (2) and lateral (3) views.



Fig. 4. Locality of *Micropeplus latus* in Poland.

***Micropeplus marietti* JACQUELIN DU VAL, 1857**

New records: Lublin Upland: Czumów near Hrubieszów (GB02), 1 ex., 7 VI 1997, leg. M. Wanat (MNHV); Roztocze: Wieprzecka Góra near Zamość (FB51), 1 ex., 21 V 1985, leg. M. Wanat (MNHV).

Previously recorded from: Western Sudetes Mts.: Gołogłowy near Kłodzko (KANIA 1994); Pieniny Mts.: Magura Spiska, Kacwin (KUBISZ & SZWAŁKO 1991); and three unclearly defined regions with no exact collection data: Prussia (HORION 1963); Silesia (KOLBE 1927, HORION 1935, 1951); Sudetes Mts. (HORION 1950).

Micropeplus porcatus (PAYKULL, 1789)

New records: Wielkopolska-Kujawy Lowland: Gołuchów near Kalisz (YT04), 1 ex. sifted from rotting plant debris, 24 IV 1997, leg. A. Melke (PCAM); Kalisz, city park (BC93), 1 ex. in flight, 2 VI 2001, leg. A. Melke (PCAM); Mazovian Lowland: Jabłonna near Otwock (EC27), 9 exx., 25 V 1893; Natolin near Otwock (EC35), 85 exx., 6 IV 1893; Warszawa-Saska Kępa (EC08), 1 ex., 15 VI 1897; Warszawa-Saski Ogród (EC08), 18 exx., 26 IV 1902; Świder near Otwock (EC17), 3 exx., 13 VII 1901, 9 exx., 8 VIII 1901; Urle near Łochów (ED41), 2 exx., 5 VII 1909; Warszawa (exact UTM square unknown), 1 ex., 2 V 1892, 5 exx., 4 VI 1892, 13 exx., 3 V 1895; Warszawa-Wawer (EC08), 1 ex., 8 VI 1898, 2 exx., 1902 – all leg. W. Mączyński (USM); Białowieża Primeval Forest: Białowieża (FD94), meadows S of Białowieża NP, 2 exx., 23 V 1986, leg. M. Wanat (PCPJ); Małopolska Upland: Modlica (CC92), 1 ex., 11 VII 1982, leg. M. Wanat (PCPJ); Świętokrzyskie Mts: Świętokrzyski Nat. Park (mFIT material): p. u. Dębno (DB93): for. comp. 100b, 1 ex., 14-28 VIII 2009, for. comp. 96a, 1 ex., 31 VII – 14 VIII 2009 – leg. L. Buchholz & R. Matysek; p. u. Chełmowa Góra: for. comp. 5c (EB03), 1 ex., 1-16 VII 2009, leg. L. Buchholz & W. Gawlik; p. u. Jastrzębi Dół: for. comp. 183d (DB93), 1 ex., 15 VII-3 VIII 2009, leg. L. Buchholz & H. Bąk; p. u. Klonów: for. comp. 229a (DB84), 1 ex., 17 VI-3 VII 2009, leg. L. Buchholz & S. Pajdo; p. u. Podgórze (DB94): for. comp. 10b, 22 IV-16 V 2009, 1 ex., 16 VII-3 VIII 2009, 1 ex., leg. L. Buchholz & P. Borek; for. comp. 20b, 1 ex., 3-17 VIII 2009, leg. L. Buchholz & Z. Brożyna; p. u. Święty Krzyż (EB03): for. comp. 204c, 27 VII – 17 VIII 2009, 1 ex., leg. L. Buchholz & P. Miernik; for. comp. 202f, 23 IV-4 V 2009, 1 ex., 1-15 VII 2009, 2 exx., 27 VII-17 VIII 2009, 1 ex., leg. L. Buchholz & P. Iwan; p. u. Święta Katarzyna (DB93): for. comp. 147c, 1 ex., 13-28 VII 2009, leg. L. Buchholz & Sz. Rak; Lublin Upland: Czumów near Hrubieszów (GB02), 1 ex., 7 VI 1997, leg. M. Wanat (MNHW); Roztocze: Wieprzecka Góra near Zamość (FB51), 3 exx., 21 V 1985, leg. M. Wanat (MNHW, PCPJ); Western Sudetes Mts.: Wąwóz Myśliborski Nat. Res. near Jawor (WS85), 1 ex., 16 V 1992, leg. M. Wanat (PCPJ).

Previously recorded from: Baltic Coast: Gdańsk (LENTZ 1879, HELM 1880), Koszalin (LÜLLWITZ 1916), Kołobrzeg (NOHEL in BURAKOWSKI et al. 1978); Pomeranian Lakeland: Kaczynos near Malbork (LENTZ 1879), Słupsk (NOHEL in BURAKOWSKI et al. 1978); Wielkopolska-Kujawy Lowland: Dąbrowa near Lub ska (NOHEL in BURAKOWSKI et al. 1978); and records without exact data: LETZNER (1871, 1888), SCHUMANN (1904), SZULCZEWSKI (1922), ARNOLD (1936); Mazovian Lowland: Warszawa, Świder near Otwock (SZUJECKI 1968); Białowieża Primeval Forest: Polana Białowieska (BOROWIEC et al. 1992); (KUBISZ 2001); (BYK A. et al. 2006); Lower Silesia: Oława, Paczków (NOHEL in BURAKOWSKI et al. 1978); records without exact data: LETZNER (1871, 1888); Trzebnica Hills: Twardogóra near Syców (LETZNER 1871, 1888); Upper Silesia: Brynek (SZOLTYS 1994); and records without exact data: KELCH (1846), ROGER (1856), REITTER (1870),

LETZNER (1871, 1888); Kraków-Wieluń Upland: Ojcowski PN (KUBISZ & PAWŁOWSKI 1998); records without exact data: KOTULA 1873, LGOCKI 1908, JACENTKOVSKIJ 1910, NOHEL 1973; Świętokrzyskie Mts.: Bodzentyn (JACENTKOVSKIJ 1910); Trzemosna for. distr.; Cisów Nat. Res.; Radomice Nat. Res.; Świętokrzyski Nat. Park: Św. Krzyż for. distr. and Chełmowa Góra for. distr. (MOKRZYCKI 2007); Roztocze: Sabaudia (TENENBAUM 1913); Western Sudetes Mts.: records without exact data: LETZNER (1888); Eastern Sudetes Mts.: records without exact data: ZEBE (1852), LETZNER (1871, 1888); Western Beskid Mts.: Stary Żywiec (WACHTL 1870), Zabrzeg near Bielsko-Biała (NOHEL in BURAKOWSKI et al. 1978); Eastern Beskid Mts.: Przemyśl vic. (TRELLA 1930). Additionally, this species has been recorded without exact collecting data from Poland (ŁOMNICKI 1913); Prussia (SIEBOLD 1847); East Prussia (SEIDLITZ 1888); Silesia (SCHILLING 1829, KUHN 1912); Galicia (ŁOMNICKI 1884); Western Galicia (NOWICKI 1873); and "near the River Kwis" (TOMASZEWSKI 1932).

***Micropeplus staphylinoides* (MARSHAM, 1802)**

Recorded only from Pomeranian Lakeland: Człuchów Forest (SZUJECKI 1995). According to SZUJECKI (2008), this record was based on an erroneously identified specimen. However, the occurrence of *M. staphylinoides* in Poland is highly plausible.

IDENTIFICATION KEY FOR POLISH SPECIES OF *MICROPEPLUS* WITH TWO
DORSAL ELYTRAL CARINAE

1. In lateral view posterodorsal margin of fourth visible abdominal tergite strongly projected caudad and forming a distinct tooth.....*M. staphylinoides* MARSHAM
- In lateral view posterodorsal margin of fourth tergite blunt or right-angled, not projected.....2
2. Elytra at widest point much broader than base of abdomen; second elytral carina (counting from suture) nearly equidistant from humeral carina and from suture.....*M. latus* HAMPE
- Elytra at widest point as broad as base of abdomen or only indistinctly broader; second elytral carina distinctly closer to humeral carina than to suture.....3
3. Frons and vertex with 3 elongate, sometimes indistinct convexities; median longitudinal impression on metaventricle indistinct or shorter than 1/3 length of ventrite; body length 2.5-2.8 mm.....*M. longipennis* KRAATZ
- Frons and vertex with 4-5 longitudinal carinae convergent anterad; median longitudinal impression on metaventricle deep and at least as long as half the length of ventrite; body length 2.0-2.5 mm.....4

4. Antennal club distinctly darker than flagellum; three median longitudinal impressions on metaventrite sharply delimited and with parallel sides; body length 2.2-2.5 mm.....*M. marietti* DUVAL
- Antennal club and flagellum uniformly testaceous; three median impressions on metaventrite diffused and irregular in shape; body length 2.0-2.3 mm.....*M. fulvus fulvus* ERICHSON

DISCUSSION

Including the newly recorded *M. latus* and excluding *M. staphylinoides*, the updated Polish checklist of Micropeplinae comprises seven species. However, most recent Polish records of *M. longipennis* and *M. caelatus* are nearly 30 and 40 years old respectively, and correctly identified voucher specimens from the present-day territory of Poland are not known to the authors. The occurrence of these two rare species in Poland must be confirmed with new findings. Despite extensive collecting efforts and numerous surveys of all regions by Polish coleopterists, even the most common *M. fulvus* and *M. porcatus* have not yet been found in all regions. However, the existing distributional data clearly show that these two micropelines inhabit the entire country. *Micropeplus marietti* and *A. tesserula* are known from several findings, mostly in the southern mountain ranges. A few records from north-western (Pomeranian Lakeland) and eastern (Białowieża Primeval Forest, Lublin Upland and Roztocze) Poland suggest broader distributions. In general, the Micropeplinae have been exceptionally poorly studied and further field work and collection surveys are required to fully characterize the distribution of individual species in Poland and to recognize possible threats, important for nature conservation projects. Interesting biogeographical problems are related to such rare species as *M. latus*, here recorded from Poland for the first time. Its highly disjunct distribution, consisting of apparently very small local populations from the Balkans to Scandinavia and from France to Poland may suggest vicariance processes, but at the same time the micropelines associated with decaying hay and other decomposing plant matter are prone to anthropogenic dispersal.

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