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New records of handsome fungus beetles (Coleoptera: Endomychidae) in Bulgaria

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Abstract. New data on the distribution of the species *Endomychus coccineus* (Linnaeus, 1758), *Hylaia reissi* Csiki, 1911, *Lycoperdina pulvinata* Reitter, 1884, *L. succincta* (Linnaeus, 1767), *Mycetina cruciata* (Schaller, 1783) and *Mycetaea subterranea* (Fabricius, 1801) (Coleoptera: Endomychidae) in Bulgaria are presented.

Key words: Endomychidae, Bulgaria, distribution.

Introduction

In the Catalogue of Palaearctic Coleoptera only nine species of the family Endomychidae (Coleoptera: Coccinelloidea) are listed for Bulgaria (Rücker & Löbl 2007; Tomaszewska 2007). Handsome fungus beetles are rarely reported from the country and some of the old records have been omitted in the Catalogue. In the present work, we provide new data on the distribution of six species based on material hosted in the Zoological Collection of Sofia University, Faculty of Biology (BFUS).

Material and Methods

The study includes materials collected by the authors from 2000 to 2022 in different regions of Bulgaria, as well as those provided by other collectors. The abbreviations used are as follows: DGr – Denis Gradinarov; YP – Yana Petrova; OS – Ognyan Sivilov; HH – Hristina Hristova; PM – Plamen Mitov; RK – Rumyana Kostova; VS – Vladimir Stefanov; DGe – Dilian Georgiev; ex. – specimen/s; pft – pitfall traps; fit – flight interception traps.

Results and discussion

Endomychidae Leach, 1815

***Endomychus coccineus* (Linnaeus, 1758)**

Material examined: Zemen Gorge, near Polska Skakavitsa Vill., 42°24.590'N 22°41.265'E, 550 m a.s.l., riverine forest, 16.iv.2000, 1 ♂ (BFUS-COL000903), 2 ex. (BFUS-COL000904, BFUS-COL000905), under bark of *Populus alba* L., DGr leg.; Central Stara Planina Mts, near Bukovets Hut, 42°47.354'N 25°53.439'E, 1052 m a.s.l., beech forest, 27.viii.2009, 1 ex. (BFUS-COL000906), OS leg.; Zemen Gorge, near Polska Skakavitsa Vill., 42°24.720'N 22°41.210'E, 550 m a.s.l., 22.iv.2011, 1 ex. (BFUS-COL000907), under bark of *Populus* sp., DGr leg.; Sarnena Gora Mts, NW Gorno Novo Selo Vill., 42°28.451'N 25°13.324'E, 800 m a.s.l., 24.ix.2018, 1 ex. (BFUS-COL000908), under bark of *Quercus* sp., YP leg.; W Rhodopes Mts, SW of Peshtera, 42°00.518'N 24°16.789'E, 570 m a.s.l., hornbeam

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forest, 30.vi. – 27.vii.2020, 1 ex. (BFUS-COL000909), fit, OS & HH leg.; Sandanski-Petrich Valley, E of Novo Hodzhovo Vill., 41°24.355'N 23°24.301'E, 121 m a.s.l., riverine vegetation, 24.iv.2022, 1 ♂ (BFUS-COL000910), DGr leg.

Notes: In Bulgaria this species is known from Sarnena Gora Mts (Joakimov 1904: 38), Sofia (Netolitzky 1912: 158), Stara Planina Mts (Joakimov 1904: 38; Tomaszewska 1997: 221) and from Albena resort (Tomaszewska 1997: 221). First record for Zemen Gorge, W Rhodopes and Sandanski-Petrich Valley.

Fig. 1. Endomychidae species from Bulgaria. A – *Endomychus coccineus* (male, BFUS-COL000903); B – *Hylaia reissi* (male, BFUS-COL000911); C – *Lycoperdina pulvinata* (male, BFUS-COL000915); D – *L. succincta* (male, BFUS-COL000918), E – *Mycetina cruciata* (male, BFUS-COL000925); F – *Mycetaea subterranea* (BFUS-COL000939). Scale bars: 1 mm.

***Hylaia reissi* Csiki, 1911**

Material examined: Pirin Mts, SE of Pirin Vill., 41°31.357'N 23°34.688'E, 890 m a.s.l., oak-hornbeam forest, 06.iv. – 16.v.2012, 1 ♂ (BFUS-COL000911), pft, OS leg.; the same, 41°31.294'N 23°34.735'E, 896 m a.s.l., beech forest, 17.vi. – 19.vii.2012, 1 ♂ (BFUS-COL000912), 1 ♀ (BFUS-COL000913); Belasitsa Mts, S of Petrich, Luda Mara Riv. Valley, 41°21.995'N 23°12.653'E, 460 m a.s.l., deciduous forest, 16.vi. – 18.vii.2012, 1 ♂ (BFUS-COL000914), pft, OS leg.

Notes: Balkan endemic, in Bulgaria known from Stara Planina Mts (Csiki 1911: 74; Esser 2012: 174), Maleshevska Planina Mts (Guéorguiev & Ljubomirov 2009: 253), W Rhodopes (Esser 2012: 174; Bekchiev & Guéorguiev 2015: 335), Ruy, Pirin, and Vitosha Mts (Bekchiev & Guéorguiev 2015: 335). First record for Belasitsa Mts.

***Lycoperdina pulvinata* Reitter, 1884**

Material examined: Strandzha Mts, NE of Balgari Vill., Marina Reka Protected Area, 42°06.695'N 27°45.883'E, 180 m a.s.l., beech-oak forest, 08.v. – 12.vi.2009, 1 ♂ (BFUS-COL000915), pft, PM, RK & OS leg.; Strandzha Mts, NW of Brodilovo Vill., 42°06.362'N 27°50.543'E, 295 m a.s.l., shrubs of green olive tree, 08.v. – 12.vi.2009, 1 ♂ (BFUS-COL000916), pft, PM, RK & OS leg.; Sandanski-Petrich Valley, Kozhuh Hill, 41°27.526'N 23°15.418'E, 223 m a.s.l., xerothermic oak grove, 06.iv. – 14.v.2012, 1 ♀ (BFUS-COL000917), pft, OS leg.

Notes: Balkan endemic, in Bulgaria known from the southern parts of the country – Slavyanka Mts (Roubal 1931: 453; Bekchiev & Guéorguiev 2015: 335), Maleshevska Planina Mts (Guéorguiev & Ljubomirov 2009: 253), Belasitsa Mts (Guéorguiev 2011: 13) and from Chelopech Village (Guéorguiev 2018: 5). Omitted in the Catalogue of Palaearctic Coleoptera for Bulgaria (Tomaszewska 2007). First record for Strandzha Mts and for Kozhuh Hill.

***Lycoperdina succincta* (Linnaeus, 1767)**

Material examined: E Stara Planina Mts, above Kotel, 42°55.288'N 26°27.658'E, 698 m a.s.l., pasture, 19.v.2019, 1 ♂ (BFUS-COL000918), 3 ♀♀ (BFUS-COL000919 – BFUS-COL000921), on puffball fungus, VS leg.; Falakro Mts, E of Petrelik Vill., 41°29.322'N 23°52.333'E, 533 m a.s.l., pasture, 07.v.2021, 1 ♀ (BFUS-COL000922), in puffball fungus, YP & DGr leg.

Notes: In Bulgaria reported from Vitosha Mts (Joakimov 1904: 38), Sofia (Nedelkov 1909: 9), Central Stara Planina Mts (Angelov 1968: 144) and Maleshevska Planina Mts (Guéorguiev & Ljubomirov 2009: 253). Omitted in the Catalogue of Palaearctic Coleoptera for Bulgaria (Tomaszewska 2007). First record for E Stara Planina Mts and for the Bulgarian part of Falakro Mts.

***Mycetina cruciata* (Schaller, 1783)**

Material examined: Central Stara Planina Mts, SW of Chiflik Vill., 42°49.407'N 24°32.45'E, 760 m a.s.l., beech forest, 22.vi. – 04.vii.2020, 2 ♀♀ (BFUS-COL000923, BFUS-COL000924), fit, OS & HH leg.; the same, 04.vii. – 30.vii.2020, 4 ♂♂ (BFUS-COL000925 – BFUS-COL000928), 2 ♀♀ (BFUS-COL000929, BFUS-COL000930); Rila Mts, 42°05.518'N 23°23.101'E, 1325 m a.s.l., deciduous forest, 25.vi. – 26.vii.2020, 1 ♂ (BFUS-COL000931), fit, OS & HH leg.; Osogovska Planina Mts, SW of Novo Selo Vill., 42°10.666'N 22°40.122'E, 1034 m a.s.l., deciduous forest, 24.vi. – 25.vii.2020, 1 ♂ (BFUS-COL000932), 1 ♀ (BFUS-COL000933), fit, OS & HH leg.

Notes: In Bulgaria this species has been reported from Sredna Gora Mts (Joakimov 1904: 38; Kostova *et al.* 2019: 80), Slavyanka Mts (Roubal 1931: 453), Central Stara Planina Mts (Horion 1961: 126; Angelov 1968: 144), Maleshevska Planina Mts (Guéorguiev & Ljubomirov 2009: 253) and Belasitsa Mts (Guéorguiev 2011: 13). First record for Rila Mts and for Osogovska Planina Mts.

***Mycetaea subterranea* (Fabricius, 1801)**

Material examined: Belasitsa Mts, S of Petrich, Luda Mara Riv. Valley, 41°21.995'N 23°12.653'E, 460 m a.s.l., deciduous forest, 15.v. – 16.vi.2012, 2 ♂♂ (BFUS-COL000934, BFUS-COL000935), 2 ♀♀ (BFUS-COL000936, BFUS-COL000937), 1 ex. (BFUS-COL000938), pft, OS leg.; Sarnena Gora Mts, Zmeyova Dupka Cave, 42°30.50'N 25°38.05'E, 665 m a.s.l., 20.iii.2018, 2 ♂♂ (BFUS-COL000939, BFUS-COL000940), 4 ex. (BFUS-COL000941 – BFUS-COL000944), in detritus and roots, DGe leg.

Notes: In Bulgaria this species has been reported from Sofia City (Horion 1961: 116), several caves in different regions of the country (Guéorguiev & Beron 1962: 333; Beron 1972: 317) and also from nest of *Formica rufa* L. in Rila Mts (Lapeva-Gjonova & Rücker 2011: 7). Omitted in the Catalogue of Palaearctic Coleoptera for Bulgaria (Tomaszewska 2007). First record for Belasitsa Mts and for Sarnena Gora Mts.

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