CONTRIBUTION TO THE KNOWLEDGE OF COMB-CLAWED BEETLES (COLEOPTERA: TENEBRIONIDAE, ALLECULINAE) OF LITHUANIAN FAUNA

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Introduction

Adults of comb-clawed beetles may be recognized by having pectinate or serrate tarsal claws (Burakowski, 1976). The similarity of larval morphology of comb-clawed and darkling beetles was established in the middle of the last century and the fusion of these groups was suggested by Skopin (1964) and Watt (1966). These propositions were accepted by Doyen (1972) and many authors later, who comprised comb-clawed beetles as a subfamily Alleculinae within Tenebrionidae in their papers.

Alleculinae is one of the largest subfamily of Tenebrionidae with about 2600 extant species, grouped in 188 genera worldwide (Burakowski, 1976; Bousquet *et al*., 2015). 711 species are listed for Palaearctic region, and 197 of them are noted as representatives of the European fauna (Novák & Pettersson 2008). The members of some genera e.g. *Allecula*, *Hymenorus*, *Prionychus*, *Pseudocistella*, *Mycetocahara*, belong to the assemblage of saproxylic beetles and inhabit mainly forests where larvae develop in rotten wood (Burakowski *et al*., 1987; Jansson & Coskun, 2008; Novák *et al*., 2013, Atay *et al*., 2012). While the larvae of another group of alleculins, e.g. members of the genera *Hymenalia*, *Gonodera*, *Isomira*, *Cteniopus*, *Omophlus*, are ground dwelling and eat the roots of grasses (Burakowski *et al*., 1987; Yldirim *et al*., 2013).

Past investigations of comb-clawed beetles in Lithuania were fragmentary therefore their species composition in Lithuania is still not completely known. Till now only nine species of the subfamily were recorded for local fauna, and eight were noted as expected in the country (Tamutis *et al*., 2011).

The aim of our study was to re-examine available specimens, analyze faunistic data and contribute to the knowledge of species composition and distribution of comb-clawed beetles in Lithuania.

Material and Methods

The specimens were collected during the survey of species composition of insects in different biotopes. Additionally we re-examined the material of the subfamily, collected in Lithuania since the beginning of the last century and deposited in Kaunas T. Ivanauskas Museum of Zoology. Except for those published previously, the results of this study were included in this paper. We also decided to include the data given from Lithuanian photographers, who photographed some, well distinguished species of comb-

clawed beetles in nature and published their photos on the website http://www.macrogamta.lt/ according to the licence of the authors. All collected material is deposited in Kaunas T. Ivanauskas Museum of Zoology.

The species are arranged following the systematic order accepted in the Catalogue of Lithuanian beetles (Tamutis *et al*., 2011).

Prionychus melanarius is marked with an asterisk (*) in the text, as it is recorded for the first time for Lithuanian fauna.

Examined material was collected by: Artūras Gedminas (A.G.), A. Kučinskas (A.K.), Elena Gaidienė (E.G.), Giedrius Markevičius (G.M.), Gintautas Steiblys (G.S.), Giedrius Švitra (G.Š.), Konstantinas Aris (K.A.), Kazimieras Martinaitis (K.M.), M. Ryliškienė-Kabašinskaitė (M.R.K.), Povilas Ivinskis (P.I.), Povilas Rėklaitis (P.R.); Rolandas Dvilevičius (R.D.), Romas Ferenca (R.F.), Rimvydas Gaidys (R.G.), Rimas Kuprys (R.K.), Stefanas Bazarevskis (S.B.), Saulius Karalius (S.K.), Simonas Pileckis (S.P.), Vitalijus Bačianskas (V.B.), Vytautas Inokaitis (V.I.), Vidmantas Monsevičius (V.M.), Vytautas Tamutis (V.T.), Žilvinas Pūtys (Ž.P.).

Faunistic information is presented by: geographic name of locality of collection, collection date (day, month, year), number of specimens, collecting pecularities (if present), initials of collector.

Geographical names are used following the document of National land service under the ministry of Agriculture of the Republic of Lithuania "Regulation usage of geographical names on maps" Order 1P-15, 3 February, 2004 (https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.227707). The names of reserves are used following the regulation of National protected areas service under the ministry of Environment of Republic of Lithuania (http://www.vstt.lt/VI/index.php#r/57) and (Kirstukas, 2004).

Conventions used in the text: Čepkeliai – Čepkeliai Strict Nature Reserve, Gerdašiai – Gerdašiai Entomological Reserve, Jiesia – Jiesia Landscape Reserve; Kamanos – Kamanos Strict Nature Reserve; Nevėžis – Nevėžis Landscape Reserve, Nagliai – Nagliai Nature Reserve, Pajūris – Pajūris Regional Park, Pavilniai – Pavilniai Regional Park, Ringovė – Ringovė Entomological Reserve, Vaisgėliškis – Vaisgėliškis Botanical Reserve, Verkiai – Verkiai Regional Park, Veršva – Veršva Landscape Reserve, Vidzgiris - Vidzgiris Botanical Reserve, Viešvilė – Viešvilė Strict Nature Reserve.

List of localities

Locality	Administrative district	Coordinates (LAT, LONG)
Amaliai	Kaunas mun.	54.922259, 24.037805
Babėnai	Kėdainiai	55.323611, 23.976789
Braziūkai	Kaunas district	54.903604, 23.477084
Čepkeliai (1)	Varėna district	54.028576, 24.470402
Čepkeliai (2)	Varėna district	54.016123, 24.428368
Čepkeliai (3)	Varėna district	54.020475, 24.426911
Čepkeliai (4)	Varėna district	53.985463, 24.440731
Daubėnai	Vilnius district	54.568643, 25.445867
Didieji Grūžiai	Pasvalys district	56.092088, 24.228349
Didysis Raistas	Jonava district	54.951763, 24.135385
Druskininkai env.	Druskininkai mun.	54.007176, 24.004539
Dubravos miškas f. (1)	Kaunas district	54.841788, 24.091348

Dubravos miškas f. (2)	Kaunas district	54.830566, 24.037593
Dubravos miškas f. (3)	Kaunas district	54.827727, 24.033584
Dukstynos miškas f.	Ukmergė district	55.281411, 24.846411
Gelgaudiškis	Šakiai district	55.082347, 22.975487
Gerdašiai	Druskininkai mun.	53.946502, 23.880343
Giruliai	Klaipėda district	55.771224, 21.082911
Guogiškis	Zarasai district	55.845376, 26.073155
Jiesia (1)	Kaunas mun.	54.856051, 23.936927
Jiesia (2)	Kaunas mun.	54.856179, 23.936977
Jiesia (3)	Kaunas mun.	54.856498, 23.935495
Jiesia (4)	Kaunas mun.	54.850759, 23.938894
Jiesia (5)	Kaunas mun.	54.816029, 23.916801
Jiesia (6)	Kaunas mun.	54.815941, 23.915551
Jiesia (7)	Kaunas mun.	54.816786, 23.917295
Jiesia (8)	Kaunas mun.	54.848093, 23.931831
Juodkrantė (1)	Neringa mun.	55.522616, 21.107542
Juodkrantė (2)	Neringa mun.	55.549352, 21.102595
Juknaičiai	Šilutė district	55.296118, 21.575763
Miškas Juškinė (1)	Šakiai district	55.019589, 23.462074
Miškas Juškinė (2)	Šakiai district	55.017174, 23.452731
Miškas Juškinė (3)	Šakiai district	55.019791, 23.463516
Miškas Juškinė (4)	Šakiai district	55.023484, 23.450025
Miškas Juškinė (5)	Šakiai district	55.013697, 23.461696
Kačerginė (1)	Kaunas district	54.933799, 23.721188
Kačerginė (2)	Kaunas district	54.932413, 23.694117
Kačerginės miškas f.	Kaunas district	54.925721, 23.716132
Kairėnai	Vilnius district	54.720588, 25.404319
Kairiai	Klaipėda district	55.621296, 21.173577
Kalviai	Jurbarkas district	55.072618, 23.354608
Kamanos	Akmenė district	56.312417, 22.653304
Karklė	Klaipėda district	55.811472, 21.067530
Karmėlava (1)	Kaunas district	54.972877, 24.075064
Karmėlava (2)	Kaunas district	54.973128, 24.068647
Kaunas (1)	Kaunas mun.	54.897541, 23.929624
Kaunas (2)	Kaunas mun.	54.865891, 23.933733
Kaunas (3)	Kaunas mun.	54.904799, 23.913356
Kaunas (4)	Kaunas mun.	54.865873, 23.933622
Kaunas (5)	Kaunas mun.	54.907355, 23.942785
Kazlų Rūda	Kazlų Rūda mun.	54.752358, 23.477403
Kirtimai	Vilnius mun.	54.642683, 25.277721
Klaipėda	Klaipėda mun.	55.726743, 21.116827
Kleboniškio miškas f.	Kaunas mun.	54.948926, 23.987892
Lėbartai	Klaipėda district	55.661979, 21.290782
Lekėčiai	Šakiai district	54.984601, 23.503719
Laumikoniai	Molėtai district	55.052658, 25.438629
Lomankos miškas f.	Kaunas district	54.967562, 23.748644
Marackų miškas f.	Kazlų Rūda mun.	54.775266, 23.576298
Marcinkonys (1)	Varėna district	54.058648, 24.403233
Marcinkonys (2)	Varėna district	54.054269, 24.395297
Marcinkonys (2)	Varėna district	54.045433, 24.400889
Margininkai	Kaunas district	54.793274, 24.046397

Margionys	Varėna district	53.997861, 24.290599
Minčios miškas f.	Utena district	55.483934, 25.981797
Miškas Paliepė	Varėna district	54.973128, 24.068647
Nagliai	Neringa mun.	55.462252, 21.083545
Nemirseta	Palanga mun.	55.875689, 21.060209
Netoniai	Kaunas district	54.938764, 23.727576
Nevėžis	Kaunas district	54.936901, 23.795808
Nida (1)	Neringa mun.	55.322088, 21.033241
Nida (2)	Neringa mun.	55.305271, 21.001306
Pajūrio	Klaipėda district	55.865463, 21.062023
Palanga	Palanga mun.	55.946017, 21.072053
Paluobiai	Šakiai district	55.034322, 23.439573
Pasalupis	Tauragė district	55.255118, 22.491498
Pavilkijys	Šakiai district	55.037386, 23.572555
Pavilniai	Vilnius district	54.689959, 25.355177
Pavilnys	Vilnius district	54.687076, 25.330099
Petroškų miškas f.	Lazdijai district	54.112618, 23.630254
Pervalka	Neringa mun.	55.427193, 21.101311
Pilėnų miškas f.	Kaunas district	54.967562, 23.748644
Pogarenda	Varėna district	53.938474, 24.483482
Prienai	Prienai mun.	54.647246, 23.933718
Punios šilas (1)	Alytus district	54.543254, 24.079822
Punios šilas (2)	Alytus district	54.540753, 24.085502
Punios šilas (3)	Alytus district	54.54644, 24.0539452
Punios šilas (4)	Alytus district	54.51778, 24.0962023
Puvočiai	Varėna district	54.115485, 24.293589
Rastinėnai	Vilnius district	54.757036, 25.004592
Ringovė (1)	Kaunas district	55.050463, 23.518401
Ringovė (2)	Kaunas district	55.053185, 23.519079
Romainiai	Kaunas district	54.919278, 23.841573
Semeliškės	Elektrėnai mun.	54.67361, 24.6666313
Skirmantiškės	Elektrėnai mun.	54.757967, 24.870813
Smalininkai	Jurbarkas district	55.083182, 22.543444
Smiltynė	Klaipėda mun.	55.713179, 21.098931
Slydžiai	Šiauliai district	55.839513, 23.153718
Stirniai	Molėtai district	55.230778, 25.647581
Školkampio miškas f.	Kaunas district	54.883475, 23.569835
Šventoji	Palanga mun.	56.004588, 21.075004
Taujėnų miškas f.	Ukmergė district	55.432542, 24.642828
Tervydoniai (1)	Šakiai district	55.027086, 23.446256
Tervydoniai (2)	Šakiai district	55.027875, 23.443422
Tervydoniai (3)	Šakiai district	55.026666, 23.441774
Tervydoniai (4)	Šakiai district	55.027182, 23.448232
Turžėnų miškas f.	Jonava district	54.986242, 24.099939
Utena	Utena mun.	55.493403, 25.580027
Vaiguvos miškas f.	Kaišiadorys district	54.779832, 24.210592
Vaisgėliškis	Ukmergė district	55.291298, 24.853226
Veliuona	Jurbarkas district	55.078166, 23.280032
Ventės Ragas	Šilutė district	55.343219, 21.199373
Verkiai	Vilnius mun.	54.750035, 25.293303
Verkiai	Vilnius mun.	54.784633, 25.334593

Veršvas	Kaunas mun.	54.921328, 23.860241
Viečiūnų miškas f.	Druskininkai district	54.038485, 24.071945
Viešvilė (1)	Tauragė district	55.139499, 22.449578
Viešvilė (2)	Tauragė district	55.140866, 22.456487
Vidzgiris	Alytus district	54.377814, 24.010585
Vilnius	Vilnius mun.	54.685596, 25.290794
Vyteniškių miškas f.	Vilnius mun.	54.748266, 25.471422
Zujai	Ukmergė district	55.289568, 24.849732
Žiogeliai	Druskininkai mun.	54.066872, 24.116803

List of species

Tribe Alleculini Laporte, 1840
Subtribe Alleculinae Laporte, 1840
***Prionychus ater* (Fabricius, 1775)**

Faunistic information: Braziūkai, 15.06.2019, 1, in homestead (V.T.); Druskininkai env., 16.06.1995, 1 (V.T.); Kaunas (1), 09.06.1937, 1 (leg. unknown); Kaunas (2), 23.07.1981, 1, 28.07.1982, 1 (R.F.); Kaunas (3), 15.06.2011, 1, 25.07.2011, 2, 07.07.2012, 1, 04.07.2013, 2, 14.07.2014, 1, 23.07.2014, 2, 27.07.2015, 1, 03.08.2015, 1, 06.08.2015, 2, 22.07.2016, 1, 29.07.2017, 1, 17.08.2019, 1, all 16 specimens attracted to light (V.I.); Kaunas (4), 19.06.2012, 1, 25.07.2016, 1 (R.F.); Kaunas (5), 12.08.2014, 1 (R.K.); Margininkai, 31.05.1998, 3, in hollows of old *Malus domestica* (V.T.); Neveronys, 26.07.2004, 1, attracted by light (V.I.); Paluobiai, 09.10.2005, 1 (R.F.); Punios šilas (1), 18.06.2009, 1 (R.F.); Ringovė (1), 14.08.2009, 1 (V.T.); Slydžiai, 19.06.1996, 1, under bark of dead *Quercus robur* (V.T.); Utena, 02.07.1967, 1 (E.G.); Tervydoniai (2), 25.07.2016, 1 (R.F., photo in nature); Ventės Ragas, 31.07.1993, 1, 02.08.1993, 1 (S.K.) Žiogeliai, 10.07.2017, 1, attracted to light (V.I.).

Comments. Euro-Siberian species distributed throughout Europe and West Siberia (Novák & Pettersson, 2008). The larvae develop in wood mould of decaying trees, commonly in hollows of old deciduous trees (Atay *et al*., 2012). Actual faunistic information was known only from Druskininkai, Ignalina, Joniškis and Kaunas districts (Butvila *et al*., 2007; Inokaitis, 2009; Pileckis, 1968; Šablevičius, 2003). It was ranked as rare and noted as distributed in southern region of the country by Pileckis & Monsevičius (1997) and is included in the European red list of saproxylic beetles (Cálix *et al*., 2018).

***Prionychus melanarius* (Germar, 1813)**

Faunistic information: Braziūkai, 15.08.2004, 1, 03.08.2013, 1, 15.07.2016, 1, all three specimens collected in *Pinus sylvestris* dominated forest (V.T.); Dubravos miškas f. (1), 06.07.1997, 1, in *P. sylvestris* dominated forest, (R.F.); Gerdašiai, 13.07.1999, 1, in *P. sylvestris* dominated forest (R.F.); Marcinkonys (1), 14.07.1994, 1, in *P. sylvestris* dominated forest (P.I.); Margionys, 11.08.1976, 1 (R.G.); Miškas Paliepė, 28.08.2019, 2, attracted by light in *P. sylvestris* dominated forest (V.I.); Stirniai, 06.07.1975, 1 (V.M.); Školkampio miškas f., 02.08.2019, one dead specimen under bark of dead *Pinus sylestris* (V.T.); Viečiūnų miškas f., 10.07.2017, 1, 02.08.2017, 2, attracted to light in *P. sylvestris* dominated forest (V.I.); Viešvilė (1), 08.07.2008, 2, in coniferous forest (R.F.); Viešvilė (2), 30.07.2009, 1, in *P.*

sylvestris dominated forest (G.S.).

Comments. The habitus of this species is very similar to *P. ater*, however its surface of pronotum and elytra is glabrous, without microsculpure between dots (Fig. 1). Also contrary to *P. ater*, *P. melanarius* has a narrow ridge along frontal edge of pronotum (Burakowski, 1976). This species is distributed in Europe (Novák & Pettersson, 2008), to the north as far as southern Finland (Rossi *et al*. 2015), however still not found in Latvia and Estonia. The larvae of *P. melanarius* have been regarded to be associated with deciduous trees (Burakowski *et al*., 1987), but our examined adults were collected mainly in *P. sylvestris* dominated forests.

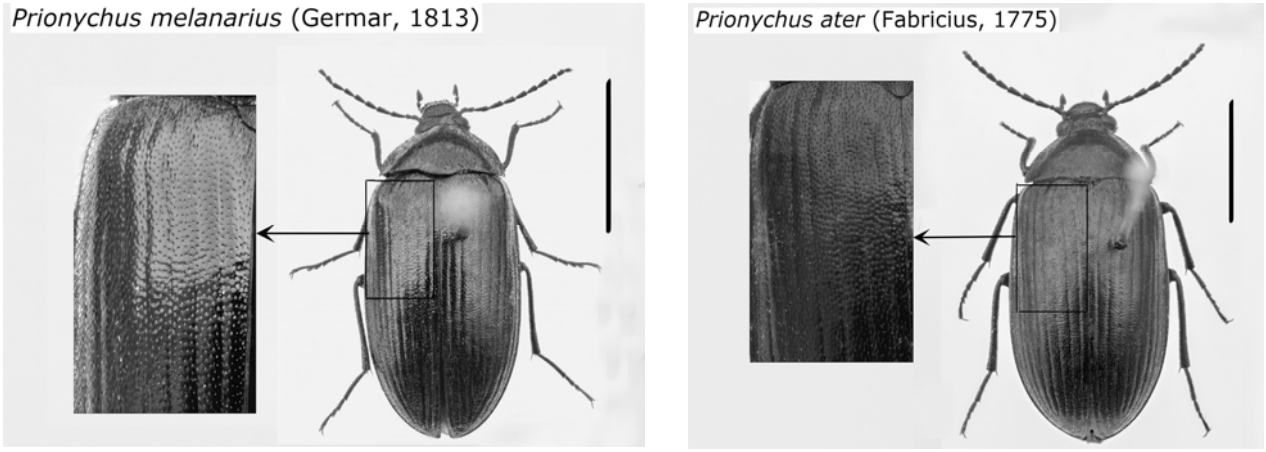

Figure 1. The habitus (right) and close-up fragment of elytra surface (left) of *Prionychus melanarius* and *Prionychus ater* (Photo: K. Martinaitis).

Subtribe Gonoderina Seidlitz, 1896

***Pseudocistela ceramboides* (Linnaeus, 1758)**

Faunistic information: Amaliai, 19.06.2017, 1 (V.I.); Braziūkai, 15.06.2004, 1, 15.07.2004, 1, 15.06.2007, 1, 10.05.2008, 1, 23.05.2008, 1, 08.07.2008, 1 (V.T.); Čepkeliai (3), 18.06.1988, 1 (R.F.); Čepkeliai (4), 16.06.1978, 1 (V.M.); Didysis Raistas, 28.06.1999, 1 (R.F.); Dubravos miškas f. (2), 14.06.1957, 1, 15.06.1957, 1 (S.P.); Dubravos Miškas f. (3), 15.06.1998, 1, 28.06.1999, 1, 26.06.2005, 1 (R.F.); Jiesia (5), 09.06.1992, 1 (R.F.); Juodkrantė (1), 24.06.2006, 1 (R.F.); Juodkrantė (2), 11.07.2008 1 (G.S., photo in nature); Miškas Juškinė (1), 27.05.2006., 1, 08.06.2008, 1, 25.06.2008, 1; Miškas Juškinė (4) 03.07.2017, 1 (R.F.); Kačerginės miškas f., 15.08.1960, 1 (S.P.); Karmėlava (1), 18.06.1960, 1 (S.P.); Karmėlava (2), 16.06.2006, 1, attracted to light (V.I.); Kaunas (3), 30.06.2016, 1, to light (V.I.); Kazlų Rūda, 10.07.1955, 1, 12.07.1955, 1 (E.G.); Laumikoniai, 12.06.2019, 1, attracted by light (V.I.); Lekėčiai, 01.06.1988, 1, 14.06.1999, 1 (R.F.); Lomankos miškas f., 09.06.2014, 1, attracted by light (V.I.); Marackų miškas f., 17.06.1984, 1 (R.F.); Marcinkonys (2), 06.06.1984, 1 (R.F.); Marcinkonys (3), 31.07.1976, 1 (V.M.); Margionys, 11.08.1976, 1 (R.G.); Minčios miškas f., 25.07.2013, 1, in *P, sylvestris* dominated forest, flight interception trap (V.T.); Nida (1), 27.06.1988, 1 (R.F.); Pasalupis, 25.06.2016, 1 (G.S.); Pavilnys, 19.07.1976, 1 (A.K.); Pervalka, 23.06.1988, 1 (R.F.); Pilėnų miškas f., 16.06.2015, 1, 20.06.2015, 1, both specimens attracted to light (V.I.); Petroškų miškas f., 27.05.2017, 1 (G.M.); Punios šilas, (2) 27.06.2008, 1 (R.F.); Semeliškės, ??.06.1957, 1 (S.P.); Tervydoniai (4), 02.07.2013,

1 (R.F.); Vaiguvos miškas f., 02.07.2007, 1 (R.F.); Veršvas, 29.06.2006, 1 (R.F.); Viečiūnų miškas f., 03.07.2015, 1 attracted to light, 10.07.2017, 5, 04.06.2019, 2, all eight specimens were attracted to light (V.I.); Vilnius, 20.06.1938, 1 (S.B.); Vyteniškių miškas f., 06.06.2019 (Ž.P., photo in nature).

Comments. This species is widely distributed in Europe (Novák & Pettersson, 2008), to the north as far as southern Finland (Rassi *et al*., 2015), it is also known from Turkey (Jansson & Coskun, 2008). The larvae feed on rotten, decayed wood and among excrements of the larvae of other saproxilous insects (Burakowski, 1976). It is included in the European red list of saproxylic beetles (Cálix *et al*., 2018). Actual faunistic information was known only from Kaunas district (Ferenca, 2006), however it is ranked as common and noted as distributed throughout the country by Pileckis & Monsevičius (1997).

***Isomira murina* (Linnaeus, 1758) = *Isomira semiflava* (Küster, 1852)**

Faunistic information: Babėnai, 10.07.1977, 1, 25.04.1977, 1 (leg. unknown); Braziūkai, 05.06.2011, 1, 19.06.2012, 1 (V.T.); 10.06.2018, 1 (Ž.P., photo in nature); Daubėnai, 20.07.1991, 1 (S.K.); Dukstynos miškas f., 20.06.1977, 1 (G.Š.); Gerdašiai, 15.06.2017, 6 (V.I.); Giruliai, 24.06.1990, 2 (S.K.); Juknaičiai, 24.06.1997, 1 (A.G.); Juodkrantė (1), 20.06.1988, 1 (R.F.); Miškas Juškinė (2), 18.06.2000, 1 (R.F.); Miškas Juškinė (3), 16.06.2007, 1, 30.06.2007, 1; Miškas Juškinė (5), 13.06.2015, 1 (R.F., photo in nature); Kairiai, 27.06.1993, 1 (S.K.); Kalviai, 01.08.2000, 1 (R.F.); Karmėlava (2), 26.06.2006, 1 (V.I.) Klaipėda, 19.06.1994, 1 (S.K.); Kleboniškio miškas f., 08.07.2009, 1 (G.S., photo in nature); Lėbartai, 27.05.1989, 1 (S.K.); Nagliai, 07.07.2003, 1 (R.F.); Netoniai, 09.07.2014, 1, 18.06.2017, 2 (R.F.); Nevėžis, 09.06.2006, 2 (R.F.); Palanga, 14.06.2001, 2 (R.F.); Prienai, 23.06.1984, 3 (R.F.); Punios šilas (3), 21.06.2017, 1 (G.S., photo in nature); Punios šilas (4), 03.06.2018 1 (Ž.P., photo in nature); Ringovė (2), 07.06.1990, 4 (R.F.); Smalininkai, 15.06.1994, 1, 23.06.1995, 1 (V.T.); Smiltynė, 2010.06.16-07.15, 1 (P.I.); Slydžiai, 21.05.1997, 1 (V.T.); Šventoji, 26.06.2010, 1, 12.06.2015, 1 (R.F.); Tervydoniai (3), 18.06.2017, 2 (R.F.); Vaisgėliškis, 25.06.1978, 1 (G.Š.); Veliuona, 21.05.1993, 1 (R.F.); Vidzgiris, 05.06.1998, 3 (R.F.); Vilnius, 01.06.1911, 4 (leg. unknown); Zujai,13.06.1984, 3 (R.D.).

Comments. Euro-Siberian species distributed throughout Europe, also known in Siberia and Kazakhstan (Dubrovin, 1992; Novák & Pettersson, 2008). The larvae develop in the soils; mostly in open, xerothermic habitats. The adults are active during daylight, visiting flowers, especially Apiacea (Burakowski, 1976; Burakowski *et al*., 1987). It is quite common in the country, however was categorized as rare species by Pileckis and Monsevičius (1997). Actual faunistic information was known only from Neringa (Pileckis, 1963), Klaipėda (Ferenca *et al*., 2006), Kaunas and Plungė (Ivinskis *et al*., 2009) districts. The new status of *Isomira semiflava* (Küster, 1852) as synonym of *I. murina* was established by Bouyon (2002), however *I. semiflava* was erroneously regarded as separate species and noted as expected for Lithuania previously (Tamutis *et al*., 2011).

Subtribe Mycetocharina Gistel, 1848

***Mycetochara axillaris* (Paykull, 1799)**

Faunistic information: Guogiškis, 27.05.1969, 1 (M.R.K.); Kairėnai, 04.06.2019, 1 (Ž.P., photo in nature); Kaunas (2), 10.06.1996, 1 (R.F.); Kaunas (3), 24.05.1998, 1

(V.I.); Margininkai, 31.05.1998, 1, in homestead (V.T.).

Comments. This species is widely distributed in Europe (Novák & Pettersson, 2008), to the north as far as central Finland (Rassi *et al*., 2015). The larvae develop in humid decayed wood of deciduous trees, especially of *Quercus*, *Betula*, *Acer* and *Populus* (Burakowski, 1976; Burakowski *et al*., 1987). It is a rarely observed species in the whole distribution range; included in the European red list of saproxylic beetles (Cálix *et al*., 2018), and categorized as very rare in Lithuania (Pileckis and Monsevičius, 1997). Actual faunistic information was known only from Molėtai district (Pacevičius, 2019).

***Mycetochara flavipes* (Fabricius, 1792)**

Faunistic information: Babtai, 27.05.1937, 1 (K.A.); Čepkeliai (2), 13.05.2002, 1 (V.T.); Didieji Grūžiai, 22.05.2007, 1 (V.B.); Kamanos, 10.07.2003, 1 (V. M.); Kaunas (4), 17.06.2008, 1, (R.F.); Margininkai, 21.05.1994, 1 (V.T.); Pajūris, 29.07.2004, 1 (R.F.); Pasalupis, 04.07.2012, 1 (G.S., photo in nature); Puvočiai, 02.07.1978, 1 (G.Š.); Taujėnų miškas f., 22.06.2004, 1 (G.Š.); Tervydoniai (1), 23.06.2013, 1 (R.F.); Tervydoniai (2), 06.06.2010, 1 (R.F.); Ventės Ragas, 22.05.2019, 1 (R.F.); Vilnius, 13.05.1911, 3 (leg. unknown).

Comments. Euro-Siberian species distributed throughout Europe, also known in Caucasus, northern Kazakhstan, southern Siberia, Mongolia, Far East (Dubrovin, 1992; Novák & Pettersson, 2008). The larvae inhabit rotten, infected by fungi wood of deciduous trees (Burakowski, 1976; Burakowski *et al*., 1987). Adults are active in dusk (Dubrovin, 1992). This species is rare and sporadically found in Poland (Burakowski *et al*., 1987; Iwan *et al*., 2010) and Lithuania (Pileckis & Monsevičus, 1997), included in the European red list of saproxylic beetles (Cálix *et al*., 2018). Actual faunistic information was known from Kaunas (Pileckis, 1963; Ferenca *et al*., 2006; Inokaitis, 2009), Ignalina, Kaišiadorys, Neringa, Švenčionys, Zarasai (Šablevičius, 2003, 2004; Ferenca, 2004), Varėna (Ferenca *et al*., 2007), and Vilnius districts (Pileckis & Monsevičus, 1997).

***Mycetochara humeralis* (Fabricius, 1787)**

Faunistic information: Kaunas (4), 08.06.1988, 1, 17.06.2008, 1, 12.06.2012, 1 (R.F.); Kirtimai, 30.05.2000, 1 (V.T.); Jiesia (1), 06.06.2000, 1 (R.F.); Jiesia (2), 19.06.2003, 1 (R.F.); Jiesia (3), 15.06.2006, 2 (R.F.); Jiesia (4), 09.06.2009, 1 (R.F.); Miškas Juškinė (1), 24.05.2009, 1 (R.F.).

Comments. This species widely distributed in Europe (Novák & Pettersson, 2008), to the north as far as southern Finland (Rassi *et al*., 2015). The larvae inhabit rotten, infected by fungi wood of deciduous trees, mostly *Quercus*, *Fagus*, *Betula*, *Acer* and *Populus* (Burakowski, 1976; Burakowski *et al*., 1987). It is rarely observed species in whole distribution range (Iwan *et al*., 2010); included in the European red list of saproxylic beetles (Cálix *et al*., 2018), and categorized as very rare in Lithuania (Pileckis & Monsevičius, 1997). Actual faunistic information was known only from Kaunas (Šablevičius, 2004) and Molėtai districts (Pacevičius, 2019).

***Mycetochara maura* (Fabricius, 1792) = *M. linearis* (Illiger, 1794).**

Faunistic information: Kaunas (3), 28.05.2016, 1, 29.05.2016, 1, 08.06.2017, 1, 11.06.2017, 3, all six specimens were attracted to light (V.I.).

Comments. Western Palaearctic species, is widely distributed in Europe (Novák & Pettersson, 2008), to the north as far as southern Norway, Sweden, Estonia (Lundberg & Gustafsson, 1995; Gough *et al*., 2014); also it is known from Northern

Africa (Novák & Pettersson, 2008) and Turkey (Atay *et al*., 2012), Iran (Samin *et al*., 2014). The larvae inhabit rotten wood of deciduous trees, usually infected by fungi; mostly found together with other saproxylous beetles, e.g. *Synodendron cylindricus* and species of Anobiidae (Burakowski *et al*., 1987). It is a rarely observed species in the whole distribution range, included in the European red list of saproxylic beetles (Cálix *et al*., 2018). Actual faunistic information was known only from Neringa municipality (Ferenca & Tamutis, 2009)

Tribe Cteniopodini Solier, 1835

***Cteniopus sulphureus* (Linnaeus, 1758) = *C. flavus* (Scopoli, 1763).**

Faunistic information: Gelgaudiškis, 07.07.2013, 1 (R.F.); Jiesia (6), 11.07.1981, 7, 17.07.1982, 1 (R.F.); Jiesia (7), 27.06.2011, 1 (R.F.); Jiesia (8), 03.06.2016, 1 (R.F.); Kačerginė (1), 11.07.2014, 1 (K.M.); Karmėlava (2), 24.07.2008, 1, 27.07.2008, 1, 27.07.2017, 1, all three specimens were collected from blooms of herbaceous plants (V.I.); Netoniai, 27.07.2017, 1 (V.I.); Pavilkijys, 07.07.2019, 3, collected by sweep net from herbaceous plants (V.TRastinėnai, 30.06.2018, 1 (G.M. , photo in nature); Ringovė (2), 19.07.1999, 1 (R.F.); Romainiai, 29.06.2018, 1 (G.S., photo in nature); Skirmantiškės, 17.07.2019, >10 specimens were observed in road side, on the blooms of Apiacea (R.F. & V.T.); Turžėnų miškas f., 08.07.2000, 1, on flowers (V.I.); Verkiai (2), 12.07.2001, 2 (R.F.);

Comments. Euro-Siberian species distributed throughout Europe, also known in Turkey, Kazakhstan, Siberia and Mongolia (Ogloblin & Znoiko, 1950; Novák & Pettersson, 2008), however not noted for Far East by Dubrovin (1992). The larvae develop in the sandy or gravel soils; mostly in open, xerothermic habitats. The adults are active in day time, visiting flowers, especially on Apiacea (Burakowski, 1976; Burakowski *et al*., 1987). This species was categorized as rare by Pileckis and Monsevičius (1997). Actual faunistic information was known from Jonava, Kaunas (Šablevičius, 2003; Inokaitis, 2004; Ivinskis *et al*., 2009) and Vilnius districts (Roubal, 1910; Pileckis, 1963; Obelevičius, 2016).

***Omophlus pubescens* (Linnaeus, 1767) = *O. betulae* (Herbst, 1783) = *O. rufitarsis* (Leske, 1785).**

Faunistic information: Kačerginė (2), 1936.06.01, 1 (P.R.); Kazlų Rūda, 17.06.1979, 1 (S.P.); Pogarenda, 05.06.1977, 1 (V.M.).

Comments. This species is distributed in Europe (Novák & Pettersson, 2008), to the north as far as southern Sweden, Estonia, Saint Petersburg region (Ogloblin & Znoiko, 1950; Lundberg & Gustafsson, 1995). The larvae dwell in sandy soils and feed on the roots of herbaceous plants, especially Poacea; the adults are active in day time, visiting flowers (Ogloblin & Znoiko, 1950; Burakowski, 1976; Burakowski *et al*., 1987). It is an insuficiently known species in Lithuania, it was categorized as rare by Pileckis and Monsevičius (1997). Actual faunistic information was known from Jonava, Trakai and Varėna districts (Pileckis & Monsevičius, 1997).

Discussion

Our study, with 193 new records of 258 specimens, contributes the knowledge on distribution of ten species, including the first record of *Prionychus melanarius*, of comb-clawed beetles' species in Lithuania. The occurrence of *Mycetochara obscura*

(Zetterstedt, 1838) remains to be known from a single record (Ferenca *et al*., 2016). So, to this moment the occurrence of 11 species of alleculins is recorded from Lithuania. Consequently the occurrences of six species remain to be expected.

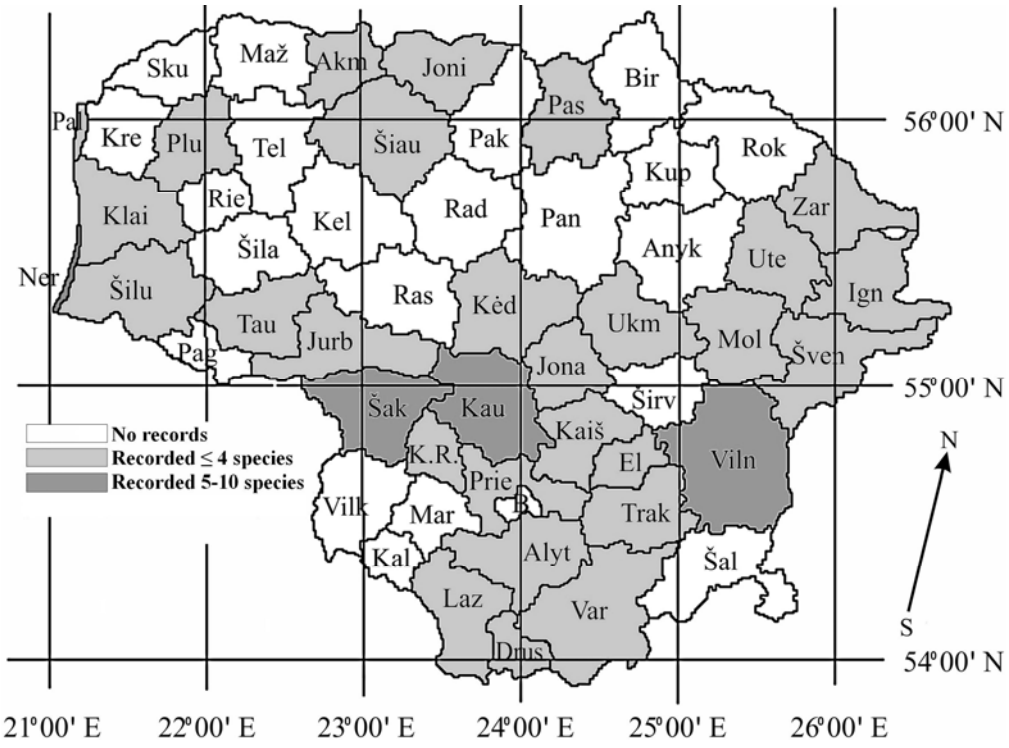

Figure 2. Map of Lithuania with a grid of administrative districts: Akm – Akmenė; Alyt – Alytus; Anyk – Anykščiai; B – Birštonas; Biržai – Biržai, Drus – Druskininkai; El – Elektrėnai; Ign – Ignalina; Jona – Jonava; Joni – Joniškis; Jurb – Jurbarkas; Kaiš – Kašiadorys; Kal – Kalvarija; Kau – Kaunas; Kel – Kelmė; Kėd – Kėdainiai; Klai – Klaipėda; K.R. – Kazlų Rūda; Kre – Kretinga, Kup – Kupiškis; Laz – Lazdijai; Mar – Marijampolė; Maž – Mažeikiai; Mol – Molėtai; Ner – Neringa; Pag – Pagėgiai; Pak – Pakruojis; Pal – Palanga; Pan – Panevėžys; Pas – Pasvalys; Plu – Plungė; Prie – Prienai; Rad – Radviliškis; Ras – Raseiniai; Rie – Rietavas; Rok – Rokiškis; Sku – Skuodas; Šak – Šakiai; Šal – Šalčininkai; Šiau – Šiauliai; Šila – Šilalė, Šilu – Šilutė; Širv – Širvintos; Šven – Švenčionys; Tau – Tauragė; Tel – Telšiai; Trak – Trakai; Ukm – Ukmergė; Ut – Utena; Var – Varėna; Vilk – Vilkaviškis; Viln – Vilnius; Zar – Zarasai. The areas where species were recorded are coloured.

The detection of comb-clawed beetles in nature is often quite problematic, due to their cryptic life style, especially in case of saproxilous species. The using of sweep net in potential habitats of particular species or survey of potential substances for its developing, e.g. rotten stumps, trunks or branches are suggested as main methods for collecting of imagos (Burakowski 1976). Also some good results collectingspecies of *Mycetochara* or *Pseudocistela* have been obtained using the flight interception traps (Novák *et al*., 2013; Ferenca *et al*., 2016; Telnov *et al*., 2016). However almost nothing is known about attraction of these beetles using the light. So it is interesting to note, that specimens of even four species of comb-clawed beetles: *Prionychus ater*, *P. melanarius*, *Pseudocistela caraboides* and *Mycetochara maura*, have been captured using the light

(500 W mercury bulb in this instance) in our study. Therefore we suppose that this method could be quite suitable for surveys of night active alleculins.

Currently there are 246 records of alleculins from 31 districts of Lithuania known altogether; however, those are distributed unevenly: 40 % of all the records are concentrated in Kaunas district, where ten species of alleculins were found (Fig. 2). In most of the other districts fewer than four species were found. Additional sampling is required, as data on distribution of the members of the studied subfamily are still absent from 23 administrative districts in Lithuania (Fig. 2).

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Indėlis į Lietuvos faunos dulkiagraužių (Coleoptera: Tenebrionidae, Alleculinae) pažinimą

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Santrauka

Pateikiami iki šiol neskelbti duomenys apie dulkiagraužinių pošeimio (Coleoptera: Tenebrionidae: Alleculinae) vabalus Lietuvoje: skelbiama informacija apie 10 dulkiagraužinių pošeimio vabalų rūšių, iš kurių viena (*Prionychus melanarius*) nauja Lietuvos faunai. Duomenys surinkti atlikus Kauno T. Ivanausko zoologijos muziejaus rinkiniuose saugomų šio pošeimio vabalų reviziją, taip pat į straipsnį įtraukta gamtos fotografų užfiksuota informacija (http://www.macrogamta.lt/).

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