

New records and notes on click beetles (Coleoptera, Elateridae) from the Palearctic region

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Abstract. First records for twelve species of Elateridae Leach, 1815 belonging to the genera *Lanelater* Arnett, 1952, *Gambrinus* LeConte, 1853, *Pseudocrepidophorus* Dolin & Agajev, 1988, *Stenagostus* C. G. Thomson, 1859, *Anostirus* C. G. Thomson, 1859, *Zorochros* C. G. Thomson, 1859, *Brachygonus* Buysson, 1912, *Sericus* Eschscholtz, 1829, *Melanoxanthus* Eschscholtz, 1838, *Podeonius* Kiesenwetter, 1858, *Cardiophorus* Eschscholtz, 1829 and *Dicronychus* Brullé, 1832 are given. Another record of *Heteroderes vagus* Candèze, 1893 from Morocco and the new location of the holotype of *Synaptus iranicus* Jarzabek-Müller, Morinière, Varandi & Müller, 2017 are reported.

Keywords: Coleoptera, Elateridae, new records, new data, Palearctic region, holotype, *Synaptus iranicus*.

Introduction

This paper presents a new distribution record of the exotic click beetle *Heteroderes vagus* Candèze, 1893 from Morocco and new records of some click beetles from different countries in the Palearctic region, including Afghanistan, Albania, Armenia, Germany, Georgia, Saudi Arabia, Switzerland, and Oman.

While examining material from the Senckenberg German Entomological Institute (SDEI) Müncheberg (Germany), Josef Mertlik (Czech Republic) identified the recently described species *Anostirus bohemicus* Mertlik, 2019, which had originally been determined as *A. sulphuripennis* (Germar, 1843), for the first time in Germany and Switzerland. Subsequently, the author examined additional material from the German federal states Bavaria and Baden-Wuerttemberg, submitted by several colleagues, which confirmed further localities of this species in Southern Germany. Finally, the new location of the holotype of *Synaptus iranicus* Jarzabek-Müller, Morinière, Varandi & Müller, 2017 is reported.

Material and methods

The present study is based on the material which has been collected by J. Müller (University of Würzburg, Germany), S. Prepsl (Brno, Czech Republic), Y. Skrylnyk (Ukrainian Research Institute of Forestry and Forest Melioration, Kharkiv, Ukraine), and S. Thorn (University of Marburg, Germany). The material is stored in the collection of the author in Riedlhütte, Germany (CAJM). Additionally, the author has studied material deposited in the Bavarian State Collection of Zoology, Munich, Germany (CZSM), as well as material provided by the colleagues D. Hauth, Fürstenfeldbruck, Germany (CDH), F. Lange, Niedernhausen, Germany (CFL), M. Mühlfeit, Gleichen, Germany (CMM), J. Schünemann, Görwihl-Rotzingen, Germany (CJS), and A. Szallis, Reutlingen, Germany (CAZ). J. Mertlik examined material deposited in the Senckenberg German Entomological Institute Müncheberg, Germany (CSDEI).

The subfamilial and tribal placement of the genera follows Bouchard et al. (2011) and Kundera et al. (2019).

Results

ELATERIDAE Leach, 1815

Subfamily AGRYPNINAE Candèze, 1857

Tribe Oophorini Gistel, 1848

***Heteroderes vagus* Candèze, 1893**

New distributional data: 1 ♂ 1 ♀ (CAJM): **Morocco**, Aghbalou, Ourika river valley, 31.30666N, 7.73723W, 16.-18.VI.2022, S. Thorn leg., A. Jarzabek-Müller det.

Distribution: Neotropical region (origin); Palearctic region: France, Saudi Arabia, Spain (Cate 2007) including Canary Islands: Gran Canaria (as *H. grancanariensis* Palm 1976, synonymized by García et al. 2025), Fuerteventura (Zapata de la Vega & Sánchez Ruiz 2017), Tenerife (Garcia et al. 2025); Portugal (Zapata de la Vega et al. 2010); Italy (Platia et al. 2020); Morocco (Platia & Pulvirenti 2024).

Tribe Pseudomelanactini Arnett, 1967

Lanelater arabicus Candèze, 1874

Material examined: 1 ♂ (CAJM) – **Oman:** Oman-North, 16 km E Ibra 20.-21.VIII.2014, S. Prepsl leg., A. Jarzabek-Müller det.

Distribution: Iran, Saudi Arabia, Yemen (Cate 2007).

First record for Oman.

Subfamily DENDROMETRINAE Gistel, 1848

Tribe Dendrometrini Gistel, 1848

Gambrinus violaceus (Müller, 1821)

Fig. 1-3

Material examined: 1 larva (length: 15 mm) (CMM) (Fig. 1, 2) – **Albania:** Tirane district, Mount Dajti National Park, 1020 m a.s.l., 41.34530N, 19.92930E, 12.V.2025, M. Mühlfeit leg. et det.

Collecting circumstances: The larva was found in the wood mould of a basal hollow of a beech tree (*Fagus sylvatica*) (Fig. 3).

Distribution: Austria, Czech Republic, Denmark, Estonia, France, Great Britain, Germany, Greece, Hungary, Poland, Romania, Slovakia, Spain, Turkey (Cate 2007); Slovenia (Brancsik 1871, Drovenik & Pirnat 2003); Bosnia (Roubal 1924); Croatia (Stiller 1918, Lucas 1919, Roubal 1924); Ukraine (Mertlik & Samek 2009); Bulgaria (Gouix et al. 2012); Switzerland (Chittaro & Sanchez 2018); Serbia (Živojinović 1950, Kovács & Mesaroš 2021); Italy (Horion 1953, Gillett & Blanc 2023).

First record for Albania.

Pseudocrepidophorus flavescens (Eschscholtz, 1818)

Material examined: 1 ♂ (CAJM) – **Armenia:** Teghut, 1030 m a.s.l., 41.09063N, 44.81085E, VI.-VII.2016, flight-interception trap, J. Müller leg., A. Jarzabek-Müller det.

Collecting circumstances: The species was collected using a flight-interception trap placed in an old-growth beech forest.

Distribution: Azerbaijan, Bulgaria, Georgia, Iran, Russia (South European Territory), Turkey (Cate 2007); Greece (Platia 2008).

First record for Armenia.

Stenagostus rosti (Schwarz, 1897)

Material examined: 1 ♀ (CAJM) – **Armenia:** Tavush, Zikatar, 1275 m a.s.l., 41.12371N, 44.92248E, VI.-VII.2016, flight-interception trap, J. Müller leg., A. Jarzabek-Müller det.

Collecting circumstances: The species was collected using a flight-interception trap placed in an old-growth beech forest.

Distribution: Azerbaijan, Georgia (including Abkhazia (Lukmazova & Selikhovkin 2013)), Russia (South European Territory) (Cate 2007); Turkey (Orlov 1989, Lodos 1998, Mertlik & Platia 2008).

First record for Armenia.

Tribe Prosternini Gistel, 1856

Anostirus bohemicus Mertlik, 2024

Fig. 4-6

Material examined: 1 ♂ (CSDEI) (Fig. 4) – **Germany:** “Hohentwiel” (=Mt. Hohentwiel 696 m a.s.l. (Hegau), near Singen, Baden-Wuerttemberg), without data and collector (as *sulphuripennis*), coll. Stierlin (CSDEI), J. Mertlik redet.; 1 ♀ (CFL) – **Germany:** Baden-Wuerttemberg, Glastal W, Hayingen, Umgebung Schloß Ehrenfels, 26.VI.2004, F. Lange leg., A. Jarzabek-Müller det.; 1 ♂ (CFL) – **Germany:** Baden-Wuerttemberg, Traifelbergfelsen (Lichtenstein), on beech branch (*Fagus sylvatica*), 48.41000N, 9.26833E, 23.IV.2017, F. Lange leg., A. Jarzabek-Müller det.; 1 ♂ (CJS) – **Germany:** Baden-Wuerttemberg, Stadt Waldshut, NSG Schwarza-Schlüchtal, 47.688339N, 8.264971E, flight-interception trap, 16.V.2016, J. Schünemann leg., A. Jarzabek-Müller det.; 1 ♂ (CJS) – **Germany:** Baden-Wuerttemberg, Stadt Waldshut, NSG Schwarza-Schlüchtal, 47.686353N, 8.256847E, 24.IV.2017, J. Schünemann leg., A. Jarzabek-Müller det.; 1 ♂ (CJS) – **Germany:** Baden-Wuerttemberg, Stadt Waldshut, NSG Schwarza-Schlüchtal, 47.695824N, 8.240499E, flight-interception trap, 15.V.2017, J. Schünemann leg., A. Jarzabek-Müller det.; 2 ♀ (CJS) – **Germany:** Baden-Wuerttemberg, Stadt Waldshut, NSG Schwarza-Schlüchtal, 47.690466N, 8.247704E, flight-interception trap, 5.VI.2017, J. Schünemann leg., A. Jarzabek-Müller det.; 1 ♂ (CJS) – **Germany:** Baden-Wuerttemberg, St. Peter/Zweribach, 48.038656N, 8.089715E, flight-interception trap, 28.V.2018, J. Schünemann leg., A. Jarzabek-Müller det.; 1 ♂ 1 ♀ (CJS) – **Germany:** Baden-Wuerttemberg, St. Peter/Zweribach, 48.038656N, 8.089715E, flight-interception trap, 25.VI.2019, J. Schünemann leg., A. Jarzabek-Müller det.; 1 ♂ (CJS) – **Germany:** Baden-Wuerttemberg, St. Peter/Zweribach, 48.038661N, 8.089730E, flight-interception trap, 25.V.2020, J. Schünemann leg., A. Jarzabek-Müller det.; 1 ♂ (CJS) – **Germany:** Baden-Wuerttemberg, Utzenfeld (Lörrach), NSG Utzenfluh, 47.805471N, 7.916382E, flight-interception trap, 8.VI.2020, Braun leg., A. Jarzabek-Müller det.; 1 ♀ (CJS) – **Germany:** Baden-Wuerttemberg, St. Peter/Zweribach, 48.038661N, 8.089730E, 21.VIII.2020, J. Schünemann leg., A. Jarzabek-Müller det.; 1 ♂ (CJS) – **Germany:** Baden-Wuerttemberg, Zweribach, 48.043736N, 8.100106E, flight-interception trap, 16.V.2022, FVA-WSG (Forest Research Institute Baden-Wuerttemberg) leg., A. Jarzabek-Müller det.; 1 ♂ (CJS) – **Germany:** Baden-Wuerttemberg, Napf, 47.872091N, 7.978314E, flight-interception trap, 19.V.2022, FVA-WSG leg., A. Jarzabek-Müller det.; 2 ♂, 1 ♀ (pers. comm. A. Szallies, specimens missing) – **Germany:** Baden-Wuerttemberg, Northern Black Forest, Oberharmersbach, Nill, Heidenkirche, 24.V.2007, A. Szallies leg. et det., beaten from rowan (*Sorbus aucuparia*); 1 ♀ (CZSM) – **Germany:** Fichtelgebirge, Berneck, Ölschnitztal (Bavaria), 10.VI.1967, G. Rößler leg., K. Wellschmied det. (as *sulphuripennis*), A. Jarzabek-Müller redet.; 1 ♀ (CSDEI) (Fig. 5) – **Switzerland:** “Schaffhaus” (=Schaffhausen, Canton of Schaffhausen), without data and collector (as *sulphuripennis*), coll. Stierlin (CSDEI), J. Mertlik redet.; 1 ♂ (CAS) – **Switzerland:** Canton of Zurich, Weiach, Fürstenhalden, V.2020, WSL (Swiss Federal Institute for Forest, Snow and Landscape Research) leg., A. Szallies det. (Fig. 6); 1 ♀ (CAS) – **Switzerland:** Canton of Zurich, Weiach, Fürstenhalden, VII.2020, WSL leg., A. Szallies det.

Distribution: Czech Republic (Mertlik 2024).

First records for Germany and Switzerland.

Subfamily NEGASTRIINAE Nakane & Kishii, 1956

Tribe Negastrini Nakane and Kishii, 1956

Zorochros dermestoides (Herbst, 1806) (f. *dufourii* Buysson, 1900)

Material examined: 1 ♂ 1 ♀ (CMM) – **Albania:** Fushë-Lurë, Parku Kombëtar Lurë, Mali i Dejës, small lake, 1650 m a.s.l., 41.790472N, 20.203528E, 20.V.2025, M. Mühlfeit leg., A. Jarzabek-Müller det.

Distribution: Hungary (Horion 1953); Latvia (Barševskis 1998 as *Z. minimus*); Andorra, Armenia, Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Great Britain, Greece, Ireland, Italy, Lithuania, North Macedonia, Moldavia, Montenegro, Morocco, The Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine (Cate 2007); Turkey (Mertlik & Platia 2008).

First record for Albania.

Subfamily ELATERINAE Leach, 1815**Tribe Ampedini Gistel, 1848*****Brachygonus bouyoni* (Chassain, 1992)**

Material examined: 1 ♂ (CFL) – **Germany:** Hessen, Groß-Gerau, 90 m a.s.l., 49.9475N, 8.5060E, 5.IV.2025, M. Lange leg. et det., R. Rupp vid.

Collecting circumstances: The species was found on a log of a beech tree (*Fagus sylvatica*) with white rotting decomposition.

Distribution: Austria, Czech Republic, France, Italy, Hungary, Portugal, Slovakia, Spain (Cate 2007); Switzerland (Chittaro & Blanc 2012); Russia (Prosvirov 2013 as *B. megerlei*, Prosvirov 2017); Greece (Platia 2018).

First record for Germany.

Tribe Elaterini Leach, 1815***Sericus subaeneus* (W. Redtenbacher, 1842)**

Fig. 7, 8

Material examined: 1 ♂ (CAJM) (Fig. 7) – **Germany:** Hesse, Kellerwald-Edersee National Park, Daudenberg, 316 m a.s.l., 51.164722N, 8.987222E, 14.V.-11.VI.2025, flight-interception trap, S. Thorn leg., A. Jarzabek-Müller det.

Collecting circumstances: The species was collected using a flight-interception trap exposed in the canopy of an old-growth oak-hornbeam forest (Fig. 8).

Distribution: Austria, Bulgaria, Czech Republic, France, Germany, Italy, Moldavia, Poland, Romania, Slovakia, Slovenia, Switzerland, Ukraine (Cate 2007); Croatia (Novak 1952); Bosnia and Herzegovina (Mertlik 2025).

First record for the federal state of Hesse in Germany.

Tribe Megapenthini Gurjeva, 1973***Melanoxanthus almaca* Wurst, Schimmel & Platia, 2001**

Fig. 9, 10

Material examined: 1 ♂ (CAJM) (Fig. 9, 10) – **Saudi Arabia:** Jizan prov., Al-Aydabi Governorate, 2.5 km SE Al Henayah vill., 302 m a.s.l., 17.226794N, 43.032914E, 2.X.2021, Yu. Skrylnik leg., A. Jarzabek-Müller det.

Distribution: Yemen (Cate 2007).

First record for Saudi Arabia.

Tribe Physorhinini Candèze, 1859***Podeonius acuticornis* (Germar, 1824)**

Fig. 11-13

Material examined: 1 ♀ (CDH) (Fig. 11) – **Georgia:** Kachetien, Heretiskari, 41.710500N, 46.087389E, 11.V.2025, D. Hauth leg. et det., A. Jarzabek-Müller vid.

Collecting circumstances: The species was found sitting at the base of an old oak (*Quercus*) (Fig. 12) in a wood pasture, late in the afternoon (Fig. 13).

Distribution: Albania, Austria, Croatia, Czech Republic, France, Germany, Greece, Hungary, Italy, Montenegro, Poland, Romania, Serbia, Slovakia, Spain, Switzerland, Turkey, Ukraine (Cate 2007).

First record for Georgia.

Tribe Synaptini Gistel, 1856

Synaptus iranicus Jarzabek-Müller, Morinière, Varandi & Müller, 2017

Note: The holotype of *Synaptus iranicus* Jarzabek-Müller et al. 2017 was deposited in the Bavarian State Collection of Zoology, Munich, Germany (CZSM).

Distribution: Iran (Jarzabek-Müller et al. 2017); Armenia, Georgia (Platia & Pulvirenti 2021).

Subfamily CARDIOPHORINAE Candèze, 1859

Cardiophorus mesasiaticus Dolin & Latifi, 1997

Material examined: 1 ♀ (CAJM) – **Afghanistan:** Bamyan prov., Yakawlang distr., 1.5 km S Jarukashan vill., Band-e Amir res., 3250 m a.s.l., 34.809531N, 67.188508E, 27.VI.2009, Yu. Skrylnyk leg., A. Jarzabek-Müller det.; 1 ♂ (CAJM) – **Afghanistan:** Bamyan prov., 18 km NE Yakawlang, 6 km N Gumab vill., Baldarghanak Mt., 2980 m a.s.l., 34.858186N, 67.077433E, 17.VI.2016, Yu. Skrylnyk leg., A. Jarzabek-Müller det.; 1 ♂ (CAJM) – **Afghanistan:** Bamyan prov., 4.5 km SE Sabzak vill., 2800 m a.s.l., 34.864297N, 67.693739E, 21.VI.2016, Yu. Skrylnyk leg., A. Jarzabek-Müller det.

Distribution: Kyrgyzstan, Tajikistan, Uzbekistan (Cate 2007).

First record for Afghanistan.

Dicronychus cinereus (Herbst, 1784)

Material examined: 1 ♂ (CAJM) – **Iran:** Gilan, Asalam, 1100 m a.s.l., 37.6717N, 48.75261E, primeval pasture, 13.V.2018, S. Thorn leg., A. Jarzabek-Müller det.

Distribution: Azerbaijan, Armenia, Austria, Belgium, Bulgaria, Belarus, Croatia, Czech Republic, Denmark, France, Germany, Georgia, Greece, Hungary, Italy, Kazakhstan, Latvia, Lebanon? (listed by Cate 2007, but not recorded from Lebanon according to Németh 2019), Luxembourg, Lithuania, North Macedonia, Moldavia, The Netherlands, Poland, Portugal, Romania, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey (Cate 2007); Serbia (Toscano et al. 2015); Syria (Zapata de la Vega & Sánchez-Ruiz, 2022); China (Xinjiang) (Yang et al. 2023).

First record for Iran.

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Photo documentation



Fig. 1: *Gambrinus violaceus* (larva), Dajti National Park, Albania (photo: M. Mühlfeit, 2025).

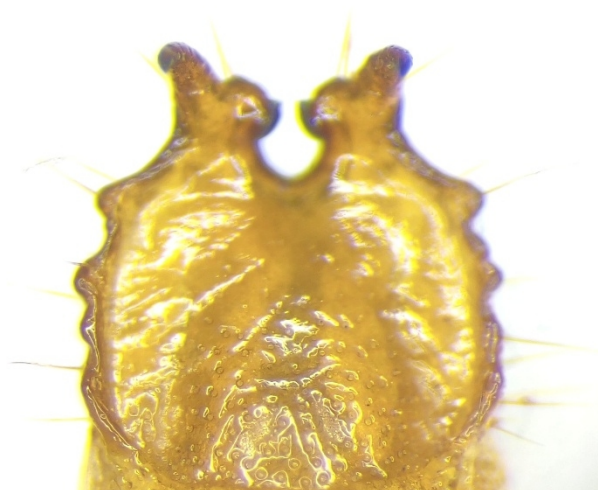


Fig. 2: *Gambrinus violaceus* (larva), ninth abdominal segment (photo: M. Mühlfeit, 2025).



Fig. 3: Habitat tree (*Fagus sylvatica*) of *Gambrinus violaceus* (Dajti National Park, Albania) (photo: M. Mühlfeit, 2025).



Fig. 4: *Anostirus bohemicus* (♂), Hohentwiel, Germany (photo: J. Mertlik, 2025).



Fig. 5: *Anostirus bohemicus* (♀), Schaffhausen, Switzerland (photo: J. Mertlik, 2025).



Fig. 6: *Anostirus bohemicus* (♂), Weiach, Canton of Zurich, Switzerland (photo: A. Szallies, 2025).



Fig. 7: *Sericus subaeneus* (♂), Kellerwald-Edersee National Park, Daudenberg, Hesse, Germany (photo: A. Jarzabek-Müller, 2025).



Fig. 8: Habitat of *Sericus subaeneus* (Kellerwald-Edersee National Park, Daudenberg, Hesse, Germany) (photo: M. Mayer, 2025).



Fig. 9: *Melanoxanthus almaca* (♂), Al-Aydabi Governorate, Saudi Arabia (photo: A. Jarzabek-Müller, 2025).



Fig. 10: Aedeagus of *Melanoxanthus almaca* (photo: A. Jarzabek-Müller, 2025).



Fig. 11: *Podeonius acuticornis* (♀), Heretiskari, Georgia (photo: D. Hauth, 2025).



Fig. 12: Habitat tree (*Quercus*) of *Podeonius acuticornis* (Heretiskari, Georgia) (photo: D. Hauth, 2025).



Fig. 13: Wood pasture, habitat of *Podeonius acuticornis* (Heretiskari, Georgia) (photo: D. Hauth, 2025).