

Research article

Notes on jewel beetles (Coleoptera: Buprestidae) in Türkiye

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Abstract: New data are presented on the distribution of 58 species and subspecies in the European and Asiatic part of Türkiye, which belong to 16 genera and six subfamilies of jewel beetles (Coleoptera: Buprestidae). Notably, this research confirms the presence of *Anthaxia (Anthaxia) fulgurans* (Schrank, 1789), *Eurythyrea quercus* (Herbst, 1780) and *E. aurata* (Pallas, 1776) within the Turkish fauna. *Anthaxia (A.) semicuprea* Küster, 1851 is new for the European Türkiye. The exact localities in this country of *Chalcophora intermedia intermedia* (Rey, 1890), *Cyphosoma paganettii* Obenberger, 1914, *C. veselyi* Obenberger, 1925, *Dicerca amphibia* Marseul, 1865 and *D. moesta* (Fabricius, 1792) are reported for the first time. Some distinguishing characters of *Agrilus (Quercuagrilus) graminis* Kiesenwetter, 1857 and *A. (Q.) hastulifer* (Ratzeburg, 1837) allowing their better identification are given as well.

Keywords: Buprestidae, Coleoptera, distribution, Insecta, taxonomy, Türkiye

Introduction

According to the summarising paper of Kirçakci & Kabalak (2021) the total number of Turkish jewel beetle fauna is 421 species, which belong to 37 genera and 6 subfamilies. From a zoogeographic point of view, this fauna is most similar to the Greek and Bulgarian ones (Kirçakci & Kabalak, 2021). Later Volkovitsh et al. (2023) reported one species and one subspecies that are new for the Turkish fauna, and Tonga & Sakalian (2023) added another new species for this country.

The aim of this study is to report new data on the distribution of 58 species and subspecies of jewel beetles in the European and Asiatic parts of Türkiye. A short key, which illustrates the main morphological characters of *Agrilus (Quercuagrilus) graminis* Kiesenwetter, 1857 and *A. (Q.) hastulifer* (Ratzeburg,

1837), which allows their better identification, is additionally provided.

Material and methods

The specimens were collected by traditional entomological methods such as: collecting the specimens from flowers and bushes by entomological net; shaking and beating of tree branches and crowns and collecting with Malaise traps during the period April–July 2007 and 2008.

The SEM photomicrographs were obtained using a JEOL GSM-5510, operating at 10 kV, the images were produced with a secondary electron detector at high vacuum. The magnification used to take each photomicrograph is shown in the corresponding photo.

In this work, the following abbreviations are used:
AT – Asiatic Türkiye; ET – European Türkiye; coll. – collection; Prov. – Turkish provinces (vilayet); Vill. – village.

The names of tribes, genera, subgenera, species and subspecies are listed in alphabetical order. The studied specimens are kept in the collection of the first author, Vladimir Sakalian (Institute of Biodiversity and Ecosystem Research, Bulgarian Academy of Sciences), unless otherwise stated.

Results and discussion

The established taxa of jewel beetles (Coleoptera: Buprestidae) belong to 16 genera and 6 subfamilies, as follows:

Family Buprestidae Leach, 1815

Subfamily Julodinae Lacordaire, 1857

Genus *Julodis* Eschscholtz, 1829

Julodis ehrenbergii ehrenbergii Laporte, 1835

AT: Adana Prov.: SW of Yumurtalık, 36.7667°N, 35.7167°E, 2 m a.s.l., 21.vii.2008, 1 ex., T. Ljubomirov leg. and V. Sakalian det.

Subfamily Polycestinae Lacordaire, 1857

Tribe Acmaeoderini Kerremans, 1893

Genus *Acmaeodera* Eschscholtz, 1829

Acmaeodera (Acmaeodera) flavolineata flavolineata Laporte & Gory, 1835

AT: Hatay Prov.: Kengerlidüz natural protected area, 36.9333°N, 36.4000°E, 1650 m a.s.l., 23.vii.2008, 1 ex., T. Ljubomirov leg. and V. Kubáň det.

Acmaeodera (A.) sycophanta sycophanta Abeille de Perrin, 1900

AT: Isparta Prov.: Kasnak Meşesi natural protected area, 37.5667°N, 30.5500°E, 1420 m a.s.l., 12.vii.2008, 1 ex., T. Ljubomirov leg. and V. Kubáň det.

Acmaeodera (Acmaeotethya) biseriata Reitter, 1890

AT: Isparta Prov.: Kasnak Meşesi natural protected area, 37.7333°N, 30.5500°E, 1420 m a.s.l., 12.vii.2008, 1 ex., T. Ljubomirov leg. and V. Kubáň det.

Acmaeodera (A.) saxicola saxicola Spinola, 1838

AT: Isparta Prov.: Kasnak Meşesi natural protected area, 37.7333°N, 30.5500°E, 1420 m a.s.l., 2.vii.2008, 4 ex.; 37.7333°N, 30.8167°, 1520 m a.s.l., 6.viii.2008, 1 ex.; all T. Ljubomirov leg. and V. Kubáň det.

Genus *Acmaeoderella* Cobos, 1955

Acmaeoderella (Acmaeoderella) elbursi (Obenberger, 1924)

AT: Isparta Prov.: Kasnak Meşesi natural protected area, 37.7333°N, 30.5500°E, 1520 m a.s.l., 6.viii.2008, 1 ex., T. Ljubomirov leg. and V. Kubáň det.

Acmaeoderella (Carininota) farinosa (Reiche & Saulcy, 1856)

AT: Isparta Prov.: N of Isparta, 37.8337°N, 30.5468°E, 1045 m a.s.l., 31.vii.2008, 1 ex.; Kasnak Meşesi natural protected area, 37.7400°N, 30.8305°E, 1520 m a.s.l., 6.viii.2008, 1 ex.; all T. Ljubomirov leg. and V. Kubáň det.

Acmaeoderella (C.) flavofasciata flavofasciata (Piller & Mitterpacher, 1783)

ET: Kırklareli Prov.: NE of Demirköy, 41.8631°N, 27.8142°E, 373 m a.s.l., 9.vi.2022, 1 ex.; 41.8597°N, 27.8161°E, 358 m, 13.vi.2022, 1 ex.; S of Beğendik Vill., 41.9331°N, 27.9864°E, 157 m a.s.l., 13.vi.2022, 2 ex.; all T. Ljubomirov leg. and V. Sakalian det.

Subfamily Galbellinae Reitter, 1911
Genus *Galbella* Westwood, 1848

Galbella (Galbella) felix (Marseul, 1866)

AT: Antalya Prov.: NW of Antalya, Termessos (8 km NE), 37.0164°N, 30.5428°E, 325 m a.s.l.: 20.v.1992, 7 ex.; 10.vi.1992, 51 ex.; 11.vi.1998, 61 ex., all J. Chalupek leg.; Alanya env., 36.5426°N, 32.0977°E, 125 m a.s.l., 2.vi.1994, 2 ex., J. Hron leg.; N of Akseki, Irmasan Pass, 37.1045°N, 31.8007°E, 1520 m a.s.l., 8.vi.1992, 1 ex., J. Chalupek leg.; Mersin Prov.: SW of Silifke, Boğsak, S env., 36.2641°N, 33.8102°E, 150 m a.s.l., 5.vi.1992, 11 ex., J. Chalupek leg.; Yumurtalık-İkisu, 36.7597°N, 35.7053°E, 5 m a.s.l., 25.v.1993, 2 ex., P. Průdek leg.; Tarsus, W env., 36.9231°N, 34.8434°E, 90 m a.s.l., 3.vi.1994, 2 ex., F. Moravec leg.; Hatay Prov.: S of İskenderun, Belen, N env., 36.5028°N, 36.1916°E, 580 m a.s.l., 18.vi.1991, 2 ex., V. Němec leg.; all V. Kubáň det. (coll. V. Kubáň).

Subfamily Chrysochroinae Laporte, 1835
Tribe Chalcophorini Lacordaire, 1957
Genus *Chalcophora* Dejean, 1833

Chalcophora intermedia intermedia (Rey, 1890)

AT: Gümüşhane Prov.: Torul, 40.5548°N, 39.2895°E, 1000 m a.s.l., 4.vii.1993, 1 ex. (coll. V. Kubáň); Bursa Prov.: Bozkır env., 37.1883°N, 32.2078°E, 1285 m a.s.l., 30.vi.2007, 1 ex., J. Horyna leg. (coll. J. Horyna, Říčany, Czechia); Adana Prov.: Pozanti (6 km E), 37.4380°N, 34.9364°E, 1700 m a.s.l., 27–29.v.1995, 1 ex., V. Bíža & Z. Koštál leg. (coll. V. Kubáň); all V. Kubáň det.

Remarks: This subspecies was reported for AT (without any locality names) by Kubáň (2006, 2016a). There have not been any exact localities published for this country until now.

Tribe Dicercini Gistel, 1848
Genus *Capnodis* Eschscholtz, 1829

Capnodis semisuturalis Marseul, 1865

AT: Adiyaman Prov.: Karadut, 37.9300°N, 38.7830°E, 1025 m a.s.l., 26.v–5.vi.1997, 2 ex., P. Moravec leg., V. Kubáň det. (coll. V. Kubáň).

Genus *Cyphosoma* Mannerheim, 1837

Cyphosoma paganettii Obenberger, 1914

AT: Ankara Prov.: Ankara, 39.9504°N, 32.8063°E, 830 m a.s.l., 3 ex. (coll. National Museum Prague, Czechia); Hatay Prov.: Akbez, 36.8515°N, 36.5552°E, ca. 600 m a.s.l., 2 ex. (coll. National Museum Prague, Czechia); all V. Kubáň det.

Remarks: This species was reported for AT (without any locality names) by Kubáň (2006, 2016a). There have not been any exact localities published for this country until now.

Cyphosoma veselyi Obenberger, 1925

AT: Siirt Prov.: Baykan (10 km S), 38.0920°N, 41.7687°E, 600 m a.s.l., 3–4.vi.1998, 6 ex., M. Snížek & M. Halada leg., V. Kubáň det. (coll. V. Kubáň).

Remarks: This species was reported for AT (without any locality names) by Kubáň (2006, 2016a). There have not been any exact localities published for this country until now.

Genus *Dicerca* Eschscholtz, 1829

Dicerca amphibia Marseul, 1865

AT: Muş Prov.: Muş, city, 38.7313°N, 41.4918°E, 1400 m a.s.l., 16.vi.1991, on *Populus* sp., 2 ex., M. Janata leg. (coll. National Museum Prague, Czechia); V. Kubáň det.

Remarks: This species was reported for AT (without any locality names) by Kubáň (2006, 2016a). There have not been any exact localities published for this country until now.

Dicerca moesta (Fabricius, 1792)

AT: Artvin Prov.: Şavşat, 41.2492°N, 42.3527°E, 1200 m a.s.l., 11.vi.1972, 1 ex., C. Holzschuh leg., V. Kubáň det. (coll. V. Kubáň); Bursa Prov.: Orhaneli, 39.9054°N, 28.9947°E, 570 m a.s.l., 15.ix.1969, 1 ex., F. Wilson leg. (coll. British Museum, London, U.K.); V. Kubáň and H. Mühle det.; Konya Prov.: Bozkır (25 km W), 37.2117°N, 31.9793°E, 1775 m a.s.l., 2011–2013, reared from *Pinus nigra pallasiana*, 7 ex., V.

Kubáň & P. Zábranský leg.; V. Kubáň det. (coll. V. Kubáň and coll. P. Zábranský, Vienna, Austria).

Remarks: This species was reported for AT (without any locality names) by Mühle et al. (2000) and Kubáň (2006, 2016a). There have not been any exact localities published for this country until now.

1 ex.; 23–24.vi.1998, 6 ex., J. Chalupek leg.; AT: Kahramanmaraş Prov.: Pazarcık (20 km NE), 37.5917°N, 37.4987°E, 930 m a.s.l., 31.v.2007, 1 ex., R. Novák leg.; Adiyaman Prov.: Koçalı, 37.9293°N, 38.2695°E, 1100 m a.s.l., 21–22.vi.1998, 1 ex., J. Chalupek leg.; all specimens were beaten from *Quercus* sp.; V. Kubáň det. (coll. V. Kubáň).

Genus *Latipalpis* Solier, 1833

Latipalpis (Latipalpis) plana berythensis G. Novak, 1990

AT: Mersin Prov.: Erdemli, Aydinlar, 36.7022°N, 34.1475°E, 1155 m a.s.l., 14–17.vi.1998, 16 ex., J. Chalupek leg.; collected on *Quercus* trunk; V. Kubáň det. (coll. V. Kubáň).

Latipalpis (Palpilatis) johanidesi Niehuis, 2002

Mardin Prov.: Midyat, Çayırlı, 37.3355°N, 41.4760°E, 836 m a.s.l., 20.v.2011, 3 ex., M. Čermák leg., V. Kubáň det. (coll. V. Kubáň).

Latipalpis (P.) plasoni (Reitter, 1888)

AT: Mersin Prov.: Erdemli, Aydinlar, 36.7022°N, 34.1475°E, 1155 m a.s.l.: 27.v.1992, 2 ex.; 14–17.vi.1998, 3 ex., J. Chalupek leg.; N of Tarsus, Tekir (6 km SW), 37.3019°N, 34.7361°E, 1410 m a.s.l.: 2.vi.1992, 4 ex., J. Chalupek leg.; 3.vi.1992, 1 ex., V. Němec leg.; 3.vi.1992, 2 ex., P. Svoboda leg.; all specimens was beaten from *Ostrya carpinifolia*; all V. Kubáň det. (coll. V. Kubáň).

Latipalpis (P.) stellio (Kiesenwetter, 1857)

AT: Denizli Prov.: Denizli, 37.7498°N, 29.0817°E, 490 m a.s.l., 19.v.1992, 1 ex.; J. Chalupek leg.; Mugla Prov.: Baba Dag Mts, Gölbent, 36.4310°N, 29.2550°E, 185 m a.s.l., 17.iv.1990, 1 ex., J. Mertlík leg.; Antalya Prov.: NW of Antalya, Termessos (8 km NE), 37.0164°N, 30.5428°E, 325 m a.s.l.: 20.v.1992, 1 ex., P. Svoboda leg.; 10.vi.1992: 5 ex., J. Chalupek leg.; 1 ex., V. Němec leg.; 11.vi.1998, 9 ex., J. Chalupek leg.; Mersin Prov.: Erdemli, Aydinlar, 36.7022°N, 34.1475°E, 1155 m a.s.l.: 14–17.vi.1998,

Genus *Perotis* Dejean, 1833

Perotis xerxes xerxes (Marseul, 1865)

AT: Antalya Prov.: Yazır Vill., 37.0000°N, 30.3000°E, 925 m a.s.l., 7.iv.2007, 1 ex., T. Ljubomirov leg. and V. Kubáň det.

Tribe Sphenopterini Lacordaire, 1857

Genus *Sphenoptera* Dejean, 1833

Sphenoptera (Chilostetha) cauta cauta Jakovlev, 1904

AT: Isparta Prov.: Kasnak Meşesi natural protected area, 37.6833°N, 30.5500°E, 1630 m a.s.l., 29.vii.2008, 1 ex., T. Ljubomirov leg. and V. Kubáň det.

Sphenoptera (C.) syriaca Jakovlev, 1908

AT: Isparta Prov.: Kasnak Meşesi natural protected area, 37.7333°N, 30.5500°E, 1420 m a.s.l., 12.vii.2008, 1 ex., T. Ljubomirov leg. and V. Kubáň det.

Subfamily Buprestinae Leach, 1815

Tribe Anthaxiini Gory & Laporte, 1839

Genus *Anthaxia* Eschscholtz, 1829

Anthaxia (Anthaxia) bicolor bicolor Faldermann, 1835

ET: Kırklareli Prov.: W of İğneada Vill., 41.8781°N, 27.9075°E, 29 m a.s.l.: 9.vi.2022, 2 ex.; 13.vi.2022, 3 ex.; S of Beğendik Vill., 41.9331°N, 27.9864°E, 157 m a.s.l., 13.vi.2022, 1 ex.; all T. Ljubomirov leg. and V. Sakalian det.

Anthaxia (A.) fulgurans (Schrank, 1789)

AT: Bolu Prov.: Mengen, Eskiçağa Vill., 40.8182°N, 32.0368°E, 1000 m a.s.l., 13.vi.2001, 1 ex., M. Šárovec leg., V. Kubáň det. (coll. V. Kubáň); ET: Kırklareli Prov.: W of İğneada Vill., 41.8781°N, 27.9075°E, 29 m a.s.l., 13.vi.2022, 2 ex.; S of Beğendik Vill., 41.9331°N, 27.9864°E, 157 m a.s.l., 13.vi.2022, 4 ex.; all T. Ljubomirov leg. and V. Sakalian det.

Remarks: Richter (1949) and Bellamy (2008) reported this species for Türkiye without any locality name. Schimitschek (1944) published locality – Bahçeköy near İstanbul. Kabalak & Tezcan (1998) mentioned some new localities in AT, but they are very doubtful and related to *Anthaxia (Anthaxia) muliebris* Obenberger, 1918 in our opinion. According to the geographical distribution presented by Bílý (2006, 2022), Kubáň (2016b) and Kirçakci & Kabalak (2021) it is not considered to occur in this country. We confirm the existence of *Anthaxia fulgurans* in Türkiye.

Anthaxia (A.) hirschfelderi Niehuis & Strauss, 2019

AT: Isparta Prov.: Kasnak Meşesi natural protected area, 37.6833°N, 30.5500°E, 1630 m a.s.l., 29.vii.2008, 1 ex., T. Ljubomirov leg.; 37.7333°N, 30.5500°E, 1520 m a.s.l., 6.viii.2008, 1 ex., A. Buncukçu leg.; all V. Sakalian det.

Anthaxia (A.) muliebris Obenberger, 1918

AT: Osmaniye Prov.: Mitisin, 36.9833°N, 36.3676°E, 1705 m a.s.l., 22.vii.2008, 1 ex., T. Ljubomirov leg. and V. Sakalian det.

Anthaxia (A.) nigricollis Abeille de Perrin, 1904

AT: Isparta Prov.: Kasnak Meşesi natural protected area, 37.7333°N, 30.5500°E, 1420 m a.s.l., 12.vii.2008, 3 ex.; 1390 m a.s.l., 12.vii.2008, 1 ex.; all T. Ljubomirov leg. and V. Sakalian det.

Anthaxia (A.) podolica podolica Mannerheim, 1837

ET: Kırklareli Prov.: S of Beğendik Vill., 41.9331°N,

27.9864°E, 157 m a.s.l., 13.vi.2022, 2 ex., T. Ljubomirov leg. and V. Sakalian det.

Remarks: According to our opinion the localities of this species in AT reported by Kabalak & Tezcan (1998) are related to *Anthaxia (Anthaxia) kervillei* Théry, 1939 or/and *Anthaxia hirschfelderi* Niehuis & Strauss, 2019.

Anthaxia (A.) semicuprea Küster, 1851

ET: Kırklareli Prov.: S of Beğendik Vill., 41.9331°N, 27.9864°E, 157 m a.s.l., 13.vi.2022, 1 ex., T. Ljubomirov leg. and V. Sakalian det.

Remarks: The species is new to European Türkiye, as until now it has only been found in the Asiatic part of the country (Bílý, 2006; Kubáň, 2016b).

Anthaxia (A.) signaticollis (Krynicki, 1832)

ET: Kırklareli Prov.: N of Pazarlı Vill., 41.6044°N, 27.7175°E, 228 m a.s.l., 11.vi.2022, 1 ex.; NE of Demirköy, 41.8597°N, 27.8161°E, 358 m a.s.l., 13.vi.2022, 2 ex.; W of İğneada Vill., 41.8781°N, 27.9075°E, 29 m a.s.l., 13.vi.2022, 6 ex.; 41.8725°N, 27.9856°E, 10 m a.s.l., 14.vi.2022, 1 ex.; all T. Ljubomirov leg. and V. Sakalian det.

Anthaxia (Cratomerus) diadema diadema (Fischer von Waldheim, 1824)

AT: Isparta Prov.: N of Isparta, 37.8337°N, 30.5468°E, 1250 m a.s.l., 16.vii.2008, 1 ex., T. Ljubomirov leg. and V. Sakalian det.

Anthaxia (C.) hungarica hungarica (Scopoli, 1772)

ET: Kırklareli Prov.: S of Beğendik Vill., 41.9331°N, 27.9864°E, 157 m a.s.l., 13.vi.2022, 1 ex., T. Ljubomirov leg. and V. Sakalian det.

Anthaxia (C.) sponsa Kiesenwetter, 1857

AT: Isparta Prov.: Yukarı Gökdere Vill., 37.6167°N,

30.5500°E, 1280 m a.s.l., 12.vii.2008, 2 ex., T. Ljubomirov leg. and V. Kubáň det.

Anthaxia (H.) mundula Kiesenwetter, 1857

Anthaxia (Haplanthaxia) cichorii (A.G. Olivier, 1790)

AT: Isparta Prov.: Isparta, Gökçay, 37.7500°N, 30.4833°E, 1150 m a.s.l., 13.vii.2008, 1 ex.; Sidre, 37.7333°N, 30.5500°E, 1320 m a.s.l., 13.vii.2008, 2 ex.; all T. Ljubomirov leg. and V. Kubáň det.

AT: Antalya Prov.: NW of Olimpos Vill., 36.4179°N, 30.4680°E, 100 m a.s.l., 3.viii.2008, 2 ex., T. Ljubomirov leg. and V. Sakalian det.

Anthaxia (H.) olympica Kiesenwetter, 1880

Anthaxia (H.) karsanthiana Pic, 1917

ET: Kırklareli Prov.: S of Beğendik Vill., 41.9331°N, 27.9864°E, 157 m a.s.l., 13.vi.2022, 1 ex.; W of İğneada Vill., 41.8781°N, 27.9075°E, 29 m a.s.l., 13.vi.2022, 1 ex.; all T. Ljubomirov leg. and V. Sakalian det.

AT: Çanakkale Prov.: Bahramkale (“Asoz”), İskel, 39.4882°N, 26.3449°E, 20 m a.s.l., 19–24.vii.1991, 26 ex.; Tevfikiye (“Troya”), 39.9567°N, 26.2404°E, 40 m a.s.l., 17.vii.1991, 1ex., V. Kubáň leg.; Mugla Prov.: Torba, 37.0808°N, 27.4533°E, 40 m a.s.l., 17–31.vi.1995, 5 ex., J. Probst leg.; all V. Kubáň det. (coll V. Kubáň); Isparta Prov.: Isparta, Gökçay, 37.7500°N, 30.4833°E, 1150 m a.s.l., 13.vii.2008, 6 ex.; T. Ljubomirov leg. and V. Kubáň det.

Anthaxia (H.) praecincta praecincta Mannerheim, 1837

Anthaxia (H.) lyciae Magnani, 1996

AT: Hatay Prov.: Kengerlidüz, 36.9333°N, 36.4000°E, 1650 m a.s.l., Malaise trap, 19–26.iv.2008, 1 ex., M. F. Gürbüz leg.; Isparta Prov.: Kasnak Meşesi natural protected area, 37.7333°N, 30.5500°E, 1420 m a.s.l., 12.vii.2008, 3 ex.; 1390 m a.s.l., 12.vii.2008, 1 ex.; 37.7333°N, 30.8167°E, 1520 m a.s.l., 12.vii.2008, 3 ex.; 1390 m a.s.l., 6.viii.2008, 1 ex.; NE of Isparta, Günür hill, 37.7833°N, 30.5667°E, 1320 m a.s.l., 16.vii.2008, 1 ex.; Osmaniye Prov.: Mitisin, 36.9833°N, 36.3676°E, 1705 m a.s.l., 22.vii.2008, 3 ex.; all T. Ljubomirov leg., V. Kubáň and V. Sakalian det.

Anthaxia (H.) serena K. Daniel, 1903

Anthaxia (H.) millefolii millefolii (Herbst, 1801)

AT: Isparta Prov.: Kasnak Meşesi natural protected area, 37.7333°N, 30.5500°E, 1520 m a.s.l., 6.viii.2008, 1 ex., T. Ljubomirov leg. and V. Kubáň det.

ET: Kırklareli Prov.: NE of Demirköy, 41.8631°N, 27.8142°E, 373 m a.s.l., 9.vi.2022, 4 ex.; 41.8597°N, 27.8161°E, 358 m a.s.l., 13.vi.2022, 3 ex.; W of İğneada Vill., 41.8781°N, 27.9075°E, 29 m a.s.l.: 9.vi.2022, 13 ex.; 13.vi.2022, 9 ex.; S of Beğendik Vill., 41.9331°N, 27.9864°E, 157 m a.s.l., 13.vi.2022, 12 ex.; all T. Ljubomirov leg. and V. Sakalian det.

Anthaxia (H.) ursulae Niehuis, 1989

Anthaxia (H.) niehuisi Brandl, 1987

AT: Antalya Prov.: NW of Olimpos Vill., 36.4179°N, 30.4680°E, 100 m a.s.l., 3.viii.2008, 2 ex., T. Ljubomirov leg. and V. Kubáň det.

AT: Çanakkale Prov.: Bahramkale (“Asoz”), İskel, 39.4882°N, 26.3449°E, 20 m a.s.l., 19–24.vii.1991, 1 ex., V. Kubáň leg. and det. (coll. V. Kubáň).

Anthaxia (Melanthaxia) corinthia Reiche & Saulcy, 1856

AT: Antalya Prov.: N of Antalya, 36.6167°N,

32.0333°E, 860 m a.s.l., 6.iv.2007, 2 ex.; Doyran Vill., 36.8833°N, 30.1833°E, 70 m a.s.l., 7.iv.2007, 9 ex.; Adana Prov.: Yumurtalık, 36.7333°N, 35.6168°E, 5 m a.s.l.: 12–17.iv.2007, Malaise trap, 7 ex.; 13.iv.2007, 2 ex.; 17.iv.2007, 4 ex.; Isparta Prov.: S of Eğerdır, 37.7791°N, 30.7139°E, 1700 m a.s.l., 21.iv.2007, 1 ex.; all T. Ljubomirov leg. and V. Sakalian det.

Anthaxia (M.) masculina Bílý, 1984

AT: Isparta Prov.: Gökdere, 37.7024°N, 30.8492°E, 970 m a.s.l., 3.iv.2007, 1 ex., J. Kolarov leg.; S of Isparta, 37.7492°N, 30.5689°E, 1076 m a.s.l., 7.iv.2007, 1 ex.; Antalya Prov.: N of Antalya, 36.6167°N, 32.0333°E, 860 m a.s.l., 6.iv.2007, 2 ex.; Doyran Vill., 36.8833°N, 30.1833°E, 70 m a.s.l., 7.iv.2007, 29 ex.; all T. Ljubomirov leg. and V. Sakalian det.

Anthaxia (M.) obesa Abeille de Perrin, 1900

AT: Antalya Prov.: N of Antalya, 37.0000°N, 30.3000°E, 60 m a.s.l., 7.iv.2007, 1 ex.; Doyran Vill., 36.8833°N, 30.1833°E, 70 m a.s.l., 7.iv.2007, 1 ex.; all T. Ljubomirov leg. and V. Sakalian det.

Tribe Buprestini Leach, 1815
Genus *Eurythyrea* Dejean, 1833

Eurythyrea aurata (Pallas, 1776)

AT: Bingöl Prov.: Şeref Region, 1530 m a.s.l., 26.vii.2008, M. Kemal photographed (Koçak & Kemal, 2009). The exact location of this place is near the road 20 km from Bingöl to Solhan, 38.9101667°N, 40.7787500°E, 1530 m a.s.l. (M. Kemal, personal communication).

Remarks: Koçak & Kemal (2009) reported *Eurythyrea austriaca* (Linnaeus, 1767), from the aforementioned area (see photo by M. Kemal, fig. 73 in this paper). After precise study of the photo V. Kubáň established that *E. austriaca* is misdetermined and identified species as *E. aurata*. According to Richter (1952) *E. aurata* is distributed in Türkiye, but there aren't any specimens of this species found in the collections of Zoological Institute St. Petersburg (Russia) from Türkiye (M.G. Volkovitsh, personal

communication). In this case only the determination of *E. aurata* by photo confirms its distribution in Türkiye.

Eurythyrea quercus (Herbst, 1780)

AT: Hatay Prov.: Akbez (as "Akbès"), 36.8515°N, 36.5552°E, ca. 600 m a.s.l., 1883, A. David leg. (Fairmaire 1884). Bursa Prov.: Çağlıyan, N env., 40.3055°N, 29.0216°E, 125 m a.s.l., 10.vii.1997, 1 ex., collected on *Quercus* sp. trunk, M.P. Říha leg., V. Kubáň det. (coll. V. Kubáň).

Remarks: Fairmaire (1884) mentions "*Eurythyrea carniolica* Hb." (synonym of *E. quercus*) in a list of Coleoptera, collected by priest Armand David in Akbez (Hatay Prov.). This data is unverified, that is why our new information confirms distribution of this species in Türkiye.

Tribe Chrysobothrini Gory & Laporte, 1938

Genus *Chrysobothris* Eschscholtz, 1829

Chrysobothris (*Chrysobothris*) *affinis affinis* (Fabricius, 1794)

ET: Kırklareli Prov.: W of İğneada Vill., 41.8781°N, 27.9075°E, 29 m a.s.l., 13.vi.2022, 1 ex., T. Ljubomirov leg. and V. Sakalian det.

Subfamily Agrilinae Laporte, 1835

Tribe Agrilini Laporte, 1835

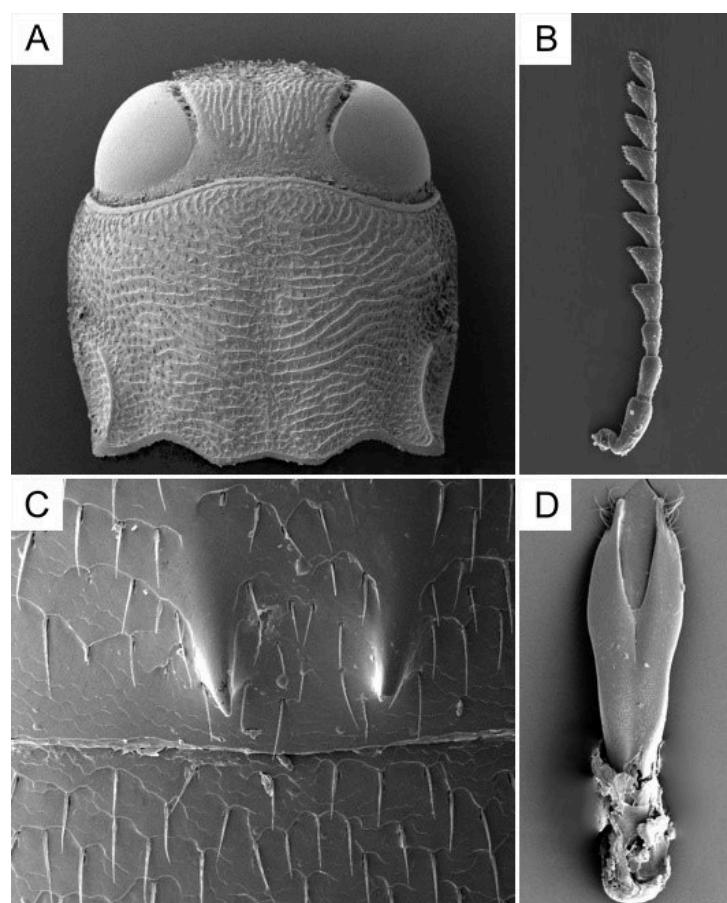
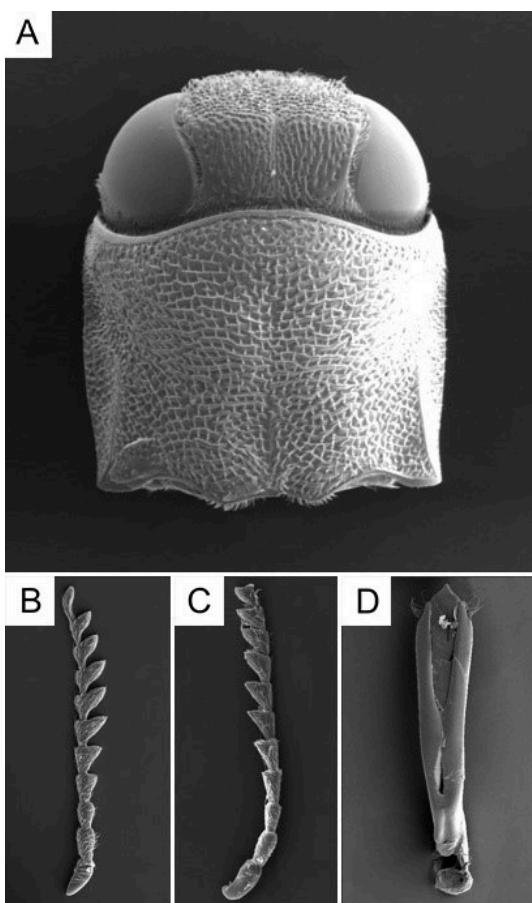
Genus *Agrilus* Curtis, 1825

Agrilus (*Agrilus*) *cuprescens cuprescens* (Ménétriés, 1832)

ET: Kırklareli Prov.: S of Beğendik Vill., 41.9331°N, 27.9864°E, 157 m a.s.l., 13.vi.2022, 1 ex., T. Ljubomirov leg. and V. Sakalian det.

Agrilus (*Quercuagrilus*) *adlbaueri* Niehuis, 1987

AT: Hatay Prov.: Kengerlidüz, 36.9333°N, 36.4000°E, 1650 m a.s.l., 14–21.vi.2007, Malaise trap, 1 ex., M. F. Gürbüz leg. and V. Kubáň det.



[Left] Fig. 1. *Agrilus (Quercuagrilus) graminis* Kiesenwetter, 1857. A. Vertex and pronotum ($\times 115$). B. Antenna male ($\times 150$). C. Antenna female ($\times 194$). D. Aedeagus ($\times 133$). [Right] Fig. 2. *Agrilus (Quercuagrilus) hastulifer* (Ratzeburg, 1837). A. Vertex and pronotum ($\times 115$). B. Antenna male ($\times 150$). C. Tubercles male ($\times 634$). D. Aedeagus ($\times 155$).

Agrilus (Q.) angustulus angustulus Illiger, 1803

ET: Kırklareli Prov.: NE of Demirköy, 41.8631°N, 27.8142°E, 373 m a.s.l., 9.vi.2022, 1 ex.; W of İğneada Vill., 41.8781°N, 27.9075°E, 29 m a.s.l.: 9.vi.2022, 4 ex.; 13.vi.2022, 3 ex.; S of Beğendik Vill., 41.9331°N, 27.9864°E, 157 m a.s.l., 13.vi.2022, 3 ex.; all T. Ljubomirov leg. and V. Sakalian det.

Agrilus (Q.) graminis Kiesenwetter, 1857

AT: Hatay Prov.: Kengerlidüz, 36.9333°N, 36.4000°E, 1650 m a.s.l.: 21.vi–4.vii.2007, Malaise trap, 1 ex.; 4–14.vii.2007, Malaise trap, 1 ex., M. F. Gürbüz leg.; ET: Kırklareli Prov.: W of İğneada Vill., 41.8781°N, 27.9075°E, 29 m a.s.l.: 9.vi.2022, 1 ex.; 13.vi.2022, 4 ex.; S of Beğendik Vill., 41.9331°N,

27.9864°E, 157 m a.s.l., 13.vi.2022, 2 ex.; all T. Ljubomirov leg. and V. Sakalian det.

Remarks: This species is similar to *Agrilus (Quercuagrilus) hastulifer* (Ratzeburg, 1837). Gutowski et al. (2020) presented the differences between these two species in details. In this article, we propose a short key, which illustrates the main characters and adds some new ones, using SEM photomicrographs, as follows: White pubescence of elytra in both species is situated along the suture in around middle (shorter hairs) and in apical parts (longer hairs). Exact disposition, dimensions and density of this pubescence vary in different specimens of both taxa. Some *A. graminis* specimens are without medial pubescence. The size of the vertex of the head between the lower part of the eyes is wider in *A. graminis* (both sexes) (Fig. 1. A.) compared to *A. hastulifer* (both sexes) (Fig. 2. A.). The lateral

pronotal sides of *A. graminis* are almost parallel (Fig. 1. A.) while the lateral sides of the pronotum are arcuate in *A. hastulifer* (Fig. 2. A.). Microsculptures of vertexes and pronota are also different (Fig. 1. A. and Fig. 2. A.). Male ones differ by antennal conformation (Fig. 1. B. and Fig. 2. B.), existing tubercles on the second sternit in *A. hastulifer* (Fig. 2. C.) and aedeagi (Fig. 1. D. and Fig. 2. D.). The sexual dimorphism concerns the antennal structures of *A. graminis* (Fig. 1. B. and Fig. 1. C.).

Agrilus (Q.) olivicolor Kiesenwetter, 1857

ET: Kırklareli Prov.: W of İğneada Vill., 41.8781°N, 27.9075°E, 29 m a.s.l., 9.vi.2022, 1 ex., T. Ljubomirov leg. and V. Sakalian det.

Agrilus (Sinuatiagrilus) sinuatus sinuatus (A.G. Olivier, 1790)

ET: Kırklareli Prov.: N of Beğendik Vill., 41.9686°N, 28.0281°E, 23 m a.s.l., 13.vi.2022, 1 ex., T. Ljubomirov leg. and V. Sakalian det.

Agrilus (Spiragrilus) sulcifer Abeille de Perrin, 1895

AT: Hatay Prov.: Kengerlidüz, 36.9333°N, 36.4000°E, 1650 m a.s.l., 4–14.vii.2007, Malaise trap, 1 ex., M. F. Gürbüz leg. and E. Jendek det.

Tribe Coraebini Bedel, 1921

Genus *Coraebus* Gory & Laporte, 1839

Coraebus (Coraebus) elatus (Fabricius, 1787)

AT: Isparta Prov.: Kasnak Meşesi natural protected area, 37.6833°N, 30.5500°E, 1630 m a.s.l., 29.vii.2008, 1 ex., T. Ljubomirov leg. and V. Sakalian det.

Coraebus (C.) rubi (Linnaeus, 1767)

ET: Kırklareli Prov.: W of İğneada Vill., 41.8781°N, 27.9075°E, 29 m a.s.l., 13.vi.2022, 1 ex., T. Ljubomirov leg. and V. Sakalian det.

The Buprestidae fauna in Türkiye stands out as one of the richest and diverse within the Palearctic region. The unique zoogeographical structure of the country is shaped by a confluence of European, Mediterranean, and Middle Asiatic faunal elements. Although this fauna has been extensively studied in Türkiye, the continuous potential for the discovery and description of new taxa remains promising.

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