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Original article (Orijinal araştırma)

Faunistic contributions and zoogeographical and ecological evaluations on species belonging to the genus *Philonthus* Stephens, 1829 (Coleoptera: Staphylinidae: Staphylininae: Staphylinini: Philonthiina) from the Aegean Region (Türkiye)[1]

Ege Bölgesi (Türkiye)'nden *Philonthus* Stephens, 1829 (Coleoptera: Staphylinidae: Staphylininae: Staphylinini: Philonthiina) cinsine bağlı türler üzerine faunistik katkılar ile zoocoğrafik ve ekolojik değerlendirmeler

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Abstract

Philonthus Stephens, 1829 is the most speciose genus of the tribe Staphylini in the world. In this present study, faunistic contributions to the *Philonthus* fauna of Türkiye were made along with additional records. A total of 30 species were recorded from the examined material which was composed of specimens collected from the Aegean Region between 2019-2022. Among them, 13 species are new records for the region and new province records for 15 species are also provided. Additionally, first detailed locality records are provided for the widely distributed *Philonthus viridipennis* Fauvel, 1875. Besides several ecological properties, general distribution of species in Türkiye and other zoogeographical regions are presented and discussed. Previous records from the study region are given and evaluated with our results, zoogeographic status of species is discussed. As a result of the study, composition of the collected species represent regional characters, as they mostly belong to the European and Asian fauna.

Keywords: Fauna, new records, *Philonthus*, Staphylininae, Staphylinini, Türkiye

Öz

Philonthus Stephens, 1829, Staphylinini tribüsünün dünyada türce en zengin cinsidir. Bu çalışmada, Türkiye *Philonthus* faunasına yeni kayıtlar aracılığı ile faunistik katkılar yapılmıştır. 2019-2022 yılları arasında Ege Bölgesinden toplanan örneklerden oluşan inceleme materyalinden, toplamda 30 tür kaydedilmiştir. Bunların arasından 13 tür bölge için yeni kayıttır ve 15 tür için de yeni il kayıtları sağlanmıştır. Ayrıca, geniş bir dağıla sahip olan *Philonthus viridipennis* Fauvel, 1875 türü için ilk ayrıntılı dağılım kayıtları verilmiştir. Birkaç ekolojik özelliğin yanısıra, türlerin Türkiye ve diğer zoocoğrafik bölgelerdeki genel dağılımları sunulmuş ve tartışılmıştır. Bölgeden daha önceki kayıtlar verilerek kendi sonuçlarımızla değerlendirilmiş, türlerin zoocoğrafik durumları tartışılmıştır. Çalışmanın sonucu olarak, toplanan türlerin kompozisyonu, türlerin çoğunlukla Avrupa ve Asya faunasına ait olmasından ötürü, bölgesel karakterleri yansıtmaktadır.

Anahtar sözcükler: Fauna, yeni kayıtlar, *Philonthus*, Staphylininae, Staphylinini, Türkiye

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Introduction

The subfamily Staphylininae, including the tribe Stapylinini, is the third largest subfamily of Staphylinidae comprising over 9.000 species in more than 400 genera worldwide (Newton, 2022). *Philonthus* Stephens, 1829, as the most speciose genus belonging to the tribe Staphylinini, has 1.333 species worldwide and 67 species/subspecies in Türkiye (Anlaş, 2009; Schülke & Smetana, 2015; Fırat & Sert, 2016a, b; Özgen et al., 2016; Özdemir, 2021). Staphylinines are one of the most widely distributed animals on earth and found in various kinds of humid habitats (Demirsoy, 2003; Frank & Thomas, 2010). As most of the staphylinines, *Philonthus* species are defined predators and coprophiles, and adults are generally found on riverbanks, under leaf debris and in dung and carrion/carcasses (Coiffait, 1972).

The study area, Aegean Region comprises Türkiye's fifth biggest region, covering 10.1% of the country's lands. It stretches along the shores of the Aegean Sea and neighbours the Marmara, Central Anatolian and Mediterranean Regions. Along the coastal part, mediterranean climate type is dominant and because of the depression plains, it reaches almost 100-150 km inland through shores. Further inland, a transitional state between mediterranean and continental climate is seen. Decreased precipitation on inner part relative to the coastal part shifts towards spring season. Therefore, summer drought is much less than coastal part (Atalay & Mortan, 2011).

Materials and Methods

Material used in the study was collected from the Aegean Region of Türkiye, including the southern part of Balıkesir province (Figure 1), between April 2019 and October 2022. Specimens were collected by conventional collection methods using aspirator on dung and riverbanks-understones, sifting debris and sweeping herbaceous plants. Collected specimens are preserved in ethanol-acetic acid (%10) solution in order to keep them soft until examination. Coordinates were recorded by using GPS. Material is deposited in the Hacettepe University Zoology Museum (Ankara, Türkiye) (HUZOM). Identifications were done by using identification keys from Coiffait (1974) and Schillhammer (2011). For the examinations, Nikon SMZ-U and Euromex Nexius Zoom binocular stereomicroscopes were used. Catalogue of Löbl & Löbl (2015) were used for taxonomic classification and zoogeographical distributions. Species were organized in Table 1 as common species with Europe (E), common species with Asia (A), common species with North Africa (N), and Afrotropical (AFR), Nearctic (NAR), and Oriental (ORR) regions, and also cosmopolitan species (COS).

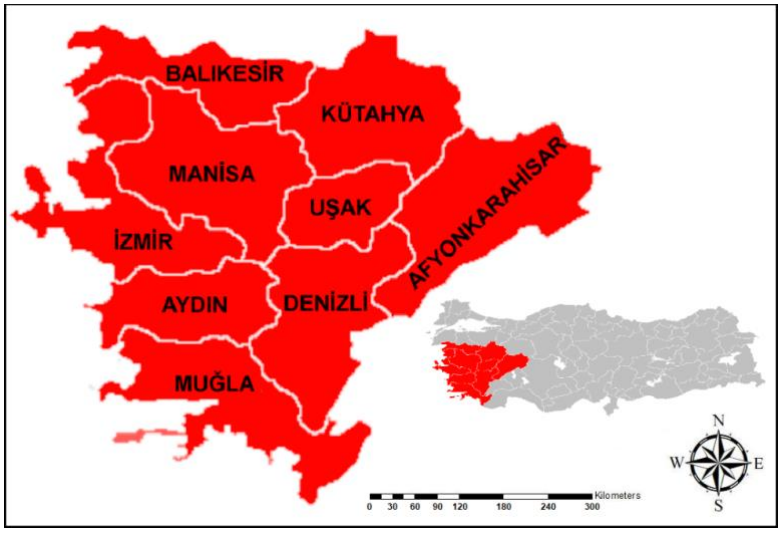

Figure 1. Map of research area (ArcMap 10.6.1).

Results and Conclusion

A total of 30 species belonging to *Philonthus* were detected. Among all *Philonthus* species found in Türkiye, 24 species were previously recorded from the study region. In the present study, 13 species are detected as new for the region and together with these records, a total of 37 species are now distributed in Aegean region including the widely distributed *Philonthus viridipennis*. Ecological collecting data regarding number of specimens, collecting months, vertical distribution and collecting habitat-methods are given in Table 1 along with their zoogeographical distribution. Previous records from the study region are given in comparison with our results in Table 2.

Tribe Staphylinini Latreille, 1802

Subtribe Philonthina Kirby, 1837

Genus *Philonthus* Stephens, 1829

Philonthus carbonarius (Gravenhorst, 1802)

Material examined. Afyonkarahisar: Sultandağı, 1138m., 1.V.2019, ♀, leg. S. Özdemir.

Distribution in Türkiye. Afyonkarahisar, Aksaray, Antalya, Ardahan, Bingöl, Bursa, Elazığ, Erzurum, Kahramanmaraş, Kars, Konya, Manisa (Bodemeyer, 1906; Anlaş & Rose, 2009; Kesdek et al., 2009; Özgen & Anlaş, 2010; Assing, 2013; Fırat & Sert, 2016a; Özgen et al., 2016; Daşdemir & Tozlu, 2022).

Philonthus cognatus Stephens, 1832

Material examined. Afyonkarahisar: Sandıklı, 1483m., 21.X.2019, ♂, leg. Y. Turan; Kütahya: Central province, 1164m., 14.VI.2022, ♂, leg. S. Özdemir.

Distribution in Türkiye. Afyonkarahisar, Ankara, Ardahan, Artvin, Balıkesir (Kaz Mountain), Erzurum, Eskişehir, Gaziantep, Giresun, İzmir, Kars, Konya, Manisa, Mersin, Trabzon, Yozgat (Bodemeyer, 1900; Smetana, 1953; Fagel, 1963; Coiffait, 1978; Kesdek et al., 2009; Abacıgil et al., 2013; Çiftçi & Hasbenli, 2016; Fırat & Sert, 2016a; Özgen et al., 2016; Özdemir, 2021).

Philonthus concinnus (Gravenhorst, 1802)

Material examined. Afyonkarahisar: Başmakçı, 1110m., 26.VII.2021, 3♀♀, ♂, leg. S. Özdemir, B. Şabanoğlu; Bayat, 1388m., 16.VII.2021, ♀, leg. B. Şabanoğlu; Bolvadin, 1282m., 19.VII.2021, 10♀♀, 5♂♂, leg. S. Özdemir, O. Sert; Bolvadin, 1175m., 19.VII.2021, ♂, leg. S. Özdemir; Çay, 1029m., 24.IV.2021, ♀, leg. M. Kabalak; Çay, 1920m., 17.VII.2021, ♀, ♂, leg. S. Özdemir, B. Şabanoğlu; Sultandağı, 1310m., 05.VII.2019, 4♀♀, 3♂♂, leg. S. Özdemir, O. Sert; Sultandağı, 1215m., 05.VII.2019, 3♀♀, ♂, leg. S. Özdemir, Y. Turan; Emirdağ, 1252m., 01.VI.2019, ♀, leg. S. Özdemir; Emirdağ, 1511m., 06.VII.2019, 5♀♀, ♂, leg. O. Sert, S. Özdemir; Emirdağ, 982m., 05.VI.2021, ♀, leg. M. Kabalak; İscehisar, 1360m., 19.VII.2021, ♀, leg. S. Özdemir; Sandıklı, 1528m., 18.VII.2021, 3♀♀, leg. S. Özdemir, B. Şabanoğlu; Sandıklı, 1654m., 18.VII.2021, ♀, leg. S. Özdemir; Sandıklı, 1428m., 18.VII.2021, ♀, leg. S. Özdemir; Aydın: Bozdoğan, 384m., 02.VI.2022, ♂, leg. O. Sert; Karacasu, 470m., 28.VI.2021, 2♀♀, leg. S. Özdemir, O. Özdil; Koçarlı, 750m., 19.V.2022, 2♂♂, leg. S. Özdemir, E C. Ceylan; Nazilli, 665m., 20.V.2022, ♀, leg. S. Özdemir; Nazilli, 434m., 20.V.2022, 8♀♀, 8♂♂, leg. S. Özdemir, O. Sert; Nazilli, 975m., 22.VII.2022, ♂, leg. S. Özdemir; Balıkesir: Burhaniye, 562m., 03.VII.2022, ♀, leg. S. Özdemir; Edremit, 1723m., 26.V.2022, ♀, ♂, leg. S. Özdemir, U. Özfuçucu; Denizli: Acıpayam, 1346m., 13.VI.2021, ♂, leg. O. Sert; Bekilli, 799m., 18.VII.2022, ♀, ♂, leg. S. Özdemir, O. Özdil; Çal, 1198m., 28.VII.2021, 2♀♀, leg. S. Özdemir, O. Özdil; Çal, 697m., 12.VI.2021, 6♀♀, leg. S. Özdemir, O. Özdil; Çardak, 1403m., 13.VI.2021, 2♀♀, leg. O. Sert, S. Özdemir; İzmir: Aliağa, 195m., 27.VI.2019, 3♂♂, leg. S. Özdemir, Y. Turan; Aliağa, 120m., 27.VI.2019, ♀, leg. S. Özdemir; Bergama, 473m., 23.V.2022, 3♀♀, 3♂♂, leg. S. Özdemir, B. Şabanoğlu; Bergama,

605m., 23.V.2022, ♀, leg. S. Özdemir; Kemalpaşa, 879m., 29.VI.2019, ♀, leg. S. Özdemir; Tire, 358m., 12.V.2019, 2♀♀, 2♂♂, leg. S. Özdemir, Y. Turan; Tire, 952m., 12.V.2019, ♀, leg. B. Şabanoğlu; Kütahya: Central province, 1164m., 14.VI.2022, 2♀♀, leg. S. Özdemir, B. Şabanoğlu; Domaniç, 873m., 14.VI.2022, ♀, 1♂, leg. S. Özdemir, B. Şabanoğlu; Domaniç, 1204m., 06.VIII.2022, ♀, leg. O. Sert; Emet, 972m., 23.VI.2019, ♀, ♂, leg. S. Özdemir, O. Sert; Gediz, 742m., 29.V.2021, 2♀♀, leg. S. Özdemir, B. Şabanoğlu; Simav, 719m., 23.VI.2021, ♀, leg. S. Özdemir; Tavşanlı, 967m., 21.VI.2019, ♀, ♂, leg. S. Özdemir, B. Şabanoğlu; Manisa: Salihli, 759m., 16.IX.2019, ♀, ♂, leg. S. Özdemir, O. Sert; Salihli, 141m., 25.V.2022, ♂, leg. S. Özdemir; Saruhanlı, 775m., 07.VI.2021, 2♀♀, ♂, leg. S. Özdemir, O. Özdil; Muğla: Milas, 66m., 26.VI.2021, ♀, leg. B. Şabanoğlu; Uşak: Banaz, 1498m., 17.VI.2019, 4♀♀, ♂, leg. S. Özdemir, O. Sert; Banaz, 1804m., 13.VII.2021, 7♀♀, 2♂♂, leg. S. Özdemir, O. Özdil; Central province, 465m., 15.VI.2019, ♀, leg. B. Şabanoğlu; Central province, 934m., 14.VII.2021, ♀, leg. S. Özdemir; Eşme, 881m., 17.VI.2019, 4♀♀, ♂, leg. S. Özdemir, B. Şabanoğlu; Eşme, 950m., 30.VI.2019, ♀, leg. O. Sert; Eşme, 767m., 15.VI.2019, ♀, leg. B. Şabanoğlu; Eşme, 488m., 12.VII.2021, 2♂♂, leg. S. Özdemir, O. Özdil; Karahallı, 1077m., 25.VII.2022, ♂, leg. O. Sert; Ulubey, 832m., 18.V.2019, ♀, leg. O. Sert; Ulubey, 565m., 25.VII.2022, 4♀♀, leg. S. Özdemir, O. Sert.

Distribution in Türkiye. Adana, Afyonkarahisar, Aksaray, Ankara, Antalya, Ardahan, Balıkesir (Kaz Mountain), Bilecik, Bingöl, Bolu, Bursa, Çankırı, Denizli, Diyarbakır, Elazığ, Erzincan, Erzurum, Eskişehir, Gaziantep, Gümüşhane, Isparta, Iğdır, İzmir, Karaman, Kayseri, Kırıkkale, Kırşehir, Konya, Kütahya, Malatya, Manisa, Mardin, Mersin, Muğla, Muş, Nevşehir, Niğde, Siirt, Sivas, Tunceli, Uşak, Yozgat (Bodemeyer, 1906; Sahlberg, 1913; Smetana, 1953, 1967; Anlaş, 2009; Anlaş & Rose, 2009; Kesdek et al., 2009; Özgen & Anlaş, 2010; Özgen et al., 2010, 2015, 2016; Abacıgil et al., 2013; Assing, 2013; Anlaş et al., 2014; Çiftçi & Hasbenli, 2016; Fırat & Sert, 2016a; Özgen, 2017; Tanyeri et al., 2017; Tezcan et al., 2019; Özdemir, 2021).

Remarks. This species is a widely distributed species and together with records from Aydın in this study, it is now distributed in whole Aegean Region.

Philonthus coprophilus Jarrige, 1949

Material examined. Afyonkarahisar: Sultandağı, 1134m., 01.V.2019, ♀, 4♂♂, leg. S. Özdemir, B. Şabanoğlu; Kütahya: Central province, 1164m., 21.VI.2019, ♀, leg. S. Özdemir; Uşak: Ulubey, 873m., 18.V.2019, ♀, leg. S. Özdemir.

Distribution in Türkiye. Aksaray, Balıkesir (Kaz Mountain), Erzurum, Kırıkkale, Konya, Muğla, Nevşehir, Sinop (Assing, 2007, 2010; Abacıgil et al., 2013; Fırat & Sert, 2016a, Tezcan et al., 2019).

Philonthus cruentatus (Gmelin, 1790)

Material examined. Afyonkarahisar: Bayat, 1388m., 16.VII.2021, ♀, leg. B. Şabanoğlu; Balıkesir: Sındırgı, 465m., 25.V.2022, 2♀♀, 3♂♂, leg. S. Özdemir, U. Özfuçucu; İzmir: Bergama, 517m., 28.IV.2022, ♀, leg. S. Özdemir; Kütahya: Central province, 1164m., 21.VI.2019, 3♀♀, ♂, leg. S. Özdemir, O. Sert; Tavşanlı, 996m., 22.VI.2019, 2♀♀, leg. S. Özdemir, Y. Turan; Manisa: Central province, 1373m., 24.V.2022, 2♀♀, ♂, leg. S. Özdemir, E.C. Ceylan; Uşak: Banaz, 1066m., 16.VI.2019, ♀, 1♂, leg. S. Özdemir, O. Sert; Central province, Ovacık, 976m., 16.VI.2019, ♂, leg. O. Sert; Ulubey, 834m., 18.V.2019, 3♀♀, 2♂♂, leg. S. Özdemir, O. Sert, B. Şabanoğlu.

Distribution in Türkiye. Antalya, Balıkesir (Kaz Mountain), Denizli, Erzurum, Eskişehir, Gümüşhane, İstanbul, Konya, Manisa, Mersin, Nevşehir (Apfelbeck, 1902; Bodemeyer, 1906, 1927; Sahlberg, 1913; Öncüer, 1991; Anlaş & Rose, 2009; Anlaş et al., 2014; Çiftçi & Hasbenli, 2016; Fırat & Sert, 2016a; Özgen et al., 2016; Daşdemir & Tozlu, 2022).

Philonthus debilis (Gravenhorst, 1802)

Material examined. Afyonkarahisar: Emirdağ, 1719m., 26.VI.2019, ♂, leg. M. Kabalak; Aydın: Nazilli, 383m., 22.VII.2022, ♀, ♂, leg. S. Özdemir, U. Özfuçucu; Denizli: Tavas, 1060m., 01.VII.2019, ♀, leg. S. Özdemir; İzmir: Aliağa, 120m., 27.VI.2019, 2♀♀, ♂, leg. S. Özdemir, B. Şabanoğlu; Kemalpaşa, 879m., 29.VI.2019, ♀, leg. S. Özdemir; Kütahya: Aslanapa, 1351m., 23.VI.2019, ♂, leg. S. Özdemir; Manisa: Salihli, 380m., 30.VI.2019, 2♀♀, 3♂♂, leg. S. Özdemir, O. Sert; Uşak: Sivaslı, 957m., 14.VII.2021, ♂, leg. S. Özdemir.

Distribution in Türkiye. Adana, Afyonkarahisar, Ankara, Balıkesir (Kaz Mountain), Bilecik, Denizli, Erzincan, Eskişehir, Konya, Mersin, Rize (Peyron, 1858; Fauvel, 1874; Bodemeyer, 1900; Sahlberg, 1913; Smetana, 1953; Öncüer, 1991; Abacıgil et al., 2013; Assing, 2013; Çiftçi & Hasbenli, 2016; Fırat & Sert, 2016a; Özgen et al., 2016; Özdemir, 2021).

Philonthus dimidiatipennis Erichson, 1840

Material examined. Afyonkarahisar: Çay, 1028m., 05.VII.2019, ♂, leg. S. Özdemir; Çobanlar, 1037m., 17.VII.2021, ♀, leg. S. Özdemir.

Distribution in Türkiye. Adana, Ankara, Isparta, Konya (Smetana, 1953, 1967; Scheerpeltz, 1958; Fırat & Sert, 2016a).

Remarks. This species is here reported for the first time from the Aegean Region.

Philonthus ebeninus Gravenhorst, 1802

Material examined. Kütahya: Tavşanlı, 967m., 21.VI.2019, 2♀♀, leg. S. Özdemir, B. Şabanoğlu; Uşak: Ulubey, 834m., 18.V.2019, ♂, leg. S. Özdemir.

Distribution in Türkiye. Adana, Aksaray, Antalya, Bursa, Çankırı, Elazığ, Eskişehir, İzmir, Kırşehir, Manisa, Mersin, Muş, Nevşehir (Peyron, 1858; Smetana, 1953; Anlaş, 2009; Anlaş & Rose, 2009; Anlaş et al., 2014; Çiftçi & Hasbenli, 2016; Fırat & Sert, 2016a; Özgen et al., 2016).

Philonthus frigidoides Coiffait, 1963

Material examined. Afyonkarahisar: Çay, 1215m., 05.VII.2019, ♀, ♂, leg. S. Özdemir, Y. Turan; Çay, 1689m., 05.VII.2019, ♀, leg. Y. Turan.

Distribution in Türkiye. Isparta, Ordu (Coiffait, 1963, 1978).

Remarks. This species is here reported for the first time from the Aegean Region.

Philonthus frigidus frigidus Märkel & Kiesenwetter, 1848

Material examined. Afyonkarahisar: Çay, 1920m., 17.VII.2021, ♀, leg. S. Özdemir.

Distribution in Türkiye. Aksaray, Bayburt, Giresun, Rize (Fırat & Sert, 2016a; Özdemir, 2021).

Remarks. This species is here reported for the first time from the Aegean Region.

Philonthus fumarius (Lacordaire, 1835)

Material examined. Kütahya: Central province, 1043m., 24.VI.2019, ♀, leg. S. Özdemir.

Distribution in Türkiye. İstanbul, Kırşehir, Muş (Apfelbeck, 1902; Horion, 1965; Fırat & Sert, 2016a; Özgen et al., 2016).

Remarks. This species is here reported for the first time from the Aegean Region.

Philonthus intermedius (Lacordaire, 1835)

Material examined. Afyonkarahisar: Emirdağ, 1719m., 26.VI.2019, ♂, leg. M. Kabalak; Denizli: Tavas, 1115m., 11.VI.2021, 2♂♂, leg. S. Özdemir, O. Özdil; İzmir: Kemalpaşa, 256m., 05.V.2019, ♀, ♂, leg. O. Sert, B. Şabanoğlu; Tire, 781m., 12.V.2019, ♀, leg. O. Sert; Kütahya: Central province, 1164m., 14.VI.2022, ♂, leg. U. Özfuçucu; Manisa: Salihli, 141m., 25.V.2022, 2♀♀, 2♂♂, leg. S. Özdemir, E.C. Ceylan; Muğla: Kavaklıdere, 805m., 02.VI.2022, ♀, leg. S. Özdemir; Uşak: Central province, 976m., 16.VI.2019, ♀, 3♂♂, leg. O. Sert, B. Şabanoğlu; Central province, 946m., 16.VI.2019, ♂, leg. S. Özdemir; Eşme, 767m., 15.VI.2019, ♀, ♂, leg. S. Özdemir, B. Şabanoğlu; Ulubey, 873m., 18.V.2019, ♀, leg. S. Özdemir; Ulubey, 834m., 18.V.2019, ♀, 3♂♂, leg. S. Özdemir, O. Sert, B. Şabanoğlu.

Distribution in Türkiye. Adıyaman, Aksaray, Ankara, Antalya, Balıkesir (Kaz Mountain), Bilecik, Denizli, Elazığ, Erzincan, Eskişehir, Gümüşhane, İzmir, Kahramanmaraş, Kayseri, Kırıkkale, Kırşehir, Kocaeli, Konya, Malatya, Mardin, Manisa, Mersin, Muğla, Muş, Nevşehir, Sivas (Peyron, 1858; Sahlberg, 1913; Öncüer, 1991; Anlaş, 2009; Anlaş & Rose, 2009; Özgen & Anlaş, 2010; Abacıgil et al., 2013; Anlaş et al., 2014; Özgen et al., 2015, 2016; Çiftçi & Hasbenli, 2016; Fırat & Sert, 2016a; Tanyeri et al., 2017).

Philonthus juvenilis Peyron, 1858

Material examined. Afyonkarahisar: Sandıklı, 1702m., 18.VII.2021, ♀, leg. B. Şabanoğlu; Aydın: Nazilli, 665m., 20.V.2022, ♀, leg. S. Özdemir; Balıkesir: Havran, 242m., 05.VI.2021, ♀, leg. O. Özdil; İzmir: Bergama, 220m., 28.IV.2022, 2♀♀, leg. S. Özdemir, B. Şabanoğlu; Central province, 691m., 04.V.2019, ♀, ♂, leg. S. Özdemir, Y. Turan; same locality, 29.IV.2022, ♀, leg. B. Şabanoğlu; Kemalpaşa, 879m., 29.VI.2019, ♂, leg. O. Sert; Ödemiş, 1376m., 20.V.2022, 2♂♂, leg. S. Özdemir, B. Şabanoğlu; Kütahya: Dumlupınar, 1164m., 28.VII.2021, ♂, leg. S. Özdemir; Hisarcık, 772m., 23.VI.2019, ♀, leg. S. Özdemir; Uşak: Banaz, 957m., 19.V.2019, ♀, leg. O. Sert.

Distribution in Türkiye. Antalya, Bayburt, Erzurum, Konya, Mersin, Niğde (Peyron, 1858; Bodemeyer, 1900; Smetana, 1953; Coiffait, 1974; Anlaş & Rose, 2009; Fırat & Sert, 2016a; Özdemir, 2021).

Remarks. This species is here reported for the first time from the Aegean Region.

Philonthus laminatus (Creutzer, 1799)

Material examined. Balıkesir: Sındırgı, 465m., 25.V.2022, 2♀♀, 3♂♂, leg. S. Özdemir, U. Özfuçucu; İzmir: Central province, 725m., 29.IV.2022, ♀, leg. S. Özdemir; Tire, 781m., 12.V.2019, ♀, leg. B. Şabanoğlu; Manisa: Central province, 1373m., 24.V.2022, 2♀♀, ♂, leg. S. Özdemir, B. Şabanoğlu; Kula, 596m., 09.VI.2021, ♀, leg. S. Özdemir.

Distribution in Türkiye. Ankara, Balıkesir, Bayburt, Erzurum, Eskişehir, Kırşehir, Manisa, Mersin, Muğla, Tunceli (Fauvel, 1874; Bodemeyer, 1906; Smetana, 1953; Horion, 1965; Coiffait, 1978; Schillhammer, 2003; Kesdek et al., 2009; Anlaş et al., 2014; Çiftçi & Hasbenli, 2016; Fırat & Sert, 2016a; Daşdemir & Tozlu, 2022).

Philonthus longicornis Stephens, 1832

Material examined. Manisa: Salihli, 141m., 25.V.2022, ♀, ♂, leg. S. Özdemir, E.C. Ceylan; Uşak: Eşme, 939m., 12.VII.2021, ♀, leg. S. Özdemir; Ulubey, 565m., 25.VII.2022, ♀, leg. O. Sert.

Distribution in Türkiye. Adana, Ankara (Smetana, 1953).

Remarks. This is the first record from the Aegean Region.

Philonthus nigrita (Gravenhorst, 1806)

Material examined. Kütahya: Central province, 1221m., 27.V.2021, ♀, leg. S. Özdemir.

Distribution in Türkiye. Bolu (Korge, 1971).

Remarks. This species is here reported for the second time from Türkiye and the first time from the Aegean Region.

Philonthus nitidicollis (Lacordaire, 1835)

Material examined. Afyonkarahisar: Çay, 1230m., 05.VII.2019, ♀, leg. S. Özdemir; Aydın: Nazilli, 434m., 20.V.2022, ♀, leg. O. Sert; Balıkesir: Edremit, 1723m., 26.V.2022, ♀, leg. S. Özdemir; Sındırgı, 465m., 25.V.2022, ♀, leg. S. Özdemir; Denizli: Tavas, 183m., 03.VI.2022, ♂, leg. B. Şabanoğlu; İzmir: Bergama, 517m., 28.IV.2022, ♀, leg. S. Özdemir; Bergama, 473m., 23.V.2022, 3♀♀, ♂, leg. S. Özdemir, B. Şabanoğlu; Karaburun, 466m., 02.V.2019, ♀, leg. O. Sert; Manisa: Central province, 1373m., 24.V.2022, ♀, leg. S. Özdemir; Salihli, 141m., 25.V.2022, ♂, leg. E.C. Ceylan; Saruhanlı, 328m., 17.IX.2019, ♂, leg. S. Özdemir.

Distribution in Türkiye. Adana, Aksaray, Ankara, Antalya, Balıkesir (Kaz Mountain), Bingöl, Bursa, Çanakkale (Gökçeada-Bozcaada), Denizli, Diyarbakır, Eskişehir, Gaziantep, Isparta, İzmir, Karaman, Kayseri, Kırşehir, Konya, Manisa, Mardin, Mersin, Muğla, Nevşehir, Siirt, Şırnak (Sahlberg, 1913; Bodemeyer, 1927; Smetana, 1953; Anlaş, 2009; Anlaş & Rose, 2009; Özgen & Anlaş, 2010; Japoshvili & Anlaş, 2011; Abacıgil et al., 2013; Anlaş et al., 2014; Assing, 2014; Çiftçi & Hasbenli, 2016; Fırat & Sert, 2016a; Özgen et al., 2016; Sezer, 2018; Tezcan et al., 2019 Daşdemir & Tozlu, 2022).

Philonthus parvicornis (Gravenhorst, 1802)

Material examined. Afyonkarahisar: Sultandağı, 1134m., 01.V.2019, 2♂♂, leg. S. Özdemir, O. Sert; İzmir: Aliağa, 195m., 27.VI.2019, ♂, leg. Y. Turan; Kütahya: Tavşanlı, 996m., 22.VI.2019, ♀, leg. S. Özdemir; Harmancık, 967m., 21.VI.2019, ♂, leg. O. Sert; Uşak: Central province, 976m., 16.VI.2019, ♀, leg. O. Sert; Ulubey, 873m., 18.V.2019, ♂, leg. B. Şabanoğlu; Ulubey, 834m., 18.V.2019, ♂, leg. O. Sert.

Distribution in Türkiye. Eskişehir, Isparta, Konya, Manisa, Muğla, Muş (Bodemeyer, 1900, 1927; Anlaş, 2009; Assing, 2013; Anlaş et al., 2014; Çiftçi & Hasbenli, 2016; Özgen et al., 2016).

Philonthus punctus punctus (Gravenhorst, 1802)

Material examined. Afyonkarahisar: Çobanlar, 1037m., 17.VII.2021, 2♀♀, ♂, leg. S. Özdemir, B. Şabanoğlu; Kütahya: Central province, 1084m., 24.VI.2019, ♂, leg. S. Özdemir.

Distribution in Türkiye. Thrace (Türkiye-Bulgaria frontier), Mersin (Peyron, 1858; Smetana, 1953).

Remarks. This species is here reported for the first time from the Aegean Region.

Philonthus quisquiliarius quisquiliarius (Gyllenhal, 1810)

Material examined. Afyonkarahisar: Central province, 1119m., 16.VII.2021, ♂, leg. B. Şabanoğlu; Çay, 1028m., 05.VII.2019, 2♂♂, leg. S. Özdemir, B. Şabanoğlu; Çobanlar, 1271m., 07.VII.2019, ♀, 4♂♂, leg. S. Özdemir, O. Sert; Aydın: Bozdoğan, 94m., 09.V.2019, ♀, leg. B. Şabanoğlu; Didim, 0m., 10.V.2019, 7♀♀, 7♂♂, leg. S. Özdemir, B. Şabanoğlu; Koçarlı, 14m., 10.V.2019, ♀, 4♂♂, leg. S. Özdemir, Y. Turan; Koçarlı, 65m., 26.IV.2022, 10♀♀, 8♂♂, leg. S. Özdemir, B. Şabanoğlu, U. Özfuçucu; Söke, 23m., 11.V.2019, 4♀♀, 5♂♂, leg. S. Özdemir, B. Şabanoğlu; Denizli: Buldan, 207m., 12.VI.2021, ♂, leg. B. Şabanoğlu; Çal, 697m., 12.VI.2021, ♀, leg. O. Özdil; Tavas, 1036m., 01.VII.2019, 2♂♂, leg. S. Özdemir, O. Sert; Tavas, 1077m., 01.VII.2019, 11♀♀, 9♂♂, leg. S. Özdemir, O. Sert; İzmir: Foça, 0m., 27.VI.2019, 7♂♂, leg. S. Özdemir, O. Sert; Yenifoça, 112m., 27.VI.2019, ♀, ♂, leg. S. Özdemir, Y. Turan; Kemalpaşa, 143m., 28.VI.2019, ♂, leg. S. Özdemir; Kütahya: Altıntaş, 1231m., 28.V.2021, ♀, leg. B. Şabanoğlu; Aslanapa, 1138m., 08.VIII.2022, ♂, leg. S. Özdemir; Central province, 1164m., 21.VI.2019, ♀, leg. S. Özdemir; Central province, 1046m., 29.VII.2021, 4♀♀, 2♂♂, leg. S. Özdemir, O. Özdil; Manisa: Kula,

343m., 09.VI.2021, ♀, leg. S. Özdemir; Salihli, 126m., 16.IX.2019, 3♀♀, ♂, leg. S. Özdemir, B. Şabanoğlu; Saruhanlı, 144m., 07.VI.2021, ♂, leg. S. Özdemir; Muğla: Central province, 15m., 31.V.2022, 2♀♀, ♂, leg. S. Özdemir, O. Sert; Uşak: Eşme, 777m., 18.V.2019, ♀, leg. S. Özdemir.

Distribution in Türkiye. Adana, Aksaray, Ankara, Bayburt, Diyarbakır, Eskişehir, İzmir, Kırıkkale, Kırşehir, Konya, Mersin, Nevşehir, Siirt (Peyron, 1858; Sahlberg, 1913; Smetana, 1953, 1967; Öncüer, 1991; Özgen et al., 2010, 2016; Assing, 2013; Çiftçi & Hasbenli, 2016; Fırat & Sert, 2016a; Özdemir, 2021).

Philonthus rectangulus Sharp, 1874

Material examined. Afyonkarahisar: İhsaniye, 1160m., 07.VII.2019, ♀, 3♂♂, leg. S. Özdemir, B. Şabanoğlu; Aydın: Çine, 464m., 28.VI.2021, ♀, leg. S. Özdemir; Balıkesir: Savaştepe, 568m., 06.VI.2021, ♀, ♂, leg. S. Özdemir, B. Şabanoğlu; Denizli: Acıpayam, 1031m., 27.VII.2021, 5♀♀, 2♂♂, leg. S. Özdemir, O. Özdil; Kale, 1031m., 02.VI.2022, ♂, leg. S. Özdemir; Tavas, 1060m., 01.VII.2019, 3♀♀, ♂, leg. S. Özdemir, O. Sert; İzmir: Bergama, 390m., 09.VII.2021, ♀, 3♂♂, leg. O. Sert, S. Özdemir; Tire, 781m., 12.V.2019, 3♀♀, ♂, leg. S. Özdemir, B. Şabanoğlu; Muğla: Milas, 66m., 26.VI.2021, 2♀♀, 3♂♂, leg. S. Özdemir, B. Şabanoğlu; Uşak: Central province, 976m., 16.VI.2019, ♀, leg. O. Sert; Eşme, 939m., 12.VII.2021, ♀, leg. S. Özdemir; Sivaslı, 957m., 14.VII.2021, 2♀♀, leg. S. Özdemir, B. Şabanoğlu; Ulubey, 565m., 25.VII.2022, ♂, leg. O. Sert.

Distribution in Türkiye. Aksaray, Ankara, Erzurum, Eskişehir, Kayseri, Kırıkkale, Manisa, Şanlıurfa, Trabzon, Tunceli, Yozgat (Smetana, 1953; Anlaş, 2009; Kesdek et al., 2009; Anlaş et al., 2014; Çiftçi & Hasbenli, 2016; Fırat & Sert, 2016a).

Philonthus rubripennis Stephens, 1832

Material examined. Balıkesir: Central province, 299m., 04.VI.2021, ♂, leg. S. Özdemir; Kepsut, 190m., 27.V.2022, ♀, leg. O. Özdil; İzmir: Bergama, 473m., 23.V.2022, ♀, leg. B. Şabanoğlu; Kütahya: Simav, 758m., 22.VI.2019, 2♀♀, ♂, leg. S. Özdemir, O. Sert.

Distribution in Türkiye. Ankara, Bayburt, Erzurum, Eskişehir, Gümüşhane, Konya, Mardin, Mersin, Rize, Tunceli, Uşak (Peyron, 1858; Fauvel, 1874; Smetana, 1953; Anlaş, 2009; Kesdek et al., 2009; Çiftçi & Hasbenli, 2016; Fırat & Sert, 2016a; Özgen et al., 2016; Özdemir, 2021).

Philonthus rufimanus Erichson, 1840

Material examined. Balıkesir: Central province, 207m., 03.VII.2022, ♀, ♂, leg. S. Özdemir, B. Şabanoğlu; İvrindi, 314m., 06.VI.2021, 6♀♀, 3♂♂, leg. S. Özdemir, B. Şabanoğlu, O. Özdil; İvrindi, 284m., 03.VII.2022, ♂, leg. S. Özdemir; Sındırgı, 310m., 06.VI.2021, ♀, 2♂♂, leg. S. Özdemir, B. Şabanoğlu; İzmir: Kınık, 189m., 23.V.2022, ♀, leg. S. Özdemir; Kütahya: Simav, 758m., 22.VI.2019, ♀, leg. O. Sert; Tavşanlı, 1051m., 27.V.2021, ♂, leg. S. Özdemir; Manisa: Gördes, 384m., 25.V.2022, ♀, leg. S. Özdemir; Kula, 596m., 09.VI.2021, ♀, leg. S. Özdemir; Kula, 343m., 09.VI.2021, ♀, 2♂♂, leg. B. Şabanoğlu, O. Özdil; Muğla: Ula, 402m., 01.VI.2022, ♂, leg. O. Sert; Yatağan, 519m., 25.IV.2019, ♀, leg, Y. Turan; Uşak: Eşme, 524m., 23.VII.2022, ♀, leg. S. Özdemir.

Distribution in Türkiye. Aksaray, Ankara, Artvin, Aydın, Balıkesir (Kaz Mountain), Bursa, Bilecik, Bayburt, Elazığ, Erzurum, Eskişehir, Çankırı, Gümüşhane, İzmir, Kahramanmaraş, Kayseri, Kilis, Konya, Kütahya, Malatya, Manisa, Mardin, Mersin, Muğla, Muş, Siirt, Sivas, Thrace, Tunceli, Uşak, Yozgat (Peyron, 1858; Fauvel, 1874; Bodemeyer, 1900, 1927; Sahlberg, 1913; Smetana, 1953, 1967; Horion, 1965; Tezcan & Amiryan, 2003; Anlaş, 2009; Anlaş & Rose, 2009; Abacıgil et al., 2013; Özgen et al., 2015; 2016; Çiftçi & Hasbenli, 2016; Fırat & Sert, 2016a; Tanyeri et al., 2017; Özdemir, 2021).

Philonthus salinus Kiesenwetter, 1844

Material examined. Afyonkarahisar: Çobanlar, 1037m., 17.VII.2021, ♂, leg. S. Özdemir; Aydın: Didim, 0m., 10.V.2019, ♂, leg. S. Özdemir.

Distribution in Türkiye. Balıkesir (Coiffait, 1974)

Remarks. This species was previously recorded from Manyas Lake, Balıkesir by Coiffait (1974), which belongs to Marmara region. It is here recorded from the Aegean Region for the first time.

Philonthus sanguinolentus (Gravenhorst, 1802)

Material examined. Afyonkarahisar: Sultandağı, 1134m., 01.V.2019, ♂, leg. S. Özdemir; Kütahya: Aslanapa, 1351m., 23.VI.2019, 2♂♂, leg. S. Özdemir, O. Sert; Uşak: Banaz, 1066m., 16.VI.2019, ♀, leg. O. Sert; Central province, 976m., 16.VI.2019, ♀, leg. B. Şabanoğlu.

Distribution in Türkiye. Aksaray, Ankara, Konya, Nevşehir (Fırat & Sert, 2016a).

Remarks. This species is here reported for the first time from the Aegean Region.

Philonthus spinipes kabardensis Bolov & Kryzhanovskij, 1969

Material examined. Afyonkarahisar: Sultandağı, 1134m., 01.V.2019, 2♂♂, leg. S. Özdemir, B. Şabanoğlu; Kütahya: Central province, 1164m., 14.VI.2022, ♂, leg. B. Şabanoğlu; Manisa: Salihli, 141m., 25.V.2022, ♀, ♂, leg. S. Özdemir, E.C. Ceylan; Muğla: Kavaklıdere, 805m., 02.VI.2022, ♂, leg. S. Özdemir; Uşak: Central province, 976m., 16.VI.2019, ♀, leg. S. Özdemir; Sivaslı, 871m., 19.V.2019, ♀, leg. S. Özdemir.

Distribution in Türkiye. Antalya, Konya, Mersin, Nevşehir (Assing, 2006; Fırat & Sert, 2016a).

Remarks. This species is here reported for the first time from the Aegean Region.

Philonthus tenuicornis Mulsant & Rey, 1853

Material examined. Afyonkarahisar: Sultandağı, 1134m., 01.V.2019, ♀, 3♂♂, leg. S. Özdemir, O. Sert; Kütahya: Tavşanlı, 1092m., 22.VI.2019, ♀, leg. S. Özdemir; Uşak: Banaz, 1066m., 16.VI.2019, 3♀♀, ♂, leg. S. Özdemir, O. Sert.

Distribution in Türkiye. Kırklareli, Manisa, Rize (Özgen et al., 2016; Özdemir, 2021).

Philonthus umbratilis (Gravenhorst, 1802)

Material examined. Afyonkarahisar: Çay, 1600m., 17.VII.2021, ♂, leg. S. Özdemir; Çobanlar, 1037m., 17.VII.2021, 2♂♂, leg. S. Özdemir, B. Şabanoğlu; Aydın: Söke, 23m., 11.V.2019, 2♂♂, leg. S. Özdemir, B. Şabanoğlu; Balıkesir: Dursunbey, 518m., 02.VII.2022, ♀, leg. S. Özdemir; Denizli: Çal, 1198m., 28.VII.2021, ♀, leg. S. Özdemir; Kütahya: Hisarcık, 772m., 23.VI.2019, ♀, ♂, leg. S. Özdemir, B. Şabanoğlu; Uşak: Ulubey, 565m., 25.VII.2022, ♂, leg. S. Özdemir.

Distribution in Türkiye. Tunceli (Özgen et al., 2016).

Remarks. This species is here reported for the first time from the Aegean Region.

Philonthus varians (Paykull, 1789)

Material examined. Aydın: Karpuzlu, 592m., 19.V.2022, ♂, leg. B. Şabanoğlu; Muğla: Dalaman, 86m., 01.VI.2022, ♂, leg. O. Sert; Uşak: Banaz, 1066m., 16.VI.2019, ♂, leg. S. Özdemir; Eşme, 767m., 15.VI.2019, ♂, leg. S. Özdemir.

Distribution in Türkiye. Ankara, Eskişehir, Gümüşhane, Manisa, Mersin, Sinop (Peyron, 1858; Assing, 2010; Anlaş et al., 2014; Çiftçi & Hasbenli, 2016; Özgen et al., 2016; Altunsoy et al., 2017).

Philonthus viridipennis Fauvel, 1875

Material examined. Afyonkarahisar: Çobanlar, 1037m., 17.VII.2021, 4♀♀, 7♂♂, leg. S. Özdemir, B. Şabanoğlu; İhsaniye, 1111m., 16.VII.2021, ♀, leg. B. Şabanoğlu; Aydın: Çine, 75m., 28.VI.2021, 2♀♀, 2♂♂, leg. S. Özdemir, O. Sert; Çine, 737m., 28.VI.2021, 5♂♂, leg. S. Özdemir, B. Şabanoğlu; Çine, 723m., 28.VI.2021, 2♀♀, ♂, leg. S. Özdemir, B. Şabanoğlu; Koçarlı, 65m., 26.IV.2022, 2♀♀, ♂, leg. S. Özdemir, E.C. Ceylan; Köşk, 105m., 26.IV.2022, ♀, leg. S. Özdemir; Balıkesir: Sındırgı, 310m., 06.VI.2021, ♀, leg. S. Özdemir; Denizli: Tavas, 1077m., 01.VII.2019, 4♀♀, 2♂♂, leg. S. Özdemir, O. Sert; Kütahya: Central province, 16084m., 24.VI.2019, ♀, leg. S. Özdemir; Central provicne, 1093m., 29.VII.2021, ♀, leg. S. Özdemir; Manisa: Kula, 596m., 09.VI.2021, ♀, leg. S. Özdemir; Uşak: Eşme, 777m., 18.V.2019, ♀, 2♂♂, leg. S. Özdemir, O. Sert.

Distribution and remarks. Although its presence in Türkiye was reported by Coiffait (1967, 1974), Herman (2001) and Schülke & Smetana (2015), a detailed locality record is given for the first time with this study.

Discussion

According to the data, *Philonthus* species were collected by aspirator on river/water/lake edges under stones and from dung, as they are predators and recurring habitants of dung feeding on Diptera larvae. *Philonthus concinnus* is the most abundant species with 155 specimens and it is also the only species occuring in the entire altitude range of the study. *Philonthus quisquiliarius quisquiliarius* is the second abundant species with 112 specimens, which is also the only species continuously found between April and September. With respect to their phenology, within the study period of April-October, they can be found mostly between May-July (Table 1).

It is determined that all of the species, except three cosmopolitan species, are shared with the European fauna, while 25 of species with Asian and 16 of them with the North Africa subsections of the Palaearctic fauna. Since 11 detected species are introduced to Nearctic fauna, origin of species mostly belongs to Asiatic-European and this composition reflects the location of the country which is an intersection area for all three subsections of Palaearctic region (Table 1). When regional records were compared with previous records (Table 1), the most number of species are shared with Central Anatolian Region (22 species), followed by Mediterranean (19 species) and Aegean Regions (17 species). Following this, 15 species both for Marmara and Eastern Anatolian, and 12 species are shared with Black Sea Region. The fact that only seven species are shared with the Southeastern Anatolian Region may be explained by a less thorough and less frequent sampling activity.

According to the results, 44.7% of all the species reported from Türkiye and 70.8% of the previously reported species from the Aegean Region were collected in this study (Table 2). Thirteen of the species are new records for the region. Together with this result, it can be said that, 81% of the recorded *Philonthus* species are determined by the study. Besides the 13 new species records for the region, new province records are provided for most of the species.

Table 1. Collected species from research area

Species	Sp.	Vertical Distribution	Collecting Months	Collecting habitat-method	Distribution in Türkiye	Zoogeographical Distributions
Philonthus carbonarius	1	E	May	III	MR, AR, MDR, CAR, EAR	Eu, N, As, NARi
Philonthus cognatus	2	E, F	Jun, Oct	II	MR, AR, MDR, CAR, BSR, EAR, SEAR	Eu, N, As, NARi
Philonthus concinnus	155	A, B, C, D, E, F, G, H	Apr, May, Jun, Jul, Aug	I, II, III, IV	MR, AR, MDR, CAR, BSR, EAR, SEAR	Eu, N, As, NARi
Philonthus coprophilus	7	D, E	May, Jun	I	MR, AR, CAR, BSR, EAR	Eu, N, As
Philonthus cruentatus	24	B, C, D, E, F	Apr, May, Jun, Jul	I	MR, AR, MDR, CAR, BSR	Eu, N, As, NARi
Philonthus debilis	15	A, B, D, E, F, G	Jun, Jul	I, II, III, IV	MR, AR, MDR, CAR, EAR	Eu, N, As, NARi
Philonthus dimidiatipennis	2	E	Jul	II	MDR, CAR	Eu, N, As, ORR
Philonthus ebeninus	3	D	May, Jun	I	MR, AR, MDR, CAR, EAR	Eu, N, As
Philonthus frigidoides	3	E, G	Jul	II	MDR, BSR	Eu, As
Philonthus frigidus frigidus	1	H	Jul	II	CAR	Eu
Philonthus fumarius	1	E	Jun	III	MR, CAR, EAR	Eu
Philonthus intermedius	24	A, B, D, E, G	May, Jun	I, IV	MR, AR, MDR, CAR, BSR, EAR, SEAR	Eu, N, As
Philonthus juvenilis	14	A, C, D, E, F, H	Apr, May, Jun, Jul	II	MDR, CAR	Eu, As
Philonthus laminatus	11	B, C, D, F	May, Jun	II, III	MR, AR, MDR, CAR, BSR, EAR,	Eu, As
Philonthus longicornis	4	A, C, D	May, Jul	I, II	MDR, CAR	Eu, N, As, COS, NARi
Philonthus nigrita	1	E	May	II	BSR	Eu, As
Philonthus nitidicollis	16	A, B, C, E, F, G	Apr, May, Jun, Jul, Sep	I, II, III	MR, AR, MDR, CAR, EAR, SEAR	Eu, N, As
Philonthus parvicornis	8	A, D, E	May, Jun	I	AR, MDR, CAR, EAR	Eu, N, As, ORR
Philonthus punctus punctus	4	E	Jun, Jul	II	MR, MDR	Eu, N, As
Philonthus quisquiliarius quisquiliarius	112	A, C, E, F	Apr, May, Jun, Jul, Aug, Sep	II	AR	Eu, N, As, AFR
Philonthus rectangulus	37	A, B, C, E	May, Jun, Jul	II	AR, CAR, BSR, EAR, SEAR	Eui, Ni, As, COS, NARi
Philonthus rubripennis	6	A, B, D	May, Jun	II	AR, MDR, CAR, BSR, EAR, SEAR	Eu, N, As
Philonthus rufimanus	26	A, B, C, D, E	May, Jun, Jul	I, II	MR, AR, MDR, CAR, BSR, EAR, SEAR	Eu, As
Philonthus salinus	2	A, E	May, Jul	II	MR	Eu, As
Philonthus sanguinolentus	5	D, E, F	May, Jun	I	CAR	Eu, N, As, NARi
Philonthus spinipes kabardensis	8	A, D, E	May, Jun	I	MDR, CAR	Eu, As
Philonthus tenuicornis	9	B	May, Jun	I, II	MR, AR	Eu, As, NARi
Philonthus umbratilis	10	A, C, D, E, G	May, Jun, Jul	II	EAR	Eu, N, As, NARi
Philonthus varians	4	A, C, D, E	May, Jun	I	AR, MDR, CAR, BSR	Eu, N, As, COS, NARi

Vertical distributions (A: 0-250 m; B: 251-500 m; C: 501-750 m; D: 751-1000 m; E: 1001-1250 m; F: 1251-1500 m; G: 1501-1750 m; H: 1751-2000 m); Collecting Months, Apr: April, May: May, Jun: June, Jul: July, Aug: August, Sep: September, Oct: October; Collecting habitat-methods, (I: on dung by aspirator, II: under stones by aspirator, III: sifting debris, IV: sweeping herbaceous plants), Distributions in Türkiye, MR: Marmara Region, AR: Aegean Region, MDR: Mediterranean Region, CAR: Central Anatolian Region, BSR: Black Sea Region, EAR: Eastern Anatolian Region, SEAR: South Eastern Anatolian Region; Zoogeographical Distributions, COS: Cosmopolitan, As: Asia, Eu: Europe, N: North Africa, AFR: Afrotropical, NAR: Nearctic, ORR: Oreintal, i: introduced (Schülke & Smetana, 2015).

Table 2. Comparison of record of *Philonthus* species which are previously recorded from the region and collected with this study

Species	Previous provincial studies	This study
*Philonthus alberti***	Afyonkarahisar	-
Philonthus carbonarius	Afyonkarahisar, Manisa	Afyonkarahisar
Philonthus cognatus	Afyonkarahisar, Balıkesir, İzmir, Manisa	Afyonkarahisar, Kütahya
Philonthus concinnus	Afyonkarahisar, Balıkesir, Denizli, Manisa, Muğla, İzmir, Kütahya, Uşak	Afyonkarahisar, Aydın, Balıkesir, Denizli, İzmir, Kütahya, Manisa, Uşak
Philonthus coprophilus	Balıkesir, Muğla	Afyonkarahisar, Kütahya, Uşak
*Philonthus corruscus***	Balıkesir, İzmir, Manisa, Muğla	-
Philonthus cruentatus	Balıkesir, Denizli, Manisa	Afyonkarahisar, Balıkesir, İzmir, Kütahya, Uşak
Philonthus debilis	Afyonkarahisar, Balıkesir, Denizli	Afyonkarahisar, Aydın, Denizli, İzmir, Kütahya, Manisa, Uşak
*Philonthus dimidiatipennis**	-	Afyonkarahisar
Philonthus ebeninus	İzmir, Manisa	Kütahya, Uşak
*Philonthus frigidoides**	-	Afyonkarahisar
*Philonthus frigidus frigidus**	-	Afyonkarahisar
*Philonthus fumarius**	-	Kütahya
Philonthus intermedius	Balıkesir, Denizli, İzmir, Manisa, Muğla	Afyonkarahisar, Denizli, İzmir, Manisa, Muğla, Uşak
*Philonthus juvenilis**	-	Afyonkarahisar, Aydın, Balıkesir, İzmir, Kütahya, Uşak
Philonthus laminatus	Balıkesir, Manisa, Muğla	Balıkesir, İzmir, Manisa
*Philonthus longicornis**	-	Manisa, Uşak
*Philonthus mimus***	Afyonkarahisar, Balıkesir (Manyas Lake)	-
*Philonthus minutus***	Manisa	-
*Philonthus nigrita**	-	Kütahya
Philonthus nitidicollis	Balıkesir, Denizli, İzmir, Kütahya, Manisa, Muğla	Afyonkarahisar, Aydın, Balıkesir, Denizli, İzmir, Manisa
Philonthus parvicornis	Manisa, Muğla	Afyonkarahisar, İzmir, Kütahya, Uşak
*Philonthus politus***	Manisa	-
*Philonthus punctus punctus**	-	Afyonkarahisar, Kütahya
Philonthus quisquiliariformis (E)***	Aydın, Manisa	-
Philonthus quisquiliarius quisquiliarius	İzmir	Afyonkarahisar, Aydın, Denizli, İzmir, Kütahya, Manisa, Uşak
Philonthus rectangulus	Manisa	Afyonkarahisar, Aydın, Balıkesir, Denizli, İzmir, Muğla, Uşak
Philonthus rubripennis	Uşak	Balıkesir, İzmir, Kütahya, Muğla
Philonthus rufimanus	Aydın, Balıkesir, İzmir, Kütahya, Manisa, Muğla, Uşak	Balıkesir, İzmir, Kütahya, Manisa, Muğla, Uşak
Philonthus salinus	Balıkesir (Manyas Lake)	Afyonkarahisar, Aydın
*Philonthus sanguinolentus**	-	Afyonkarahisar, Kütahya, Uşak
*Philonthus spinipes kabardensis**	-	Afyonkarahisar, Kütahya, Manisa, Muğla, Uşak
*Philonthus splendens splendens***	Manisa	-
Philonthus tenuicornis	Manisa	Afyonkarahisar, Kütahya, Uşak
*Philonthus umbratilis**	-	Afyonkarahisar, Aydın, Balıkesir, Denizli, Kütahya, Uşak
Philonthus varians	Manisa	Aydın, Muğla, Uşak
*Philonthus viridipennis**	First detailed locality	Afyonkarahisar, Aydın, Denizli, Kütahya, Manisa, Uşak

Species which are recorded from the region for the first time are indicated by asterisk (*), species which were previously recorded but could not be found with this study are indicated by two asterisks (**). E: Endemic species.

In the study only seven species could not be collected from the region. It is thought that there would be some reasons for this situation. The first and simplest of all, previous records could have been misidentifications. Furthermore, male specimens are usually required for the exact identification of species. Thus, when there are only females, sometimes identifications are not reliable. Moreover, when previous records of not found species were examined, the most recent record from the region dates back to 2010. Even, *Philonthus mimus* was reported from region by Coiffait in year 1974. Having the purpose to determine the fauna, sufficient field studies have been done. Previous available locations of species were revisited. Even though just about ten years may not seem like a very long period of time, it is possible that species may have retracted from the region due to various reasons. For example, overuse of natural resources by humans is a known cause of biodiversity loss. Due to the population growth, this seems to be one of the possible reasons. Besides that, climate change could also be a potential reason, causing devastating results regarding habitat loss. As a result, although, this study was not designed to determine this, effects of these potential reasons can easily be seen.

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