

**Original article (Orijinal araştırma)**

**Additional faunistic records of the family Staphylinidae (Coleoptera)  
from Balıkesir province of Turkey**

Balıkesir İlinden Staphylinidae (Coleoptera) familyasına ait ek faunistik kayıtlar

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**Abstract**

With this study was aimed to determination of Staphylinidae species by using the window and pitfall traps from 11 different forest localities in old hollow oaks and beeches in Balıkesir province of western Turkey, during years of 2012 and 2013. As a result of this study, in totally 29 species, one of Tachyporinae, two of Omaliinae, three of Oxytelinae, four of Aleocharinae, seven of Paederinae and twelve of Staphylininae belonging to Staphylinidae, were recorded from Balıkesir province of Turkey. Amongst them, *Omaliium cinnamomeum* Kraatz, 1857, *Anotylus tetracarınatus* (Block, 1799), *Bledius furcatus* (Olivier, 1811) and *Domene stilicina* (Erichson, 1840) are reported from Marmara Region of Turkey for the first time. In addition, 18 species were new records to the Balıkesir province.

**Keywords:** Staphylinidae, window and pitfall trap, old hollow oak and beech, Balıkesir, Turkey

**Öz**

Bu çalışma ile Balıkesir İlinde yaşlı çökük meşe ve kayın ağaçlarından oluşan ormanlarda 11 farklı çalışma alanında pencere ve çukur tuzaklar kullanılarak Staphylinidae familyasına bağlı türlerin belirlenmesi amaçlanmıştır. 2012-2013 yıllarında gerçekleştirilen bu çalışmanın sonucunda, Balıkesir İlinden Staphylinidae familyasına ait, Tachyporinae altfamilyasından 1, Omaliinae altfamilyasından 2, Oxytelinae altfamilyasından 3, Aleocharinae altfamilyasından 4, Paederinae altfamilyasından 7 ve Staphylininae altfamilyasından 12 olmak üzere toplam 29 tür kaydedilmiştir. Tespit edilen türler içerisinde, *Omaliium cinnamomeum* Kraatz, 1857, *Anotylus tetracarınatus* (Block, 1799), *Bledius furcatus* (Olivier, 1811) ve *Domene stilicina* (Erichson, 1840) türleri Marmara Bölgesi için ilk kayıt olarak rapor edilmiştir. Bunun yanında 18 tür Balıkesir İli lokal faunası için yeni kayıttır.

**Anahtar sözcükler:** Staphylinidae, pencere ve çukur tuzak, yaşlı çökük meşe ve kayın, Balıkesir, Türkiye

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## Introduction

The knowledge of the beetle fauna living in forests and wooded pastures with old and hollow broad leaved deciduous trees in Turkey have increased in the last years from many studies (Atay et al., 2012, Jansson and Coskun, 2008; Novák et al., 2011, 2013, 2014, Platia et al., 2011, 2014, 2018, Sama et al., 2011, Mazur et al., 2013). But these studies have mostly been focusing on other families than Staphylinidae.

Staphylinidae is the largest family of beetles (Coleoptera), includes 33 subfamilies, more than 3.500 genera and 58.000 described species all over the world (Newton, 2007; Grebennikov and Newton, 2009; Solodovnikov et al., 2013). Staphylinidae is represented in Turkey by more than 1900 species, 625 of which are exclusively known from the country (Anlaş, 2009; Schülke & Smetana, 2015). But, many Turkish regions are sparsely investigated regarding the Staphylinidae fauna. Staphylinids can be found in all environments but most often in many humid places, like in decaying plant matter, under stones, on river and creek banks, and leaf litter. Most of them are predators of other invertebrates.

The knowledge of Staphylinidae fauna is not so good in the Balıkesir province and the Marmara region of Turkey. Therefore, this study attempted to increase the knowledge on the distribution of this fauna in this part of Turkey.

## Material and Methods

The specimens were collected from 11 different localities (Fig. 1) in forests with old hollow oaks (*Quercus petraea*, *Q. frainetto*, *Q. cerris*, *Q. pubescens* and *Q. frainetto* x *Q. petraea*) and beeches (*Fagus orientalis* and *F. sylvatica*) in Balıkesir province in western Turkey, during the years of 2012 and 2013. At each site 5 oaks and 5 beeches (excluding the only pitfall traps in one tree) were examined with two different trap types for sampling the beetle fauna.



Figure 1. The Balıkesir map of oak and beech. 1. Erdek, Pond (oak) and Kurtboğazı (beech); 2. Gönen, Şarkoluk (oak) and Porta hill (beech); 3. Ilıca, Hisaralan (oak); 4. Susurluk, Darıalan (oak) and Bağiran stream (beech); 5. Bakacak, Koru (oak); 6. Savaştepe, Mancılık (oak); 7. Bigadiç, Davutlar (oak) and Ulus mountain (beech).

The trapping methods (Fig. 2); Firstly, the window traps (w-trap) consisted of a 30 x 60 cm wide transparent plastic plate with a tray underneath (Fig. 2A). They were placed near the trunk (<1 m), beside or in front of a cavity entrance. Their positions were 1.5-5 m from the ground, depending on where the cavity entrance was situated on the studied tree. Secondly, the pitfall traps (p-trap) (Fig. 2B) were plastic cups with a top diameter of 6.5 cm. They were placed, in the wood mould in the bottom of the cavity, with

the opening on level with the wood mould surface. The window-and pitfall traps were partially filled with ethylene glycol and water (1:1 v/v), with some detergent added to reduce surface tension. The traps were placed in the trees in the middle of April, were visited every third week to collect the caught beetles, and were removed in early December.

The morphological studies were conducted using a Stemi 2000-C microscope (Zeiss Germany). The material referred to in this study is stored in Balıkesir Zoological Museum, Balıkesir, Turkey (S. Varlı).



Figure 2. The trapping methods. A. Window trap; B. Pitfall trap.

## Results and Discussion

In this study, total of 29 species belonging to Staphylinidae including one of Tachyporinae, two of Omaliinae, three of Oxytelinae, four of Aleocharinae, seven of Paederinae and twelve of Staphylininae were determined from 11 different forest localities in old hollow oaks and beeches in Balıkesir province of western Turkey.

### Family Staphylinidae

#### Subfamily Omaliinae MacLeay, 1825

##### *Dasycerus crenatus* Motschulsky, 1839

**Material examined:** Bakacak district, 39°40'N, 27°43'E, *Q. frainetto*, w-trap, 485 m, 05.VIII.2013, 1 ex. Totally 1 ex.

**Distribution in Turkey:** Artvin, Bolu, Giresun, Gümüşhane, İstanbul, İzmir, Kars, Kastamonu, Ordu, Rize, Sinop, Trabzon, Zonguldak (Anlaş, 2009; Assing, 2010). This species is recorded from Balıkesir province for the first time.

##### *Omalius cinnamomeum* Kraatz, 1857

**Material examined:** Erdek district, Kurtboğazi, 40°28'N, 27°43'E, 330 m, *F. orientalis*, w-trap, 15.XI.2012, 2 exs; Susurluk district, Darıalan, 39°52'N, 28°16'E, 569 m, *Q. petraea*, w-trap, 30.X.2013, 1 ex. Totally 3 exs.

**Distribution in Turkey:** Ankara, Antalya, Isparta, İzmir, Manisa, Mersin (Anlaş, 2009; Japoshvili & Anlaş, 2011). This species is recorded from Marmara Region of Turkey for the first time.

#### Subfamily Tachyporinae MacLeay, 1825

##### *Tachyporus nitidulus* (Fabricius, 1781)

**Material examined:** Bigadiç district, Ulus mountain, 39°54'N, 27°20'E, 1608 m, *F. orientalis*, w-trap, 08.X.2013, 1 ex.; Erdek district, Pond, 40°08'N, 27°29'E, 315 m, *Q. frainetto* x *Q. petraea*, w-trap,

16.VII.2012, 1 ex.; Erdek district, Kurtboğazi, 40°27'N, 27°49'E, 601 m, *F. sylvatica*, w-trap, 28.XI.2013, 1 ex.; Gönen district, Şarkoluk, 39°54'N, 27°20' E, 443 m, *Q. frainetto*, w-trap, 27.IX.2012, 2 exs.; Gönen district, Porta hill, 40°07'N, 27°25'E, 743 m, *F. orientalis*, w-trap, 21.VI.2013, 1 ex.; 40°07'N, 27°25'E, 768 m, *F. orientalis*, w-trap, 21.VI.2013, 3 exs.; Ilica district, Hisaralan, 39°54'N, 27°20'E, 312 m, *Q. frainetto*, w-trap, 21.VI.2012, 4 exs.; 39°54'N, 27°20'E, 311 m, *Q. cerris*, p-trap, 31.VII.2012, 2 exs; Savaştepe district, 39°21'N, 27°48'E, 791 m, *Q. frainetto*, p-trap, 06.VIII.2012, 1 ex.; Susurluk district, Bağiran stream, 39°51'N, 28°18'E, 806 m, *F. orientalis*, w-trap, 27.XI.2012, 1 ex. Totally 17 exs.

**Distribution in Turkey:** This species has a wide distribution in Turkey. But it had not been recorded from Balıkesir province before (Anlaş, 2009; Kesdek et al., 2009; Tezcan & Anlaş, 2009; Anlaş & Rose, 2009a; Japoshvili & Anlaş, 2011; Özgen & Anlaş, 2011).

**Subfamily Aleocharinae** Fleming, 1821

***Aleochara intricata*** Mannerheim, 1830

**Material examined:** Bakacak district, 39°40'N, 27°43'E, 488 m, *Q. frainetto*, p-trap, 04.XII.2012, 2 exs.; 39°40'N, 27°43'E, 432 m, *Q. pubescens*, p-trap, 20.X.2012, 1 ex.; 39°40'N, 27°43'E, 485 m, *Q. frainetto*, w-trap, 05.VIII.2013, 1 ex.; 39°40'N, 27°43'E, 455 m, *Quercus* sp. (dead tree), w-trap, 06.IX.2013, 1 ex.; Ilica district, Hisaralan, 39°54'N, 27°20'E, 321 m, *Q. frainetto*, w-trap, 20.XI.2012, 2 exs.; 39°54'N, 27°50'E, 312 m, *Q. frainetto*, w-trap, 21.VI.2012, 1 ex.; Susurluk district, Bağiran stream, 39°51'N, 27°18'E, 806 m, *F. orientalis*, w-trap, 27.XI.2012, 2 exs.; Susurluk district, Darialan, 39°52'N, 28°16'E, 570 m, *Q. petraea*, w-trap, 27.VIII.2012, 3 exs. Totally 13 exs.

**Distribution in Turkey:** Adıyaman, Aksaray, Ankara, Antalya, Bitlis, Hatay, İstanbul, Karaman, Kayseri, Kırşehir, Konya, Mersin, Nevşehir, Niğde, Osmaniye, Sivas, Şanlıurfa, Van, Yozgat (Assing, 2007a, b; Anlaş, 2009; Anlaş & Rose, 2011; Sert et al., 2015). This species is recorded from the Balıkesir province for the first time.

***Aleochara laevigata*** Gyllenhal, 1810

**Material examined:** Erdek district, Kurtboğazi, 40°27'N, 27°49'E, 607 m, *F. sylvatica*, w-trap, 24.V.2013, 1 ex.; Susurluk district, Darialan, 39°52'N, 28°16'E, 584 m, *Q. petraea*, w-trap, 26.VII.2012, 1 ex. Totally 2 exs.

**Distribution in Turkey:** Bitlis, Çankırı, Erzurum, Isparta, İstanbul, İzmir, Kastamonu, Kırşehir, Mersin, Nevşehir, Sivas, Şanlıurfa, Van (Assing, 2007b; Anlaş, 2009; Kesdek et al., 2009; Assing, 2011; Japoshvili & Anlaş, 2011; Sert et al., 2015). This species is recorded from Balıkesir province for the first time.

***Aleochara tristis*** Gravenhorst, 1806

**Material examined:** Bakacak district, 39°40'N, 27°43'E, 485 m, *Q. frainetto*, p-trap, 04.XII.2012, 1 ex.; 39°40'N, 27°43'E, 493 m, *Q. cerris*, p-trap, 20.X.2012, 4 exs.; Bigadiç district, Ulus mountain, 39°19'N, 27°23'E, 1616 m, *F. orientalis*, w-trap, 27.VI.2013, 3 exs.; Erdek district, Kurtboğazi, 40°27'N, 27°49'E, 607 m, *F. sylvatica*, w-trap, 26.VII.2013, 2 exs.; Gönen district, Şarkoluk, 40°08'N, 27°29'E, 443 m, *Q. frainetto*, w-trap, 27.IX.2012, 3 exs.; Ilica district, Hisaralan, 39°54'N, 27°20'E, 325 m, *Q. frainetto*, w-trap, 07.VI.2013, 1 ex.; Savaştepe district, Mancılık, 39°21'N, 27°48'E, 782 m, *Q. cerris*, w-trap, 21.V.2013, 2 exs.; 39°21'N, 27°48'E, 791 m, *Q. frainetto*, p-trap, 06.VIII.2012, 2 exs.; Susurluk district, Darialan, 39°52'N, 28°16'E, 569 m, *Q. petraea*, w-trap, 19.VI.2013, 3 exs. Totally 21 exs.

**Distribution in Turkey:** This species is a wide distribution in Turkey. But it had not been recorded from Balıkesir province before (Assing, 2007b; Anlaş, 2009; Kesdek et al., 2009; Tezcan & Anlaş, 2009; Özgen & Anlaş, 2010; Anlaş & Rose, 2011; Japoshvili & Anlaş, 2011; Anlaş et al., 2014).

***Drusilla canaliculata*** (Fabricius, 1787)

**Material examined:** Bigadiç district, Ulus mountain, 39°19'N, 27°23'E, *F. orientalis*, p-trap, 1613 m, 23.XI.2012, 3 exs. Totally 3 exs.

**Distribution in Turkey:** This species is a wide distribution in Turkey. But it had not been recorded from Balıkesir province before (Anlaş, 2009; Japoshvili & Anlaş, 2011; Sert et al., 2015).

**Subfamily Oxytelinae** Fleming, 1821

***Anotylus inustus*** (Gravenhorst, 1806)

**Material examined:** Bigadiç district, Ulus mountain, 39°19'N, 27°23'E, 1613 m, *F. orientalis*, w-trap, 19.IX.2012, 7 exs.; 39°19'N, 27°23'E, 1613 m, *F. orientalis*, w-trap, 08.VIII.2013, 3 exs.; Erdek district, Kurtboğazı, 40°27'N, 27°49'E, 607 m, *F. sylvatica*, w-trap, 26.VII.2013, 4 exs.; Savaştepe district, Mancılık, 39°21'N, 27°48'E, 791 m, *Q. frainetto*, p-trap, 06.VIII.2012, 1ex.; 39°21'N, 27°48'E, 830 m, *Q. frainetto*, p-trap, 27.XI.2012, 2 exs. Totally 17 exs.

**Distribution in Turkey:** Adana, Artvin, Batman, Bursa, Diyarbakır, Erzurum, Isparta, İstanbul, İzmir, Kilis, Kocaeli, Konya, Manisa, Mardin, Mersin, Muğla (Anlaş, 2009; Anlaş & Rose, 2009a; Kesdek et al., 2009; Tezcan & Anlaş, 2009; Özgen & Anlaş, 2010; Özgen et al., 2010; Japoshvili & Anlaş, 2011). This species is recorded from the Balıkesir province for the first time.

***Anotylus tetracarinatus*** (Block, 1799)

**Material examined:** Bakacak district, 39°40'N, 27°43'E, 488 m, *Q. frainetto*, p-trap, 04.XII.2012, 4 exs.; 39°40'N, 27°43'E, 490 m, *Q. frainetto*, w-trap, 07.XI.2013, 2 exs.; 39°40'N, 27°43'E, 485 m, *Q. frainetto*, p-trap, 04.XII.2012, 8 exs.; Erdek district, Kurtboğazı, 40°27'N, 27°49'E, 601 m, *F. sylvatica*, w-trap, 20.IX.2012, 4 exs.; Gönen district, Şarkoluk, 40°08'N, 27°29'E, 425 m, *Q. cerris*, w-trap, 24.V.2013, 2 exs.; 40°08'N, 27°29'E, 443 m, *Q. frainetto*, w-trap, 27.IX.2012, 5 exs.; Gönen district, Porta hill, 40°07'N, 27°25'E, 730 m, *F. orientalis*, w-trap, 27.IX.2012, 2 exs.; Ilica district, Hisaralan, 39°54'N, 27°50'E, 321 m, *Q. frainetto*, w-trap, 07.VIII.2013, 5 exs.; Susurluk district, Darıalan, 39°52'N, 28°16'E, 570 m, *Q. petraea*, w-trap, 20.IX.2013, 1 ex.; 39°51'N, 28°18'E, 759 m, *Q. petraea*, w-trap, 28.VI.2012, 3 exs.; 39°52'N, 28°16'E, 563 m, *Q. petraea*, w-trap, 27.VIII.2012, 5 exs. Totally 41 exs.

**Distribution in Turkey:** Ankara, Antalya, Diyarbakır, Gaziantep, Hatay, Isparta, Kastamonu, Manisa (Anlaş, 2009; Anlaş & Rose, 2009a; Japoshvili & Anlaş, 2011; Assing, 2014; Anlaş et al., 2014). This species is recorded from Marmara Region of Turkey for the first time.

***Bledius furcatus*** (Olivier, 1811)

**Material examined:** Bigadiç district, Ulus mountain, 39°19'N, 27°23'E, 1613m, *F. orientalis*, w-trap, 19.IX.2012, 2 exs.; Savaştepe district, Mancılık, 39°21'N, 27°48'E, 830 m, *Q. cerris*, p-trap, 27.XI.2012, 1 ex. Totally 3 exs.

**Distribution in Turkey:** Ankara, Aydın, Diyarbakır, İzmir, Manisa (Anlaş, 2009; Anlaş & Rose, 2009a; Özgen et al., 2010). This species is recorded from Marmara Region of Turkey for the first time.

**Subfamily Paederinae** Fleming, 1821

***Astenus procerus*** (Gravenhorst, 1806)

**Material examined:** Bakacak district, 39°40'N, 27°43'E, 490 m, *Q. frainetto*, w-trap, 20.X.2012, 1 ex. Totally 1 ex.

**Distribution in Turkey:** This species has a wide distribution in Turkey (Anlaş, 2009; Anlaş & Rose, 2009b; Anlaş & Deveci, 2011; Sert et al., 2013; Örgel & Anlaş, 2016; Anlaş, 2017c). But it had not been recorded from Balıkesir province before.

***Leptobium gracile*** (Gravenhorst, 1802)

**Material examined:** Bakacak district, 39°40'N, 27°43'E, 483 m, *Quercus* sp. (dead tree), p-trap, 18.V.2012, 1 ex.; Savaştepe district, Mancılık, 39°21'N, 27°48'E, 830 m, *Q. cerris*, p-trap, 27.XI.2012, 1 ex. Totally 2 exs.

**Distribution in Turkey:** This species has a wide distribution in Turkey. But it had not been recorded from Balıkesir province before (Assing, 2005; Anlaş & Çevik, 2008; Anlaş, 2009; Anlaş, 2012; Assing, 2013; Örgel & Anlaş, 2016, Anlaş, 2017a).

***Domene stilicina*** (Erichson, 1840)

**Material examined:** Bakacak district, 39°40'N, 27°43'E, 488 m, *Q. frainetto*, w-trap, 04.XII.2012, 1 ex.; 39°40'N, 27°43'E, 490 m, *Q. frainetto*, w-trap, 07.XI.2013, 1 ex. Totally 2 exs.

**Distribution in Turkey:** Adıyaman, Ankara, Antalya, Hatay, İzmir, Kahramanmaraş, Kilis, Manisa, Mersin, Şırnak (Anlaş, 2009; Anlaş & Rose 2009b; Tezcan & Anlaş, 2009; Sert et al., 2013). This species is recorded from Marmara Region of Turkey for the first time.

***Medon dilutus pythonissa*** (Saulcy, 1865)

**Material examined:** Ilica district, Hisaralan, 39°54'N, 27°50'E, 321 m, *Q. frainetto*, w-trap, 07.VI.2013, 1 ex. Totally 1 ex.

**Distribution in Turkey:** This species has a wide distribution in Turkey. But it had not been recorded from Balıkesir province before (Assing, 2004; Anlaş, 2009; Anlaş & Rose, 2009b; Assing, 2013; Anlaş, 2015).

***Medon fuscus*** (Mannerheim, 1830)

**Material examined:** Erdek district, Kurtboğazi, 40°27'N, 27°49' E, 601 m, *F. sylvatica*, w-trap, 20.IX.2012, 2 exs.; Ilica district, Hisaralan, 39°54'N, 27°50'E, 321 m, *Q. frainetto*, p-trap, 13.X.2012, 1 ex. Totally 3 exs.

**Distribution in Turkey:** This species has a wide distribution in Turkey. But it had not been recorded from Balıkesir province before (Assing, 2004; Anlaş, 2009; Anlaş & Rose, 2009b; Assing, 2013; Anlaş, 2015).

***Scopaeus bicolor*** Baudi di Selve, 1848

**Material examined:** Bakacak district, 39°40'N, 27°43'E, 481 m, *Q. frainetto*, p-trap, 04.XII.2012, 1 ex.; Erdek district, Kurtboğazi, 40°27'N, 27°49'E, 601 m, *F. sylvatica*, w-trap, 28.XI.2013, 3 exs.; Gönen district, Şarkoluk, 40°08'N, 27°29'E, 443 m, *Q. frainetto*, w-trap, 26.VII.2013, 1 ex. Totally 5 exs.

**Distribution in Turkey:** Ankara, Aksaray, Antalya, Erzurum, Eskişehir, Giresun, Isparta, İzmir, Kahramanmaraş, Kastamonu, Kayseri, Kocaeli, Kütahya, Manisa, Muğla, Niğde, Sinop, Sivas, Uşak, Trabzon, Yozgat (Anlaş, 2009; Sert et al., 2013; Anlaş & Frisch, 2014). This species is recorded from Balıkesir province for the first time.

***Paederus fuscipes*** Curtis, 1826

**Material examined:** Susurluk district, Darıalan, 39°52'N, 28°16'E, 570 m, *Q. petraea*, w-trap, 30.X.2013, 2 exs.; 39°51'N, 28°17'E, 759 m, *Q. petraea*, w-trap, 28.VI.2012, 1 ex. Totally 3 exs.

**Distribution in Turkey:** This species has a wide distribution in Turkey. But it had not been recorded from Balıkesir province before (Anlaş, 2009; Anlaş, 2018).

**Subfamily Staphylininae** Latreille, 1802

***Othius laeviusculus*** Stephens, 1833

**Material examined:** Bakacak district, 39°40'N, 27°43'E, 490 m, *Q. frainetto*, w-trap, 03.VI.2013, 2 exs.; Erdek district, Kurtboğazi, 40°27'N, 27°49'E, 601 m, *F. sylvatica*, w-trap, 20.IX.2012, 2 exs.; 40°27'N, 27°49'E, 607 m, *F. sylvatica*, w-trap, 26.VII.2013, 1 ex.; Erdek district, Pond, 40°28'N, 27°53'E, 315 m, *Q. frainetto* x *Q. petraea*, w-trap, 15.VIII.2012, 1 ex.; Ilica district, Hisaralan, 39°54'N, 27°50'E, 314 m, *Q. cerris*, w-trap, 07.XI.2013, 3 exs.; Savaştepe district, Mancılık, 39°21'N, 27°48'E, 830 m, *Q. cerris*, p-trap, 27.XI.2012, 2 exs. Totally 11 exs.

**Distribution in Turkey:** This species has a wide distribution in Turkey (Anlaş, 2009; Abacıgil et al., 2013; Fırat & Sert, 2016).

***Philonthus cognatus*** Stephens, 1832

**Material examined:** Erdek district, Kurtboğazi, 40°27'N, 27°49'E, 607 m, *F. sylvatica*, w-trap, 24.V.2013, 3 exs. Totally 3 exs.

**Distribution in Turkey:** Afyonkarahisar, Ankara, Ardahan, Artvin, Balıkesir, Erzurum, Eskişehir, Gaziantep, İzmir, Manisa, Kars, Mersin, Trabzon, Yozgat (Anlaş, 2009; Abacıgil et al., 2013; Assing, 2014; Fırat & Sert, 2016; Özgen et al., 2016).

***Philonthus concinnus*** (Gravenhorst, 1802)

**Material examined:** Bakacak district, 39°40'N, 27°43'E, 485 m, *Q. frainetto*, p-trap, 04.XII.2012, 5 exs.; 39°40'N, 27°43'E, 490 m, *Q. frainetto*, w-trap, 19.VI.2012, 4 exs.; 39°40'N, 27°43'E, 485 m, *Q. frainetto*, w-trap, 02.VIII.2012, 3 exs.; 39°40'N, 27°43'E, 483 m, *Quercus* sp. (dead tree), p-trap, 18.V.2012, 2 exs.; Bigadiç district, Ulus mountain, 39°19'N, 27°23'E, 1616 m, *F. orientalis*, w-trap, 27.VI.2013, 9 exs.; Bigadiç district, Davutlar village, 39°29'N, 28°19'E, 713 m, *Q. cerris*, w-trap, 19.X.2012, 2 exs.; 39°29'N, 28°19'E, 719 m, *Q. cerris*, w-trap, 08.VIII.2012, 6 exs.; Erdek district, Kurtboğazi, 40°27'N, 27°49'E, 607 m, *F. sylvatica*, w-trap, 15.VIII.2012, 2 exs.; 40°27'N, 27°49'E, 607 m, *F. sylvatica*, w-trap, 26.VII.2013, 4 exs.; Erdek district, Pond, 40°28'N, 27°53'E, 290 m, *Q. petraea*, w-trap, 24.V.2013, 1 ex.; Gönen district, Porta hill, 40°07'N, 27°25'E, 768 m, *F. orientalis*, w-trap, 24.V.2013, 1 ex.; Gönen district, Şarkoluk, 40°08'N, 27°29'E, 443 m, *Q. frainetto*, w-trap, 23.X.2012, 1 ex.; Ilica district, Hisaralan, 39°54'N, 27°50'E, 321 m, *Q. frainetto*, w-trap, 07.VI.2013, 2 exs.; Susurluk district, Darialan, 39°52'N, 28°16'E, 570 m, *Q. petraea*, w-trap, 30.X.2013, 1 ex.; 39°52'N, 28°16'E, 569 m, *Q. petraea*, w-trap, 22.XI.2012, 1 ex.; 39°51'N, 28°18'E, 797 m, *Q. petraea*, w-trap, 23.V.2013, 1 ex. Totally 45 exs.

**Distribution in Turkey:** This species has a wide distribution in Turkey (Anlaş, 2009; Abacıgil et al., 2013; Fırat & Sert, 2016).

***Philonthus debilis*** (Gravenhorst, 1802)

**Material examined:** Ilica district, Hisaralan, 39°54'N, 27°50'E, 314 m, *Q. cerris*, w-trap, 07.XI.2013, 1 ex.; Susurluk district, Darialan, 39°51'N, 28°17'E, 759 m, *Q. petraea*, w-trap, 27.VIII.2012, 1 ex. Totally 2 exs.

**Distribution in Turkey:** Adana, Afyonkarahisar, Ankara, Balıkesir, Denizli, Erzincan, Eskişehir, Konya, Mersin (Anlaş, 2009; Abacıgil et al., 2013; Assing, 2013; Özgen et al., 2016).

***Philonthus intermedius*** (Lacordaire, 1835)

**Material examined:** Bigadiç district, Ulus mountain, 39°19'N, 27°23'E, 1619 m, *F. orientalis*, w-trap, 27.VI.2013, 2 exs.; Gönen district, Porta hill, 40°07'N, 27°25'E, 735 m, *F. orientalis*, p-trap, 28.XI.2013, 1 ex.; 40°07'N, 27°25'E, 743 m, *F. orientalis*, w-trap, 21.VI.2013, 3 exs. Totally 6 exs.

**Distribution in Turkey:** Adıyaman, Aksaray, Ankara, Antalya, Balıkesir, Bilecik, Denizli, Elazığ, Erzincan, Eskişehir, Gümüşhane, İzmir, Kahramanmaraş, Kayseri, Kırıkkale, Kırşehir, Kocaeli, Konya, Manisa, Mardin, Mersin, Muş, Nevşehir, Sivas (Anlaş, 2009; Abacıgil et al., 2013; Assing, 2013; Özgen et al., 2015; Çiftçi & Hasbenli, 2016; Fırat & Sert, 2016; Özgen et al., 2016).

***Philonthus nitidicollis*** (Lacordaire, 1835)

**Material examined:** Bakacak district, 39°40'N, 27°43'E, 490 m, *Q. frainetto*, w-trap, 20.X.2012, 1 ex.; Gönen district, Şarkoluk, 40°08'N, 27°29'E, 463 m, *Q. cerris*, w-trap, 24.V.2013, 3 exs.; Gönen district, Porta hill, 40°07'N, 27°25'E, 768 m, *F. orientalis*, w-trap, 28.XI.2013, 1 ex.; Susurluk district, Darialan, 39°51'N, 28°18'E, 798 m, *Q. petraea*, w-trap, 30.X.2013, 6 exs.; 39°52'N, 28°16'E, 574 m, *Q. petraea*, w-trap, 07.XI.2013, 2 exs.; 39°52'N, 28°16'E, 580 m, *Q. petraea*, w-trap, 16.VIII.2013, 4 exs. Totally 17 exs.

**Distribution in Turkey:** This species has a wide distribution in Turkey (Anlaş, 2009; Abacıgil et al., 2013; Fırat & Sert, 2016).

***Ocypus curtipennis*** Motschulsky, 1849

**Material examined:** Bakacak district, 39°40'N, 27°43'E, 488 m, *Q. frainetto*, w-trap, 28.VI.2013, 1 ex.; 39°40'N, 27°43'E, 485 m, *Q. frainetto*, p-trap, 04.XII.2012, 2 exs.; Bigadiç district, Ulus mountain, 39°19'N, 27°23'E, 1619 m, *F. orientalis*, w-trap, 27.VI.2013, 1 ex.; 39°19'N, 27°23'E, 1617 m, *F. orientalis*, w-trap, 15.X.2012, 1 ex.; Erdek district, Pond, 40°28'N, 27°53'E, 315 m, *Q. frainetto* x *Q. petraea*, w-trap, 15.VIII.2012, 1 ex.; 40°28'N, 27°53'E, 315 m, *Q. frainetto* x *Q. petraea*, p-trap, 14.X.2012, 1 ex.; Savaştepe district, Mancılık, 39°21'N, 27°48'E, 782 m, *Q. cerris*, w-trap, 11.VII.2013, 6 exs.; 39°21'N, 27°48'E, 782 m, *Q. cerris*, w-trap, 27.XI.2012, 2 exs.; 39°21'N, 27°48'E, 782 m, *Q. cerris*, w-trap, 21.V.2013, 2 exs. Totally 17 exs.

**Distribution in Turkey:** Adana, Aksaray, Ankara, Antalya, Balıkesir, Bursa, Çanakkale, Diyarbakır, Elazığ, Eskişehir, Gaziantep, Hatay, İstanbul, İzmir, Kahramanmaraş, Kırklareli, Kırşehir, Kilis, Manisa, Nevşehir (Anlaş, 2009; Surgut & Varlı, 2012; Abacıgil et al., 2013; Fırat & Sert, 2016; Özgen et al., 2015; Özgen et al., 2017).

***Ocypus mus*** (Brullé, 1832)

**Material examined:** Bakacak district, 39°40'N, 27°43'E, 488 m, *Q. frainetto*, p-trap, 04.XII.2012, 1 ex.; 39°40'N, 27°43'E, 485 m, *Q. frainetto*, w-trap, 05.VIII.2013, 1 ex.; 39°40'N, 27°43'E, 490 m, *Q. frainetto*, w-trap, 19.VI.2012, 2 exs.; Bigadiç district, Ulus mountain, 39°19'N, 27°23'E, 1616 m, *F. orientalis*, w-trap, 08.VIII.2013, 1 ex.; Gönen district, Şarkoluk, 40°08'N, 27°29'E, 451 m, *Q. frainetto*, p-trap, 23.X.2012, 3 exs.; 40°08'N, 27°29'E, 443 m, *Q. frainetto*, w-trap, 27.IX.2012, 1 ex.; Susurluk district, Darialan, 39°52'N, 28°16'E, 580 m, *Q. petraea*, w-trap, 16.VIII.2013, 1 ex.; Susurluk district, Bağırın stream, 39°51'N, 28°18'E, 794 m, *F. orientalis*, w-trap, 19.VI.2013, 2 exs.; 39°51'N, 28°18'E, 806 m, *F. orientalis*, w-trap, 27.XI.2012, 1 ex. Totally 13 exs.

**Distribution in Turkey:** This species has a wide distribution in Turkey (Anlaş, 2009; Anlaş & Rose, 2009c; Abacıgil et al., 2013; Özgen et al., 2017).

***Ocypus sericeicollis*** (Ménétriés, 1832)

**Material examined:** Bigadiç district, Ulus mountain, 39°19'N, 27°23'E, 1616 m, *F. orientalis*, w-trap, 30.V.2013, 1 ex.; Erdek district, Kurtboğazi, 40°27'N, 27°49'E, 604 m, *F. orientalis*, w-trap, 21.VI.2013, 1 ex. Totally 2 exs.

**Distribution in Turkey:** Adıyaman, Ankara, Antalya, Balıkesir, Diyarbakır, Elazığ, Erzurum, Eskişehir, Gaziantep, Hatay, Isparta, İzmir, Kahramanmaraş, Manisa, Şanlıurfa, Şırnak, Yozgat (Anlaş, 2009; Abacıgil et al., 2013; Özgen et al., 2015; Çiftçi & Hasbenli, 2016; Fırat & Sert, 2016; Özgen et al., 2017).

***Megalinus scutellaris*** (Fauvel, 1900)

**Material examined:** Bakacak district, 39°40'N, 27°43'E, 485 m, *Q. frainetto*, w-trap, 17.VII.2012, 1 ex.; 39°40'N, 27°43'E, 488 m, *Q. frainetto*, w-trap, 28.VI.2012, 1 ex.; 39°40'N, 27°43'E, 490 m, *Q. frainetto*, w-trap, 20.X.2012, 1 ex.; Bigadiç district, Davutlar village, 39°29'N, 28°19'E, 719 m, *Q. cerris*, w-trap, 08.VIII.2012, 1 ex.; Gönen district, Şarkoluk, 40°08'N, 27°29'E, 451 m, *Q. cerris*, p-trap, 10.VIII.2012, 3 exs.; Susurluk district, Darialan, 39°51'N, 28°17'E, 736 m, *Q. petraea*, w-trap, 22.XI.2012, 1 ex.; 39°52'N, 28°16'E, 580 m, *Q. petraea*, w-trap, 16.VIII.2013, 2 exs. Totally 10 exs.

**Distribution in Turkey:** Adana, Ankara, Antalya, Balıkesir, Çanakkale, Elazığ, Denizli, Hatay, İzmir, Manisa, Mersin (Anlaş, 2009; Anlaş & Rose, 2009c; Abacıgil et al., 2013).

***Xantholinus audrasi*** Coiffait, 1956

**Material examined:** Bigadiç district, Davutlar village, 39°29'N, 28°19'E, 706 m, *Q. cerris*, p-trap, 23.VI.2012, 14 exs.; 39°29'N, 28°19'E, 719 m, *Q. cerris*, w-trap, 08.VIII.2012, 2 exs.; Bigadiç district, Ulus mountain, 39°19'N, 27°23'E, 1619 m, *F. orientalis*, w-trap, 27.VI.2013, 1 ex.; 39°19'N, 27°23'E, 1617 m,



*F. orientalis*, w-trap, 15.X.2012, 2 exs.; Gönen district, Porta hill, 40°07'N, 27°25'E, 768 m, *F. orientalis*, w-trap, 24.V.2013, 2 exs.; Susurluk district, Darıalan, 39°51'N, 28°17'E, 736 m, *Q. petraea*, w-trap, 19.VI.2013, 2 exs.; 39°52'N, 28°16'E, 582 m, *Q. petraea*, w-trap, 30.X.2013, 3 exs. Totally 26 exs.

**Distribution in Turkey:** This species has a wide distribution in Turkey. But it had not been recorded from Balıkesir provinces before (Assing, 2007c; Anlaş, 2009; Anlaş, 2014; Anlaş, 2017b).

***Xantholinus rufipennis*** Erichson, 1839

**Material examined:** Bakacak district, 39°40'N, 27°43'E, 488 m, *Q. frainetto*, w-trap, 02.VIII.2012, 2 exs.; 39°40'N, 27°43'E, 490 m, *Q. frainetto*, w-trap, 19.VI.2012, 1 ex.; Bigadiç district, Ulus mountain, 39°19'N, 27°23'E, 1615 m, *F. orientalis*, w-trap, 05.XI.2013, 1 ex.; Savaştepe district, Mancılık, 39°21'N, 27°48'E, 830 m, *Q. cerris*, p-trap, 08.IX.2012, 5 exs. Totally 9 exs.

**Distribution in Turkey:** This species has a wide distribution in Turkey (Assing, 2007c; Anlaş, 2009; Anlaş, 2014; Anlaş, 2017b).

The Mediterranean region is the second largest one of 34 biodiversity hotspots in the world, extending through more than 22 countries. Although the Mediterranean region is considered to be a biodiversity hotspot, only a few systematic studies reported on the biodiversity of beetles in Mediterranean tree habitats (Atay et al., 2012).

As a result of this study, 29 species of 16 genera belonging to 6 subfamilies of the Staphylinidae family have been reported from Balıkesir province. Among those species, *D. crenatus*, *O. cinnamomeum*, *T. nitidulus*, *A. intricata*, *A. laevigata*, *A. tristis*, *D. canaliculata*, *A. inustus*, *A. tetracarınatus*, *B. furcatus*, *A. procerus*, *L. gracile*, *D. stilicina*, *M. dilutus pythonissa*, *M. fuscus*, *S. bicolor*, *P. fusciceps* and *X. audrasi* have been determined from Balıkesir province for the first time, and also *O. cinnamomeum*, *A. tetracarınatus*, *B. furcatus* and *D. stilicana* have been determined from the Marmara Region of Turkey for the first time.

The most number of the individuals respectively, as *P. concinnus* (45 individuals), *A. tetracarınatus* (41 individuals), *A. tristis* (21 individuals), *A. inustus* (17 individuals), *P. nitidicollis* (17 individuals), *O. curtipennis* (17 individuals), *T. nitidulus* (17 individuals), *A. intricata* (13 individuals), *O. mus* (13 individuals), *O. laeviusculus* (11 individuals) and *M. scutellaris* (10 individuals) were determined.

In terms of the oak and the beech tree species, the most number of the species respectively, as *Q. frainetto* (18 species), *F. orientalis* (16 species), *Q. cerris* (13 tür), *Q. petraea* (11 species), *F. sylvatica* (10 species), *Q. frainetto* x *Q. petraea* (3 species) and *Q. pubescens* (1 species) were determined.

*T. nitidulus*, *A. tristis*, *P. concinnus*, *A. tetracarınatus*, *O. laeviusculus*, *O. curtipennis*, *O. mus* and *M. scutellaris* were the abundant and the widespread species in all the studied areas. *A. intricata*, *A. inustus*, *S. bicolor*, *P. nitidicollis*, *X. audrasi* and *X. rufipennis* were the other widespread species. *D. crenatus*, *A. procerus*, *L. gracile*, *D. stilicana*, *M. dilutus pythonissa*, *P. fusciceps*, *P. debilis* and *M. scutellaris* were caught from only the oak tree species, after all *D. canaliculata*, *P. cognatus*, *P. intermedius* and *O. sericeicollis* were caught from only the beech tree species.

According to the trapping methods, 27 species with the window trap, 18 species with the pitfall traps, besides 11 species with the only window traps, 2 species with the only pitfall traps and 16 species with both the window traps and the pitfall traps were caught from all the studied areas.

With this study, we have been determined the species of the family Staphylinidae that are new for Balıkesir local fauna and the Marmara Region by using different trapping methods from old hollow oak and beech trees from Balıkesir province, and also we believe that future studies on different broad-leaved old hollow tree species will increase our knowledge on the family Staphylinidae in forest ecosystems.

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