

Orijinal araştırma (Original article)

**New and additional records of the Subfamily
Tachyporinae (Coleoptera: Staphylinidae) from
Turkey, with observations on agricultural
importance of the genus *Tachyporus***

İnanç ÖZGEN^{1*} Sinan ANLAŞ²

Summary

In this study, 25 species of 10 genera belonging to two tribes of Tachyporinae collected in different parts of Turkey between 2005-2010 are listed. *Tachyporus formosus* A. Matthews, 1838 and *Tachyporus lignorum* (Linnaeus, 1758) are the first records for the Turkish fauna. Many species were reported for the first time from some regions of Turkey. Among them *Tachyporus hypnorum* (Fabricius, 1775) and *Tachyporus nitidulus* (Fabricius, 1781) are found the most common and abundant species. In addition, agricultural importance of these species are discussed.

Key words: Staphylinidae, Tachyporinae, *Tachyporus* species, fauna, new records, predatör, Turkey

Anahtar sözcükler: Staphylinidae, Tachyporinae, *Tachyporus* türleri, fauna, yeni kayıtlar, predator, Türkiye

Introduction

The Staphylinidae is most diverse family of the order Coleoptera, comprising about 57.000 species belonging to 33 subfamilies in all zoogeographical regions of the world (Newton, 2007 and updated to the end of 2009 from unpublished Newton database catalog). The staphylinid beetle subfamily Tachyporinae contains more than 1.500 known species out of 39 genera worldwide (Herman, 2001). According to Anlaş (2009), 80 species and subspecies of Tachyporinae have been reported for Turkey. However, many

¹ Department of Biology, Faculty of Sciences, Dicle University, 21000, Diyarbakır, Turkey

² Department of Biology, Faculty of Sciences, Ege University, 35100 Bornova, Izmir, Turkey

* Sorumlu yazar (Corresponding author) e-mail: inancoz@hotmail.com

Alınış (Received): 08.06.2010 Kabul edilmiş (Accepted): 01.10.2010

Turkish regions and provinces are sparsely investigated regarding their Tachyporinae inventory.

Tachyporinae are distributed worldwide and are found in practically all types of ecosystems. Most of the Tachyporine species are found in litter, forming one of the most common and ecologically important insect components of the soil fauna. In agricultural landscapes, Tachyporinae are the one of the important group of epigeal invertebrates. Most Tachyporinae are facultative predators of other small invertebrates in the garden or in agriculture, feeding especially on aphids.

Material and Methods

The present paper is based on material collected during recent field studies in different parts of Anatolia between 2005-2010, conducted mainly by İnanç Özgen, Sinan Anlaş, Ersen Aydın Yağmur (İzmir) and Kadir Boğaç Kunt (Ankara). Material have been identified by I. Özgen, S. Anlaş and Michael Schülke (Berlin), and also deposited in the first and second author's private collection. The main aim of the study is to contribute to the knowledge of the fauna of Tachyporinae of Turkey.

Results

In this study, 25 species of 10 genera belonging to two tribes of Tachyporinae are reported in different parts of Turkey between 2005-2010. Among them, *Tachyporus formosus* A. Matthews, 1838 and *Tachyporus lignorum* (Linnaeus, 1758) are the first records for the Turkish fauna.

Subfamily Tachyporinae MacLeay, 1825

Tribe Mycetoporini Thomson, 1859

Bolitobius castaneus (Stephens, 1832)

Material examined: **Diyarbakır:** Çüngüş, Camiişak, near Zoğar, 1024 m, 38°12'50"N, 39°16'50"E, 13.IV.2010, leg. Özgen & Yağmur. **Mardin:** 2 exs., Mazıdağı, Gürgöze, 950 m, 37°29'08"N, 40°31'38"E, 31.V.2010, 1 ex., leg. Özgen.

Distribution in Turkey: Bolu, Tunceli (Anlaş, 2009; Anlaş & Rose, 2009). First record for Southeastern Anatolia.

Bryoporus multipunctus Hampe, 1867

Material examined: **Diyarbakır:** Central province, Dicle valley, near Dicle river, 800 m, ca. 38°14'N, 40°10'E, 27.IV.2010, 1 ex., leg. Özgen; Hazro 2 km N, 960 m, 38°14'47"N, 40°46'59"E, 17.IV.2010, 1 ex., leg. Özgen. **İzmir:** Kınık, Musacalı 1 km W, 80 m, 39°02'10"N, 27°14'10"E, 14.V.2005, 1 ex., leg. Anlaş. **Kırklareli:** Demirköy, İgneada, Sisioba, 41°57'44"N, 27°54'36"E, 03.X.2009, 2

exs., leg. Kunt. **Manisa**: Alaşehir, Kestanederesi, 980 m, 38°17'15"N, 28°23'24"E, 21.X.2006, 1 ex., leg. Anlaş; Central province, Karakoca village, 350 m, 38°33'48"N, 27°20'00"E, 23.XII.2006, 1 ex., leg. Anlaş; Central province, Spil National Park, 1200 m, 38°33'20"N, 27°23'17"E, 29.III.2007, 1 ex., leg. Anlaş.

Distribution in Turkey: Antalya, Artvin, Bitlis, Diyarbakır, Hatay, Kastamonu, Mardin, Mersin, Ordu (Anlaş, 2009). First records for Aegean and Marmara Regions of Turkey.

Lordithon exoletus (Erichson, 1839)

Material examined: **Aydın**: Ova, Çine, 88 m, 37°39'59"N, 28°56'44"E, 19.VI.2005, 3 exs., leg. Anlaş. **Diyarbakır**: Eğil, Kalkan, ca. 780 m, 38°08'37"N, 40°03'37"E, 21.V.2010, 2 exs., leg. Özgen. **Mardin**: Mazıdağı, Gürgöze, 950 m, 37°29'08"N, 40°31'38"E, 31.V.2010, 5 exs., leg. Özgen.

Distribution in Turkey: Izmir, Mersin, Muğla (Anlaş, 2009; Anlaş & Rose, 2009). First record for Southeastern Anatolia.

Lordithon thoracicus (Fabricius, 1777)

Material examined: **Afyonkarahisar**: Sinanpaşa 15 km SW, 1600 m, 38°42'48"N, 30°04'40"E, 23.IV.2010, 4 exs., leg. Anlaş. **Kütahya**: Şaphane, İlçesi 1 km N, 720 m, 38°56'58"N, 29°17'29"E, 24.IV.2010, 3 exs., leg. Anlaş; Simav 10 km NW, near Simav Gölü, 720 m, 39°10'32"N, 28°55'21"E, 24.IV.2010, 2 exs., leg. Anlaş.

Distribution in Turkey: Antalya, Manisa, Mersin (Anlaş, 2009; Anlaş & Rose, 2009).

Lordithon trinotatus (Erichson, 1839)

Material examined: **Antalya**: Alanya, Taşatan Yaylası, 09.I.2010, 1 ex., leg. Yağmur & Kunt; Serik, Beşkonak 10 km N, 248 m, 37°12'45"N, 31°12'37"E, 13.IX.2007, 1 ex., leg. Yağmur. **Uşak**: Eşme, Kısık 2 km NE, 470 m, 38°38'06"N, 28°57'19"E, 23.IV.2010, 2 exs., leg. Anlaş.

Distribution in Turkey: Ankara, Aydın, İzmir, Manisa (Anlaş, 2009; Anlaş & Rose, 2009). First records for Mediterranean Regions of Turkey.

Lordithon variegatus (Bernhauer, 1902)

Material examined: **Elazığ**: Central province, Doğu Kent, 1080 m, 38°40'50"N, 39°15'42"E, 27.V.2010, 3 exs., leg. Özgen.

Distribution in Turkey: İzmir, Sakarya, Sivas (Anlaş, 2009). First record for Eastern Anatolia.

Mycetoporus dispersus Schülke & Kocian, 2000

Material examined: **Bursa**: Uludağ, Aynalı Gölü, 2310 m, 40°04'13"N, 29°14'01"E, 30.VIII.2008, 2 exs., leg. Koç. **Manisa**: Central province, Spil National Park, 1200 m, 38°33'20"N, 27°23'17"E, 29.III.2007, 1 ex., leg. Anlaş.

Distribution in Turkey: Isparta, Konya, Mersin (Anlaş, 2009). First records for Aegean and Marmara Region of Turkey.

Mycetoporus ignidorsum Eppelsheim, 1880

Material examined: **Burdur**: Central province 5 km S, 1050 m, 37°31'48"N, 30°28'26"E, 16.X.2009, 1 ex., leg. Yağmur.

Distribution in Turkey: Antalya (Anlaş & Rose, 2009).

Tribe Tachyporini MacLeay, 1825

Cilea silphoides (Linnaeus, 1767)

Material examined: **Afyonkarahisar**: Sinanpaşa 15 km SW, 1600 m, 38°42'48"N, 30°04'40"E, 23.IV.2010, 2 exs., leg. Anlaş. **Izmir**: Buca, Kaynaklar, 365 m, 38°21'43"N, 27°17'19"E 11.X.2009, 2 exs., leg. Yağmur.

Distribution in Turkey: The exact locality of this species has not been cited by previous studies (Smetana, 2004; Anlaş, 2009).

Coproporus colchicus Kraatz, 1858

Material examined: **Diyarbakır**: Silvan 3 km N, 1185 m, 38°11'21"N, 41°00'30"E, 15.IV.2010, 2 exs., leg. Özgen & Yağmur. **Mardin**: Mazıdağı, Gürgöze, 950 m, 37°29'08"N, 40°31'38"E, 31.V.2010, 3 exs., leg. Özgen.

Distribution in Turkey: Antalya, İstanbul, Konya, Izmir, Mersin (Anlaş, 2009). First record for Southeastern Anatolia.

Lamprinodes fairmairei (Leprieur, 1853)

Material examined: **Diyarbakır**: Eğil road 5 km E, 780 m, 38°08'34"N, 40°03'27"E, 13.IV.2010, 1 ex., leg. Özgen & Yağmur; Eğil, Kalkan village, ca. 700 m, 38°08'N, 40°03'E, 21.V.2010, 1 ex., leg. Özgen.

Distribution in Turkey: Kilis (Anlaş, 2009).

Sepedophilus bipustulatus (Gravenhorst, 1802)

Material examined: **Elazığ**: Central province, Harput, Dabakhane 1 km S, 19.V.2010, 3 exs., leg. Özgen.

Distribution in Turkey: Bolu, Mersin (Anlaş, 2009). First record for Eastern Anatolia.

Sepedophilus littoreus (Linnaeus, 1758)

Material examined: **Diyarbakır**: Ergani 7 km SW, near Çayönü, 850 m, 38°13'00"N, 39°43'09"E, 26.V.2010, 2 exs., leg. Özgen. **Mardin**: Mazıdağı, Gürgöze, 950 m, 37°29'08"N, 40°31'38"E, 31.V.2010, 4 exs., leg. Özgen.

Distribution in Turkey: Denizli, Izmir, Kars (Anlaş, 2009). First record for Southeastern Anatolia.

Sepedophilus obtusus (Luze, 1902)

Material examined: **Aydın**: Ova, Çine, 88 m, 37°39'59"N, 28°56'44"E, 19.VI.2005, 1 ex., leg. Anlaş. **Manisa**: Spil National Park, 1200 m, 38°33'20"N, 27°23'17"E, 29.III.2007, 2 exs., leg. Anlaş.

Distribution in Turkey: Adana, Ankara, Antalya, Izmir, Kayseri, Manisa, Mersin (Anlaş, 2009; Anlaş & Rose, 2009).

Tachinus corticinus Gravenhorst, 1802

Material examined: **Gaziantep**: Central province 7 km NW, pitfall traps, 514 m, 37°09'52"N, 38°12'46"E, 11-29.VI.2007, 4 exs., leg. Gramov & Koç.

Distribution in Turkey: Antalya, Bursa, Izmir (Anlaş, 2009; Anlaş & Rose, 2009). First record for Southeastern Anatolia.

Tachinus fimetarius Gravenhorst, 1802

Material examined: **Adıyaman**: Doğanşehir, Reşadiye pass 1 km S, 1413 m 38°58'57"N, 38°00'11"E, 03.V.2008, 1 ex., leg. Yağmur. **Batman**: Gercüş 5 km N, 14.IV.2010, 1 ex., leg. Özgen & Yağmur. **Diyarbakır**: near Central province, Dicle Valley, ca. 800 m, ca. 38°14'N, 40°10"E, 26.V.2008, 2 exs., leg. Özgen.

Distribution in Turkey: Bursa, Erzurum, Konya, Mersin (Anlaş, 2009; Kesdek et al., 2009). First record for Southeastern Anatolia.

Tachyporus caucasicus Kolenati, 1846

Material examined: **Afyonkarahisar**: Sinanpaşa 15 km SW, 1600 m, 38°42'48"N, 30°04'40"E, 23.IV.2010, 3 exs., leg. Anlaş. **Izmir**: Karaburun, 10.VI.2004, 2 exs., pitfall traps.

Distribution in Turkey: Antalya, İstanbul, Izmir (Anlaş, 2009; Anlaş & Rose, 2009)

Tachyporus chrysomelinus (Linnaeus, 1758)

Material examined: **Tunceli**: Çemişgezek, 1 km NW Ormanyolu creek, 948 m, 39°04'06"N, 38°54'18"E, 14.IX.2007, 1 ex., leg. Anlaş. **Diyarbakır**: Hazro 4 km E, 950 m, 38°14'53"N, 40°47'21"E, 25.V.2010, 3 exs., leg. Özgen.

Distribution in Turkey: Ardahan, İstanbul (Anlaş, 2009; Kesdek et al., 2009). First record for Southeastern and Eastern Anatolia.

Tachyporus formosus A. Matthews, 1838

Material examined: **Kırklareli:** Demirköyköy, İğneada, Longoz Mert Lake, ca. 41°49'N; E 27°57'E, 29.IX.2009, 3 exs., leg. Kunt.

Distribution in Turkey: According to Smetana (2004), *T. formosus* is widespread in Europe and is recorded from Uzbekistan and Morocco, too. The species is here reported from Turkey for the first time.

Tachyporus hypnorum (Fabricius, 1775)

Material examined: **Afyonkarahisar:** Sinanpaşa 15 km SW, 1600 m, 38°42'48"N, 30°04'40"E, 23.IV.2010, 7 exs., leg. Anlaş. **Elazığ:** Central province, Doğukent, 1080 m, 38°40'50"N, 39°15'42"E, 27.V.2010, 3 exs., leg. Özgen. **Denizli:** Babadağ, 754 m, 37°48'07"N, 28°46'38"E, 18.X.2009, 5 exs., leg. Yağmur. **Gaziantep:** Şahinbey, Sarısaltık 1 km N, 12.XI.2006, 2 exs., leg. Yağmur; İslahiye, Huzurlu Yaylası, 1724 m, 36°58'24"N, 36°27'12"E, 26.IV.2008, 4 exs., leg. Yağmur. **Kırklareli:** Demirköyköy, İğneada, Longoz Mert Lake, ca. 41°49'N; E 27°57'E, 29.IX.2009, 7 exs., leg. Kunt. **Kütahya:** Şaphane, K.Mustafalar yol ayrimı, 980 m, 38°59'58"N, 29°14'41"E, 24.IV.2010, 7 exs., leg. Anlaş; Simav 10 km NW, near Simav Gölü, 720 m, 39°10'32"N, 28°55'21"E, 24.IV.2010, 6 exs., leg. Anlaş. **Mardin:** Mazıdağı, Gürgöze, 950 m, 37°29'08"N, 40°31'38"E, 31.V.2010, 2 exs., leg. Özgen; near Derik, 820 m, 37°22'05"N, 40°57'59"E, 31.V.2010, 4 exs., leg. Özgen. **Rize:** Çamlıhemşin, Ayder Yaylası, 1237 m, 40°57'08"N, 41°06'17"E, 28.VI.2008, 2 exs., leg. Yağmur. **Şırnak:** Silopi, near Görümlü, 1000 m, 37°20'10"N, 42°34'30"E, 20.V.2010, 1 ex., leg. Yağmur.

Distribution in Turkey: Adana, Adiyaman, Ankara, Antalya, Aydın, Bayburt, Bilecik, Erzincan, Erzurum, İzmir, Kahramanmaraş, Kars, Manisa, Malatya, Mersin, Muğla, Şırnak, Tunceli (Anlaş, 2009; Anlaş & Rose, 2009; Kesdek et al., 2009). The species is very common in Turkey.

Tachyporus lignorum (Linnaeus, 1758)

Material examined: **Manisa:** Manisa, Spil National Park, 1200 m, 38°33'20"N, 27°23'17"E, 14.III.2010, 4 exs., leg. Anlaş.

Distribution in Turkey: According to Smetana (2004), *T. lignorum* is widespread in Europe and is recorded from Algeria, too. The species is here reported from Turkey for the first time.

Tachyporus nitidulus (Fabricius, 1781)

Material examined: **Afyonkarahisar**: Sinanpaşa 15 km SW, 1600 m, 38°42'48"N, 30°04'40"E, 23.IV.2010, 12 exs., leg. Anlaş. **Burdur**: Salda Lake, Yeşilova 5 km N, 1168 m, 37°30'32"N, 29°41'58"E, 16.X.2009, 10 exs., leg. Yağmur. **Elazığ**: Central province, Doğukent, 1080 m, 38°40'50"N, 39°15'42"E, 27.V.2010, 5 exs., leg. Özgen; Keban 7 km SE, Ulupınar, Birvan creek, 1160 m, 38°44'34"N, 38°51'03"E, 27.V.2010, 3 exs., leg. Özgen. **Denizli**: Babadağ, 754 m, 37°48'07"N, 28°46'38"E, 18.X.2009, 3 exs., leg. Yağmur. **Diyarbakır**: Central province, Dicle valley, near Dicle river, 800 m, ca. 38°14'N, 40°10'E, 27.IV.2010, 2 exs., leg. Özgen; 96 m, 38°14'47"N, 40°46'59"E, Hazro 2 km N, 17.IV.2010, 3 ex., leg. Özgen. Çüngüş, Camiişak, near Zoğar, 1024 m, 38°12'50"N, 39°16'50"E, 13.IV.2010, 4 exs., leg. Özgen & Yağmur; Ergani 7 km SW, near Çayönü, 850 m, 38°13'00"N, 39°43'09"E, 26.V.2010, 5 exs., leg. Özgen. **Izmir**: Aliağa, Karakuza, 350 m., ca. 38°44'N, 27°10'E, 04.X.2008, 8 exs., leg. Anlaş; Buca, Kaynaklar, 365 m, 38°21'43"N, 27°17'19"E, 11.X.2009 and 28.V.2010, 15 exs., leg. Yağmur. **Gaziantep**: İslahiye, Huzurlu Yaylası, 1724 m, 36°58'24"N, 36°27'12"E, 26.IV.2008, 5 exs., leg. Yağmur. **Kahramanmaraş**: Andırın, Kırac 2 km W, 720 m, 37°31'48"N, 36°22'49"E, 23.VI.2007, 5 exs., leg. Yağmur. Nurhak, Nurhak Dağları, Kullartatlar 2 km NE, 09.VII.2006, 8 exs., leg. Anlaş. **Kırklareli**: Demirköy, İgneada, Hamam Lake, 41°49'43"N; E 27°57'31"E, 02.X.2009, 8 exs., leg. Kunt. **Kütahya**: Şaphane, K.Mustafalar yol ayrimı, 980 m, 38°59'58"N, 29°14'41"E, 24.IV.2010, 6 exs., leg. Anlaş; Simav 10 km NW, near Simav Gölü, 720 m, 39°10'32"N, 28°55'21"E, 24.IV.2010, 17 exs., leg. Anlaş. **Malatya**: Doğanşehir, Boruk Dağı, 1100 m., 37°53'08"N, 37°43'04"E, 09.VII.2006, 18 exs., leg. Anlaş; **Mardin**: Mazıdağı, Gürgöze, 950 m, 37°29'08"N, 40°31'38"E, 31.V.2010, 7 exs., leg. Özgen. **Muğla**: Central province, Derinkuyu, 18.VI.2005, 5 exs., leg. Anlaş. **Osmaniye**: Bahçe, Aşağıarıcaklı, 726 m, 37°11'29"N, 36°36'54"E, 19.V.2008, 3 exs., leg. Yağmur. **Tunceli**: Çemişgezek, 1 km NW Ormanyolu creek 948 m, 39°04'06"N, 38°54'18"E, 14.IX.2007, 4 exs., leg. Anlaş; Ovacık, Ağaçpınar 6 km E, Munzur river, 1197 m, 39°21'28"N, 39°15'51"E, 13.IX.2007, 7 exs., leg. Anlaş. **Trabzon**: Maçka, Sümela road 6 km S, 06.VI.2006, 3 exs., leg. Anlaş. **Uşak**: Banaz, 20 E, 470 m, 38°44'40"N, 29°58'22"E, 23.IV.2010, 5 exs., leg. Anlaş.

Distribution in Turkey: Ankara, Antalya, Ardahan, Aydin, Bayburt, Bursa, Diyarbakır, Erzurum, İstanbul, Izmir, Kars, Kayseri, Manisa, Mersin, Mersin-Karaman and environs (Caramania) (Anlaş, 2009; Anlaş & Rose, 2009; Kesdek et al., 2009). The species is very common in Turkey.

Tachyporus pusillus Gravenhorst, 1806

Material examined: **Diyarbakır**: Çüngüş, Camiişak, near Zoğar, 1024 m, 38°12'50"N, 39°16'50"E, 13.IV.2010, 2 exs., leg. Özgen & Yağmur; Ergani 7 km

SW, near Çayönü, 850 m, 38°13'00"N, 39°43'09"E, 26.V.2010, 2 exs., leg. Özgen.

Distribution in Turkey: Antalya, Erzurum, Izmir (Anlaş, 2009; Anlaş & Rose, 2009; Kesdek et al., 2009). First record for Southeastern Anatolia.

Tachyporus scitulus Erichson, 1839

Material examined: **Adıyaman:** Doğanşehir, Reşadiye pass 1 km S, 1413 m, 38°58'57"N, 38°00'11"E, 03.V.2008, 2 exs., leg. Yağmur. **Elazığ:** Keban 7 km SE, Ulupınar, Birvan creek, 1160 m, 38°44'34"N, 38°51'03"E, 27.V.2010, 1 ex., leg. Özgen. **Kars:** Sarıkamış, Karakurt 7 km S, 16.V.2009, 1 ex., leg. Yanar.

Distribution in Turkey: Erzurum, Adana-Mersin (Gülek Boğazı) (Anlaş, 2009; Kesdek et al., 2009). First record for Southeastern Anatolia.

Tachyporus solutus Erichson, 1839

Material examined: **Kırklareli:** Demirköy, İğneada-Demirköy road 11 km N, under pine forest, 41°51'45"N, 27°53'00"E, 03.X.2009, 1 ex., leg. Kunt. **Uşak:** Banaz, 20 E, 470 m, 38°44'40"N, 29°58'22"E, 23.IV.2010, 1 ex., leg. Anlaş.

Distribution in Turkey: Bilecik, Eskişehir, Osmaniye (Anlaş, 2009; Anlaş & Rose, 2009). First record for Thrace and Aegean region of Turkey.

Discussion

Tachyporus hypnorum and *T. nitidulus* are the most abundant species in our study. According to Benckiser (1997), *T. hypnorum* is the typical staphylinids encountered in agricultural fields. And also, *T. hypnorum* is more common in European countries. For example, one of the most widely occurring species of Staphylinidae in orchard ground level was *T. hypnorum* in Hungary (Balog et al., 2005). According to Krooss & Schaefer (1998), one of the most common staphylinid species in all farming systems in Europe is *T. hypnorum*, but total faunal composition was different. Species richness and diversity were highest with reduced tillage and fewer pesticide applications. According to Dennis et al. (2008), Aphid consumption by larval and adult *T. hypnorum* in different reproductive states was compared under laboratory conditions. Choice experiments incorporating *Isotoma viridis* Bourlet 1839 (Collembola: Isotomidae) and *Sciara thomae* L. 1767 (Diptera: Mycetophilidae) as alternative prey items showed that *T. hypnorum* had a strong preference for aphids at a range of prey frequencies.

On the contrary, *T. nitidulus* is more common than *T. hypnorum* in agriculture landscape in Turkey. According to our observations on field trips in different parts of Turkey, adult beetles of *T. nitidulus* and *T. hypnorum* prey upon cereal aphids and eggs of cabbage root flies (*Delia* sp.). According to

Pedersen et al. (1990), some *Tachyporus* species are considered important in cereal aphid control, and a study carried out in barley fields in Denmark demonstrated that *Tachyporus* spp. are present in the crop from mid May onwards and prior to the appearance of aphids. In particular the ability of *Tachyporus* to disperse rapidly and thoroughly in cereals in early spring makes it a useful predator (Coombes & Sotherton, 1986).

The feeding preferences of the other Tachyporine species are unknown. It is hoped that current data will be contributed other studies that will be carried out in Turkey. Studies with Tachyporine and also staphylinids, which is very important for agriculture and forest ecosystems, will help using staphylinid species as a biological war agent and bioindicator.

Özet

Türkiye'den Tachyporinae (Coleoptera: Staphylinidae) altfAMILYASINA ait yeni ve ek kayıtlar ile *Tachyporus* cinsinin tarımsal önemi üzerine gözlemler

Bu çalışmada Türkiye'nin farklı yerlerinden 2005-2010 yılları arasında toplanan iki tribus içinde yer alan, 10 cinse bağlı 25 Tachyporinae türü değerlendirilmiştir. Bunlardan *Tachyporus formosus* A. Matthews, 1838 ve *Tachyporus lignorum* (Linnaeus, 1758) türleri Türkiye'den ilk defa bildirilmiştir. Birçok tür de Türkiye'nin bazı bölgelerinden ilk kez rapor edilmiştir. Bunlardan *Tachyporus hypnorum* (Fabricius, 1775) ve *Tachyporus nitidulus* (Fabricius, 1781) türleri en yaygın ve bol olarak bulunmuştur. Ek olarak bu türlerin tarımsal önemleri tartışılmıştır.

Acknowledgements

We would like to appreciate to Michael Schülke from Germany for confirming and identifying part of the specimens and also Ersen Aydın Yağmur, Kadir Boğaç Kunt, Dr. Halil Koç for their helps in field studies, and also thank Dr. Alfred Newton from USA for providing some literature.

References

- Anlaş, S., 2009. Distributional checklist of the Staphylinidae (Coleoptera) of Turkey, with new and additional records. **Linzer biologische Beiträge**, **41** (1): 215-342.
- Anlaş, S. & A. Rose, 2009. Some additional notes about Tachyporinae (Coleoptera: Staphylinidae) fauna of Turkey. **Munis Entomology & Zoology**, **4** (2): 479-482.
- Balog, A., V. Markó, C. Kutasi & L. Ádám, 2003. Species Composition of Ground Dwelling Staphylinid (Coleoptera: Staphylinidae), Communities in Apple and Pear Orchards in Hungary. **Acta Phytopathologica et Entomologica Hungarica**, **38** (1-2): 181-197.

- Benckiser, G., 1997. Fauna in Soil Ecosystems. Recycling Processes, Nutrient fluxes, and Agricultural production. Marcel Dekker, New York, 307-362.
- Coombes, S. & N. M. Sotherton, 1986. The dispersal and distribution of polyphagous predatory Coleoptera in cereals. **Annals of Applied Biology**, **108**: 461-474.
- Dennis, P., S. D. Wratten & N. W. Sotherton, 2008. Feeding behaviour of the staphylinid beetle *Tachyporus hypnorum* in relation to its potential for reducing aphid numbers in wheat. **Annals of Applied Biology**, **117** (2): 267-276.
- Herman, L. H., 2001. Catalog of the Staphylinidae (Insecta: Coleoptera). 1758 to the end of the second millennium. Volumes I-VII. **Bulletin of the American Museum of Natural History**, **265**: 1-4218
- Kesdek, M., E. Yıldırım, S. Anlaş & S. Tezcan, 2009. Contribution to the knowledge of Staphylinidae (Coleoptera) fauna of Turkey. **Munis Entomology & Zoology**, **4** (2): 355-364.
- Krooss, S. & M. Schaefer, 1998. The effect of different farming systems on epigeic arthropods: a five-year study on the rove beetle fauna (Coleoptera: Staphylinidae) of winter wheat. **Agriculture, Ecosystems & Environment**, **69** (2): 121-133.
- Newton, A. F., 2007. Documenting biodiversity: How well are we doing in Staphyliniformia? (Coleoptera). Entomological Society of America poster presentation D0471 (available web page (ESA members only) at (Web page: http://esa.confex.com/esa/2007/techprogram/paper_32168.htm). (Data accessed: 01.Haziran 2010).
- Pedersen, M., L. T. Pedersen & K. Abildgaard, 1990. Annual and diurnal activity of some *Tachyporus* species (Coleoptera: Staphylinidae) in two spring barley fields and a hedge. **Pedobiologia**, **34**: 367-378.
- Smetana, A., 2004. Subfamily Tachyporinae, In I. Löbl & A. Smetana (Eds), Catalogue of Palaearctic Coleoptera. Volume 2. Hydrophiloidea, Histeroidea, Staphylinoidea. Apollo Books, Stenstrup: 330-352.