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YEŐİM BULAK

EROL YILDIRIM

MARCİN KADEJ

JİRİ HAVA

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Contribution to the knowledge of the Dermestidae (Coleoptera) fauna of Turkey

Yeşim BULAK¹, Erol YILDIRIM^{2*}, Marcin KADEJ³, Jiri HÁVA⁴

¹Department of Plant Protection, Faculty of Agriculture, Iğdır University, Iğdır, Turkey

²Department of Plant Protection, Faculty of Agriculture, Atatürk University, Erzurum, Turkey

³Division of Invertebrate Biology, Evolution, and Conservation, Department of Evolutionary Biology and Ecology, Faculty of Biological Science, University of Wrocław, Wrocław, Poland

⁴Department of Forest Protection and Entomology, Faculty of Forestry and Wood Sciences, Czech University of Life Sciences, Prague 6 - Suchbát, Czech Republic

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Abstract: This study is based upon material of the family Dermestidae collected from different localities in Turkey between 1965 and 2012. The study resulted in the recording for the Turkish fauna of 28 species of 6 genera belonging to 3 subfamilies (Attageninae, Dermestinae, Megatominae) within the family Dermestidae. Among them, *Attagenus unicolor unicolor* (Brahm, 1791), *Anthrenus scrophulariae scrophulariae* (Linnaeus, 1758), and *Anthrenus goliath* Saulcy in Mulsant & Rey, 1868 have been found to be the most abundant and widespread species. Separately, *Anthrenus eichleri* Kadej & Háva, 2006 is a new record for the Turkish fauna. In addition, new localities are added for some species previously reported for Turkey.

Key words: Coleoptera, Dermestidae, fauna, new record, Turkey

1. Introduction

Dermestidae is one of the smallest beetle families and currently includes more than 1430 species grouped into 52 genera. Their bodies vary in length from 1–13 mm. The shape of the body of adults is also variable, ranging from elliptical (elongate-oval) to nearly round. Usually, dorsal and ventral surfaces are covered with hairs or scales. Larvae of dermestids are characterised by the presence of setae that are variable in shape and size, which densely cover the whole body. Some of the species (mainly synanthropic) have been recognised as serious pests of stored goods (they can infest museum collections, domestic spaces, and industrial premises). Despite the economic and medical importance of knowledge about the biology (including development) of these species, faunistic and systematic research is still incomplete and limited. In general, most dermestid larvae are scavengers on dried animal proteins (dried carrion, meat, fish, leather, wool and woollen products, furs, silk, feathers); some of the species are associated closely with spider nests, where larvae consume spider webbing and dry insects caught in it; some are also predators in wasps' and bees' nests, webs of gregarious caterpillars, mantid egg cases, and Lepidoptera egg masses; finally, some feed on dried plant material (stored grain). Adult dermestids usually feed only on nectar or pollen, although some,

for example *Dermestes* species, will feed on the larval food, although to a lesser extent (Beal, 1959; Booth et al., 1990; Peacock, 1993; Kiselyova and McHugh, 2006).

As mentioned above, although we know so many species of this family, our knowledge about the distribution of many species is limited. Thus, further faunistic studies are required. For this reason, new data about distribution have great value.

Turkey is one of the most interesting countries located in the western Palaearctic region where most of the insect families including Dermestidae exist. Thus, some faunistic studies on the family Dermestidae have been conducted by foreign and native researchers in Turkey. Lodos (1998) listed 54 species belonging to 7 genera of Dermestidae from Turkey. Háva (2000, 2002, 2003a, 2003b, 2006, 2007), Háva and Tezcan (2004), Tezcan et al. (2004), and Háva and Herrmann (2010) recorded and described new genera and new species from Turkey, and thus the number of the species of Turkish dermestids rose to 74. Faunistic studies on the dermestids of Turkey have also been performed by Kadej and Háva (2007).

The aim of this paper is to present new collection and biological data on Dermestidae in Turkey. In this study, 28 species of 6 genera belonging to 3 subfamilies (Attageninae, Dermestinae, Megatominae) from the family Dermestidae were recorded from Turkey.

* Correspondence: eyildi@atauni.edu.tr

2. Materials and methods

The Dermestidae material was collected from different localities of Turkey between 1965 and 2012. The insect samples for this study were collected by sweeping flowering plants with an insect net; some specimens were reared from the feed material of larvae in cages in the laboratory. Provinces of the collected specimens are given in alphabetical order in the following list. The material is deposited in the Entomology Museum, Erzurum, Turkey (EMET). The systematic classification used in this paper follows that of Háva (2003b).

3. Results

In this study, a total of 28 species of 6 genera belonging to 3 subfamilies (Attageninae, Dermestinae, Megatominae) from the family Dermestidae were recorded from Turkey.

Subfamily Attageninae

Tribe Attagenini

Attagenus (s. str.) *quadrimaculatus* Kraatz, 1858

Material examined: **Artvin:** Ardanuç, 400 m, 13.V.2000, 2 exs., leg. L. Gültekin. **Erzincan:** Bahçe Kültürleri Araştırma Enstitüsü, 1185 m, 7.VII.1993, 3 exs., leg. İ. Aslan; Bayırbağ, 1200 m, 8.VII.1993, 3 exs., leg. İ. Aslan. **Erzurum:** Atatürk University field, 1850 m, 24.VI.1998, 1 ex., leg. E. Yıldırım, 10.VI.2010, 1 ex., leg. E. Yıldırım. **Kars:** Karakurt, 1500 m, 25.VIII.2000, 1 ex., leg. L. Gültekin.

Distribution: Albania, Bosnia Hercegovina, Bulgaria, Croatia, France, Greece, Macedonia, Montenegro, Serbia, Slovenia, Switzerland, Caucasus, Jordan, and Turkey (Háva, 2007).

Attagenus (s. str.) *unicolor unicolor* (Brahm, 1791)

Material examined: **Erzurum:** 13.III.1985, 1 ex., leg. H. Yüksel, 1850 m, 22.VI.2009, 3 exs., leg. E. Yıldırım, 23.VI.2009, 9 exs., leg. E. Yıldırım, 28.VI.2009, 24 exs., leg. E. Yıldırım, 1.VII.2009, 4 exs., leg. E. Yıldırım, 3.VII.2009, 12 exs., leg. Y. Bulak, 4.VII.2009, 13 exs., leg. Y. Bulak, 7.VII.1980, 1 ex., leg. H. Özışık, 13.VII.2009, 1 ex., leg. E. Yıldırım, 14.VII.2009, 3 exs., leg. E. Yıldırım, 28.VII.2009, 6 exs., leg. Y. Bulak, 1.VIII.2009, 2 exs., leg. Y. Bulak, 5.VIII.2009, 1 ex., leg. Y. Bulak, 15.VIII.2009, 1 ex., leg. Y. Bulak; Aşkale, 1650 m, 8.VII.2009, 2 exs., leg. Y. Bulak; Aziziye, 1800 m, 17.VII.2009, 20 exs., leg. Y. Bulak, 23.VII.2009, 6 exs., leg. Y. Bulak; Beypınarı, 1850 m, 15.VII.2009, 9 exs., leg. Y. Bulak; Çiftlik, 1850 m, 15.VII.2009, 12 exs., leg. Y. Bulak; Dadaşkent, 1850 m, 11.VI.2009, 4 exs., leg. Y. Bulak, 16.VI.2009, 21 exs., leg. Y. Bulak, 26.VI.2009, 68 exs., leg. Y. Bulak, 27.VI.2009, 8 exs., leg. Y. Bulak; Ortadüzü, 1800 m, 12.VII.2009, 3 exs., leg. Y. Bulak; Palandöken, 2400 m, 13.VI.2009, 33 exs., leg. Y. Bulak; Atatürk University field, 1850 m, 11.III.2009, 1 ex., leg. E. Yıldırım, 28.III.2009, 3 exs., leg. E. Yıldırım, 11.V.2009, 3 exs., leg. E. Yıldırım, 14.V.2009, 3 exs., leg.

E. Yıldırım, 18.V.2009, 2 exs., leg. E. Yıldırım, 24.V.2009, 7 exs., leg. E. Yıldırım, 29.V.2009, 1 ex., leg. E. Yıldırım, 10.VI.2009, 52 exs., leg. Y. Bulak, 11.VI.2009, 8 exs., leg. Y. Bulak, 12.VI.2009, 6 exs., leg. Y. Bulak, 16.VI.2009, 2 exs., leg. Y. Bulak, 17.VI.2009, 1 ex., leg. Y. Bulak, 22.VI.2009, 6 exs., leg. Y. Bulak, 24.VI.2009, 30 exs., leg. Y. Bulak, 26.VI.2009, 2 exs., leg. Y. Bulak, 27.VI.2009, 28 exs., leg. Y. Bulak, 29.VI.2009, 4 exs., leg. Y. Bulak, 30.VI.2009, 1 ex., leg. Y. Bulak, 1.VII.2009, 45 exs., leg. Y. Bulak, 2.VII.2009, 28 exs., leg. Y. Bulak, 4.VII.2009, 1 ex., leg. Y. Bulak, 7.VII.1996, 1 ex., leg. E. Yıldırım, 12.VII.1979, 1 ex., leg. H. Özışık, 20.VII.2009, 11 exs., leg. Y. Bulak, 22.VII.2009, 14 exs., leg. Y. Bulak, 29.VII.2009, 2 exs., leg. Y. Bulak, 10.VIII.2009, 1 ex., leg. Y. Bulak, 17.VIII.2009, 3 exs., leg. Y. Bulak, 27.XII.2011, 4 exs., leg. E. Yıldırım; Çat, 1900 m, 3.VII.2009, 3 exs., leg. Y. Bulak; Çat yolu, 1890 m, 27.VI.2009, 7 exs., leg. Y. Bulak, 1850 m, 13.VII.2009, 1 ex., leg. Y. Bulak, 13.VII.2009, 38 exs., leg. Y. Bulak; İspir, 1040 m, 19.VI.2009, 24 exs., leg. Y. Bulak; Çapans, 1350 m, 20.VIII.2009, 2 exs., leg. Y. Bulak; Oltu, 1400 m, 24.VII.2009, 4 exs., leg. Y. Bulak; Pasinler, 1660 m, 14.VI.2009, 3 exs., leg. Y. Bulak, 26.VII.2009, 2 exs., leg. Y. Bulak; Tortum, 1450 m, 29.VII.2009, 3 exs., leg. Y. Bulak. **İğdır:** 825 m, 20.VI.2009, 9 exs., leg. Y. Bulak; Tuzluca, 900 m, 18.VI.2009, 4 exs., leg. Y. Bulak. **Tokat:** University field, 623 m, 06.IV.2010, 1 ex., leg. Y. Bulak.

Distribution: Cosmopolitan, mentioned by Háva from Turkey (2007).

Subfamily Dermestinae

Tribe Dermestini

Dermestes (s. str.) *bicolor bicolor* Fabricius, 1781

Material examined: **Erzurum:** 1850 m, 28.IV.1965, 3 exs., leg. O. Ecevit, 1.VII.2009, 1 ex., leg. Y. Bulak, 2.VII.2009, 3 exs., leg. Y. Bulak, 3.VII.2009, 1 ex., leg. Y. Bulak, 13.VII.1979, 1 ex., leg. H. Özışık; Atatürk University field, 1850 m, 25.VI.2009, 1 ex., leg. Y. Bulak.

Distribution: Europe, Canary Islands, Afghanistan, Iran, Japan, Kazakhstan, Korea, Kyrgyzstan, Pakistan, Russia, Siberia, Syria, Tadzhikistan, Turkmenistan, Uzbekistan, and Turkey (Háva, 2007).

Dermestes (s. str.) *lardarius* Linnaeus, 1758

Material examined: **Erzurum:** 1850 m, 23.VI.2009, 2 exs., leg. Y. Bulak, 4.VII.2009, 1 ex., leg. Y. Bulak; Aziziye, Dadaşkent, 1850 m, 22.V.2009, 2 exs., leg. Y. Bulak, 11.VI.2009, 4 exs., leg. Y. Bulak; Ortadüzü, 1800 m, 12.VII.2009, 1 ex., leg. Y. Bulak; Palandöken, 2400 m, 15.V.2010, 10 exs., leg. G. Yazıcı, 20.V.2010, 6 exs., leg. G. Yazıcı, 22.V.2010, 2 exs., leg. G. Yazıcı; Atatürk University field, 1850 m, 30.IV.2009, 1 ex., leg. E. Yıldırım, 4.V.2009, 3 exs., leg. E. Yıldırım, 5.VI.2009, 1 ex., leg. Y. Bulak, 10.VI.2010, 1 ex., leg. E. Yıldırım, 30.VI.2010, 2 exs., leg. E. Yıldırım, 5.VII.1993, 1 ex., leg. G. Tozlu, 9.VII.1997, 1 ex., leg. E. Dane, 1800 m, 20.VIII.2010, 1 ex., leg. E. Yıldırım;

Şenkaya, Turnalı, 1750 m, 20.II.1997, 1 ex., leg. E. Yıldırım, 20.VI.1997, 1 ex., leg. E. Yıldırım, 10.VII.1999, 1 ex., leg. E. Yıldırım; Tortum, 1450 m, 29.VII.2009, 2 exs., leg. Y. Bulak. **Kars:** Sarıkamış, 1750 m, 14.IV.2009, 1 ex., leg. G. Tozlu. **Neşehir:** Nar, 1150 m, 29.VI.2009, 1 ex., leg. S. Yünlüer.

Distribution: Cosmopolitan, mentioned by Háva from Turkey (2007).

Dermestes (Dermestinus) coronatus Steven in Schönherr, 1808

Material examined: **Erzurum:** 1850 m, 17.V.1980, 1 ex., leg. H. Özişik; Atatürk University field, 1850 m, 01.VI.2009, 1 ex., leg. Y. Bulak; Pasinler, 1660 m, 2.VII.1983, 1 ex., leg. A. Turan.

Distribution: Poland (introduced), Afghanistan, Caucasus, India: Kashmir, Iran, Kyrgyzstan, Mongolia, Pakistan, Russia, China: Xinjiang, and Turkey (Háva, 2007).

Dermestes (Dermestinus) frischii Kugelann, 1792

Material examined: **Erzurum:** 1850 m, 7.VI.1971, 5 exs., leg. H. Özişik, 18.VI.1971, 4 exs., leg. M. Doğanlar, 19.VI.1971, 1 ex., leg. H. Özişik, 20.VII.1971, 8 exs., leg. H. Özbek; Aziziye, 1800 m, 17.VII.2009, 1 ex., leg. Y. Bulak.

Distribution: Nearly cosmopolitan, mentioned by Háva from Turkey (2007).

Dermestes (Dermestinus) intermedius intermedius Kalík, 1951

Material examined: **Muş:** Has, 1850 m, 1.VI.1972, 1 ex., leg. M. Doğanlar.

Distribution: Austria, Bulgaria, Czech Republic, Crete, Cyprus, Germany, Greece, Hungary, Italy, Macedonia, Romania, Slovakia, Ukraine, and Turkey (Háva, 2007).

Dermestes (Montandonia) fuliginosus Rossi, 1792

Material examined: **Erzincan:** 1250 m, 23.VI.1994, 1 ex., leg. E. Yıldırım. **Erzurum:** 1850 m, 1.V.1996, 1 ex., leg. K. Gümüş, 18.VI.1971, 13 exs., leg. M. Doğanlar, 22.VI.1975, 1 ex., leg. O. Ecevit.

Distribution: Europe, Caucasus, Iran, and Turkey (Háva, 2007).

Dermestes (Montandonia) olivieri Lepesme, 1939

Material examined: **Bayburt:** 1550 m, 12.VIII.2009, 2 exs., leg. Y. Bulak. **Erzincan:** Refahiye, 1500 m, 20.VI.2009, 1 ex., leg. E. Yıldırım. **Erzurum:** Atatürk University field, 1850 m, 17.VIII.2009, 1 ex., leg. Y. Bulak; Oltu, Toprakkale, 1436 m, 23.VI.2011, 1 ex., leg. Y. Bulak; Pasinler, 1660 m, 7.VII.2009, 1 ex., leg. Y. Bulak; Çöğender, 1768 m, 30.VII.2011, 1 ex. leg. Y. Bulak.

Distribution: Central and South Europe, Armenia, Cyprus, Ukraine, Georgia, Caucasus, Iran, Syria, Turkmenistan, Tunisia, and Turkey (Háva, 2007).

Subfamily **Megatominae**

Tribe **Anthreninini**

Anthrenus (Anthrenodes) ineptus Háva & Tezcan, 2004

Material examined: **Erzurum:** Atatürk University field, 1850 m, 10.VI.2012, 5 exs., leg. E. Yıldırım; İspir, Çapans, 1350 m, 20.VIII.2009, 2 exs., leg. E. Yıldırım; Madenköprübaşı, 1245 m, 4.VIII.2012, 8 exs., leg. G. Yazıcı, 1200 m, 20.VIII.2009, 6 exs., leg. Y. Bulak.

Distribution: Iran, Iraq, and Turkey (Háva, 2007).

Anthrenus (Anthrenops) coloratus Reitter, 1881

Material examined: **Erzurum:** Ortadüzü, 1800 m, 12.VII.2009, 1 ex., leg. Y. Bulak; Atatürk University field, 1850 m, 24.VI.2009, 2 exs., leg. Y. Bulak, 1.VII.2009, 1 ex., leg. Y. Bulak. **Iğdır:** 825 m, 20.VI.2009, 1 ex., leg. Y. Bulak.

Distribution: Europe, Canary Islands, Algeria, Egypt, Eritrea, Guinea, Morocco, Namibia, South Sudan, Sudan, Tunisia, USA, Afghanistan, India, Israel, Iran, Iraq, Kazakhstan, Kyrgyzstan, Qatar, Oman, Saudi Arabia, Syria, Tadjhikistan, Turkmenistan, United Arab Emirates, Yemen, and Turkey (Háva, 2007).

Anthrenus (Anthrenops) eichleri Kadej & Háva, 2006

Material examined: **Iğdır:** Tuzluca, 1050 m, 16.VI.2012, 32 exs., leg. L. Gültekin (collected from *Lepidium latifolium* [Brassicaceae]).

Distribution: Species known from Israel (Palestine) (Kadej and Háva, 2006).

New for the Turkish fauna.

Anthrenus (s. str.) goliath Saulcy in Mulsant & Rey, 1868

Material examined: **Bayburt:** Kop Mountain, 2400 m, 25.VI.1999, 1 ex., leg. L. Gültekin. **Erzurum:** Aziziye, Dadaşkent, 1850 m, 22.V.2009, 2 exs., leg. Y. Bulak, 10.VI.2009, 22 exs., leg. Y. Bulak; Palandöken, 2400 m, 13.VI.2009, 3 exs., leg. Y. Bulak; Atatürk University field, 1850 m, 1.VI.2009, 25 exs., leg. Y. Bulak, 2.VI.2009, 47 exs., leg. Y. Bulak, 3.VI.2009, 10 exs., leg. Y. Bulak, 5.VI.2009, 20 exs., leg. Y. Bulak, 9.VI.1994, 1 ex., leg. İ. Aslan, 10.VI.2009, 10 exs., leg. Y. Bulak, 10.VI.2010, 2 exs., leg. E. Yıldırım, 11.VI.2009, 1 ex., leg. E. Yıldırım, 10.VI.2012, 2 exs., leg. E. Yıldırım, 23.VI.2009, 1 ex., leg. E. Yıldırım, 24.VI.2009, 8 exs., leg. Y. Bulak, 29.VI.2009, 7 exs., leg. Y. Bulak, 30.VI.2009, 3 exs., leg. Y. Bulak, 23.VII.2012, 3 exs., leg. E. Yıldırım, 27.XII.2011, 1 ex., leg. E. Yıldırım; Çat, 1850 m, 13.VII.2009, 3 exs., leg. Y. Bulak; Tortum, Yumaklı, 1850 m, 18.V.1999, 1 ex., leg. E. Yıldırım. **Hatay:** Erzincan, Kuyuluk, 500 m, 19.V.2001, 1 ex., leg. L. Gültekin. **Tokat:** University field, 623 m, 6.VI.2009, 1 ex., leg. Y. Bulak.

Distribution: Austria, Bosnia, Bulgaria, Croatia, Greece, Hungary, Italy, Macedonia, Montenegro, Portugal, Romania, Serbia, Spain, Algeria, Egypt, Libya, Morocco, Tunisia, Syria, and Turkey (Háva, 2007).

Anthrenus (s. str.) delicatus Kiesenwetter, 1851

Material examined: **Erzurum:** Atatürk University field, 1850 m, 1.VI.2009, 1 ex., leg. Y. Bulak, 5.VI.2009, 1 ex., leg. Y. Bulak, 10.VI.2012, 2 exs., leg. E. Yıldırım, 11.VI.2009, 1 ex., leg. Y. Bulak. **Erzincan:** Akyazi, 1202 m, 11.VI.2010, 1

ex., leg. G. Yazıcı; Refahiye, 1500 m, 20.VI.2009, 2 exs., leg. E. Yıldırım. **Iğdır:** 825 m, 20.VI.2009, 7 exs., leg. Y. Bulak.

Distribution: Armenia, Andorra, Azerbaijan, Albania, Bulgaria, Crete, Croatia, Cyprus, France, Georgia, Greece, Italy, Macedonia, Montenegro, Portugal, Romania, Serbia, Spain, Algeria, Egypt, Morocco, Tunisia, Caucasus, Iran, Israel, Jordan, Syria, and Turkey (Háva, 2007).

Anthrenus (s. str.) picturatus picturatus Solsky, 1876

Material examined: **Erzurum:** Atatürk University field, 1850 m, 25.I.2010, 1 ex., leg. E. Yıldırım, 16.II.2009, 1 ex., leg. E. Yıldırım, 4.III.2009, 2 exs., leg. E. Yıldırım, 11.III.2009, 1 ex., leg. E. Yıldırım, 16.III.2009, 1 ex., leg. E. Yıldırım, 22.III.2009, 1 ex., leg. E. Yıldırım, 28.III.2009, 1 ex., leg. E. Yıldırım, 1.VI.2009, 2 exs., leg. E. Yıldırım, 11.VI.2009, 2 exs., leg. Y. Bulak, 13.VI.2009, 7 exs., leg. Y. Bulak, 22.VI.2009, 1 ex., leg. Y. Bulak, 24.VI.2009, 7 exs., leg. Y. Bulak, 26.VI.2009, 1 ex., leg. Y. Bulak, 27.VI.2009, 1 ex., leg. Y. Bulak, 29.VI.2009, 1 ex., leg. Y. Bulak, 30.VI.2009, 2 exs., leg. Y. Bulak, 1.VII.2009, 1 ex., leg. Y. Bulak, 4.VII.2009, 2 exs., leg. Y. Bulak, 27.XII.2011, 1 ex., leg. E. Yıldırım; Palandöken, 2400 m, 13.VI.2009, 2 exs., leg. Y. Bulak. **Iğdır:** Tuzluca, 900 m, 18.VI.2009, 1 ex., leg. Y. Bulak. **Tokat:** University field, 623 m, 6.IV.2010, 1 ex., leg. Y. Bulak.

Distribution: Georgia, Afghanistan, Caucasus, Iran, Kyrgyzstan, Kazakhstan, Tadzhikistan, Turkmenistan, Uzbekistan, South Africa, and Turkey (Háva, 2007).

Anthrenus (s. str.) pimpinellae pimpinellae (Fabricius, 1775)

Material examined: **Erzurum:** İspir, Çapans, 1350 m, 20.VII.2009, 16 exs., leg. E. Yıldırım. **Iğdır:** 825 m, 20.VI.2009, 2 exs., leg. Y. Bulak; Tuzluca, Menderes, 1100 m, 23.VI.2010, 1 ex., leg. G. Yazıcı.

Distribution: Cosmopolitan, mentioned by Háva from Turkey (2007).

Anthrenus (s. str.) scrophulariae albidus Brullé, 1832

Material examined: **Erzurum:** Palandöken, 2400 m, 22.V.2010, 1 ex., leg. G. Yazıcı; Atatürk University field, 1850 m, 22.VII.2009, 1 ex., leg. Y. Bulak, 24.VI.2009, 2 exs., leg. Y. Bulak, 1.VII.2009, 1 ex., leg. Y. Bulak. **Iğdır:** Tuzluca, 900 m, 22.V.2010, 1 ex., leg. Y. Bulak.

Distribution: South-East Europe, Caucasus, Syria, Uzbekistan, and Turkey (Háva, 2007).

Anthrenus (s. str.) scrophulariae scrophulariae (Linnaeus, 1758)

Material examined: **Artvin:** Yusufeli, Demirkent, 387 m, 15.VI.2010, 1 ex., leg. G. Yazıcı; İşhan, 5.VI.1978, 1 ex., leg. H. Özbek; Pamukçular, 700 m, 16.VI.2010, 2 exs., leg. G. Yazıcı; Sebzeçiler, 500 m, 16.VI.2010, 1 ex., leg. G. Yazıcı. **Bayburt:** 1569 m, 22.VI.2009, 3 exs., leg. Y. Bulak; Çalidere, 1700 m, 17.VI.2010, 3 exs., leg. G. Yazıcı. **Erzincan:** Refahiye, 1500 m, 20.VI.2009, 3 exs., leg. E. Yıldırım. **Erzurum:** 1850 m, 3.VI.1983, 1 ex., leg. Ş. Güçlü; Aziziye, Dadaşkent, 1850 m, 3.VI.2010, 2 exs., leg. G.

Yazıcı; Kırkgözeler, 1760 m, 15.VI.2010, 2 exs., leg. G. Yazıcı; Atatürk University field, 1850 m, 4.III.2009, 1 ex., leg. E. Yıldırım, 22.III.2009, 1 ex., leg. E. Yıldırım, 24.III.2009, 1 ex., leg. E. Yıldırım, 1.VI.2009, 2 exs., leg. Y. Bulak, 2.VI.2009, 2 exs., leg. Y. Bulak, 3.VI.2009, 2 exs., leg. Y. Bulak, 9.VI.1994, 2 exs., leg. İ. Aslan, 10.VI.2009, 8 exs., leg. Y. Bulak, 13.VI.2009, 3 exs., leg. Y. Bulak, 22.VI.2009, 1 ex., leg. Y. Bulak, 24.VI.2009, 35 exs., leg. Y. Bulak, 25.VI.2009, 1 ex., leg. Y. Bulak, 29.VI.2009, 3 exs., leg. Y. Bulak, 30.VI.2009, 1 ex., leg. Y. Bulak, 1.VII.2009, 2 exs., leg. Y. Bulak, 20.VII.2010, 1 ex., leg. E. Yıldırım, 22.VII.2009, 4 exs., leg. Y. Bulak; Pasinler, 1660 m, 14.VI.2009, 1 ex., leg. Y. Bulak; Tortum, Derekapı, 1400 m, 15.VI.2010, 12 exs., leg. G. Yazıcı. **Iğdır:** Tuzluca, 900 m, 18.VI.2009, 1 ex., leg. Y. Bulak. **Tokat:** University field, 623 m, 6.IV.2010, 2 exs., leg. Y. Bulak.

Distribution: Palaearctic region, USA, Canada, Chile, Australia, Tasmania, mentioned by Háva from Turkey (2007).

Anthrenus (s. str.) rotundulus Reitter, 1889

Material examined: **Iğdır:** 825 m, 20.VI.2009, 1 ex., leg. Y. Bulak. **Tokat:** University field, 623 m, 6.IV.2010, 4 exs., leg. Y. Bulak.

Distribution: Armenia, Egypt, Afghanistan, Caucasus, Iran, Turkmenistan, and Turkey (Háva, 2007).

Anthrenus (Florilinus) flavidus Solsky, 1876

Material examined: **Bayburt:** 1569 m, 22.VI.2009, 1 ex., leg. Y. Bulak. **Erzincan:** Akyazı, 1202 m, 11.VI.2010, 1 ex., leg. G. Yazıcı. **Erzurum:** 1850 m, 3.VII.2009, 1 ex., leg. Y. Bulak, 4.VII.2009, 3 exs., leg. Y. Bulak; Aziziye, Dadaşkent, 1850 m, 7.VII.2009, 2 exs., leg. Y. Bulak; Ortadüzü, 1800 m, 12.VII.2009, 1 ex., leg. Y. Bulak; Palandöken, 2400 m, 22.V.2010, 1 ex., leg. G. Yazıcı, 1850 m, 13.VI.2009, 1 ex., leg. Y. Bulak; Atatürk University field, 1850 m, 10.VI.2010, 1 ex., leg. E. Yıldırım, 12.VI.2009, 1 ex., leg. Y. Bulak, 24.VI.2009, 10 exs., leg. Y. Bulak, 26.VI.2009, 3 exs., leg. Y. Bulak, 29.VI.2009, 10 exs., leg. Y. Bulak, 30.VI.2009, 2 exs., leg. Y. Bulak, 1.VII.2009, 5 exs., leg. Y. Bulak, 2.VII.2009, 1 ex., leg. Y. Bulak, 4.VII.2009, 1 ex., leg. Y. Bulak; Çat, 1890 m, 27.VI.2009, 1 ex., leg. Y. Bulak; İspir, Çapans, 1350 m, 20.VIII.2009, 1 ex., leg. Y. Bulak; Tortum, Derekapı, 1400 m, 15.VI.2010, 1 ex., leg. G. Yazıcı. **Iğdır:** 825 m, 20.VI.2009, 2 exs., leg. Y. Bulak. **Tokat:** University field, 623 m, 6.IV.2010, 6 exs., leg. Y. Bulak.

Distribution: Poland, Afghanistan, Caucasus, China, Iran, Kazakhstan, Kyrgyzstan, Tadzhikistan, Turkmenistan, Uzbekistan, and Turkey (Háva, 2007).

Anthrenus (Nathrenus) verbasci (Linnaeus, 1767)

Material examined: **Erzincan:** Akyazı, 1202 m, 11.VI.2010, 1 ex., leg. G. Yazıcı. **Erzurum:** Atatürk University field, 1850 m, 30.VI.2009, 1 ex., leg. Y. Bulak, 19.VII.2009, 1 ex., leg. Y. Bulak, 20.VII.2009, 2 exs., leg. Y. Bulak; İspir, Madenköprübaşı, 1200 m, 20.VIII.2009, 11 exs., leg. Y. Bulak. **Tokat:** University field, 623 m, 6.IV.2010, 2 exs., leg. Y. Bulak.

Distribution: Cosmopolitan, mentioned by Háva from Turkey (2007).

Anthrenus (Nathrenus) zahradniki Háva, 2003

Material examined: **Erzurum**: İspir, Madenköprübaşı, 1245 m, 4.VIII.2012, 3 exs., leg. G. Yazıcı.

Distribution: Greece and Turkey (Háva, 2007).

Tribe **Megatomini*****Globicornis (s. str.) picta*** (Küster, 1851)

Material examined: **Erzurum**: Atatürk University field, 1850 m, 20.VII.2009, 1 ex., leg. Y. Bulak; Aşkale, 1600 m, 12.VIII.2009, 1 ex., leg. Y. Bulak.

Distribution: Albania, Armenia, Bulgaria, Bosnia, Czech Republic, Hercegovina, Cyprus, Greece, Hungary, Italy, Macedonia, Montenegro, Sardinia, Serbia, Sicily, Slovakia, Slovenia, Egypt, Israel, Jordan, and Turkey (Háva, 2007).

Phradonoma alium Háva, 2006

Material examined: **Bayburt**: Kop Mountain, 2370 m, 13.VIII.2009, 1 ex., leg. Y. Bulak. **Erzurum**: Çat road, 1850 m, 13.VII.2009, 1 ex., leg. Y. Bulak; Aşkale, 1600 m, 12.VIII.2009, 4 exs., leg. Y. Bulak. **Kars**: Sarıkamış, Karakurt, 1500 m, 13.VIII.2009, 9 exs., leg. Y. Bulak.

Distribution: Turkey (Hakkâri, Suvari Halil Pass) (Háva, 2006).

Phradonoma villosulum (Duftschmid, 1825)

Material examined: **Erzurum**: Aşkale, 1600 m, 12.VIII.2009, 1 ex., leg. Y. Bulak. **Kars**: Sarıkamış, 1900 m, 13.VIII.2009, 18 exs., leg. Y. Bulak.

Distribution: Europe, Iran, Kyrgyzstan, Syria, and Turkey (Háva, 2007).

Trogoderma variabile Ballion, 1878

Material examined: **İğdır**: Tuzluca, 900 m, 18.VI.2009, 2 exs., leg. Y. Bulak.

Distribution: Armenia, Czech Republic, England, Finland, Italy, Lithuania, Sweden, Morocco, South Africa, Peru, Canada, Mexico, USA, Afghanistan, Caucasus, China, Iran, Kazakhstan, Mongolia, Saudi Arabia, Tadjikistan, Turkmenistan, Uzbekistan, Vietnam, Australia, New Zealand, and Turkey (Háva, 2007).

Trogoderma granarium Everts, 1898

Material examined: **Gaziantep**: 850 m, 15.VI.1995, 1 ex., leg. E. Yıldırım.

Distribution: Cosmopolitan, mentioned by Háva from Turkey (2007).

Trogoderma glabrum (Herbst, 1783)

Material examined: **Erzurum**: Atatürk University field, 1850 m, 2.VII.2009, 1 ex., leg. Y. Bulak.

Distribution: Europe, Canada, Mexico, USA, Caucasus,

Iran, Kazakhstan, Mongolia, Uzbekistan, Oman, Russia, Siberia, Chile, and Turkey (Háva 2007).

4. Discussion

In this study, 28 species of 6 genera belonging to 3 subfamilies (Attageninae, Dermestinae, Megatominae) from the family Dermestidae were recorded from Turkey. Among them, *Attagenus unicolor unicolor* (Brahm, 1791), *Anthrenus scrophulariae scrophulariae* (Linnaeus, 1758), and *Anthrenus goliath* Saulcy in Mulsant & Rey, 1868 were found to be the most abundant and widespread species. Separately, *Anthrenus eichleri* Kadej & Háva, 2006 is a new record for the Turkish fauna. In addition, new localities have been added for some species previously reported from Turkey.

Regular collections of insects between 1965 and 2012 in Turkey allowed the capture of a representative (though not complete) sample of the fauna of Dermestidae: 28 species from 6 genera belonging to family Dermestidae. The majority of the species belong to the Mediterranean or Euro-Siberian faunal kingdoms. The collection data are interesting in terms of national or regional distribution of species (with many new localities added to known distribution). They also give information on the biology of the species (dates of the first or the last catch); the altitudes of collection stations are greatly indicative, as well. All of these data contribute to a better knowledge of Turkish fauna and of the ecology of Dermestidae in the north-eastern part of the Mediterranean basin, particularly the less common Dermestidae.

Turkey is one of the most interesting countries located in the western Palaearctic region, where most of the insect families including Dermestidae exist. Thus, some faunistic studies on the family Dermestidae have been conducted by foreign and native researchers in Turkey. Seventy-four species from Dermestidae have been recorded from Turkey by different researchers. As a result of the current study, the total number of species of Dermestidae recorded from Turkey up to now has been increased to 75, and the distribution of previously known species has broadened.

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