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The Geometridae (Lepidoptera) fauna of Bartın province in Black Sea Region, with a new record (*Pachynemina tibiaria* (RAMBUR, 1829)) for Turkey

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Abstract

In order to determine the Geometridae fauna of Bartın province where costal region of Black Sea, 1216 specimens collected between the years 2008 and 2012 by light trap in collection of Nazife Tuatay Plant Protection Museum and previous records from study area were evaluated. Totally 102 Geometridae species belong 4 subfamily were determined. There were 5 recorded species up to date but 4 recorded species could not be founded. 93 species were recorded for the first time from Bartın province. *Pachynemina tibiaria* (RAMBUR, 1829) were recorded newly for Turkish Geometridae fauna also.

Key words: *Pachynemina tibiaria*, new record, Geometridae, Black Sea, Bartın, Turkey

Zusammenfassung

Um die Geometridae-Fauna der Bartın-Provinz, in der Küstenregion des Schwarzen Meeres, zu bestimmen, wurden 1216 Exemplare, gesammelt durch Lichtfalle in den Jahren von 2008 bis 2012, aus der Sammlung des Nazife Tuatay Pflanzenschutzmuseums und frühere Aufzeichnungen aus dem Untersuchungsgebiet ausgewertet. Insgesamt 102 Geometridae-Arten wurden als zu 4 Unterfamilien gehörig bestimmt. Bisher wird von 5 Arten berichtet, 4 Arten aber konnten nicht nachgewiesen werden. 93 Arten wurden zum ersten Mal in der Provinz Bartın registriert. *Pachynemina tibiaria* (RAMBUR, 1829) wurde in die türkische Geometridae-Fauna neu aufgenommen.

Introduction

The geometrids are the most species-rich family of Lepidoptera apart from Noctuidae and Pyralidae. There are over 23000 decripted species known in worldwide (SCOBLE & HAUSMANN, 2007), 900 in Europe (HAUSMANN, 2001) and 608 in Turkey (KOÇAK & KEMAL, 2009). Geometrid species are ordinarily nocturnal, they often fly preferably at dusk, others are said to be active mainly after midnight but some species fly by day. Most geometrids

are sensitive to changing of habitat quality. Compared with most other macrolepidopterous families, species of Geometridae tend to be more specific to certain habitats and also highly suitable for use as an environmental indicator group. (SCOBLE, 1999; HAUSMANN, 2001).

Bartın is one of the provinces of Turkey where state on Southwestern coast of Black Sea. It is located in the Euxin province within the borders of the Euro-Siberian region as biogeographically. (DEMİRÖRS & KURT, 2005).

The study area is oceanic climate feature in dominantly and characterized humid forests, pseudo-maquis and primary structure degraded farmland as plant communities. The main tree species of humid forests on the more north-facing surface of the mountains are *Fagus orientalis*, *Quercus petraea*, *Castanea sativa* and in higher levels *Abies bornmulleriana*. Among these species are common as scattered *Carpinus betulus*, *Populus tremula*, *Alnus glutinosa*, *Acer platanoides*, ve *Tilia tomentosa*, *Rhododendron ponticum*, *Daphne pontica* and *Ilex aquifolium* as the undergrowth plant. Dry forests cover much narrower areas than humid forests. Ravaged forest areas at the costal regions are covered by pseudomaquis. Pseudomaquis starts from the costal line, it goes up to 350-400 m. It is also seen throughout the valleys of the sea exposure. However, in some regions primary vegetation is disturbed by factors such as agricultural activities and overgrazing (DÖNMEZ, 2014).

The studies on determine the geometrid fauna of the Black Sea region of Turkey were firstly started with MANN (1859, 1861) in Amasya and SCHWINGENSCHUSS (1939a, 1939b) in Bolu province. SEVEN (1991, 1995), KOÇAK & SEVEN (1991), ÖZDEMİR (2007), CAN (2008), OKYAR (2012) and ÖZDEMİR (2016, 2017) can be given as important studies on Geometridae fauna from different part of Black Sea. AKBULUT et al. (2003), OKYAR et. al. (2009) and AKKUZU et al. (2015) are studied on geometrids where close locations of Bartın. The knowledge on Geometridae fauna of Bartın province is quite limited. There were 9 species recorded from Bartın until now (TOPER KAYGIN et al., 2009; OKYAR, 2012).

The importance of faunistic records is great because the spread of species can be accurately assessed. In this article, the findings of the study carried out in the province of Bartın on the southwestern coastal line of the Black Sea and the previous records from this area were evaluated jointly. It is believed that the study will contribute to the evaluation of species diversity in the black sea coastal line and neighboring areas.

Material and Methods

In this study, the specimens collected by light trap (8W black light fluorescent lamp) from Bartın Province during the years 2008-2012 and previous records were investigated. The specimens were determined according to external characters and male or female genitalia morphology. For genitalia preparations, the abdomens of materials were boiled in 10% KOH solution, dissected under a stereo microscope, and slides were mounted with Entellan. VARDIKJAN (1985), HAUSMANN (2001, 2004) MIRONOV (2003) HAUSMANN & VIIDALEPP (2012) and SKOU & SIHVONEN (2015) were used for the identification.

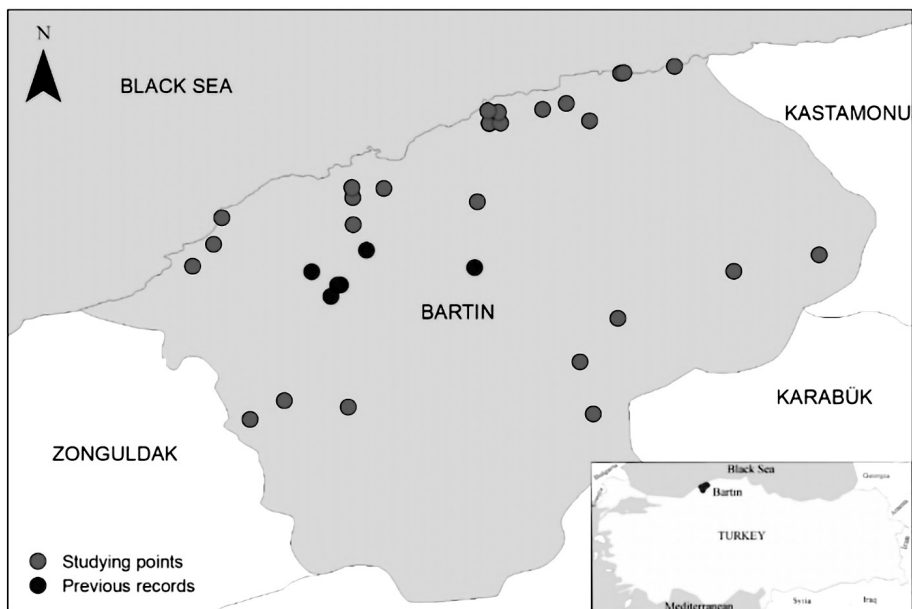


Fig. 1: The map to the localities sampled and previous records in the study area.

Results

Subfamily: *Geometrinae* STEPHENS, 1829

Chlorissa cloraria (HÜBNER, 1813)

Examined material: Amasra, Aliobası 150m 22.V.2012 1♂, 41°46'39"N 32°30'59"E; Çakrazova 65m 21.V.2012 1♂, 41°46'38"N 32°30'17"E; Center, Bahçecik 244m 19.VII.2012 1♀ 2♂♂, 41°28'49"N 32°36'41"E.

Distribution in Turkey: Balıkesir Bolu, Düzce Edirne Zonguldak (KOÇAK & KEMAL 2009, ALTIPARMAK 2010; OKYAR 2012)

Eucrostes indigenata (DE VILLERS, 1789)

Examined material: Kurucaşile, Uğurlu 210m 2.VIII.2011 1♀ 1♂, 41°50'8"N 32°41'40"E.

Distribution in Turkey: Antalya, Bursa, Hatay (KOÇAK & KEMAL 2009; CAN 2010).

Hemithea aestivaria (HÜBNER, 1789)

Examined material: Amasra, Akkonak 50m 19.VII.2012 1♂, 41°47'25"N 32°30'12"E; Hatipler 100m 2.VIII.2011 1♀, 41°46'39"N 32°30'18"E.

Distribution in Turkey: Amasya, Bolu, Bursa, Düzce, Edirne, İstanbul, Ordu, Trabzon, (OKYAR & MIRONOV 2008; KOÇAK & KEMAL 2009; ÖZDEMİR 2016).

***Jodis lactearia* (LINNAEUS, 1758)**

Examined material: Amasra, Akkonak 50m 19.VII.2012 1♂, 41°47'25"N 32°30'12"E.
Distribution in Turkey: Bolu, Bursa, Düzce, Kastamonu, Kayseri, Ordu, Rize, Tekirdağ, Trabzon (KOÇAK & KEMAL 2009; OKYAR 2010b; ÖZDEMİR 2016).

***Phaiogramma etruscaria* (ZELLER, 1849)**

Examined material: Amasra, Akkonak 200m 2.VIII.2011 1♂, 41°47'19"N 32°30'51"E; Çakrazova 65m 21.V.2012 1♂, 41°46'38"N 32°30'17"E; Hatipler 100m 2.VIII.2011 2♂♂, 41°46'39"N 32°30'18"E; Kurucaşile, Uğurlu 210m 2.VIII.2011 1♂, 41°50'08"N 32°41'40"E.
Distribution in Turkey: Artvin, Adana, Amasya, Bolu, Bursa, Çanakkale, Edirne, Gaziantep, Giresun, Hatay, Isparta, İçel, Kırklareli, Konya, Kahramanmaraş, Ordu, Osmaniye, Siirt, Sivas, Trabzon, Van (DOĞANLAR 2003; OKYAR & MIRONOV 2008; KOÇAK & KEMAL 2009; CAN 2010; GÖKTÜRK 2011; KOYUNCU 2011; KEMAL & SEVEN 2013; ÖZDEMİR 2016; SEVEN & AKIN 2016).

***Proteuchloris neriaria* (HERRICH-SCHÄFFER, 1852)**

Previous record from Bartın: Bartın Credit and Housing Agency Park 01.VI.2007 (TOPER KAYGIN et al., 2009)
Distribution in Turkey: Adana, Amasya, Bolu, Bursa, Bartın, Çanakkale, Edirne, Gaziantep, Hatay, İçel, Kahramanmaraş, Osmaniye, Siirt (KOÇAK & KEMAL 2009; CAN 2010; OKYAR 2010; KOYUNCU 2011; SEVEN 2014).

***Pseudoterpna pruinata* (HUFNAGEL, 1767)**

Examined material: Amasra, Hatipler 100m 2.VIII.2011 1♀ 1♂, 41°46'39"N 32°30'18"E; Arıt, Kocaköy 180m 6.IX.2010 3♂♂, 41°41'50"N 32°29'34"E.
Distribution in Turkey: Ankara, Bolu, Bursa, Düzce, Karabük, Muğla, Sinop (KOÇAK & KEMAL 2009; OKYAR 2012).

Subfamily: S t e r r h i n a e MEYRICK, 1892

***Cyclophora albiocellaria* (HÜBNER, 1789)**

Examined material: Amasra, Çakrazova 65m 21.V.2012 1♂, 41°46'38"N 32°30'17"E.
Distribution in Turkey: Amasya, Bursa, Düzce (AKBULUT et al. 2003; KOÇAK & KEMAL 2009).

***Cyclophora annularia* (FABRICIUS, 1775)**

Examined material: Amasra, Akkonak 200m 2.VIII.2011 1♂, 41°47'19"N 32°30'51"E; 50m 19.VII.2012 1♀, 41°47'25"N 32°30'12"E; Çakrazova 65m 21.V.2012 1♀, 41°46'38"N 32°30'17"E; Kurucaşile, Paşalar 400m 22.V.2012 2♀♀, 41°46'47"N 32°36'28"E.
Distribution in Turkey: Bolu, Bursa, Düzce, İstanbul, Rize, Kahramanmaraş, Trabzon, (KOÇAK & KEMAL 2009).

***Cyclophora linearia* (HÜBNER, 1799)**

Examined material: Amasra, Akkonak 200m 2.VIII.2011 1♂, 41°47'19"N 32°30'51"E; Çakrazova 65m 21.V.2012 1♀, 41°46'38"N 32°30'17"E; Kurucaşile, Paşalar 400m 22.V.2012 21♀♀ 17♂♂, 41°46'47"N 32°36'28"E; Ulus, Aşağıemirce 240m 29.IX.2011 2♀♀ 6♂♂, 41°32'01"N 32°35'52"E.

Distribution in Turkey: Adana, Bolu, Düzce, Edirne, Hatay, İstanbul, Kastamonu, Kırklareli Ordu, Rize, Trabzon, (KOÇAK & KEMAL 2009; OKYAR 2010b; ÖZDEMİR 2016)

***Cyclophora pupillaria* (HÜBNER, 1799)**

Examined material: Amasra, Akkonak 200m 2.VIII.2011 27♀♀ 24♂♂, 41°47'19"N 32°30'51"E; Çakrazova 65m 21.V.2012 1♂, 41°46'38"N 32°30'17"E; Kozpınarı 327m 29.IX.2011 1♂, 41°42'41"N 32°21'50"E; Kurucaşile, Curunlu 220m 2.VIII.2011 11♀♀ 19♂♂, 41°49'44"N 32°38'34"E; Dizlermezeci 220m 22.V.2012 1♀ 1♂, 41°47'52"N 32°35'01"E; Karaman Village 130m 19.IX.2012 1♀, 41°49'43"N 32°38'22"E; Bartın center, Arıönü 300m 28.IX.2011 1♂, 41°7'52"N 32°12'04"E; Bahçecik 244m 19.VII.2012 1♂, 41°28'49"N 32°36'41"E; Port area 130m 28.IX.2011 1♀ 8♂♂, 41°40'50"N 32°13'51"E; Ulus, 300m 29.IX.2011 1♂, 41°34'41"N 32°38'12"E.

Distribution in Turkey: Adana, Ankara, Antalya, Bolu, Bursa, Çanakkale, Düzce, Hatay, İcel, İstanbul, Kahramanmaraş, Konya, Manisa, Muğla, Ordu, Osmaniye, Sivas (DOĞANLAR 2003; KOÇAK & KEMAL 2009; ÖZDEMİR 2016).

***Cyclophora quercimontaria* (BASTELBERGER, 1897)**

Examined material: Amasra, Çakrazova 65m 21.V.2012 3♀♀ 2♂♂, 41°46'38"N 32°30'17"E; Top Deresi 234m 21.V.2012 1♂, 41°42'39"N 32°23'49"E; Ulus, Aşağıemirce 240m 29.IX.2011 1♂, 41°32'01"N 32°35'52"E.

Distribution in Turkey: Artvin, Bolu, Düzce, Ordu, Van (KOÇAK & KEMAL 2009; ÖZDEMİR 2016).

***Idaea aversata* (LINNAEUS, 1758)**

Examined material: Amasra, Hatıpler 100m 2.VIII.2011 1♀, 41°46'39"N 32°30'18"E; Bartın center, Bahçecik 244m 19.VII.2012 6♀♀ 2♂♂, 41°28'49"N 32°36'41"E.

Distribution in Turkey: Amasya, Ardahan, Bolu, Bursa, Çanakkale, Düzce, Edirne, Hatay, İstanbul, Kırklareli, Konya, Ordu, Sakarya, Siirt, Tekirdağ, Trabzon, Van (DOĞANLAR 2003; OKYAR & MIRONOV 2008; KOÇAK & KEMAL 2009; OKYAR 2012; SEVEN 2014; ÖZDEMİR 2016).

***Idaea consolidata* (LEDERER, 1853)**

Examined material: Amasra, Akkonak 200m 2.VIII.2011 1♀, 41°47'19"N 32°30'51"E; Bartın center, Bahçecik 244m 19.VII.2012 1♀ 4♂♂, 41°28'49"N 32°36'41"E.

Distribution in Turkey: Amasya, Ankara, Antalya, Bursa, İstanbul, Kahramanmaraş (KOÇAK & KEMAL 2009).

***Idaea degeneraria* (HÜBNER, 1799)**

Previous record: Bartın Credit And Housing Agency Park 10.VI.2007 (TOPER KAYGIN et al. 2009).

Examined material: Amasra, Akkonak 200m 2.VIII.2011 1♀, 41°47'19"N 32°30'51"E; Aliobası 150m 22.V.2012 1♂, 41°46'39"N 32°30'59"E; Çakrazova 65m 21.V.2012 12♀♀ 5♂♂, 41°46'38"N 32°30'17"E; Kurucaşile, Curunlu 220m 2.VIII.2011 1♀, 41°49'44"N 32°38'34"E; Paşalar 400m 22.V.2012 5♀♀ 3♂♂, 41°46'47"N 32°36'28"E; Port area 130m 28.IX.2011 1♂, 41°40'50"N 32°13'51"E; Ulus, Aşağıemirce 240m 29.IX.2011 1♀, 41°32'01"N 32°35'52"E; Hasanören 640m 29.IX.2011 1♀, 41°37'34"N 32°45'19"E.

Distribution in Turkey: Adana, Amasya, Ankara, Antalya, Bartın, Bolu, Bursa, Çanakkale, Edirne, Gaziantep, Hatay, Hakkari, İçel, İstanbul, Kahramanmaraş, Kırıkkale, Kırklareli, Konya, Ordu, Osmaniye, Siirt, Sivas, Tekirdağ, Tokat, Trabzon, Van (DOĞANLAR 2003; OKYAR & MIRONOV 2008; KOÇAK & KEMAL 2009; TOPER KAYGIN et al. 2009; ALTIPARMAK 2010; KOYUNCU & KÜTÜK 2011; KEMAL & SEVEN 2013; ÖZDEMİR 2016; KEMAL et al. 2017).

***Idaea dimidiata* (HUFNAGEL, 1767)**

Examined material: Amasra, Akkonak 200m 2.VIII.2011 3♂♂, 41°47'19"N 32°30'51"E; Çakrazova 65m 21.V.2012 1♂, 41°46'38"N 32°30'17"E; Arıt, Kocaköy 180m 6.IX.2010 1♂, 41°41'50"N 32°29'34"E.

Distribution in Turkey: Adana, Amasya, Ardahan, Bolu, Bursa, Düzce, Gaziantep, Hatay, İstanbul, Kırklareli, Manisa, Muğla, Ordu, Kahramanmaraş, Zonguldak (KOÇAK & KEMAL 2009; KOYUNCU & KÜTÜK 2011; OKYAR 2012; ÖZDEMİR 2016).

***Idaea flicata* (HÜBNER, 1799)**

Examined material: Amasra, Çakrazova 65m 21.V.2012 1♀ 1♂, 41°46'38"N 32°30'17"E; Top Deresi 234m 21.V.2012 1♂, 41°42'39"N 32°23'49"E; Kurucaşile, Paşalar 400m 22.V.2012 4♀♀, 41°46'47"N 32°36'28"E.

Distribution in Turkey: Adana, Amasya, Bolu, Bursa, Çanakkale, Edirne, Hakkari, İçel, İstanbul, Kırıkkale, Konya, Manisa, Kahramanmaraş, Muğla, Ordu, Osmaniye, Siirt, Sivas, Tekirdağ, Tokat, Trabzon, Van (DOĞANLAR 2003; KOÇAK & KEMAL 2009; SEVEN 2014; ÖZDEMİR 2016; KEMAL et al. 2017).

***Idaea infirmaria* (RAMBUR, 1833)**

Examined material: Kurucaşile, Curunlu 220m 2.VIII.2011 1♀, 41°49'44"N 32°38'34"E.

Distribution in Turkey: Çanakkale, Muğla (KOÇAK & KEMAL 2009).

***Idaea deversaria* (HERRICH & SCHAFFER, 1847)**

Examined material: Amasra, Aliobası 150m 22.V.2012 5♀♀ 3♂♂, 41°46'39"N 32°30'59"E; Kazpınarı 60m 15.VI.2010 3♀♀, 41°42'05"N 32°21'54"E; Kurucaşile, Karaman Village 130m 19.IX.2012 3♀♀ 8♂♂, 41°49'43"N 32°38'22"E; Paşalar 400m 22.V.2012 6♀♀ 5♂♂, 41°46'47"N 32°36'28"E.

Distribution in Turkey: Amasya, Ankara, Antalya, Bolu, Bursa, Düzce, Gümüşhane, İçel, İstanbul, Kırklareli, Konya, Rize, Siirt, Trabzon (KOÇAK & KEMAL 2009; OKYAR 2010b; SEVEN 2014).

***Idaea obsoletaria* (RAMBUR, 1833)**

Examined material: Kurucaşile, Uğurlu 210m 2.VIII.2011 2♂♂, 41°50'08"N 32°41'40"E.

Distribution in Turkey: Amasya, Antalya, Bolu, Bursa, İzmir, Kırklareli Siirt Sivas (KOÇAK & KEMAL 2009; SEVEN 2014; KEMAL & KOÇAK 2015b).

***Idaea ochrata* (SCOPOLI, 1763)**

Examined material: Bartın center, Bahçecik 244m 19.VII.2012 1♀ 1♂, 41°28'49"N 32°36'41"E.

Distribution in Turkey: Amasya, Bolu, Bursa, Çanakkale, Düzce, Edirne, Gaziantep, Iğdır, İstanbul, Kırklareli, Kahramanmaraş, Karabük, Kastamonu, Ordu, Siirt, Tekirdağ, Van, Zonguldak (OKYAR & MIRONOV 2008; KOÇAK & KEMAL 2009; ALTIPARMAK 2010; KOYUNCU & KÜTÜK 2011; OKYAR 2012; SEVEN 2014; ÖZDEMİR 2016)

***Idaea politaria* (HÜBNER, 1799)**

Examined material: Amasra, Akkonak 50m 19.VII.2012 2♂♂, 41°47'25"N 32°30'12"E; Bartın center, Şabankadı 250m 23.VI.2009 1♂, 41°29'38"N 32°17'42"E.

Distribution in Turkey: Adana, Amasya, Antalya, Bolu, Bursa, Düzce, Edirne, Hatay, İçel, İstanbul, Kastamonu, Kırklareli, Manisa Ordu Siirt (KOÇAK & KEMAL 2009; OKYAR 2012; SEVEN 2014; ÖZDEMİR 2016).

***Idaea rubraria* (STAUDINGER, 1901)**

Examined material: Amasra, Hatipler 100m 2.VIII.2011 1♂, 41°46'39"N 32°30'18"E; Kurucaşile, Curunlu 220m 2.VIII.2011 1♀, 41°49'44"N 32°38'34"E; Uğurlu 210m 2.VIII.2011 2♂♂, 41°50'08"N 32°41'40"E.

Distribution in Turkey: Scattered populations in Turkey (HAUSMANN 2004).

***Idaea rufaria* (HÜBNER, 1799)**

Examined material: Amasra, Kalaycı 142m 4.VI.2008 1♂, 41°47'30"N 32°33'34"E.

Distribution in Turkey: Amasya, Bolu, Bursa, Çanakkale, Çorum, Edirne, Iğdır, İçel, İstanbul, Karabük, Kastamonu, Kırklareli, Konya, Osmaniye, Sivas, Van (KOÇAK & KEMAL 2009; OKYAR 2012)

***Idaea straminata* (BORKHAUSEN, 1794)**

Examined material: Arit, Kocaköy 180m 6.IX.2010 1♀ 1♂, 41°41'50"N 32°29'34"E.

Distribution in Turkey: Amasya, Bursa, Düzce, Kars, Konya, Ordu, Rize (KOÇAK & KEMAL 2009; OKYAR 2010b; ÖZDEMİR 2016)

***Idaea subsericeata* (HAWORTH, 1809)**

Examined material: Amasra, Akkonak 200m 2.VIII.2011 4♀♀ 7♂♂, 41°47'19"N 32°30'51"E; Çakrazova 65m 21.V.2012 2♀♀ 1♀, 41°46'38"N 32°30'17"E; Hatipler 100m 2.VIII.2011 5♂♂, 41°46'39"N 32°30'18"E; Arit, Kocaköy 180m 6.IX.2010 3♂♂, 41°41'50"N 32°29'34"E; Kurucaşile, Curunlu 220m 2.VIII.2011 2♂♂, 41°49'44"N 32°38'34"E; Paşalar 400m 22.V.2012 1♀, 41°46'47"N 32°36'28"E; Uğurlu 210m 2.VIII.2011 2♂♂, 41°50'8"N 32°41'40"E.

Distribution in Turkey: Adana, Amasya, Antalya, Bolu, Bursa, Düzce, Çanakkale, Edirne, Hatay, İçel, İstanbul, Kahramanmaraş, Ordu, Siirt, Tekirdağ (KOÇAK & KEMAL 2009; OKYAR 2012; SEVEN 2014; ÖZDEMİR 2016).

***Rhodostrophia discopunctata* AMSEL, 1935**

Examined material: Amasra, Çakrazova 65m 21.V.2012 3♂♂, 41°46'38"N 32°30'17"E; Kazınarı 60m 15.VI.2010 1♂, 41°42'05"N 32°21'54"E; Bartın center, Şabankadı 250m 23.VI.2009 4♀♀ 3♂♂, 41°29'38"N 32°17'42"E; Şarköy 200m 23.VI.2009 1♀, 41°29'14"N 32°21'37"E.

Distribution in Turkey: Amasya, Ankara, Batman, Bitlis, Bolu, Bursa, Çanakkale, Çankırı, Düzce, Gaziantep, Gırasun, Gümüşhane, Hakkari, İçel, Karabük, Kastamonu, Kayseri, Konya, Kahramanmaraş, Nevşehir, Osmaniye, Rize, Siirt, Sivas, Tokat, Van (KOÇAK & KEMAL 2009; OKYAR 2010b; KOYUNCU & KÜTÜK 2011; OKYAR 2012; KEMAL & SEVEN 2013; KEMAL et al. 2017).

***Rhodostrophia vibicaria* (CLERCK, 1759)**

Examined material: Amasra, Çakrazova 65m 21.V.2012 1♀ 1♂, 41°46'38"N 32°30'17"E.

Distribution in Turkey: Amasya, Ardahan, Bayburt, Bitlis, Bolu, Çanakkale, Düzce, Edirne, Gümüşhane, Iğdır, İstanbul, Kastamonu, Kayseri, Kırklareli, Konya, Ordu, Siirt, Sinop, Sivas, Tekirdağ, Tokat, Trabzon, Van, Bayburt, Iğdır (OKYAR & AKTAÇ 1999; AKBULUT et al. 2003; KOÇAK & KEMAL 2009; KEMAL & SEVEN 2013; OKYAR 2012; KEMAL & KOÇAK 2015b; ÖZDEMİR 2016).

***Scopula flaccidaria* (ZELLER, 1852)**

Examined material: Amasra, Akkonak 200m 2.VIII.2011 1♀ 1♂, 41°47'19"N 32°30'51"E; 50m 19.VII.2012 1♂, 41°47'25"N 32°30'12"E; Kalaycı 142m 4.VI.2008 1♂, 41°47'30"N 32°33'34"E; Arıt, Kocaköy 180m 6.IX.2010 1♂, 41°41'50"N 32°29'34"E; Kurucaşile, Uğurlu 210m 2.VIII.2011 1♂, 41°50'08"N 32°41'40"E.

Distribution in Turkey: Adana, Amasya, Bursa, Edirne, Hatay, İçel, Kırklareli, Kahramanmaraş, Siirt, Tekirdağ (KOÇAK & KEMAL 2009; SEVEN 2014).

***Scopula imitaria* (Hübner, 1799)**

Previous record: 12.VI.2007, Catmaca (adult) (TOPER KAYGIN et al. 2009).

Examined material: Amasra, Akkonak 200m 2.VIII.2011 1♀, 41°47'19"N 32°30'51"E; Çakrazova 65m 21.V.2012 1♂, 41°46'38"N 32°30'17"E; Kazınarı 60m 15.VI.2010 2♀♀ 4♂♂, 41°42'05"N 32°21'54"E; Kurucaşile, Karaman Village 130m 19.IX.2012 1♂, 41°49'43"N 32°38'22"E; Bartın center, Port area 130m 28.IX.2011 1♀, 41°40'50"N 32°13'51"E.

Distribution in Turkey: Amasya, Antalya, Aydın, Balıkesir, Bartın, Bolu, Bursa, Düzce, Edirne, Hatay, Iğdır, İstanbul, İzmir, Manisa, Muğla, Sinop, Tekirdağ (AKBULUT et al. 2003; KOÇAK & KEMAL 2009; ALTIPARMAK 2010).

***Scopula marginepunctata* (GOEZE, 1781)**

Examined material: Kurucaşile, Curunlu 220m 2.VIII.2011 1♂, 41°49'44"N 32°38'34"E; Karaman village 130m 19.IX.2012 2♀♀, 41°49'43"N 32°38'22"E; Uğurlu 210m 2.VIII.2011 1♀ 2♂♂, 41°50'08"N 32°41'40"E; Bartın center, Arıönü 300m 28.IX.2011 2♂♂, 41°37'52"N 32°12'04"E; Güzelcehisar 220m 28.IX.2011 1♀ 1♂, 41°39'13"N 32°13'21"E; Port area 130m 28.IX.2011 1♀, 41°40'50"N 32°13'51"E; Ulus, Gökpınar 730m 29.IX.2011 1♂ 41°38'35"N 32°50'34"E; Hasanören 640m 29.IX.2011 2♂♂, 41°37'34"N 32°45'19"E.

Distribution in Turkey: Adana, Amasya, Bolu, Bursa, Çanakkale, Diyarbakır, Düzce, Edirne, Erzincan, Hakkari, Iğdır, İstanbul, İzmir, Kayseri, Kırıkkale, Kırklareli, Konya, Kahramanmaraş, Ordu, Osmaniye, Siirt, Sivas, Tekirdağ, Tokat, Trabzon, Van (KOÇAK & KEMAL 2009; KEMAL et al. 2011; KEMAL & SEVEN 2013; ÖZDEMİR 2016; KEMAL et al. 2017).

***Scopula nigropunctata* (HUFNAGEL, 1767)**

Examined material: Amasra, Akkonak 200m 2.VIII.2011 1♂, 41°47'19"N 32°30'51"E; Bartın center, Port area 130m 28.IX.2011 1♀, 41°40'50"N 32°13'51"E.

Distribution in Turkey: Ankara, Bolu, Düzce, Edirne, İstanbul, Kastamonu, Kırklareli, Ordu, Sakarya (KOÇAK & KEMAL 2009; OKYAR 2012; ÖZDEMİR 2016).

***Scopula ornata* (SCOPOLI, 1763)**

Examined material: Amasra, Akkonak 200m 2.VIII.2011 1♂, 41°47'19"N 32°30'51"E; Bartın center, Arıönü 300m 28.IX.2011 1♂, 41°37'52"N 32°12'04"E.

Distribution in Turkey: Adana, Amasya, Ankara, Antalya, Aydın, Bilecik, Bitlis, Bolu, Bursa, Çanakkale, Çankırı, Düzce, Edirne, Gümüşhane, Hakkari, Iğdır İstanbul, Kırklareli, Ordu, Tekirdağ, Trabzon, Van, Yalova (DOĞANLAR 2003; KOÇAK & KEMAL 2009; ÖZDEMİR 2016; KEMAL et al. 2017; KEMAL & KOÇAK 2017).

***Scopula rubiginata* (HUFNAGEL, 1767)**

Previous record: Ağdacı village 17.VI.2007, (TOPER KAYGIN et al. 2009).

Distribution in Turkey: Amasya, Ankara, Antalya, Ardahan, Artvin, Bartın, Bitlis, Bolu, Bursa, Düzce, Erzincan, İstanbul, Kastamonu, Kırklareli, Konya, Malatya, Ordu, Sivas, Tekirdağ (KOÇAK & KEMAL 2009; GÖKTÜRK 2011; OKYAR 2012; ÖZDEMİR 2016).

***Scopula submutata* (TREITSCHKE, 1828)**

Examined material: Ulus, Gökpınar 730m 29.IX.2011 1♂, 41°38'35"N 32°50'34"E.

Distribution in Turkey: Adana, Amasya, Ankara, Antalya, Bitlis, Bursa, Çanakkale, Erzincan, Hatay, İçel, Konya, Manisa, Kahramanmaraş, Kırıkkale, Mardin, Siirt, Sivas (KOÇAK & KEMAL 2009; KEMAL & SEVEN 2013).

***Timandra comae* SCHMIDT, 1931**

Previous record: Çamköy, 1♀, 1♂ (OKYAR 2012).

Distribution in Turkey: Adana, Amasya, Artvin, Bartın, Bursa, Edirne, İçel, İstanbul, Kırklareli, Konya, Ordu, Rize, Samsun, Sivas, Tekirdağ (KOÇAK & KEMAL 2009; OKYAR 2012; ÖZDEMİR 2016).

Subfamily: Larentiinae MEYRICK, 1892

***Aplocera efformata* (GUENÉE, 1858)**

Examined material: Kurucaşile, Curunlu 220m 2.VIII.2011 3♂♂, 41°49'44"N 32°38'34"E; Karaman village 130m 19.IX.2012 2♀♀ 3♂♂, 41°49'43"N 32°38'22"E; Bartın center, Güzelcehisar 220m 28.IX.2011 1♂, 41°39'13"N 32°13'21"E.

Distribution in Turkey: Bolu, Çanakkale, Düzce, Edirne, İstanbul, Kırklareli, Manisa (KOÇAK & KEMAL 2009).

***Asthena albulata* (HUFNAGEL, 1767)**

Examined material: Amasra, Akkonak 50m 19.VII.2012 13♂♂, 41°47'25"N 32°30'12"E; Çakrazova 65m 21.V.2012 2♀♀ 1♂, 41°46'38"N 32°30'17"E; Kurucaşile, Paşalar 400m 22.V.2012 3♀♀ 7♂♂, 41°46'47"N 32°36'28"E; Bartın center, Bahçecik 244m 19.VII.2012 4♂♂, 41°28'49"N 32°36'41"E; Kaman 50m 21.V.2012 1♂, 41°40'25"N 32°21'56"E; Ulus, Aşağımircirce 240m 29.IX.2011 1♀, 41°32'01"N 32°35'52"E.

Distribution in Turkey: Bolu, Düzce, Edirne, İstanbul, Kastamonu, Kırklareli, Trabzon Zonguldak (KOÇAK & KEMAL 2009; OKYAR 2012).

***Camptogramma bilineata* (LINNAEUS, 1758)**

Examined material: Amasra, Akkonak 50m 19.VII.2012 1♀, 41°47'25"N 32°30'12"E; Amasra, Çakrazova 65m 21.V.2012 1♀, 41°46'38"N 32°30'17"E; Kurucaşile, Karaman village 130m 19.IX.2012 1♂, 41°49'43"N 32°38'22"E; Ulus, Hasanören 640m 29.IX.2011 1♀, 41°37'34"N 32°45'19"E.

Distribution in Turkey: Adana, Amasya, Ankara, Balıkesir, Bitlis, Bolu, Bursa, Çanakkale, Çankırı, Edirne, Elazığ, Gaziantep, Giresun, Hakkari, Hatay, İçel, İstanbul, İzmir, Kahramanmaraş, Kars, Kayseri, Kırklareli, Konya, Malatya, Manisa, Muğla, Ordu, Osmaniye, Rize, Siirt, Sinop, Şırnak, Tekirdağ, Tokat, Van (DOĞANLAR 2003; KOÇAK & KEMAL 2009; OKYAR 2010b; KOYUNCU 2011; KOÇAK & KEMAL 2015; ÖZDEMİR 2016).

***Catarhoe rubidata* (DENIS & SCHIFFERMÜLLER, 1775)**

Examined material: Amasra, Çakrazova 65m 21.V.2012 1♀, 41°46'38"N 32°30'17"E; Kazpınarı 60m 15.VI.2010 1♀, 41°42'05"N 32°21'54"E; Kurucaşile, Paşalar 400m 22.V.2012 1♀, 41°46'47"N 32°36'28"E.

Distribution in Turkey: Amasya, Bingöl, Bitlis, Bursa, Edirne, İstanbul, Kırklareli, Van (KOÇAK & KEMAL 2009).

***Chloroclystis v-ata* (HAWORTH, 1809)**

Examined material: Amasra, Aliobası 150m 22.V.2012 3♀♀ 2♂♂, 41°46'39"N 32°30'59"E; Çakrazova 65m 21.V.2012 2♀♀ 2♂♂, 41°46'38"N 32°30'17"E; Kurucaşile, Paşalar 400m 22.V.2012 11♀♀ 5♂♂, 41°46'47"N 32°36'28"E.

Distribution in Turkey: Ordu, Rize (OKYAR 2010b; ÖZDEMİR 2016).

***Cidaria fulvata* (FORSTER, 1771)**

Previous records: Sipahiler-Kayadibi 12.VII.2004 1250m, 1♂ (OKYAR 2012)

Distribution in Turkey: Ankara, Ardahan, Bartın, Bayburt, Bitlis, Bolu, Erzincan, Gümüşhane, Iğdır, Kastamonu, Konya, Sivas, Trabzon (KOÇAK & KEMAL 2009; OKYAR 2012).

***Coenotephria ablutaria hangayi* (VOJNITS, 1986)**

Examined material: Amasra, Çakrazova 65m 21.V.2012 1♀, 41°46'38"N 32°30'17"E; Kozpınarı 327m 29.IX.2011 7♂♂, 41°42'05"N 32°21'54"E; Bartın center, Arıönü 300m 28.IX.2011 1♂, 41°37'52"N 32°12'04"E.

Distribution in Turkey: Hatay, İçel, Siirt, Van, Central Anatolia (HAUSMANN & VIDALEPP 2012; SEVEN 2014; KEMAL & KOÇAK 2015a 2016c, 2017).

***Cosmorhoe ocellata* (LINNAEUS, 1758)**

Examined material: Amasra, Çakrazova 65m 21.V.2012 2♂♂, 41°46'38"N 32°30'17"E; Hatipler 100m 2.VIII.2011 1♂, 41°46'39"N 32°30'18"E; Kazpınarı 60m 15.VI.2010 1♂, 41°42'05"N 32°21'54"E; Arit, Kocaköy 180m 6.IX.2010 1♂, 41°41'50"N 32°29'34"E; Kurucaşile, Çurunlu 220m 2.VIII.2011 1♂, 41°49'44"N 32°38'34"E; Bartın center, Port area 130m 28.IX.2011 1♂, 41°40'50"N 32°13'51"E; Ulus, Aşağıemirce 240m 29.IX.2011 2♂♂, 41°32'01"N 32°35'52"E; Ulus, 300m 29.IX.2011 4♂♂, 41°34'41"N 32°38'12"E.

Distribution in Turkey: Adana, Amasya, Ankara, Bolu, Bursa, Düzce, Edirne, Gaziantep, İçel, İstanbul, İzmir, Kastamonu, Kocaeli, Tekirdağ, Trabzon (KOÇAK & KEMAL 2009; KOYUNCU 2011; BEŞKARDEŞ 2012; OKYAR 2012).

***Dysstroma truncata* (HUFNAGEL, 1767)**

Examined material: Ulus, 300m 29.IX.2011 1♀, 41°34'41"N 32°38'12"E.

Distribution in Turkey: Kars, Kastamonu, Rize, Trabzon (KOÇAK & KEMAL 2009; OKYAR 2010b, 2012).

***Epirrhoe galiata* (DENIS & SCHIFFERMÜLLER, 1775)**

Examined material: Amasra, Akkonak 200m 2.VIII.2011 1♂, 41°47'19"N 32°30'51"E; 50m 19.VII.2012 1♀; Çakrazova 65m 21.V.2012 1♀, 41°46'38"N 32°30'17"E; Kurucaşile, Karaman Village 130m 19.IX.2012 1♀ 3♂♂, 41°49'43"N 32°38'22"E; Uğurlu 210m 2.VIII.2011 2♀♀ 6♂♂, 41°50'08"N 32°41'40"E.

Distribution in Turkey: Amasya, Ankara, Bolu, Bursa, Gümüşhane, Hatay, İstanbul, Konya, Kahramanmaraş, Muğla, Niğde (KOÇAK & KEMAL 2009).

***Euphyia biangulata* (HAWORTH, 1809)**

Examined material: Arit, Kocaköy 180m 6.IX.2010 1♂, 41°41'50"N 32°29'34"E; Kurucaşile, Paşalar 400m 22.V.2012 1♂, 41°46'47"N 32°36'28"E.

Distribution in Turkey: Ardahan, Bolu, İstanbul, Ordu, Tokat (KOÇAK & KEMAL 2009; ÖZDEMİR 2016).

***Eupithecia breviculata* (DONZEL, 1837)**

Examined material: Bartın center, Şabankadı 250m 23.VI.2009 4♀♀, 41°29'38"N 32°17'42"E.

Distribution in Turkey: Amasya, Ankara, Balıkesir, Bolu, Bursa, Çanakkale, Diyarbakır, Hakkari, İzmir, Kahramanmaraş, Kırıkkale, Kırklareli, Konya, Osmaniye, Siirt, Van (KOÇAK & KEMAL 2009; KEMAL & SEVEN 2013; KEMAL et al., 2017).

***Eupithecia ericeata* (RAMBUR, 1833)**

Examined material: Ulus, Hasanören 640m 29.IX.2011 1♀, 41°37'34"N 32°45'19"E.

Distribution in Turkey: Bolu, Siirt (KOÇAK & KEMAL 2009; SEVEN 2014).

***Eupithecia haworthiata* DOUBLEDAY 1856**

Examined material: Amasra, Çakrazova 65m 21.V.2012 6♀♀ 1♂, 41°46'38"N 32°30'17"E; Aliobası 150m 22.V.2012 2♀♀, 41°46'39"N 32°30'59"E; Kurucaşile, Paşalar 400m 22.V.2012 1♀ 3♂♂, 41°46'47"N 32°36'28"E.

Distribution in Turkey: Ordu, Northern Anatolia (MIRONOV 2003; ÖZDEMİR 2016).

***Eupithecia selinata* Herrich-Schäffer, 1861**

Examined material: Kurucaşile, Paşalar 400m 22.V.2012 1♂, 41°46'47"N 32°36'28"E.

Distribution in Turkey: Ordu (ÖZDEMİR 2016)

***Eupithecia semigraphata* BRUAND, 1850**

Examined material: Amasra, Akkonak 200m 2.VIII.2011 1♂, 41°47'19"N 32°30'51"E; Kurucaşile, Karaman Village 130m 19.IX.2012 1♀ 1♂, 41°49'43"N 32°38'22"E; Bartın center, Arıönü 300m 28.IX.2011 1♀ 2♂♂, 41°37'52"N 32°12'04"E; Güzelcehisar 220m 28.IX.2011 2♀♀ 4♂♂, 41°39'13"N 32°13'21"E; Bartın center Port area 130m 28.IX.2011 3♂♂, 41°40'50"N 32°13'51"E; Ulus, Hasanören 640m 29.IX.2011 1♀, 41°37'34"N 32°45'19"E.

Distribution in Turkey: Amasya, Ankara, Hakkari, İstanbul, Konya, Kahramanmaraş, Ordu (OKYAR & MIRONOV 2008; KOÇAK & KEMAL 2009; ÖZDEMİR 2016).

***Gymnoscelis rufifasciata* (HAWORTH, 1809)**

Examined material: Amasra, Akkonak 200m 2.VIII.2011 1♂, 41°47'19"N 32°30'51"E; 50m 19.VII.2012 1♂, 41°47'25"N 32°30'12"E; Çakrazova 65m 21.V.2012 1♀, 41°46'38"N 32°30'17"E; Hatipler 100m 2.VIII.2011 3♂♂, 41°46'39"N 32°30'18"E; Kurucaşile, Karaman Village 130m 19.IX.2012 1♀, 41°49'43"N 32°38'22"E; Uğurlu 210m 2.VIII.2011 1♀, 41°50'08"N 32°41'40"E; Bartın center, Bahçecik 244m 19.VII.2012 1♀, 41°28'49"N 32°36'41"E; Güzelcehisar 220m 28.IX.2011 1♀, 41°39'13"N 32°13'21"E; Ulus, Aşağıemirce 240m 29.IX.2011 1♀, 41°32'01"N 32°35'52"E; Hasanören 640m 29.IX.2011 1♀, 41°37'34"N 32°45'19"E.

Distribution in Turkey: Adana, Amasya, Bolu, Bursa, Çanakkale, Edirne, Düzce, Hatay, Iğdır, İçel, İstanbul, İzmir, Kırıkkale, Konya, Mardin, Muğla, Osmaniye, Siirt (DOĞANLAR 2003; KOÇAK & KEMAL 2009; KEMAL & SEVEN 2013; KEMAL & KOÇAK 2016c).

***Horisme corticata* (TREITSCHKE, 1835)**

Examined material: Amasra, Çakrazova 65m 21.V.2012 1♂, 41°46'38"N 32°30'17"E; Kurucaşile, Paşalar 400m 22.V.2012 1♀ 3♂♂, 41°46'47"N 32°36'28"E; Bartın center, Bahçecik 244m 19.VII.2012 2♂♂, 41°28'49"N 32°36'41"E.

Distribution in Turkey: Amasya, Ankara, Bolu, Bursa, Düzce, İstanbul, Kahramanmaraş (KOÇAK & KEMAL 2009).

***Horisme tersata* (DENIS & SCHIFFERMÜLLER, 1775)**

Examined material: Amasra, Aliobası 150m 22.V.2012 1♀, 41°46'39"N 32°30'59"E; Çakrazova 65m 21.V.2012 1♂, 41°46'38"N 32°30'17"E; Hatipler 100m 2.VIII.2011 1♂, 41°46'39"N 32°30'18"E; Kazpınarı 60m 15.VI.2010 1♂, 41°42'05"N 32°21'54"E.

Distribution in Turkey: Amasya, Bolu, Bursa, İstanbul (KOÇAK & KEMAL 2009).

***Melanthia procellata* (DENIS & SCHIFFERMÜLLER, 1775)**

Examined material: Amasra, Akkonak 200m 2.VIII.2011 1♂, 41°47'19"N 32°30'51"E; 50m 19.VII.2012 4♂♂, 41°47'25"N 32°30'12"E; Aliobası 150m 22.V.2012 1♂, 41°46'39"N 32°30'59"E; Çakrazova 65m 21.V.2012 1♂, 41°46'38"N 32°30'17"E; Kurucaşile, Paşalar 400m 22.V.2012 1♂, 41°46'47"N 32°36'28"E; Ulus, Gökpınar 730m 29.IX.2011 1♂, 41°38'35"N 32°50'34"E.

Distribution in Turkey: Bolu, Düzce, Edirne, İstanbul, Kırklareli, Ordu, Sinop, Trabzon (KOÇAK & KEMAL 2009; ÖZDEMİR 2016).

***Pasiphila rectangulata* (Linnaeus, 1758)**

Examined material: Amasra, Aliobası 150m 22.V.2012 1♂, 41°46'39"N 32°30'59"E; Kurucaşile, Paşalar 400m 22.V.2012 2♂♂, 41°46'47"N 32°36'28"E.

Distribution in Turkey: Bolu, Edirne, Iğdır, Kırıkkale, Ordu, Trabzon, Van (KOÇAK & KEMAL 2009; ÖZDEMİR 2016).

***Pennithera firmata* (HÜBNER, 1822)**

Examined material: Amasra, Çakrazova 65m 21.V.2012 1♂, 41°46'38"N 32°30'17"E.

Distribution in Turkey: Bolu, Çanakkale, İstanbul (KOÇAK & KEMAL 2009).

***Thera britannica* (TURNER, 1925)**

Examined material: Ulus, Gökpınar 730m 29.IX.2011 8♀♀ 1♂, 41°38'35"N 32°50'34"E.

Distribution in Turkey: Bolu, Bursa, Düzce (KOÇAK & KEMAL 2009)

***Thera variata* (DENIS & SCHIFFERMÜLLER, 1775)**

Examined material: Ulus, Gökpınar 730m 29.IX.2011 7♀♀ 1♂, 41°38'35"N 32°50'34"E.

Distribution in Turkey: Adana, Antalya, Bolu, Düzce, İstanbul, Kastamonu, Kahramanmaraş, Sivas, Trabzon (KOÇAK & KEMAL 2009).

***Xanthorhoe ferrugata* (CLERCK, 1759)**

Examined material: Amasra, Hatipler 100m 2.VIII.2011 1♀, 41°46'39"N 32°30'18"E; Arıt, Kocaköy 180m 6.IX.2010 1♀, 41°41'50"N 32°29'34"E.

Distribution in Turkey: Bursa, Bolu, Düzce, Kırklareli, Ordu, Trabzon, Zonguldak (ÖZDEMİR 2007; KOÇAK & KEMAL 2009; OKYAR 2012; ÖZDEMİR 2016).

Subfamily: Ennominae DUPONCHEL, 1845

***Apeira syringaria* (LINNAEUS, 1758)**

Examined material: Amasra, Akkonak 50m 19.VII.2012 1♂, 41°47'25"N 32°30'12"E; Bartın center, Bahçecik 244m 19.VII.2012 2♂♂, 41°28'49"N 32°36'41"E.

Distribution in Turkey: Bolu, İstanbul, Kırklareli, Ordu, Sinop (KOÇAK & KEMAL 2009; ÖZDEMİR 2016).

***Ascotis selenaria* (DENIS & SCHIFFERMÜLLER, 1775)**

Examined material: Amasra, Akkonak 200m 2.VIII.2011 1♀ 10♂♂, 41°47'19"N 32°30'51"E; Aliobası 150m 22.V.2012 1♂, 41°46'39"N 32°30'59"E; Hatipler 100m 2.VIII.2011 2♀♀ 12♂♂, 41°46'39"N 32°30'18"E; Kurucaşile, Curunlu 220m 2.VIII.2011 2♀♀ 1♂, 41°49'44"N 32°38'34"E; Kurucaşile, Uğurlu 210m 2.VIII.2011 3♂, 41°50'08"N 32°41'40"E.

Distribution in Turkey: Adana, Amasya, Balıkesir, Bolu, Bursa, Çanakkale, Düzce, Edirne, Hatay, İçel, İstanbul, Manisa, Kahramanmaraş, Ordu, Siirt, Sinop (DOĞANLAR 2003; KOÇAK & KEMAL 2009; SEVEN 2014; ÖZDEMİR 2016).

***Asovia maeoticaria* (ALPHÉRAKY, 1876)**

Examined material: Bartın center, Bahçecik 244m 19.VII.2012 9♂, 41°28'49"N 32°36'41"E.

Distribution in Turkey: Amasya, Bolu, Kastamonu, Kırklareli, Konya, Manisa, Tokat (KOÇAK & KEMAL 2009; OKYAR 2012).

***Aspitates ochrearia* (ROSSI, 1794)**

Previous record: BFF Campus 10.IV.2007; Apdipaşa road 07.V.2007 (TOPER KAYGIN et al. 2009).

Examined material: Kurucuşile, Karaman village 130m 19.IX.2012 1♂, 41°49'43"N 32°38'22"E; Bartın center, Arıönü 300m 28.IX.2011 1♂, 41°37'52"N 32°12'04"E.

Distribution in Turkey: Amasya, Ankara, Bartın, Bursa, Çanakkale, Düzce, Diyarbakır, Edirne, Gaziantep, İçel, İstanbul, İzmir, Kırklareli, Kocaeli, Manisa, Kahramanmaraş, Kırıkkale, Kilis, Osmaniye, Siirt, Tekirdağ, Uşak, (AKBULUT et al. 2003; KOÇAK & KEMAL 2009; KOYUNCU 2011; SEVEN 2014).

***Cabera exanthemata* (SCOPOLI, 1763)**

Examined material: Amasra, Akkonak 50m 19.VII.2012 1♂, 41°47'25"N 32°30'12"E; Arıt, Kocaköy 180m 6.IX.2010 1♀, 41°41'50"N 32°29'34"E; Bartın center, Kaman 50m 21.V.2012 1♂, 41°40'25"N 32°21'56"E.

Distribution in Turkey: Aydın, Bursa, Edirne, Kastamonu (KOÇAK & KEMAL 2009; OKYAR 2012).

***Cabera pusaria* (LINNAEUS, 1758)**

Examined material: Amasra, Akkonak 50m 19.VII.2012 2♀♀ 8♂♂, 41°47'25"N 32°30'12"E; Çakrazova 65m 21.V.2012 1♂, 41°46'38"N 32°30'17"E; Top Deresi 234m 21.V.2012 1♂, 41°42'39"N 32°23'49"E; Kurucuşile, Paşalar 400m 22.V.2012 1♀, 41°46'47"N 32°36'28"E.

Distribution in Turkey: Bolu, Düzce İstanbul, Kastamonu, Kırklareli, Ordu, Tokat, Trabzon, Zonguldak (KOÇAK & KEMAL 2009; OKYAR 2012; ÖZDEMİR 2016).

***Campaea margaritaria* (LINNAEUS, 1761)**

Examined material: Amasra, Çakrazova 65m 21.V.2012 1♂, 41°46'38"N 32°30'17"E; Kazpınarı 60m 15.VI.2010 1♀, 41°42'05"N 32°21'54"E; Top Deresi 234m 21.V.2012 2♂♂, 41°42'39"N 32°23'49"E; Kurucuşile, Paşalar 400m 22.V.2012 8♀♀ 22♂♂, 41°46'47"N 32°36'28"E; Ulus, Aşağıtemirce 240m 29.IX.2011 1♀, 41°32'01"N 32°35'52"E; Gökpınar 730m 29.IX.2011 1♀ 2♂♂, 41°38'35"N 32°50'34"E; Hasanören 640m 29.IX.2011 1♀, 41°37'34"N 32°45'19"E.

Distribution in Turkey: Amasya, Ankara, Ardahan, Artvin, Bolu, Bursa, Düzce, İstanbul, Kastamonu, Kırklareli, Ordu, Osmaniye, Sinop, Trabzon, Van, (KOÇAK & KEMAL 2009; GÖKTÜRK 2011; OKYAR 2012; ÖZDEMİR 2016).

***Charissa obscurata* (DENIS & SCHIFFERMÜLLER, 1775)**

Examined material: Arıt, Kocaköy 180m 6.IX.2010 2♂♂, 41°41'50"N 32°29'34"E.

Distribution in Turkey: Amasya, Bolu, Düzce, Edirne, Konya (KOÇAK & KEMAL 2009).

***Crocallis elinguaris* (LINNAEUS, 1758)**

Examined material: Arit, Kocaköy 180m 6.IX.2010 1♂, 41°41'50"N 32°29'34"E; Kurucaşile, Curunlu 220m 2.VIII.2011 1♂, 41°49'44"N 32°38'34"E; Bartın center, Port area 130m 28.IX.2011 1♂, 41°40'50"N 32°13'51"E.

Distribution in Turkey: Amasya, Bolu, Konya, Kahramanmaraş, Van (KOÇAK & KEMAL 2009).

***Ectropis crepuscularia* (DENIS & SCHIFFERMÜLLER, 1775)**

Examined material: Amasra, Akkonak 50m 19.VII.2012 4♂♂, 41°47'25"N 32°30'12"E; Kurucaşile, Paşalar 400m 22.V.2012 1♀, 41°46'47"N 32°36'28"E.

Distribution in Turkey: Bursa, Düzce (KOÇAK & KEMAL 2009).

***Ematurga atomaria* (LINNAEUS, 1758)**

Previous record: Catmaca 06.VIII. 2007; Kutlubey village 23.VIII.2007 (TOPEK KAYGIN et al., 2009).

Examined material: Amasra, Akkonak 200m 2.VIII.2011 2♀♀, 41°47'19"N 32°30'51"E; Aliobası 150m 22.V.2012 2♀♀, 41°46'39"N 32°30'59"E; Hatipler 100m 2.VIII.2011 4♀♀ 1♂, 41°46'39"N 32°30'18"E; Kurucaşile, Uğurlu 210m 2.VIII.2011 1♀ 1♂, 41°50'08"N 32°41'40"E.

Distribution in Turkey: Amasya, Ankara, Bartın, Bilecik, Bitlis, Bolu, Bursa, Düzce, Edirne, İçel, İstanbul, Kastamonu, Kırklareli, Kocaeli, Manisa, Ordu, Sakarya, Samcun, Sinop, Sivas, Tokat, Zonguldak (KOÇAK & KEMAL 2009; TOPEK KAYGIN et al. 2009).

***Ennomos fuscantaria* (HAWORTH, 1809)**

Examined material: Arit, Kocaköy 180m 6.IX.2010 1♂, 41°41'50"N 32°29'34"E.

Distribution in Turkey: Edirne, Hakkari, İstanbul (KOÇAK & KEMAL 2009; KOÇAK & KEMAL 2015; KEMAL & KOÇAK 2016).

***Ennomos quercaria* (HÜBNER, 1813)**

Examined material: Arit, Kocaköy 180m 6.IX.2010 1♂, 41°41'50"N 32°29'34"E.

Distribution in Turkey: Amasya, Bolu, İçel, İstanbul, Konya, Siirt, Tokat (KOÇAK & KEMAL 2009; SEVEN 2014).

***Ennomos quercinaria* (HUFNAGEL, 1767)**

Examined material: Amasra, Akkonak 50m 19.VII.2012 1♂, 41°47'25"N 32°30'12"E; Bartın center, Bahçecik 244m 19.VII.2012 1♂, 41°28'49"N 32°36'41"E.

Distribution in Turkey: Bolu, Düzce, İstanbul, Kırklareli, Kocaeli, (KOÇAK & KEMAL 2009; BEŞKARDEŞ 2012).

***Epione repandaria* (HUFNAGEL, 1767)**

Examined material: Ulus, Gökpınar 730m 29.IX.2011 2♂♂, 41°38'35"N 32°50'34"E.

Distribution in Turkey: İstanbul (KOÇAK & KEMAL 2009).

***Epione vespertaria* (LINNAEUS, 1767)**

Examined material: Ulus, Gökpınar 730m 29.IX.2011 1♂, 41°38'35"N 32°50'34"E.

Distribution in Turkey: Bursa, Gümüşhane, Kars, Trabzon (KOÇAK & KEMAL 2009).

***Eumannia oppositaria* (MANN, 1864)**

Examined material: Amasra, Akkonak 200m 2.VIII.2011 1♂, 41°47'19"N 32°30'51"E; Kurucaşile, Curunlu 220m 2.VIII.2011 1♀, 41°49'44"N 32°38'34"E.

Distribution in Turkey: Bursa, Konya (KOÇAK & KEMAL 2009).

***Gnophos sartata* TREITSCHKE, 1827**

Examined material: Amasra, Çakrazova 65m 21.V.2012 9♂♂, 41°46'38"N 32°30'17"E.

Distribution in Turkey: Amasya, Bolu, Bursa, Çanakkale, Denizli, Hakkari, İstanbul, İzmir, Osmaniye, Kocaeli, Konya, Manisa, Kahramanmaraş, Siirt (KOÇAK & KEMAL 2009; BEŞKARDEŞ 2012; SEVEN 2014; KOÇAK & KEMAL 2015).

***Hylaea fasciaria* (LINNAEUS, 1758)**

Examined material: Bartın center, Port area 130m 28.IX.2011 1♂, 41°40'50"N 32°13'51"E; Ulus, 300m 29.IX.2011 1♂, 41°34'41"N 32°38'12"E.

Distribution in Turkey: Ankara, Balıkesir, Bolu, Çanakkale, Edirne, İçel, Tekirdağ (KOÇAK & KEMAL 2009).

***Hypomecis punctinalis* (SCOPOLI, 1763)**

Examined material: Amasra, Aliobası 150m 22.V.2012 2♂♂, 41°46'39"N 32°30'59"E; Top Deresi 234m 21.V.2012 3♂♂, 41°42'39"N 32°23'49"E; Kurucaşile, Paşalar 400m 22.V.2012 1♀ 2♂♂, 41°46'47"N 32°36'28"E.

Distribution in Turkey: Amasya, Bolu, Bursa, Düzce, Hatay, Kırklareli, Ordu, Osmaniye, Sinop, Trabzon (DOĞANLAR 2003; KOÇAK & KEMAL 2009; ÖZDEMİR 2016).

***Hypomecis roboraria* (DENIS & SCHIFFERMÜLLER, 1775)**

Examined material: Amasra, Akkonak 200m 2.VIII.2011 1♂, 41°47'19"N 32°30'51"E; 50m 19.VII.2012 4♂♂, 41°47'25"N 32°30'12"E; Aliobası 150m 22.V.2012 1♀ 1♂, 41°46'39"N 32°30'59"E; Hatıpları 100m 2.VIII.2011 1♀ 1♂, 41°46'39"N 32°30'18"E; Amasra, Top Deresi 234m 21.V.2012 1♀ 8♂♂, 41°42'39"N 32°23'49"E; Kurucaşile, Paşalar 400m 22.V.2012 1♀ 8♂♂, 41°46'47"N 32°36'28"E; Bartın center, Bahçecik 244m 19.VII.2012 1♂, 41°28'49"N 32°36'41"E.

Distribution in Turkey: Artvin, Bolu, Düzce, Ordu (KOÇAK & KEMAL 2009; ÖZDEMİR 2016).

***Ligdia adustata* (DENIS & SCHIFFERMÜLLER, 1775)**

Examined material: Amasra, Çakrazova 65m 21.V.2012 4♂♂, 41°46'38"N 32°30'17"E; Kazpınarı 60m 15.VI.2010 2♂♂, 41°42'05"N 32°21'54"E; Kurucaşile, Paşalar 400m 22.V.2012 1♀, 41°46'47"N 32°36'28"E.

Distribution in Turkey: Amasya, Bolu, Bursa, Çankırı, Düzce, Edirne, İçel, Kırklareli, Rize, Trabzon (KOÇAK & KEMAL 2009; OKYAR 2010b).

***Lomaspilis bithynica* WEHRLI, 1939**

Examined material: Amasra, Akkonak 200m 2.VIII.2011 2♂♂, 41°47'19"N 32°30'51"E; Aliobası 150m 22.V.2012 1♂, 41°46'39"N 32°30'59"E; Hatıpları 100m 2.VIII.2011 1♀ 1♂, 41°46'39"N 32°30'18"E; Kazpınarı 60m 15.VI.2010 1♀, 41°42'05"N 32°21'54"E; Kurucaşile, Paşalar 400m 22.V.2012 1♀, 41°46'47"N 32°36'28"E; Bartın center, Kaman 50m 21.V.2012 1♂, 41°40'25"N 32°21'56"E.

Distribution in Turkey: Ankara, Ardahan, Bolu, Düzce, İstanbul, Kastamonu, Kırklareli, Zonguldak (KOÇAK & KEMAL 2009; OKYAR 2012).

***Lomographa tenerata* (DENIS & SCHIFFERMÜLLER, 1775)**

Examined material: Amasra, Hatipler 100m 2.VIII.2011 3♂♂, 41°46'39"N 32°30'18"E; Kurucaşile, Uğurlu 210m 2.VIII.2011 1♀, 41°50'08"N 32°41'40"E.

Distribution in Turkey: Düzce, Ordu, Tokat (KOÇAK & KEMAL 2009; ÖZDEMİR 2016).

***Macaria alternata* (DENIS & SCHIFFERMÜLLER, 1775)**

Examined material: Amasra, Akkonak 50m 19.VII.2012 3♂♂, 41°47'25"N 32°30'12"E; Hatipler 100m 2.VIII.2011 1♀ 5♂♂, 41°46'39"N 32°30'18"E; Bartın center, Bahçecik 244m 19.VII.2012 1♂, 41°28'49"N 32°36'41"E.

Distribution in Turkey: Bursa (KOÇAK & KEMAL 2009).

***Macaria liturata* (CLERCK, 1759)**

Examined material: Kurucaşile, Paşalar 400m 22.V.2012 7♂♂, 41°46'47"N 32°36'28"E.

Distribution in Turkey: Ardahan, Bolu, Düzce (KOÇAK & KEMAL 2009).

***Macaria notata* (LINNAEUS, 1758)**

Examined material: Amasra, Akkonak 50m 19.VII.2012 3♂♂, 41°47'25"N 32°30'12"E; Aliobası 150m 22.V.2012 1♀ 3♂♂, 41°46'39"N 32°30'59"E; Kurucaşile, Paşalar 400m 22.V.2012 4♀♀ 21♂, 41°46'47"N 32°36'28"E; Bartın center, Bahçecik 244m 19.VII.2012 1♂, 41°28'49"N 32°36'41"E.

Distribution in Turkey: Düzce, Kırklareli, Rize, Sinop (AKBULUT et al. 2003; ÖZDEMİR 2007; CAN 2008; OKYAR 2010b)

***Nychiodes waltheri* WAGNER, 1919**

Previous record: Ağdacı village 10.VI.2008 (TOPER KAYGIN et al. 2009); Sipahiler-Kayadibi 12.VII.2004 1250m 1♀ (OKYAR 2012).

Examined material: Amasra, Aliobası 150m 22.V.2012 1♀ 1♂, 41°46'39"N 32°30'59"E; Çakrazova 65m 21.V.2012 2♀♀, 41°46'38"N 32°30'17"E; Bartın center, Şabankadı 142m 23.VI.2009 1♀, 41°28'29"N 32°15'35"E.

Distribution in Turkey: Bartın, Edirne, Hatay, İstanbul, Konya, Kahramanmaraş, Kırkkale, Sivas (KOÇAK & KEMAL 2009; TOPER KAYGIN et al. 2009; ALTIPARMAK 2010; OKYAR 2012).

***Opisthograptis luteolata* (LINNAEUS, 1758)**

Examined material: Amasra, Akkonak 50m 19.VII.2012 3♂♂, 41°47'25"N 32°30'12"E; Kurucaşile, Karaman Village 130m 19.IX.2012 1♀, 41°40'25"N 32°21'56"E; Bartın center, Arıönü 300m 28.IX.2011 1♀, 41°37'52"N 32°12'04"E; Ulus, Aşağıemirce 240m 29.IX.2011 1♀ 1♂, 41°32'01"N 32°35'52"E; Gökpınar 730m 29.IX.2011 2♀♀ 2♂♂, 41°38'35"N 32°50'34"E.

Distribution in Turkey: Amasya, Ankara, Artvin, Bolu, Bursa, Düzce, Çanakkale, Çankırı, İstanbul, Kastamonu, Kırklareli, Kocaeli, Manisa, Ordu, Rize, Sinop, Trabzon, Van (KOÇAK & KEMAL 2009; OKYAR 2010a, 2010b, 2012; GÖKTÜRK 2011; BEŞKARDEŞ 2012; ÖZDEMİR 2016).

***Pachynemina hippocastanaria* (HÜBNER, 1799)**

Examined material: Amasra, Aliobası 150m 22.V.2012 1♀ 1♂, 41°46'39"N 32°30'59"E; Cakrazova 65m 21.V.2012 9♂♂, 41°46'38"N 32°30'17"E; Hatipler 100m 2.VIII.2011 4♂♂, 41°46'39"N 32°30'18"E; Arit, Kocaköy 180m 6.IX.2010 1♀, 41°41'50"N 32°29'34"E; Kurucaşile, Karaman Village 130m 19.IX.2012 1♀ 1♂, 41°49'43"N 32°38'22"E.

Distribution in Turkey: Amasya, Bolu, Bursa, Çanakkale, Düzce (KOÇAK & KEMAL 2009).

***Pachynemina tibiaria* (RAMBUR, 1829)**

Examined material: Amasra, Akkonak 50m 19.VII.2012 1♂, 41°47'25"N 32°30'12"E; Kurucaşile, Karaman Village 130m 19.IX.2012 3♂♂, 41°49'43"N 32°38'22"E.

Distribution in Turkey: This species is new record for Turkish Geometridae fauna.

Description:

Imago: Wingspan 25-28 mm. Wings brownish grey and uniform, antemedial and postmedial lines shaped in small blackish dots, but indistinct in some. Medial area slightly darker. Outer margin of postmedial line lighter. Terminal line narrow, blackish, interrupted or fuzzy. Fringes concolorous with wings. Hindwings slightly lighter. Discal spots small, indistinct in upper side. Head, thorax and abdomen concolorous with wings (Fig. 2).

Male genitalia: Uncus narrow subapically, long, broadened to apex, with two lobes and setose. Gnathos fused ventrally, upturned, apex slightly dentate. Valva broadened to apex, setose, apex round. Costa sclerotized and posterior end with short extension. Transtilla distinct. Saccus narrow. Aedeagus curved. Vesica with one long comutus (Fig. 2 a,b).



Fig. 2: Habitus of *Pachynemina tibiaria* (RAMBUR, 1829) imago, a) male genitalia, b) aedeagus.

***Parectropis similaria* (HUFNAGEL, 1767)**

Examined material: Amasra, Aliobası 150m 22.V.2012 1♀, 41°46'39"N 32°30'59"E; Top Deresi 234m 21.V.2012 1♂, 41°42'39"N 32°23'49"E; Kurucaşile, Paşalar 400m 22.V.2012 2♀♀ 3♂♂, 41°46'47"N 32°36'28"E.

Distribution in Turkey: Bolu, Düzce, Ordu, Zonguldak (KOÇAK & KEMAL 2009; OKYAR 2012; ÖZDEMİR 2016)

***Peribatodes rhomboidaria* (DENIS & SCHIFFERMÜLLER, 1775)**

Examined material: Amasra, Akkonak 200m 2.VIII.2011 6♀ 10♂, 41°47'19"N 32°30'51"E; 50m 19.VII.2012 1♀ 1♂, 41°47'25"N 32°30'12"E; Aliobası 150m 22.V.2012 9♀ 8♂, 41°46'39"N 32°30'59"E; Çakrazova 65m 21.V.2012 1♀ 10♂, 41°46'38"N 32°30'17"E; Hatıpler 100m 2.VIII.2011 15♂, 41°46'39"N 32°30'18"E; Kazpınarı 60m 15.VI.2010 5♀ 3♂, 41°42'05"N 32°21'54"E; Kozpınarı 327m 29.IX.2011 2♀ 6♂, 41°42'41"N 32°21'50"E; Top Deresi 234m 21.V.2012 2♀, 41°42'39"N 32°23'49"E; Arıt, Kocaköy 180m 6.IX.2010 17♂, 41°41'50"N 32°29'34"E; Kurucaşile, Karaman Village 130m 19.IX.2012 24♀ 8, 41°49'43"N 32°38'22"E; Paşalar 400m 22.V.2012 4♀ 5♂, 41°46'47"N 32°36'28"E.

Distribution in Turkey: Adana, Amasya, Artvin, Bolu, Burdur, Bursa, Çanakkale, Düzce, Edirne, Hakkari, Hatay, İçel, İstanbul, Kars, Konya, Kahramanmaraş, Kastamonu, Kocaeli, Manisa, Muğla, Ordu, Osmaniye, Rize, Siirt, Sinop, Tekirdağ, Tokat, Trabzon, Van (DOĞANLAR 2003; KOÇAK & KEMAL 2009; GÖKTÜRK 2011; OKYAR 2010a; 2010b, 2012; BEŞKARDEŞ 2012; SEVEN 2014; ÖZDEMİR 2016; KEMAL et al. 2017).

***Petrophora chlorosata* (SCOPOLI, 1763)**

Examined material: Amasra, Çakrazova 65m 21.V.2012 1♂, 41°46'38"N 32°30'17"E.

Distribution in Turkey: Amasya, Düzce, İstanbul Kırklareli, Ordu, Rize, Sinop, Trabzon (OKYAR & MIRONOV 2008; KOÇAK & KEMAL 2009; OKYAR 2010b; ÖZDEMİR 2016).

***Plagodis dolabraria* (LINNAEUS, 1767)**

Examined material: Amasra, Akkonak 200m 2.VIII.2011 1♂, 41°47'19"N 32°30'51"E; Çakrazova 65m 21.V.2012 1♂, 41°46'38"N 32°30'17"E; Hatıpler 100m 2.VIII.2011 1♂, 41°46'39"N 32°30'18"E; Kurucaşile, Paşalar 400m 22.V.2012 2♀ 16♂, 41°46'47"N 32°36'28"E; Bartın center, Bahçecik 244m 19.VII.2012 1♀ 1♂, 41°28'49"N 32°36'41"E.

Distribution in Turkey: Bolu, Düzce, İstanbul (ÖZDEMİR 2007, 2016; AYBERK et al. 2010).

***Rhoptria asperaria* (HÜBNER, 1817)**

Examined material: Kurucaşile, Curunlu 220m 2.VIII.2011 2♀ 3♂, 41°49'44"N 32°38'34"E; Karaman Village 130m 19.IX.2012 1♀ 1♂, 41°49'43"N 32°38'22"E.

Distribution in Turkey: Bolu, Bursa, Çanakkale, Konya, Kahramanmaraş (KOÇAK & KEMAL 2009).

***Selenia dentaria* (FABRICIUS, 1775)**

Examined material: Amasra, Akkonak 50m 19.VII.2012 5♂, 41°47'25"N 32°30'12"E; Çakrazova 65m 21.V.2012 1♀, 41°46'38"N 32°30'17"E; Hatıpler 100m 2.VIII.2011 1♂, 41°46'39"N 32°30'18"E; Kurucaşile, Curunlu 220m 2.VIII.2011 1♀, 41°49'44"N 32°38'34"E; Karaman Village 130m 19.IX.2012 1♂, 41°49'43"N 32°38'22"E; Bartın center, Bahçecik 244m 19.VII.2012 1♂, 41°28'49"N 32°36'41"E; Güzelcehisar 220m 28.IX.2011 1♂, 41°39'13"N 32°13'21"E.

Distribution in Turkey: Artvin, Bolu, Düzce Ordu (KOÇAK & KEMAL 2009; ÖZDEMİR 2016).

***Selenia lunularia* (HÜBNER, 1788)**

Examined material: Amasra, Akkonak 200m 2.VIII.2011 1♀ 7♂♂, 41°47'19"N 32°30'51"E; 50m 19.VII.2012 3♂♂, 41°47'25"N 32°30'12"E; Aliobası 150m 22.V.2012 1♂, 41°46'39"N 32°30'59"E; Hatipler 100m 2.VIII.2011 2♂♂, 41°46'39"N 32°30'18"E; Kuruçaçile, Curunlu 220m 2.VIII.2011 1♀, 41°49'44"N 32°38'34"E; Uğurlu 210m 2.VIII.2011 4♂♂, 41°50'08"N 32°41'40"E; Bartın center, Bahçecik 244m 19.VII.2012 9♂♂, 41°28'49"N 32°36'41"E.

Distribution in Turkey: Adana, Amasya, Ardahan, Bitlis, Bolu, Çanakkale, Düzce, İstanbul, Kocaeli, Ordu, Osmaniye, Rize, Sinop, Trabzon, Van (DOĞANLAR 2003; KOÇAK & KEMAL 2009; OKYAR 2010a, 2010b; BEŞKARDEŞ 2012; ÖZDEMİR 2016).

***Stegania dilectaria* (HÜBNER, 1790)**

Examined material: Amasra, Akkonak 200m 2.VIII.2011 2♀♀, 41°47'19"N 32°30'51"E; Aliobası 150m 22.V.2012 1♀ 1♂, 41°46'39"N 32°30'59"E; Çakrazova 65m 21.V.2012 1♀ 1♂, 41°46'38"N 32°30'17"E; Hatipler 100m 2.VIII.2011 1♀ 4♂♂, 41°46'39"N 32°30'18"E; Kazpınarı 60m 15.VI.2010 1♂, 41°42'05"N 32°21'54"E.

Distribution in Turkey: Bitlis, Bolu, Düzce, Edirne, İstanbul, Konya, Kahramanmaraş, Siirt, Tokat, Van (KOÇAK & KEMAL 2009; SEVEN 2014; KEMAL & KOÇAK 2017).

***Synopsia sociaria* (HÜBNER, 1799)**

Examined material: Amasra, Çakrazova 65m 21.V.2012 1♂, 41°46'38"N 32°30'17"E; Hatipler 100m 2.VIII.2011 2♂♂, 41°46'39"N 32°30'18"E; Uğurlu 210m 2.VIII.2011 3♂♂, 41°50'08"N 32°41'40"E; Ulus 300m 29.IX.2011 5♀♀ 4♂♂, 41°34'41"N 32°38'12"E; Ariönü 300m 28.IX.2011 2♀♀, 41°37'52"N 32°12'04"E; Güzelcehisar 220m 28.IX.2011 12♀♀ 3♂♂, 41°39'13"N 32°13'21"E; Kaman Village 50m 21.V.2012 1♂, 41°40'25"N 32°21'56"E; Port area 130m 28.IX.2011 21♀ 1♂, 41°40'50"N 32°13'51"E; Şabankadı 250m 23.VI.2009 2♂♂, 41°29'38"N 32°17'42"E; Ulus, Aşağıemirce 240m 29.IX.2011 14♀♀ 20♂♂, 41°32'01"N 32°35'52"E; Gökpınar 730m 29.IX.2011 19♂♂, 41°38'35"N 32°50'34"E; Hasanören 640m 29.IX.2011 15♀♀ 4♂♂, 41°37'34"N 32°45'19"E.

Distribution in Turkey: Bolu, Bursa, Çanakkale, Erzurum, İçel, İstanbul, Konya, Van (KOÇAK & KEMAL 2009).

Discussion

In this study, the Geometridae fauna of the Bartın province on the Black Sea coast was evaluated and records a total of 102 species were reached. Of these species, 9 are identified with previous published studies (TOPER KAYGIN et al. 2009; OKYAR 2012). Although the recordings were also found in present study on *Idaea degeneraria*, *Scopula imitaria*, *Aspitates ochrearia*, *Ematurga atomaria* and *Nychiodes waltheri* species, *Proteuchloris neriararia*, *Scopula rubiginata*, *Timandra comae* and *Cidaria fulvata* species were not found. 93 species were detected by this study for the first time.

Pachycnemia contains two species in the West Palaearctic region and in Northern Africa (SCOU & SIHVONEN 2015). Both of species (*Pachycnemia hippocastanaria* and *P. tibiaria*) were recorded from study area with this paper. *Pachycnemia tibiaria* is a new record for fauna of Turkey also. This species distributed in Europe only in the south from the Iberian Peninsula, southern France and Italy to Greece including Crete. In Corsica and Sardinia replaced by subsp. *benesignata*. Outside Europe the species has been found in Morocco

and Tunisia (subsp. *aindrahamaria*). In Europe a somewhat local and not common species that not often occurs in numbers. The caterpillar is recorded on *Erica scoparia*, *E. arborea*, *E. carnea* and *Calluna vulgaris*. In a variety of open land habitats with bushes and scattered trees (Mediterranean macchia) (SCOU & SIHVONEN 2015). *P. tibiaria* was recorded from Bulgaria where coastal region of Black Sea were showed on map by this author. In this study, *P. tibiaria* was recorded from shore region of Black Sea where consists of local pseudomaquis habitats also. In the western Black Sea region where the study area is also located, pseudomaquis developed in ravaged forest areas can show spreading maquis elements such as *Erica arborea* (AYDINOZÜ 2008), host of *P. tibiaria*. It is thought that *P. tibiaria* exhibits local spread in these areas.

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