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Faunistic contributions on the subfamily Agathidinae (Hymenoptera: Braconidae) of Central Black Sea Region of Türkiye

Orta Karadeniz Bölgesi (Türkiye) Agathidinae (Hymenoptera: Braconidae) altfamilyası üzerine faunistik katkılar

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ABSTRACT

This study was conducted between 2003-2004 to investigate the Agathidinae (Hymenoptera: Braconidae) fauna of the Central Black Sea Region in Türkiye. For this purpose, Agathidinae samples were collected from different altitudes and habitats of Amasya, Çorum, Ordu, Samsun and Tokat provinces in the region. Seventeen species were determined and identified. These were twelve species in the genus *Agathis*, four species in the genera *Bassus* and one species in the genera *Disophrys* were recorded. Although all identified species were recorded before Türkiye, they are new records for the research area. The distributions and detailed locality records of the identified species are given.

INTRODUCTION

The Agathidinae is a large subfamily, represented all over the world, comprising 52 genera and about 1213 known species (Yu et al. 2016). More than 76 of these have been reported in Europe and 90 in the West Palearctic region (Yu et al. 2016). Eleven genera are recorded from the West Palearctic region. So far 5 genera and 40 species of Agathidinae have been recorded from Türkiye: Çetin and Beyarslan (2001), Çetin Erdoğan (2005, 2010, 2013, 2014), Çetin Erdoğan and Beyarslan (2004, 2006, 2009, 2016), Çetin Erdoğan et al. (2009), Güçlü and Özbek (2002), Zettel and Beyarslan (1992).

Agathidines are koinobiont endoparasitoids of larvae of Lepidoptera. The species with a short ovipositor select

exposed larvae and those with a long ovipositor use larvae with a concealed way of life (van Achterberg and Long 2010).

Central Black Sea Region which is located in the north part of Türkiye conforms 7% of the total area of the country. The area includes Çorum, Amasya, Samsun, Tokat and Ordu provinces; Akdağ, Kocadağ and Canik Mountains and Kızılırmak, Yeşilirmak and Kelkit rivers. This region contains 25% of Türkiye's forests.

The aim of the present study is to document the Agathidinae fauna in Central Black Sea region and to contribute to the knowledge to the braconid fauna of Türkiye.

MATERIALS AND METHODS

Samples were collected from different habitats in Amasya, Çorum, Ordu, Samsun and Tokat provinces with the help of a net from June to September 2003 and from June to July 2004 (Figure 1). Agathidins were treated with 70% ethanol and then placed on a filter paper for drying. The dried specimens were card-mounted and labeled. All the agathidin specimens were deposited in the Entomological Museum, Trakya University (EMTU), Department of Biology, Türkiye. The works of Simbolotti and van Achterberg (1992, 1999) were used for taxonomical examination and identification of the materials. Information on parasitoids, hosts, general distributions are given according to Yu et al. (2016).

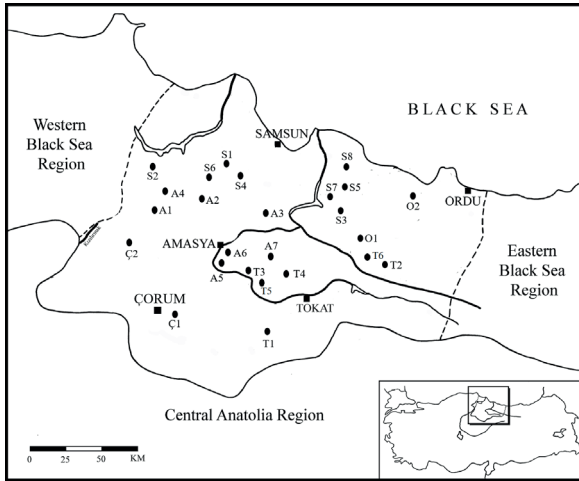


Figure 1. The Central Black Sea Region of Türkiye and sampling sites

Table 1. List of sampling sites in provinces of Central Black Sea region

Province	Sampling site	Coordinates	Altitude (m)	Locality number
AMASYA	Merzifon-Tavşan Dağları-Esenköy Yaylası	41°00'37"N 35°17'23"E	1700	A1
	Suluova	40°49' 53"N 35°38'52"E	470	A2
	Taşova-Borabay	40°80'98"N 36°18'32"E	740	A3
	Merzifon-Tavşandağı-Uzunağaç	41°00'30"N 35°21'38"E	1600	A4
	Çakallar	40°64'54"N 35°82'69"E	510	A5
	Yolyanı	40°34'22"N 36°06'38"E	700	A6
	Karaibrahim-Çengel	40°31'20"N 36°10'29"E	670	A7
ÇORUM	Kuşsaray	40°35'44"N 35°08'36"E	1015	Ç1
	Dodurga-Yeniköy	40°49'27"N 34°42'34"E	1035	Ç2
ORDU	Akkuş-Yukarıdüğencili	40°47'35"N 37°00'59"E	1340	O1
	Ünye-Çatalpınar	41°07'00"N 37°15'00"E	80	O2
SAMSUN	Kavak-Boğaziçi	41°12'49"N 36°14'24"E	350	S1
	Veziroköprü-Kızılcaören	41°06'00"N 35°30'00"E	500	S2
	Salıpazarı-Aspete mevkii	41°05'02"N 36°49'49"E	600	S3
	Kocadağ-TRT İstasyonu	41°32'81"N-36°10'43"E	1100	S4
	Salıpazarı-Kayaköprü	41°10'18"N 36°28'16"E	100	S5
	Havza-Mismilliğaç,	40°99'63"N 35°70'33"E	610	S6
	Salıpazarı-Derbentaltı,	41°10'10"N 36°10'20"E	970	S7
	Salıpazarı-Soyuk	41°28'16"N 36°25'10"E	650	S8
TOKAT	Pazar-Ballica	40°15'44"N 36°18'48"E	1020	T1
	Turhal-Üçyol	40°46'69"N 36°29'45"E	1040	T2
	Turhal-Doğanlı Çiftliği	40°18'14"N 36°19'29"E	554	T3
	Reşadiye-Çayırpınar	40°24'16"N 37°16'16"E	672	T4
	Turhal-Çamlıca	40°41'09"N 36°22'99"E	900	T5
Niksar-Çamiçi	40°59'02"N 36°95'12"E	1120	T6	

A list of localities is presented in Table 1 from provinces of Central Black Sea region. The localities are numbered with the full locality data given. A locality number and date are indicated for each record. The total number of species identified for each genus and at each province is given in

Table 2. Number of species identified according to genus and provinces

Genus	Number of species	Number of species identified				
		Amasya	Çorum	Ordu	Samsun	Tokat
<i>Agathis</i>	12	10	3	5	3	6
<i>Bassus</i>	4	-	-	1	4	-
<i>Disophrys</i>	1	1	1	-	-	1
Total	17	11	4	6	7	7

RESULTS AND DISCUSSION

Agathidinae

Agathis Latreille, 1804

Agathis anglica Marshall, 1885

Material examined: Amasya: Merzifon-Tavşan Dağları-Esenköy Yaylası, 41°00'37"N 35°17'23"E, 09.07.2003, 23 ♀♀; Suluova, 40°49' 53"N 35°38'52"E, 03.09.2003, 2 ♀♀; Çorum: Kuşsaray, 40°35'44"N 35°08'36"E, 29.06.2004, 5 ♀♀; Ordu: Akkuş-Yukarıdüğencili, 40°47'35"N 37°00'59"E, 05.07.2003, 11 ♀♀, 2 ♂♂; Ünye-Çatalpınar, 41°07'00"N 37°15'00"E, 05.07.2003, 1 ♀, 1 ♂; Samsun: Kavak-Boğaziçi, 41°12'49"N 36°14'24"E, 02.07.2003, 1 ♀; Tokat: Pazar-Ballica, 40°15'44"N 36°18'48"E, 07.07.2003, 1 ♀; Turhal-Üçyol, 40°46'69"N

36°29'45"E, 07.07.2003, 6♀♀; Turhal-Doğanlı Çiftliği, 40°18'14"N 36°19'29"E, 03.09.2003, 1♂.

General distribution: Palearctic and Oriental regions (Albania, Armenia, Bulgaria, China, Croatia, Cyprus, Finland, former Yugoslavia, France, Germany, Greece, Hungary, Iran, Italy, Kazakhstan, Macedonia, Mongolia, Morocco, Netherlands, Poland, Romania, Russia, Slovenia, Spain, Sweden, Switzerland, Syria, Tajikistan, Türkiye, Ukraine, United Kingdom).

Hosts: *Agonopterix nervosa*, *Agonopterix pallorella*, *Aproaerema anthyllidella*, *Coleophora adjunctella*, *Coleophora albitarsella*, *Coleophora argentula*, *Coleophora discordella*, *Coleophora laricella*, *Coleophora lusciniapennella*, *Epinotia mercuriana*, *Loxostege sticticalis*, *Nothris verbascella*, *Pexicopia malvella*, *Pyrausta aurata*, *Syncopacma taeniolella*, *Teleiodes saltuum*.

***Agathis assimilis* Kokujev, 1895**

Material examined: Amasya: Merzifon-Tavşan Dağları-Esenköy Yaylası, 41°00'37"N 35°17'23"E, 09.07.2003, 1♀; Taşova-Borabay, 40°80'98"N 36°18'32"E, 08.07.2003, 1♀.

General distribution: Palaearctic Region (Austria, Azerbaijan, Bulgaria, Croatia, former Yugoslavia, France, Germany, Hungary, Iran, Italy, Kazakhstan, Korea, Lithuania, Macedonia, Moldova, Mongolia, Netherlands, Norway, Poland, Russia, Tajikistan, Türkiye, Ukraine, United Kingdom, Uzbekistan).

Hosts: *Coleophora astragalella*

***Agathis fulmeki* Fischer, 1957**

Material examined: Amasya: Merzifon-Tavşan Dağları-Esenköy Yaylası, 41°00'37"N 35°17'23"E, 09.07.2003, 1♀; Ordu: Ünye-Çatalpınar, 41°07'00"N 37°15'00"E, 05.07.2003, 6♀♀, 1♂

General distribution: Palaearctic Region (Austria, Bulgaria, France, Greece, Hungary, Morocco, Spain, Türkiye).

Hosts: Unknown.

***Agathis fuscipennis* (Zetterstedt, 1838)**

Material examined: Amasya: Merzifon-Tavşan Dağı-Uzunağaç, 41°00'30"N 35°21'38"E, 09.07.2003, 1♀, Merzifon-Tavşan Dağları-Esenköy Yaylası, 41°00'37"N 35°17'23"E, 09.07.2003, 1♀; Ordu: Ünye-Çatalpınar, 41°07'00"N 37°15'00"E, 05.07.2003, 1♀.

General distribution: Palearctic Region (Armenia, Austria, Bosnia and Hercegovina, Bulgaria, Croatia, Finland, former Yugoslavia, France, Germany, Greece, Hungary, Iran, Ireland, Italy, Kazakhstan, Korea, Latvia, Lithuania, Macedonia, Mongolia, the Netherlands, Poland, Russia,

Spain, Sweden, Switzerland, Tajikistan, Tunisia, Türkiye, United Kingdom).

Hosts: *Aproaerema anthyllidella*, *Caryocolum saginella*, *Chrysoesthia hermannella*, *Chrysoesthia sexguttella*, *Coleophora albicostella*, *Coleophora albitarsella*, *Coleophora artemisiae*, *Coleophora artemisicolella*, *Coleophora chamaedriella*, *Coleophora conspicuella*, *Coleophora conyzae*, *Coleophora cracella*, *Coleophora dianthi*, *Coleophora follicularis*, *Coleophora granulata*, *Coleophora inulae*, *Coleophora laripennella*, *Coleophora linosyridella*, *Coleophora meridionella*, *Coleophora salicorniae*, *Coleophora salinella*, *Heliodines roesella*, *Ochromolopis ictella*, *Olethreutes arbutella*, *Scrobipalpa atriplicella*, *Scrobipalpa gallicella*, *Scrobipalpa ocellatella*, *Scrobipalpula absoluta*, *Spilonota ocellana*, *Thiotricha subocellea*.

***Agathis glaucoptera* Nees, 1834**

Material examined: Amasya: Çakallar, 40°64'54"N 35°82'69"E, 28.05.2002, 1♀.

General distribution: Palearctic Region (Azerbaijan, former Yugoslavia, France, Germany, Hungary, Iran, Italy, Kazakhstan, Macedonia, Russia, Spain, Türkiye, Ukraine).

Hosts: Unknown.

***Agathis lugubris* (Foerster, 1862)**

Material examined: Ordu: Akkuş-Yukarıdügencili, 40°47'35"N 37°00'59"E, 05.07.2003, 1♀, 2♂♂

General distribution: Palearctic Region (Finland, former Czechoslovakia, Germany, Greece, Hungary, Iran, Ireland, Mongolia, the Netherlands, Norway, Poland, Switzerland, Türkiye, Ukraine, United Kingdom).

Hosts: *Coleophora alticolella*, *Coleophora glaucicolella*.

***Agathis malvacearum* Latreille, 1805**

Material examined: Amasya: Merzifon-Tavşan Dağları-Esenköy Yaylası, 41°00'37"N 35°17'23"E, 09.07.2003, 7♀♀, 5♂♂; Merzifon-Tavşan Dağı-Uzunağaç, 41°00'30"N 35°21'38"E, 09.07.2003, 1♀; Çorum: Kuşsaray, 40°35'44"N 35°08'36"E, 29.60.2004, 1♀, Dodurga-Yeniköy, 40°49'27"N 34°42'34"E, 28.06.2004, 2♀♀; Ordu: Akkuş-Yukarıdügencili, 40°47'35"N 37°00'59"E, 05.07.2003, 6♀♀, 2♂♂; Samsun: Kavak-Boğaziçi, 41°12'49"N 36°14'24"E, 02.07.2003, 1♀; Tokat: Pazar-Balıca, 40°15'44"N 36°18'48"E, 07.07.2003, 1♀.

General distribution: Palearctic and Nearctic regions (Albania, Armenia, Azerbaijan, Bulgaria, Canada, Croatia, Finland, former Czechoslovakia, former Yugoslavia, France, Georgia, Germany, Greece, Hungary, Iran, Italy, Kazakhstan, Latvia, Lithuania, Macedonia, Moldova, Mongolia, the Netherlands, Poland, Romania, Russia, Slovakia, Slovenia,

Spain, Switzerland, Tajikistan, Türkiye, Ukraine, United Kingdom, United States, Uzbekistan).

Hosts: *Coleophora galbulipennella*, *Coleophora graminicolella*, *Hellinsia didactylites*, *Metzneria aestivella*, *Metzneria lappella*, *Pexicopia malvella*, *Rhyacionia resinella*.

***Agathis montana* Shestakov, 1932**

Material examined: Amasya: Merzifon-Tavşan Dağları-Esenköy Yaylası, 41°00'37"N 35°17'23"E, 09.07.2003, 1♀, 5♂♂.

General distribution: Palaearctic and Oriental Regions (Andorra, Armenia, Azerbaijan, Bulgaria, China, Czech Republic, former Yugoslavia, France, Greece, Hungary, Iran, Israel, Kazakhstan, Korea, Kyrgyzstan, Macedonia, Moldova, Mongolia, Poland, Russia, Switzerland, Türkiye, Ukraine, United Kingdom, Uzbekistan).

Hosts: *Pandemis cerasana*, *Pyrausta aurata*.

***Agathis nigra*, Nees, 1814**

Material examined: Tokat: Pazar-Balıca, 40°15'44"N 36°18'48"E, 07.07.2003, 1♀.

General distribution: Palearctic Region (Austria, Belgium, Bulgaria, Croatia, Finland, former Czechoslovakia, former Yugoslavia, France, Germany, Greece, Hungary, Iran, Israel, Italy, Kazakhstan, Korea, Latvia, Lithuania, Macedonia, Moldova, Mongolia, Morocco, the Netherlands, Poland, Russia, Slovenia, Spain, Sweden, Switzerland, Türkiye, Ukraine, United Kingdom).

Hosts: *Acleris quercinana*, *Apodia bifractella*, *Coleophora argentula*, *Coleophora laripennella*, *Coleophora meridionella*, *Coleophora vestianella*, *Eupoecilia roseana*, *Isophrictis striatella*, *Metzneria lappella*, *Metzneria metzneriella*, *Monochroa striatella*, *Ortholepis betulae*, *Phlyctaenia coronata*, *Ptycholoma lechearia*, *Pyrausta aurata*, *Scrobipalpa atriplicella*.

***Agathis rufipalpis* Nees, 1814**

Material examined: Amasya: Merzifon-Tavşan Dağları-Esenköy Yaylası, 41°00'37"N 35°17'23"E, 09.07.2003, 1♀; Yolyanı, 40°34'22"N 36°06'38"E, 30.06.2004, 1♀; Çorum: Kuşşaray, 40°35'44"N 35°08'36"E, 29.06.2004, 1♀; Tokat: Pazar-Balıca, 40°15'44"N 36°18'48"E, 07.07.2003, 1♀.

General distribution: Palaearctic Region (Belgium, Bulgaria, former Czechoslovakia, former Yugoslavia, Finland, France, Germany, Hungary, Ireland, Israel, Italy, Netherlands, Norway, Poland, Portugal, Romania, Slovenia, Spain, Sweden, Switzerland, Türkiye, United Kingdom).

Hosts: *Agonopterix kaekeritziana*, *Chrysoesthia hermannella*, *Coleophora alcyonipennella*, *Pyrausta aurata*.

***Agathis umbellatarum* Nees, 1814**

Material examined: Amasya: Merzifon-Tavşan Dağları-Esenköy Yaylası, 41°00'37"N 35°17'23"E, 09.07.2003, 1♀; Tokat: Turhal-Çamlıca, 40°41'09"N 36°22'99"E, 07.07.2003, 1♂; Niksar-Çamiçi, 40°59'02"N 36°95'12"E, 05.07.2003, 1♀.

General distribution: Palearctic Region (Algeria, Azerbaijan, Bulgaria, Croatia, Cyprus, former Yugoslavia, France, Germany, Greece, Hungary, Iran, Israel, Italy, Kazakhstan, Kyrgyzstan, Macedonia, Moldova, Mongolia, Portugal, Russia, Spain, Tajikistan, Tunisia, Türkiye, Turkmenistan, Ukraine, Uzbekistan).

Hosts: *Depressaria* sp., *Metzneria aestivella*, *Metzneria lappella*.

***Agathis varipes* Thomson, 1895**

Material examined: Samsun: Kocadağ-TRT İstasyonu, 41°32'81"N-36°10'43"E, 29.8.2003, 1♀; Salıpazarı-Kayaköprü, 41°10'18"N 36°28'16"E, 03.07.2003, 1♀; Tokat: Pazar-Balıca, 40°15'44"N 36°18'48"E, 07.07.2003, 1♀.

General distribution: Palearctic Region (Finland, former Yugoslavia, Germany, Greece, Hungary, Italy, Kazakhstan, Macedonia, Mongolia, the Netherlands, Norway, Russia, Slovakia, Sweden, Switzerland, Tajikistan, Türkiye, Ukraine, United Kingdom, Uzbekistan).

Hosts: *Apodia bifractella*, *Metzneria lappella*, *Myeloides cirrigerella*.

Bassus Fabricius, 1804

Bassus conspicuus (Wesmael, 1837)

Material examined: Ordu: Ünye-Çatalpınar, 41°07'00"N 37°15'00"E, 05.07.2003, 1♀; Samsun: Vezirköprü-Kızılcaören 41°06'00"N 35°30'00"E, 02.07.2003, 1♀.

General distribution: Holarctic Region (Belgium, Canary Islands, China, Croatia, Finland, former Yugoslavia, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Korea, Netherlands, Poland, Russia, Slovenia, Spain, Sweden, Switzerland, Türkiye).

Hosts: *Cydia pomonella*, *Grapholita molesta*, *Gypsonoma nitidulana*, *Pammene regiana*, *Phalonidia manniana*, *Rhopobota ustomaculana*, *Scoparia crataegella*.

***Bassus dimidiator* (Nees, 1834)**

Material examined: Samsun: Salıpazarı-Aspete mevki, 41°05'02"N 36°49'49"E, 03.07.2003, 2♀♀.

General distribution: Palaearctic, Nearctic and Oriental regions (Armenia, Azerbaijan, Belarus, Bulgaria, Canada, China, Finland, former Czechoslovakia, former Yugoslavia, France, Germany, Greece, Hungary, Iran, Italy, Kazakhstan,

Latvia, Lithuania, Malta, Moldova, Netherlands, Poland, Portugal, Russia, Slovakia, Switzerland, Türkiye, U.S.A., Ukraine, United Kingdom).

Hosts: *Acleris forsskaleana*, *Acleris variana*, *Aleimma loeflingiana*, *Anthonomus pomorum*, *Archips cerasivorana*, *Archips crataegana*, *Archips rosana*, *Archips xylosteana*, *Argyrotaenia velutinana*, *Blastodacna atra*, *Choristoneura rosaceana*, *Coleophora spinella*, *Croesia bergmanniana*, *Cydia latiferreana*, *Dichelia histrionana*, *Epiblema scutulana*, *Epinotia tetraquetra*, *Grapholita interstinctana*, *Grapholita molesta*, *Hedya nubiferana*, *Pandemis cerasana*, *Pandemis heparana*, *Recurvaria leucateella*, *Recurvaria nanella*, *Spilonota ocellana*, *Tortrix viridana*, *Yponomeuta malinella*.

***Bassus graecus* Achterberg, 1992**

Material examined: Samsun: Havza-Mismilliğaç, 40°99'63"N 35°70'33"E, 02.07.2003, 1♀.

General distribution: West Palearctic Region (Greece, Türkiye).

Hosts: Unknown.

***Bassus tumidulus* (Nees, 1814)**

Material examined: Samsun: Vezirköprü-Kızılcaören 41°06'00"N 35°30'00"E, 02.07.2003, 4♀♀, 2♂♂; Salıpazarı-Aspete mevkii, 41°05'02"N 36°49'49"E, 03.07.2003, 4♀♀, 2♂♂; Salıpazarı-Derbentaltı, 41°10'10"N 36°10'20"E, 03.07.2003, 6♀♀, 2♂♂; Salıpazarı-Soyuk, 41°28'16"N 36°25'10"E, 03.07.2003, 1♀.

General distribution: Palearctic and Oriental regions (Austria, Azerbaijan, Belarus, Belgium, Bulgaria, China, Croatia, Finland, former Czechoslovakia, former Yugoslavia, France, Georgia, Germany, Greece, Hungary, Iran, Ireland, Italy, Japan, Kazakhstan, Korea, Latvia, Lithuania, Moldova, Mongolia, Morocco, Netherlands, Norway, Poland, Portugal, Russia, Spain, Sweden, Switzerland, Türkiye, Ukraine, United Kingdom).

Hosts: *Agonopterix atomella*, *Cydia compositella*, *Cydia delineana*, *Cydia pallifrontana*, *Cydia splendana*, *Cydia tenebrosana*, *Dichrorampha acuminatana*, *Epiblema cirsiiana*, *Epiblema scutulana*, *Gypsonoma aceriana*, *Gypsonoma minutana*, *Lathronympha strigana*, *Lobesia botrana*, *Lobesia euphorbianus*, *Mompha epilobiella*, *Ptocheuusa inopella*, *Rhopobota ustomaculana*, *Sparganothis pilleriana*, *Utetheisa jacobaeae*.

***Disophrys caesa* (Klug, 1835)**

Material examined: Amasya: Karabrahim-Çengel, 40°31'20"N 36°10'29"E, 03.09.2003, 1♀; Çorum: Kuşsaray,

40°35'44"N 35°08'36"E, 29.06.2004, 1♂; Tokat: Reşadiye-Çayırpınar, 40°24'16"N 37°16'16"E, 01.07.2004, 2♂♂.

General distribution: Palearctic Region (Algeria, Armenia, Azerbaijan, Bulgaria, Croatia, former Yugoslavia, France, Germany, Hungary, Iran, Italy, Morocco, Portugal, Romania, Russia, Spain, Switzerland, Türkiye).

Hosts: Unknown

As a result of this study carried out in the Central Black Sea Region, 17 species of the genera *Agathis*, *Bassus* and *Disophrys* belong to Agathidinae were reported. All of the species are new to the fauna of Central Black Sea Region of Türkiye.

Agathis anglica and *A. malvacearum* are the most common species in the studied areas in all provinces where the study was conducted (Amasya, Çorum, Ordu, Samsun and Tokat) in the Central Black Sea Region of Türkiye. The highest number of specimens (50 females and 4 males) belongs to *A. anglica*.

The highest species diversity was found in Amasya. Compared with other provinces in the Central Black Sea Region, Çorum and Ordu have the lowest numbers of Agathidinae species (Table 2). Compared to the other studied locations, these locations are poorly studied, however, new records have been found for the provinces.

Agathidins are koinobiont endoparasitoids of lepidopteran larvae, which are plant pests, and thus these insects are important in natural regulation of pests in agriculture and forest areas. Therefore, it is essential to determine species diversity, habitat and host complexes of these beneficial insects so as to understand and protect their populations in nature.

Some identified parasitoid species in this study were reported as parasitoids in important agricultural and forest pests in previous studies. Among the reported species, *Agathis fuscipennis* is the parasitoid of the harmful tomato moth *Tuta absoluta*; *Agathis montana* is the parasitoid of *Pandemis cerasana*, which causes direct economic damage to flowers, fruits or grains of some pome fruits; *Bassus conspicuus* and *Bassus dimidiator* are parasitoids of apple pests *Cydia pomonella* and *Choristoneura rosaceana* and *Bassus tumidulus* is parasitoid of poplar borer *Gypsonoma aceriana* (Güçlü and Özbek 2007, Loni et al. 2011, Mills 2005, Wilkinson et al. 2004, Žikić et al. 2013).

Consequently, identifying these parasitic wasps which are quite considerable in biological control studies from the study area will guide future studies and also the identified species will contribute to the fauna of Türkiye.

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ÖZET

Bu çalışma Türkiye'nin Orta Karadeniz Bölgesine ait Agathidinae (Hymenoptera: Braconidae) faunasını ortaya koymak için 2003-2004 yılları arasında gerçekleştirilmiştir. Bu amaçla bölgedeki, Amasya, Çorum, Ordu, Samsun ve Tokat illerinin farklı yükseklik ve habitatlarından Agathidinae örnekleri toplanmıştır. Toplam 17 tür belirlenmiş ve tanımlanmıştır. Bunlar, *Agathis* cinsine ait on iki tür, *Bassus* cinsine ait dört tür ve *Disophrys* cinsine ait bir türdür. Tespit edilen tüm türler Türkiye'den daha önce kaydedilmiş olmasına rağmen araştırma bölgesi için yeni kayıt niteliğindedir. Tespit edilen türlerin dağılımları ve detaylı lokalite kayıtları hakkında bilgiler verilmiştir.

Anahtar kelimeler: dağılım, endoparazitoid, koinobiont, Türkiye, Agathidinae

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