

A Study on Microgastrinae (Hymenoptera: Braconidae) Species in Gökçeada and Bozcaada*

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Received: 27.01.2000

Abstract: Samples were collected from the islands of Gökçeada and Bozcaada between 1996 and 1997. A total of 28 species belonging to 7 genera of Microgastrinae were determined.

The species which are new records for the Turkish fauna are *Apanteles brunnistigma* Abdinbekova, *Dolichogenidea cheles* (Nixon), *D. lacteicolor* (Viereck), *D. petrovae* (Walley), *D. submarginata* (Abdinbekova), *Choeras parasitellae* (Bouché), *Glyptapanteles acasta* (Nixon), *Cotesia setebis* (Nixon), and *Microplitis docilis* Nixon.

Key Words: Microgastrinae, Braconidae, Fauna, Gökçeada, Bozcaada.

Gökçeada ve Bozcaada Microgastrinae (Hymenoptera: Braconidae) Türleri Üzerinde Bir Araştırma

Özet: Bu çalışmada Bozcaada ve Gökçeada' dan 1996-1997 yılları arasında toplanan Microgastrinae örnekleri değerlendirilerek 7 cinse ait 28 tür saptanmıştır.

Saptanan türlerden, *Apanteles brunnistigma* Abdinbekova, *Dolichogenidea cheles* (Nixon), *D. lacteicolor* (Viereck), *D. petrovae* (Walley), *D. submarginata* (Abdinbekova), *Choeras parasitellae* (Bouché), *Glyptapanteles acasta* (Nixon), *Cotesia setebis* (Nixon) ve *Microplitis docilis* Nixon Türkiye faunası için ilk kayıttır.

Anahtar Sözcükler: Microgastrinae, Braconidae, Fauna, Gökçeada, Bozcaada.

Introduction

Species of Microgastrinae are parasitoids of most species of Lepidoptera and Coleoptera. To date, a total of 16000 species of Microgastrinae have been reported in the world and approximately 485 species are found in the Palaearctic region (1).

Studies concerning Microgastrinae species in the Palaearctic region have been carried out by Wilkinson (2), Papp (3-23), Telenga (24), Nixon (25-31), Shenefelt (32, 33), Abdinbekova (34), Tobias (35, 1), Achterberg (36) and You et al. (37).

Studies on Turkish Microgastrinae species have been conducted by Beyarslan (38), İnanç and Beyarslan (39-41), Beyarslan and İnanç (42), and İnanç (43, 44).

The Gökçeada and Bozcaada islands appeared at the end of the third geological age. They are believed to have been parts of Thrace and Anatolia (Turkey). Gökçeada is situated at about 13 km distance and 700 m altitude to the north of Gallipoli. This island is composed of many hills and valleys encompassing an area of 285 km², and it is the largest island in Turkey. Its southwestern-northwestern part is 27.5 km and the northern-southern

*This study was supported by Trakya University Research Fund, (TUAF, No: 125).

part is 15 km. It has richer water sources than the other islands in Turkey. There are 8 inhabited towns on the island. The common vegetation is maquis. In addition, Frigana formation, mainly composed of *Sarcopterum spinosum* (L.), represents the second largest vegetation. Typical Mediterranean vegetation including *Nerium oleander* L. and *Vitex* sp. is also found on the island. *Olea europea* L., *Ficus carica* L. and *Medicago sativa* L. are economically important plants (Figure 1).

Bozcaada is a triangle-shaped island lying about 3 km west of Odunluk Port on the Anatolian coast. It is characterized as a plateau where agriculture, particularly viniculture, is common and it encompasses an area of 40 km² with a hill 191 m high. Its northwestern-southeastern part is 11 km and the north-south part is 5 km. Natural water sources are poor. Although it is similar to Gökçeada in regard to vegetation, it shows Eastern Mediterranean characteristics. (Figure 2). Mediterranean climate and the continental climate of Thrace affect these islands (45).

This study is a part of a project carried out since 1988 to determine Turkish Microgastrinae species.

Materials and Methods

Between 1996 and 1997, adult specimens of Microgastrinae from different habitats of Gökçeada and

Bozcaada islands were collected from grass-type plants using traps. They were transferred into suction tubes and killed immediately by KCN. Samples were then stored and brought to the laboratory for further analysis. Samples were prepared and labelled according to taxonomic rules.

Pertinent literature was used for the taxonomic examination of materials. The specimens were identified according to Mason (46). Adult Microgastrinae species from the Mediterranean region of Turkey (collected by Beyarslan) as well as collections from Hungary, Russia, Germany, Iraq and Israel (provided by Dr. J. Papp, Hungarian Natural History Museum), and the material collected by Inanc were used as comparison material. Diagnostic information is briefly presented for the new records for the Turkish fauna.

Results and Discussion

By analyzing a total of 226 specimens, 28 species were identified, of which 9 are new records for the Turkish Microgastrinae fauna.

Apantelini

Apanteles Foerster, 1862

Apanteles aragatzi Tobias, 1976.

Trudy Zool. Inst., 224-225, ♀.

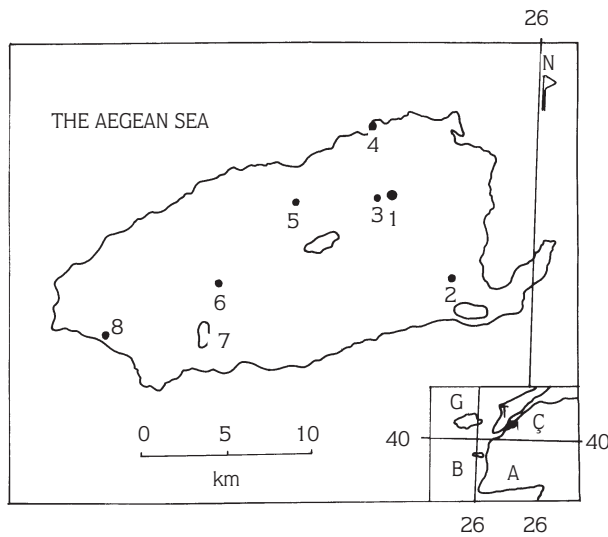


Figure 1. Gökçeada: 1. Centre, 2. Aydınçık, 3. Tigem, 4. Kaleköy, 5. Tepeköy, 6. Şahinkaya, 7. Uğurlu dam, 8. Uğurlu. A: Anatolia, AS: The Aegean Sea, B: Bozcaada, Ç: Çanakkale, G: Gökçeada, T: Thrace.

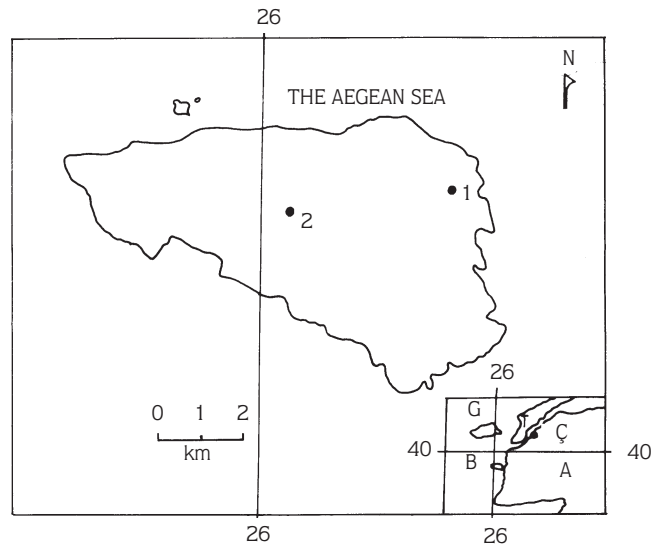


Figure 2. Bozcaada: 1. Centre, 2. Çayır. A: Anatolia, AS: The Aegean Sea, B: Bozcaada, Ç: Çanakkale, G: Gökçeada, T: Thrace.

Material examined: Gökçeada-Uğurlu dam (Meadow, 7.7.1996, 4 ♂♂, 18.6.1997, 5 ♂♂).

General distribution: Armenia, Krasnodar, Sweden (1), Turkey (16).

Distribution in Turkey: Turkey ? (16), Kırklareli-Vize-Pabuçdere, Edirne-Lalpaşa-Hacıdanişment (39).

Apanteles brunnistigma Abdinbekova, 1969

Dan, CCP, 25 (6): 72-77, ♀.

Length: 2.8 mm

2r longer than 1Rs, meeting each other more angularly (Figure 3). Nervellus (Cu and cua) of hind wing moderately arched. Mesonotum dull, usually strongly wrinkled or less usually, with confluent punctuation lending the surface as less rough sculpture, Scutellum shiny.

Material examined: Gökçeada-Uğurlu dam (Meadow, 5.6.1996, 3 ♀♀, 7.8.1996, 3 ♀♀).

General distribution: Azerbaidzhan, England, Italy, Hungary (10), Bulgaria, Caucasus, Western Siberia (1).

New record for Turkey.

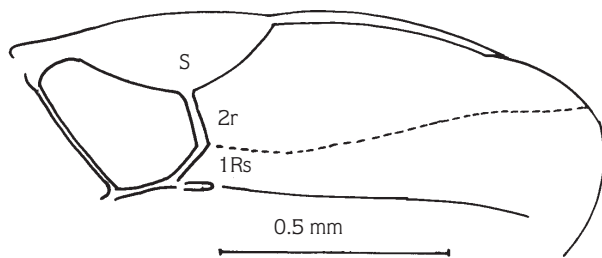


Figure 3. *Apanteles brunnistigma* Abdinbekova. S: Stigma, 2r and 1Rs.

Dolichogenidea Viereck, 1911

Dolichogenidea apellator (Telenga, 1949)

Apanteles apellator Telenga, 1949. Ent. Obar., 30: 385, ♀.

Dolichogenidea apellator: Mason, 1981. Mem. ent. Soc. Canada, 115: 4-36.

Material examined: Gökçeada-Uğurlu dam (Meadow, 7.7.1996, 4 ♂♂).

General distribution: Cape Verde Islands, Cyprus, Egypt, Hungary, Mongolia, North China, Russia (32), Middle Europe, North China (24), Turkey (38).

Distribution in Turkey: Adana-Balcalı, Kahramanmaraş-Göksun, İçel-Tarsus, Erdemli (38), Gaziantep-Centre (41), Edirne-Büyükdöllük, Tekirdağ-Muratlı, Hanoğlu, Malkara- Yaylagöne (44).

Dolichogenidea cheles (Nixon, 1972)

Apanteles cheles Nixon, 1972. Bull. Ent. Res. 61: 701-743, ♀.

Dolichogenidea cheles: Mason, 1981. Mem. Ent. Soc. Canada, 115:34-36.

Length: 3 mm

2r distinctly longer than 1Rs, stigma with a pale yellow basal spot (Figure 4). Mesonotum faintly dull to dull with dense and rather strong punctuation interspaces smaller than punctures. Distal of scutellum punctuation.

Material examined: Gökçeada-Uğurlu (Pine wood, 6.6.1996, 6 ♀♀).

General distribution: Finland, Sweden (28), England, Hungary, Korea, Romania (8).

New record for Turkey.

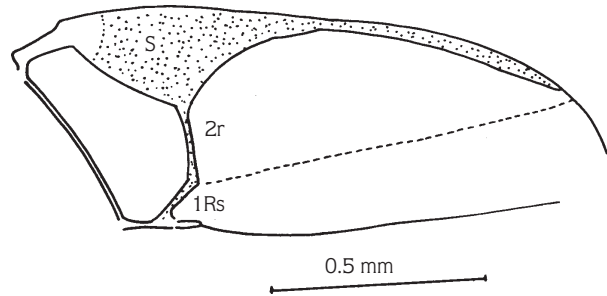


Figure 4. *Dolichogenidea cheles* (Nixon). S: Stigma, 2r and 1Rs.

Dolichogenidea lacteicolor (Viereck, 1911)

Apanteles lacteicolor Viereck, 1911. Roc. U.S. Natn. Mus. 40: 475, ♀ ♂.

Dolichogenidea lacteicolor: Mason, 1981. Mem. ent. Soc. Canada, 115: 34-36.

Length: 3 mm

2r slightly longer than 1Rs (Figure 5). Nervellus (Cu and cua) hind wing incurved below. Penultimate joint of antenna 1.1-1.3 times longer than broad. Mesonotum shiny and with discrete punctuation and deep, diameter of punctures laterally increasing in size, posterior of scutellum shiny laterally with discrete punctuation.

Material examined: Gökçeada-Centre (Cherry and *Medicago* sp., 6.7.1996, 3 ♀♀).

General distribution: Palaearctic, Nearctic (Shenefelt, 1972).

New record for Turkey.

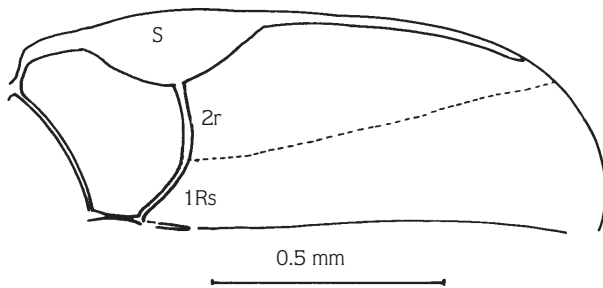


Figure 5. *Dolichogenidea lacteicolor* (Viereck). S: Stigma, 2r and 1Rs.

Dolichogenidea litae (Nixon, 1972)

Apanteles litae Nixon, 1972. Bull. Ent. Res. 61, 701-743, ♀♂.

Dolichogenidea litae: Mason, 1981. Mem. ent. Soc. Canada, 115:34-36.

Material examined: Gökçeada-Centre (Meadow, 9.6.1996, 8 ♀♀), Tepeköy (*Vitex* sp., 8.7.1996, 2 ♀♀), Bozcaada-Centre (Vineyard, 6.6.1996, 2 ♀♀).

General distribution: Crete, Germany, Jordan, Hungary, Sardinia, Turkey, and Yugoslavia (8).

Distribution in Turkey: Turkey ? (8), Edirne-Uzunköprü, Havsa-Köseömer, Tekirdağ-Malkara-Yaylagöne, Muratlı-Hanoğlu (44).

Dolichogenidea longicauda (Wesmael, 1837)

Apanteles longicauda Wesmael, 1837. Novo. Mem. Acad. Brux. 10: 54, ♀.

Dolichogenidea longicauda: Mason, 1981. Mem. ent. Soc. Canada, 115: 34-36.

Material examined: Gökçeada-Centre (Meadow, 9.6.1996, 1 ♀, 21 ♂♂), Kaleköy (*Vitex* sp. and meadow, 8.6.1996, 2 ♀♀), Uğurlu (Pine wood, 7.7.1996, 1 ♀, 6 ♂♂), Bozcaada-Çayır (Vineyard, 6.6.1996, 3 ♀♀).

General distribution: Europe, Mongolia, Russia (32), Turkey (39).

Distribution in Turkey: Edirne-Lalapaşa-Hacdanışment (39), Edirne-Sarayakpınar (44).

Dolichogenidea petrovae (Walley, 1937)

Apanteles petrovae Walley, 1937. Can. Enr. 69: 189, ♀.

Dolichogenidea petrovae: Mason, 1981. Mem. ent. Soc. Canada, 115:34-36.

Length: 3.5 mm

2r longer than 1Rs and emitting from stigma distal of its middle (Figure 6). Mesonotum with shallow and contiguous punctuation interspaces with microsculpture variable in strength. Scutellum subshiny.

Material examined: Gökçeada-Tigem-Centre (*Olea* sp., *Populus* sp. and *Medicago* sp., 6.7.1996, 3 ♀♀).

General distribution: Holarctic (11).

New record for Turkey.

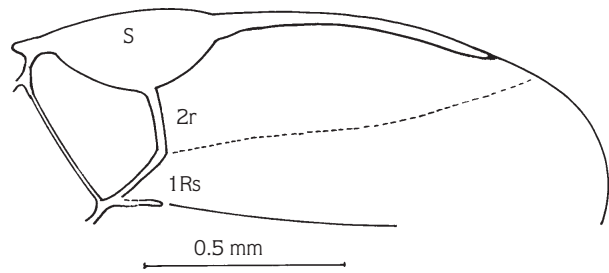


Figure 6. *Dolichogenidea petrovae* (Walley). S: Stigma, 2r and 1Rs.

Dolichogenidea seriphia (Nixon, 1972)

Apanteles seriphia Nixon, 1972. Bull. Ent. Res. 61, 701-743, ♀.

Dolichogenidea seriphia: Mason, 1981. Mem. ent. Soc. Canada, 115:34-36.

Material examined: Gökçeada-Tigem-Centre (*Olea* sp., *Populus* sp. and *Medicago* sp., 6.7.1996, 2 ♀♀).

General distribution: Germany, Hungary, European part of Russia (8).

Distribution in Turkey: Gaziantep-Centre (41).

Dolichogenidea sicaria (Marshall, 1885)

Apanteles sicaria Marshall, 1885. Trans. R. Ent. Soc. Lond. 1885: 209, ♀♂.

Dolichogenidea sicaria: Mason, 1981. Mem. ent. Soc. Canada, 115:34-36.

Material examined: Gökçeada-Uğurlu (Pine wood, 7.7.1996, 6 ♀♀, 3 ♂♂), Centre (Meadow, 9.6.1996, 1 ♀, 21 ♂♂), Kaleköy (*Vitex* sp. and meadow, 9.6.1997, 2 ♀♀), Bozcaada-Centre (Vineyard, 6.6.1996, 8 ♀♀), Çayır (Vineyard, 6.6.1996, 2 ♀♀).

General distribution: Azerbaidzhan (7), Europe (12), Kazakhstan (35), Turkey (38), New Zealand (32).

Distribution in Turkey: Adana-Centre, İçel-Tarsus, Silifke, Antakya-Aksu (38), Between Kırklareli-Demirköy and İğneada, Kofçaz, Edirne-Süleoğlu, Tatarlar, Lalapaşa-Süleymandanişment, Hacıdanişment, Doğanköy (39), Edirne-Büyükdöllük, Meriç-Hasirciarnavut, Uzunköprü-Centre, Enez-Centre, Sultaniçe, Tekirdağ-Şarköy, Saray-Safaalan, Çanakale-Eceabat-Centre, Alçitepe (44).

Dolichogenidea submarginata (Abdinbekova, 1969)

Apanteles submarginata Abdinbekova, 1969. DAN. CCP, 25 (6): 72-77, ♀.

Dolichogenidea submarginata: Mason, 1981. Mem. ent. Soc. Canada, 115: 34-36.

Length: 2.8 mm

2r and 1Rs forming a rather arched vein, not angularly meeting each other (Figure 7). Nervellus of hind wing weakly incurved, nearly straight. Mesonotum dull, and with microsculpture, posterior of scutellum rather shallow punctuation, distal of scutellum nearly smooth and shiny.

Material examined: Gökçeada-Uğurlu dam (Meadow, 7.7.1996, 3 ♀♀).

General distribution: Azerbaidzhan, Hungary (10).

New record for Turkey.

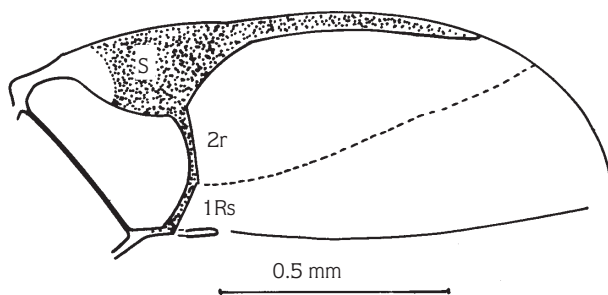


Figure 7. *Dolichogenidea submarginata* (Abdinbekova), S: Stigma, 2r and 1Rs.

Microgastrini

Iconella Mason, 1981

Iconella albinervis (Tobias, 1964)

Apanteles albinervis Tobias, 1964, Trudy. Zool. Inst. Leningr. 34:221, ♀ ♂.

Iconella albinervis: Mason, 1981. Mem. ent. Soc. Canada, 115:74-78.

Material examined: Gökçeada-Uğurlu dam (Meadow, 7.7.1996, 2 ♀♀, 6.7.1997, 2 ♂♂), Aydıncık (*Vitex* sp. 6.7.1996, 2 ♀♀).

General distribution: Azerbaidzhan (34), Kazakhstan, Hungary (15), Turkey (44).

Distribution in Turkey: Edirne-Meriç-Küplü (44).

Choeras Mason, 1981

Choeras parasitellae (Bouché, 1834)

Microgaster parasitellae Bouché, 1834. Naturg.Insect. 153, ♀.

Choeras parasitellae: Mason, 1981. Mem. ent. Soc. Canada, 115: 76-77.

Length: 2.6 mm

1Rs slightly longer than r1 or 1Rs and 2r equal. 2Rs present as a stubform reduced vein (Figure 8). Flagellar joints 15-13 cubic. Mesonum and Scutellum finely punctuate.

Material examined: Gökçeada-Şahinkaya (Oak Forest and maquis formation, 7.7.1997, 3 ♀♀).

General distribution: Europe, Asian part of Russia (15).

New record for Turkey.

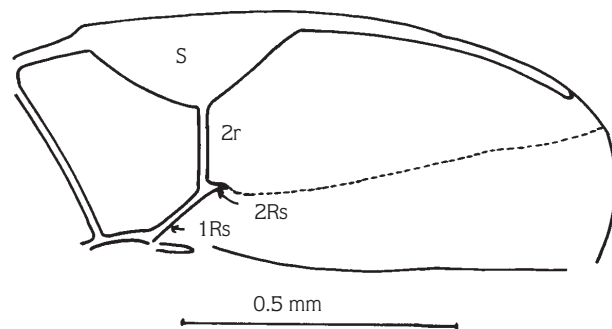


Figure 8. *Choeras parasitellae* (Bouché), S: Stigma, 2r, 1Rs and 2Rs.

Choeras dorsalis (Spinola, 1808)

Hypomicrogaster dorsalis Spinola, 1808. Insect. Liguria, 2: 151, 1 ♀.

Choeras dorsalis: Mason, 1981. Mem. ent. Soc. Canada, 115:76-77.

Material examined: Gökçeada-Centre (Meadow, 9.6.1996, 14 ♀♀, 2 ♂♂), Uğurlu dam (Meadow, 7.7.1996, 4 ♂♂, 18.6.1997, 1 ♀, 1 ♂).

General distribution: Armenia, Azerbaidzhan, Cyprus, Daghan, Middle Asia, N. Africa, Switzerland (25), Morocco (8), Hungary, Rumania (3), England, Sicily (32), Russia (35), Turkey (38).

Distribution in Turkey: Adana-Feke, Antalya-Alanya, İçel, Silifke (38), Kırklareli-Kıyıköy, Yeniceköy (39), Edirne-Büyükdöllük, Meriç-Küplü, Enez, İstanbul-Sarıyer-Kısırmandıra (44).

Cotesini

Glyptapanteles Ashmead, 1905

Glyptapanteles acasta (Nixon, 1973)

Apanteles acasta Nixon, 1973. Bull. Ent. Res. 63, 169-228, ♀ ♂.

Glyptapanteles acasta: Mason, 1981. Mem. ent. Soc. Canada, 115:105-107.

Length: 3 mm

2r issuing distally from stigma and 2r slightly longer than 1Rs (Figure 9), Stigma two-thirds clearly pigmented. Mesonotum shiny, superficially microsculpture. Scutellum shiny, separately and superficially punctuate.

Material examined: Gökçeada-Uğurlu (Pine wood, 5.6.1996, 2 ♀♀), Kaleköy (*Vitex* sp. and meadow, 9.6.1997, 2 ♂♂).

General distribution: Bulgaria, Germany, Greece, Hungary (15), England (29).

New record for Turkey.

Glyptapanteles porthetriae (Muesebeck, 1928)

Apanteles porthetriae Muesebeck, 1928. Proc. Ent. Soc. Wash. 29: 8, ♀ ♂.

Glyptapanteles porthetriae: Mason, 1981. Mem. ent. Soc. Canada, 115:105-107.

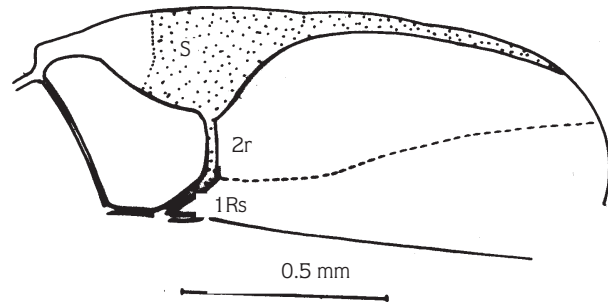


Figure 9. *Glyptapanteles acasta* (Nixon). S: Stigma. 2r and 1Rs.

Material examined: Gökçeada-Tigem-Centre (*Olea* sp., *Populus* sp. and *Medicago* sp., 5.6.1997, 3 ♂♂).

General distribution: Caucasus, Europe, Russia (15), Turkey (38).

Distribution in Turkey: Adana-Osmaniye-Zorkun (38).

Cotesia Cameron, 1891

Cotesia cupreus (Lylé, 1925)

Apanteles cupreus Lylé, 1925. Entomologist's Mon. Mag. 61: 120, ♀.

Cotesia cupreus: Mason, 1981. Mem. ent. Soc. Canada, 115:110-113.

Material examined: Gökçeada-Tigem-Centre (*Olea* sp., *Populus* sp. and *Medicago* sp., 5.6.1997, 5 ♀♀, 6.7.1997, 2 ♀♀, 1 ♂), Bozcaada-Centre (Vineyard, 6.6.1996, 4 ♀♀).

General distribution: Azerbaidzhan, England, Finland, France, Germany, Hungary, Lithuania, Netherlands, Spain (19), Turkey (38).

Distribution in Turkey: Isparta-Eğirdir (38), Edirne-Uzunköprü, Altinyazı (44).

Cotesia kazak (Telenga, 1949)

Apanteles kazak Telenga, 1949. Ent. Obozar. 30: 385, ♀ ♂.

Cotesia kazak: Mason, 1981. Mem. ent. Soc. Canada, 115:110-113.

Material examined: Gökçeada-Tigem-Centre (*Olea* sp., *Populus* sp. and *Medicago* sp., 5.6.1997, 5 ♀♀, 6.7.1997, 1 ♀), Uğurlu dam (Meadow, 7.7.1996, 4 ♂♂, 18.6.1997, 3 ♀♀, 1 ♂), Şahinkaya (Oak Forest and maquis formation, 7.7.1997, 2 ♀♀), Kaleköy (*Vitex* sp. and meadow, 9.6.1997, 5 ♀♀, 1 ♂).

General distribution: Armenia, Azerbaidhzan, Bulgaria, Greece, Israel, Italy, Mongolia, Morocco, Poland, Russia, Transcaucasus, Turkey, Turkmenia, Uzbekistan (18).

Distribution in Turkey: Turkey ? (18), Adana-Osmaniye, Antalya-Centre, Korkuteli, Burdur-Centre, Isparta-Eğirdir, Milas, Hatay-Hassa, Kahramanmaraş-Alaçayır, (38), Kırklareli-Vize-Pabuçdere, Yeniceköy, Edirne-Tatarlar (39), Tekirdağ-Hayrabolu-Kandamış (44).

Cotesia nothus (Marshall, 1885)

Apanteles nothus Marshall, 1885. Trans. R. Ent. Soc. Lond. 1885: 186, ♀ ♂.

Cotesia nothus: Mason, 1981. Mem. ent. Soc. Canada, 115:110-113.

Material examined: Bozcaada-Centre (Vineyard, 6.6.1996, 2 ♀♀, 8.7.1996, 2 ♀♀, 7.6.1997, 3 ♀♀).

General distribution: England, Germany, Hungary (19), Turkey (38).

Distribution in Turkey: Burdur-Karamanlı (38).

Cotesia memnon (Nixon, 1974)

Apanteles memnon Nixon, 1974. Bull. Ent. Res. 64: 465, ♀.

Cotesia memnon: Mason, 1981. Mem. ent. Soc. Canada, 115:110-113.

Material examined: Gökçeada-Uğurlu (Pine wood, 7.7.1997, 2 ♀♀, 1 ♂).

General distribution: Bulgaria, England, Germany, Hungary Italy, Russia, Yugoslavia (23), Turkey (38).

Distribution in Turkey: Antalya-Gazipasa, Burdur-Centre, Isparta Aliköy, Eğirdir (38), Edirne-Uzunköprü, Saçlımüsellim, Kırklareli-Babeski-Kumköy, Tekirdağ-Saray, Malkara-Yaylagone (44).

Cotesia ruficrus (Haliday, 1834)

Apanteles ruficrus Haliday, 1834. Ent. Mag. 2: 253, ♀ ♂.

Cotesia ruficrus: Mason, 1981. Mem. ent. Soc. Canada, 115:110-113.

Material examined: Gökçeada-Centre (Meadow, 9.6.1996, 1 ♀, Tigem-Centre (*Olea* sp., *Populus* sp. and *Medicago* sp., 6.7.1996, 2 ♀♀, 1 ♂), Uğurlu (Pine wood, 7.7.1997, 2 ♂♂).

General distribution: Australia, Celebes, Ceylon, China, Czechoslovakia, Egypt, England, Fiji, Formosa, France, Germany, Hawaii, India, Italian Somaliland, Japan, Java, Korea, Madagascar, Malaya, Manchoukuo, New Zealand, N. Cameron, Philippines, Poland, Russia, Senegal, S. Africa, Sudan, Sweden, Switzerland, Uganda, Yugoslavia (32), Israel (4), Turkey (38).

Distribution in Turkey: Adana-Kozan, Tufanbeyli, Antalya-Centre, Burdur-Karamanlı, Gaziantep-İslahiye, Kilis, Hatay-İskenderun, Reyhanlı, İçel-Tarsus, Silifke, Isparta-Centre, Eğirdir, Kahramanmaraş-Tekir (38), Kırklareli-İğneada, between Yeniceköy and Demirköy, Kocayazı, Kofçaz (39).

Cotesia setebis (Nixon, 1974)

Apanteles setebis Nixon, 1974. Bull. Ent. Res. 64: 506-507, ♀ ♂.

Cotesia setebis: Mason, 1981. Mem. ent. Soc. Canada, 115:110-113.

Length: 2.5 mm

2r slightly issuing distally from stigma, 2r longer than 1Rs (Figure 10). Mesonotum dull, slightly rugulose. Scutellum increasing sculpture than mesonotum and slightly shiny.

Material examined: Gökçeada-Uğurlu (Pine wood, 5.6.1996, 3 ♀♀).

General distribution: Bulgaria, Czechoslovakia, Hungary, Russia, (19), Sweden, Switzerland (30).

New record for Turkey.

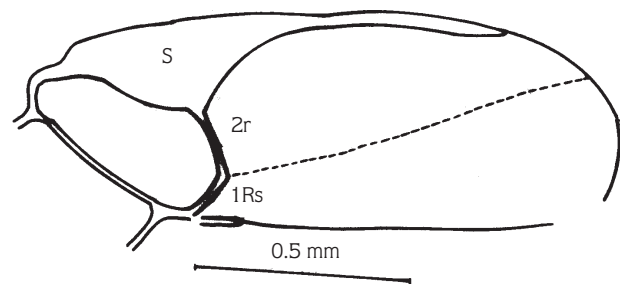


Figure 10. *Cotesia setebis* (Nixon), S: Stigma, 2r and 1Rs.

Cotesia tibialis (Curtis, 1830)

Apanteles tibialis Curtis, 1830. Br.Ent. 7: 321, ♀ ♂.

Cotesia tibialis: Mason, 1981. Mem. ent. Soc. Canada, 115:110-113.

Material examined: Gökçeada-Tigem-Centre (*Olea* sp., *Populus* sp. and *Medicago* sp., 5.6.1996, 3 ♀ ♀).

General distribution: Czechoslovakia, England (32), Palaearctic Region (18), Turkey (47).

Distribution in Turkey: Erzurum (47), Edirne-Hadımağa, Keşan-Koyunhisar, İstanbul-Çatalca, Aydınlar, Kırklareli-Babaeski-Alpullu, Tekirdağ-Hayrabolu (44).

Cotesia orestes (Nixon, 1974)

Apanteles orestes Nixon, 1974. Bull. Ent. Res. 64: 488-489, ♀ ♂.

Cotesia orestes: Mason, 1981. Mem. ent. Soc. Canada, 115:110-113.

Material examined: Gökçeada-Aydincık (*Vitex* sp., 7.7.1996, 2 ♂ ♂).

General distribution: England, Germany, Switzerland (30), Finland, Netherlands (18), Turkey (39).

Distribution in Turkey: Edirne-Süleoğlu, Tatarlar, Kırklareli-Vize-Pabuçdere (39).

Microplitini

Microplitis Foerster, 1862

Microplitis docilis Nixon, 1970

Bull. Br. Mus. Nat. Hist. (Ent.). 25: 28-29.

Length: 3.2 mm

Antenna relatively thick, penultimate joint of antenna two-thirds longer than broad (Figure 11). Mesonotum dull, densely rugose. Scutellum densely rugose.

Material examined: Gökçeada-Tigem-Centre (*Olea* sp., *Populus* sp. and *Medicago* sp., 5.6.1996, 3 ♂ ♂).

General distribution: Bulgaria, Finland, Hungary, Sweden, Russia (17).

New record for Turkey.

Microplitis marshalii Kokujev, 1897

Spec. Hym. Eur. Alg. 5 bis: 183, ♀.

Material examined: Gökçeada-Tigem-Centre (*Olea* sp., *Populus* sp. and *Medicago* sp., 5.6.1996, 3 ♂ ♂).

General distribution: Armenia, Azerbaidzhan, Georgia, Hungary, Rumania, Russia (33), Turkey (17).

Distribution in Turkey: Turkey ? (17).

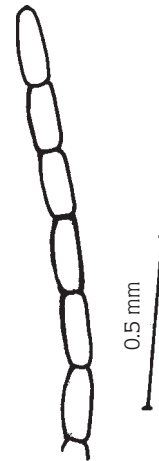


Figure 11. *Microplitis docilis* (Nixon). Penultimate joint of antenna

Microplitis cebes Nixon, 1970

Bull. Br. Mus. Nat. Hist. (Ent.). 25: 18, ♀ ♂.

Material examined: Gökçeada-Centre (Meadow, 8.7.1996, 3 ♀ ♀).

General distribution: Austria, Czechoslovakia, Switzerland, Yugoslavia (17), Mongolia (13), Turkey (38).

Distribution in Turkey: Burdur-Karamanlı (38), Edirne-Süleoğlu, Süleymandanişment, Hacıdanişment, Kırklareli-Between Demirköy and İğneada (40), Edirne-Tavukormanı, Oğulpaşa, İstanbul-Silivri-Küçüksinekli (44).

Microplitis spinolae Nees, 1880

Hym.: Ich. Affin. Mon. 1: 166, ♀ ♂.

Material examined: Gökçeada-Tigem-Centre (*Olea* sp., *Populus* sp. and *Medicago* sp., 5.6.1996, 2 ♀ ♀, 1 ♂), Uğurlu (Pine wood, 7.7.1997, 2 ♀ ♀).

General distribution: Azerbaidzhan, Europe, Russia, Siberia (17), Java, Iran (33), Turkey (38).

Distribution in Turkey: Antalya-Korkuteli, Burdur-Centre, Isparta-Gökçeli, Kahramanmaraş-Göksun (38), and Thrace Region (44).

The Microgastrinae subfamily has never been investigated on both islands and therefore all 28 species are new records for the islands. One of the new records for the Turkish fauna, *Dolichogenidea cheles* (Nixon, 1972), is found on both islands. As a result, the number of Microgastrinae species known in Turkey have increased from 107 to 116.

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