

Contribution to the knowledge of Scoliidae (Hymenoptera) fauna of Turkey

Serdar TEZCAN*

Yusuf KARSAVURAN*

Esat PEHLİVAN*

Sinan ANLAŞ**

Summary

In this study, it has been determined that totally 10 species belonging to Scoliidae occurring in the collection of LEMT (Lodos Entomological Museum, Turkey). Amongst those *Megascolia maculata maculata* (Drury, 1773) is the most common subspecies.

Key words: Hymenoptera, Scoliidae, fauna, Turkey

Anahtar sözcükler: Hymenoptera, Scoliidae, fauna, Türkiye

Introduction

Scoliidae is a small, cosmopolitan family of aculeate wasps. They are a group of solitary habits which develop externally on the larvae of Scarabeoid beetles. Their large body is hairy, black with yellow, orange or red marking. Faunistic studies on the Scoliid wasps of Turkey have been conducted by Betrem (1935, 1961), Bradley (1950), Tkalcu (1987), Madl (1997) and Osten & Özbek (1999).

Scoliids have been collected from the different parts of Turkey, but the data of which have not been published yet. They have been preserved in the collection of LEMT (Lodos Entomological Museum Turkey) of Department of Plant Protection, Faculty of Agriculture, Aegean University, Bornova, Izmir, Turkey. The aim of this paper is to present the complete records of preserved material to researchers and relevant people.

* Department of Plant Protection, Faculty of Agriculture, University of Ege, 35100 Izmir, Turkey
e-mail: tezcan@ziraat.ege.edu.tr

** Department of Zoology, Faculty of Science, University of Ege, 35100 Izmir, Turkey
Alınış (Received): 18.11.2004

Material and Methods

Material have been collected by sweeping of vegetation from the different parts of Turkey mainly by field studies of the projects (TUBITAK-TOAG/168, 336, 502) during the years of 1962-1986. In addition to these, material collected and given as a gift to the museum have also been included in this study.

Tribus and genera were given in phylogenetic order and species were listed alphabetically within each tribus.

Material have been determined by S. Anlas and confirmed by Dr. T. Osten. Classification and nomenclature of Scoliids suggested by Betrem (1935) and Osten (2000) have been followed in this study.

Results

In this study, 10 species and subspecies of four genera belonging to Campsomerini and Scoliini tribes of Scoliinae (Scoliidae) were reported in Turkey.

Campsomerini

Colpa Dufour, 1841

Colpa klugii (Vander Linden, 1827)

Material examined: **İzmir:** Gümüldür, 10.VIII.2004, 1♀; **Mersin:** Mezitli, 20.VI.2004, 1♀. Totally 2 specimens.

Colpa sexmaculata (Fabricius, 1782)

Synonym: **Scolia interrupta** Fabricius, 1782; **Trielis interrupta** Fabricius, 1782; **Campsomeris interrupta** Fabricius, 1782; **Scolia sareptana** Eversmann, 1849 (Hamon, 1994; Osten, 2000).

Material examined: **İzmir:** Buca, 25.VIII.2003, 6♀♀; Dikili, 26.VI.2003, 1♂; Menemen, 02.VII.1983, 1♀. Totally 8 specimens.

Colpa quinquecincta quinquecincta (Fabricius, 1793)

Synonym: **Sphex villosa** Fabricius, 1775; **Tiphia villosa** Fabricius, 1793; **Colpa continua** Lepeletier, 1845 (Hamon, 1994; Osten, 2000).

Material examined: **İzmir:** Bornova, 21.VI.1977, 1♀, 07.VI.1983, 1♂; **Manisa:** Turgutlu, 21.VI.2004, 2♀♀, 2♂♂. Totally 6 specimens.

Dasyscolia Bradley, 1951

Dasyscolia ciliata araratica (Radoskovsky, 1890)

Synonym: **Dielis ciliata** var. **fastuosa** Gribodo, 1893 (Bradley, 1950; Osten, 2000).

Material examined: **İzmir:** Bornova, 11.V.1977, 1♀; 12.V.1977, 2♀♀; 18.V.1977, 1♀; 21.V.1978, 1♀. Totally 5 specimens.

Scoliini

Megascolia Betrem, 1928

Megascolia maculata maculata (Drury, 1773)

Synonym: **Scolia haemorrhoidalis** Fabricius, 1787; **Scolia insignis** Saussure, 1858; **Scolia versicolor** Saussure, 1859 (Hamon & Osten, 1994).

Material examined: **Ankara:** Central province, July, 1962, 3♀♀; **Antalya:** Demre, 21.V.1980, 3♀♀; **Aydın:** Didim, 02.VII.2002, 2♀♀; **Balıkesir:** Dursunbey, 13.VII.1972, 1♀; Havran, 18.V.2002, 3♂♂; **Çanakkale:** Biga, 21.V.1973, 1♂; **Denizli:** Kızılcabölük, 01.V.1977, 1♂; **Edirne:** Central province, 15.V.2004, 1♂; **Elazığ:** Ağın, 21.V.1994, 1♂; **Isparta:** Eğirdir, 10.VI.1973, 2♀♀; **İzmir:** Bornova, 17.V.1962, 1♂; 26.V.1962, 1♂; 17.VI.1973, 1♀; 18.V.1975, 2♂♂; July, 1977, 1♀; 06.V.1978, 2♂♂; 07.V.1978, 2♂♂; 12.V.1978, 2♂♂; 20.V.1978, 1♀; 22.V.1978, 1♂; 08.VI.1978, 2♂♂; 22.V.2002, 1♀; 25.V.2003, 1♀; Kemalpaşa, 12.V.1994, 1♂; **Kahramanmaraş:** Andırın, 20.VII.1984, 2♀♀; **Manisa:** Salihli, 18.V.2002, 1♂; **Mardin:** Derik, 05.VI.1976, 1♀; **Mersin:** Silifke, 19.VII.2003, 2♀♀; **Muğla:** Kavaklıdere, 30.IV.1994, 1♂. Totally 44 specimens.

Scolia Fabricius, 1775

Scolia hirta hirta (Schrink, 1781)

Synonym: **Sphex bicincta** Scopoli, 1786; **Scolia cincta** Klug, 1805; **Scolia alutus** Nagy, 1967; **Scolia mongolina** Nagy, 1970 (Osten & Özbek, 1999; Osten, 2000).

Material examined: **İzmir:** Buca, 25.VIII.2003, 1♀; **Manisa:** Turgutlu, 04.X.2004, 2♀♀; 21.X.2004, 1♀; 22.X.2004, 2♂♂, 1♀; 25.X.2004, 1♀. Totally 8 specimens.

Scolia galbula (Pallas, 1771)

Synonym: **Scolia tricolor** Pallas, 1771; **Scolia quadricincta** Scopoli, 1786; **Scolia notata** Fabricius, 1787; **Scolia bifasciata** Rossi, 1790; **Scolia tridens** Fabricius, 1793; **Scolia dejeani** Vander Linden, 1827; **Scolia trifasciata** Vogrin, 1954; **Scolia moreana elisabethae** Muche, 1962 (Hamon, 1993; Osten & Özbek, 1999; Osten, 2000).

Material examined: **Manisa:** Turgutlu, 21.X.2004, 1♀; 01.XI.2004, 1♂; 02.XI.2004, 1♂. Totally 3 specimens.

Scolia sexmaculata sexmaculata (Müller, 1766)

Synonym: **Scolia quadripunctata** Fabricius, 1775; **Scolia biguttata** Fabricius, 1787; **Scolia violacea** Panzer, 1799; **Scolia syriaca** Klug 1832;

Scolia hispanica Betrem, 1935; **Scolia beiruti** Betrem, 1935; **Scolia montana** Steinberg, 1962; **Scolia dionysopolis** Tkalcu, 1988 (Betrem, 1936; Osten, 2000).

Material examined: **Aydin:** Çine, 22.VI.1982, 1♂; **İzmir:** Bornova, 19.VI.1983, 1♂. Totally 2 specimens.

Scolia asiella Betrem, 1935

Material examined: **İzmir:** Balçova, 03.VII.2002, 1♀; **Mersin:** Silifke, 22.VII.2003, 1♂. Totally 2 specimens.

Scolia fuciformis Scopoli, 1786

Synonym: **Scolia insubrica** Scopoli, 1786; **Scolia amabilis** Eversmann, 1849 (Osten, 2000).

Material examined: **Aydin:** Kuşadası, 09.VI.1977, 1♀. Totally 1 specimen.

Discussion

At the end of this study, it has been determined that totally 10 species and subspecies belonging to four genera of the two tribus (Campsomerini and Scoliini) of Scoliidae have been preserved in the collection of LEMT.

Up to now, a total of 21 species and subspecies of Scoliidae have been recorded from Turkey by Betrem (1935, 1961), Bradley (1950), Madl (1997), Osten & Özbek (1999), Osten (2004). Those belonging to the subfamily Proscoliiinae is **Proscolia spectator** Day, 1981; those belonging to the subfamily Scoliinae are **Colpa** (s. str.) **klugii** (Vander Linden, 1827), **C.** (s. str.) **sexmaculata** (Fabricius, 1782), **C.** (**Heterelis**) **quinquecincta** **quinquecincta** (Fabricius, 1793), **C.** (**Heterelis**) **quinquecincta** **quinquecincta** f. geogr. **abdominalis** (Spinola, 1808), **C.** (**Heterelis**) **quinquecincta** **rudaba** (Kirby, 1889), **Campsomeriella thoracica** **thoracica** (Fabricius, 1787), **Micromeriella hyalina** **angulata** (Morawitz, 1888), **Dasycolia ciliata** **araratica** (Radoskovsky, 1890), **Megascolia** (**Regiscolia**) **maculata** **maculata** (Drury, 1773), **Scolia** (**Discolia**) **hirta** **hirta** (Schrank, 1781), **S.** (**Discolia**) **turkestanica** Betrem, 1935, **S.** (s. str.) **asiella** Betrem, 1935, **S.** (s. str.) **anatoliae** Osten, 2004, **S.** (s. str.) **erivanensis** (Radoskovsky, 1876), **S.** (s. str.) **erythrocephala** **barbariae** Betrem, 1935, **S.** (s. str.) **fallax** Eversmann, 1849, **S.** (s. str.) **flaviceps** **flaviceps** Eversmann, 1846, **S.** (s. str.) **fuciformis** Scopoli, 1786, **S.** (s. str.) **galbula** (Pallas, 1771) and **S.** (s. str.) **sexmaculata** **sexmaculata** (Müller, 1766).

Material housed in LEMT constitute % 47,6 of Turkish known species. It is hoped that the number of known species and rate of housed material of Scoliids will rise in future. Among the housed material **Megascolia maculata maculata** is the most common taxon.

Özet

Türkiye Scoliidae (Hymenoptera) familyasına katkılar

Bu çalışmada, Türkiye'nin farklı yerlerinden 1962-2004 yılları arasında toplanan ve LEMT (Lodos Entomoloji Müzesi) koleksiyonunda korunan Scoliidae (Hymenoptera) familyasından 10 tür ve alttür incelenmiş olup, bunlar arasında **Megascolia maculata maculata** (Drury, 1773) alttürünün en yaygın olduğu belirlenmiştir.

Acknowledgements

The authors would like to express their gratitudes to Late Prof. Dr. Niyazi Lodos, Late Prof. Dr. Feyzi Önder, Late Assoc. Prof. Dr. Ruşen Atalay, Assoc. Prof. Dr. Enis Erkin, Sami Aksoy and others for field work and Dr. Till Osten (Germany) for identifications/ confirmations of the material and suggestions for manuscript.

Literature

- Betrem, J. G., 1935. Beitrag zur Kenntnis der Paläarktischen Arten des Genus **Scolia**. **Tijdschr. Entom.**, **78**: 1-78.
- Betrem, J. G., 1936. **Scolia quadricincta** F., 1775= **Scolia sexmaculata** (O. F. Müller, 1766) nec F., 1781. **Tijdschr. Entom.**, **79**: 77-79.
- Betrem, J. G., 1961. Bemerkungen über die Paläarktischen Scoliiden. Verh. XI. Int. Kongr. Ent. Wien, 1960 (1): 247-250.
- Bradley, J. C., 1950. The most primitive Scoliidae. **Revista Espanola de Entomologia**, 427-438.
- Hamon, J., 1992. Une espece meconnue de Scoliidae europeenne: **Colpa klugii** (Vander Linden, 1827) (Hymenoptera). **L'Entomologiste**, **48** (6): 313-316.
- Hamon, J., 1993. Observations sur **Scolia (Scolia) galbula** (Pallas, 1771), **Scolia (Scolia) fallax** Eversmann, 1849 et **Scolia (Discolia) hirta** (Schrank, 1781). **Nouv. Rev. Ent. (N.S.)**, **10** (1): 87-96.
- Hamon, J., 1994. Note sur les **Elis** de la faune de France, au sens de Berland (1925) (Hymenoptera, Scoliidae). **Nouv. Revue Ent.**, **1**: 85-90.
- Hamon, J. & T. Osten, 1994. Le nom de la grande scolie européenne à tête jaune est-il **Scolia (Triscolia) flavifrons** Fabricius, 1787, ou bien **Megascolia (Regiscolia) maculata** (Drury, 1773) (Hymenoptera, Scoliidae). **Bull. Soc. linn. Bordeaux**, **22** (1): 13-17.
- Madl, M., 1997. Über Vespiden, Pompiliden, Scoliiden und Tiphiiden der Türkei (Hymenoptera). **Linzer biol. Beitr.**, **29** (2): 823-827.
- Osten, T. & H. Özbek, 1999. Beitrag zur Kenntnis der Scoliiden-Fauna der Türkei (ohne Zypern) mit Anmerkungen zur Systematik und Taxonomie (Hymenoptera, Scoliidae). **Entomofauna**, **20** (28): 429-444.
- Osten, T., 2000. Die Scoliiden des Mittelmeer-Gebietes und angrenzender Regionen (Hymenoptera) Ein Bestimmungsschlüssel. **Linzer biol. Beitr.**, **32** (2): 537-593.
- Osten, T., 2004. Zur Taxonomie von **Scolia boeberi** Klug, 1805, **Scolia kasakhstanica** (Steinberg, 1962) und **Scolia anatoliae** spec. nov. **Entomol. Z.**, **114** (5): 204-208.

Tkalcu, B., 1987. Ergebnisse der Tschechoslowakisch-Iranischen Entomologischen Expedition nach dem Iran 1970, 1973 und 1977 (Mit Angaben über einige Sammelresultate in Anatolien) Hymenoptera: Scolioidea, Scoliidae. **Acta Ent. Mus. Nat. Pragae**, **42**: 287-291.