

# A contribution to the knowledge of Spheciformes of Turkey: Tribes Astatini, Dinetini, Larrini, Palarini and Trypoxylini (Hymenoptera: Apoidea: Crabronidae)

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**Abstract.** Between 1967 and 2000, a total of 48 species of Spheciformes (tribes Astatini, Dinetini, Larrini, Palarini and Trypoxylini) was collected in Turkey, mainly in the eastern part of the country. Five of them are new to the Turkish fauna: *Astata apostata* Mercet, *Astata gallica* Beaumont, *Ancistromma asiaticum* Gussakovskij, *Trypoxylon latilobatum* Antropov, and *Trypoxylon syriacum* Mercet.

**Kurzfassung.** Zwischen 1967 und 2000 wurden in der Türkei, besonders im Osten des Landes, insgesamt 48 Arten von Spheciformes (tribes Astatini, Dinetini, Larrini, Palarini und Trypoxylini) gesammelt. Fünf davon sind neu für die türkische Fauna: *Astata apostata* Mercet, *Astata gallica* Beaumont, *Ancistromma asiaticum* Gussakovskij, *Trypoxylon latilobatum* Antropov und *Trypoxylon syriacum* Mercet.

**Key words.** Spheciformes, Crabronidae, Anatolia, Middle East.

## Introduction

Most authors have considered the “Sphecidae” as a natural group, either as a family (BOHART & MENKE 1976) or as a superfamily (KROMBEIN et al. 1979). However, some authors consider the “Sphecidae” to be a paraphyletic group (BROTHERS 1975), and this has recently been confirmed by ALEXANDER (1992) and MELO (1999). The latter author thinks that the “Sphecidae” are in fact three families: Ampulicidae, Sphecidae and Crabronidae, which, together with the bees and the Heterogynaidae, form the superfamily Apoidea. This opinion was discussed by BROTHERS (1999). To refer to the three families proposed by MELO (1999), the term “Spheciformes” has been used, a denomination already proposed by BROTHERS (1975). These three families are cosmopolitan and comprise more than 8000 species and nearly 250 genera.

Studies on the Spheciformes fauna of Turkey are limited. The works of BEAUMONT (1967, 1969) have undoubtedly been the greatest contribution to the knowledge of Spheciformes in Turkey, as they summarize all previous work. Furthermore, ROTH (1967) on the genus *Palmodes* Kohl, 1890, appearing as an appendix to BEAUMONT’s (1967) paper, and PULAWSKI (1967) on the genera *Astata* Latreille, 1796 and *Tachyspex* Kohl, 1883 should be mentioned here.

In the first part of our serial studies on the Turkish Spheciformes, the tribes Astatini (Astatinae) and Dinetini, Larrini, Palarini and Trypoxylini (Crabroninae) are treated (the assignment to subfamilies was made according to MENKE 1997). A total of 48 species was