



To the knowledge of Vespidae (Hymenoptera) of Pakistan

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Abstract

Twenty-three species in eight genera are recorded from Pakistan and two species in two genera are recorded from Bangladesh (former East Pakistan). Seven species *Vespula nursei* Archer, *Polistes (Polistella) stigma tamulus* (Fabricius), *P. (Gyrostoma) olivaceus* (De Geer), *Ropalidia brevita* Das & Gupta, *R. cyathiformis* (Fabricius), *Ancistrocerus gazella* (Panzer), and *Anterhynchium flavomarginatum flavomarginatum* (Smith) are newly recorded from Pakistan. Body length variability is given for all studied species. Four figures (habitus, head, mesosoma and metasoma) are given for 22 species from Pakistan.

Key words: Vespidae, Pakistan, Bangladesh, new record

Introduction

The family Vespidae serves as a biological control agent as they feed their larvae on aphids and caterpillars. Females are feared for their painful sting, which may even cause death in individuals who are allergic to their venom. They also cause problems in pastry and confectionery shops, prevent pickers from harvesting fruit and attack castration and other wounds of livestock (Rasnitsyn & Quicke, 2002). They are important pollinators of fruit and vegetable crops. Yellow jackets scavenge dead insects, earthworms and other carrion, including garbage. Some species of Vespidae have become invasive pests as they have been recorded from new regions.

The Vespidae is a cosmopolitan but predominantly tropical family, containing about 5000 described species in six subfamilies; Stenogastrinae, Eumeninae, Eupragiinae, Masarinae, Polistinae, and Vespinae. Adults are predominantly black or brown but often have yellow or white markings (Goulet & Huber 1993). The subfamilies Polistinae and Vespinae are composed solely of highly eusocial species, while Eumeninae, Eupragiinae and Masarinae are all solitary; Stenogastrinae are primitively eusocial wasps. Thirty-six genera of social vespids occur in the world, mainly distributed in the tropical parts of the world except for *Dolichovespula* and *Vespula*.

The present worldwide knowledge on the wasp fauna is only moderately good, with for example the exact data for countries like Pakistan lacking (Dvořák, 2007). Das and Gupta (1989) mentioned eight species from Pakistan. Gusenleitner (2006) reported 23 species of Eumeninae mostly from Quetta (Baluchistan) and Karachi (Sindh). Similarly Dvořák (2007) mentioned 21 species from Khyber Pakhtunkhwa and Baluchistan. Some other taxonomists also mentioned a couple other species in their work. In present work 25 species were recorded and seven are new records from Pakistan. During this study new taxa have been discovered but they will be published separately.

Materials and methods

The collections of the family Vespidae present in Zoological Science Division, Pakistan Museum of Natural History, Islamabad (PMNH), Department of Agricultural Entomology, Khyber Pakhtunkhwa Agricultural University, Peshawar (KPAUP) and Department of Entomology, Pakistan Forest Institute (PFI), Peshawar were studied for this work.