



Vespidae (Hymenoptera) of the Pothwar region of Punjab, Pakistan

JUNAID ALI SIDDIQUI¹, IMRAN BODLAH^{1,4}, JAMES M. CARPENTER², MUHAMMAD NAEEM¹,
MUNIR AHMAD¹ & MUHAMMAD ADNAN BODLAH³

¹Laboratory of Biosystematics, Department of Entomology, Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi, Pakistan.
E-mail: junaidali206@gmail.com

²Division of Invertebrate Zoology, American Museum of Natural History, Central Park West at 79th Street, New York, NY 10024, USA,
Email: carpente@amnh.org

³Department of Entomology, Nanjing Agricultural University, Nanjing 210095, China

⁴Corresponding author. E-mail: imranbodlah@gmail.com

Abstract

Six genera and nine species of Eumeninae (*Eumenes punctatus* de Saussure, *E. papillarius* (Christ), *Delta dimidiatipenne* (de Saussure), *D. p. pyriforme* (Fabricius), *D. esuriens* (Fabricius), *Rhynchium brunneum* (Fabricius), *Anterhynchium ab-dominale* (Illiger), *Antepipona sibilans* (Cameron), *Allorhynchium argentatum* (Fabricius)), two genera and six species of Polistinae (*Polistes wattii* (Cameron), *P. olivaceus* (De Geer), *P. rothneyi carletoni* van der Vecht, *P. indicus* Stofa), *Ropalidia brevita* Das & Gupta, *R. cyathiformis* (Fabricius), and one genus and four species of Vespinae (*Vespa basalis* Smith, *V. orientalis* Linnaeus, *V. tropica* (Linnaeus), *V. velutina* Lepeletier de Saint Fargeau) are recorded from Pothwar region. *Eumenes punctatus* and *E. papillarius* are newly recorded from Pakistan. An illustrated keys to subfamilies, genera and species are given.

Key words: Wasp, Vespidae, Hymenoptera, Punjab, Pakistan

Introduction

Wasps of the family Vespidae play an important role in terrestrial ecosystems and they are also considered good biological control agents because their larvae feed on caterpillars and other insects (Fateryga 2009, Rasnitsyn & Quicke, 2002). These wasps also serve as pollinators of different vegetables and fruit crops.

Very few studies have been carried out on the family Vespidae in Pakistan. Just eight species were reported by Chaudhary *et al.* (1966). Eight species of social wasps were recorded from Pakistan by Das and Gupta (1989); Dvořák (2007) recorded 12, and compiled a total of 21 species from his own research and the literature. Gusenleitner (2006) recorded 23 species belonging to the subfamily Eumeninae mainly from Quetta and Karachi. Eighteen species belonging to all three subfamilies were reported from Pakistan by Gusenleitner (2007), of which 12 were from Gilgit-Baltistan. Thirty species belonging to the subfamilies Vespidae, Eumeninae and Polistinae were recorded from Khyber Pakhtunkhwa, Pakistan (Aziz, 2008). Bodlah *et al.* (2011, 2012) reported three species of the genus *Delta* de Saussure from the Punjab Province of Pakistan of which two species, *D. p. pyriforme* (Fabricius) and *D. esuriens* (Fabricius), were recorded for the first time from this area. Mahmood *et al.* (2012) described 23 species belonging to eight genera from Pakistan of which seven species were reported for the first time from this region.

Material and methods

Wasps were collected from different localities of Pothwar region, viz., Rawalpindi, Islamabad, Murree, Chakwal, Attock and Jhelum, during 2012–2013. All collected specimens belonging to 19 species were identified to three subfamilies and nine genera of the family Vespidae.

Vespa velutina karnyi van der Vecht, 1957: 35 (key), 38, ♀, ♂, [Indonesia] “Bandar Buru, Deli” (holotype ♀ Leiden).
Vespa velutina timorensis van der Vecht, 1957: 35 (key), 40, ♀, [Indonesia] “Mollo, 1350 m, Timor” (Basel); also from another locality on Timor.
Vespa velutina floresiana van der Vecht, 1957: 35 (key), 40, ♀, [Indonesia] “Labuan Badjo, Fores” (Leiden).
Vespa velutina pruthii van der Vecht, 1959: 228, ♀, [India] “Kashmir, Srinagar” (Calcutta).

Material examined. Rawalpindi, 13.ix.11, 5♀, 10.ix.12, 2♀, 22.xi.12, 7♀, 2♂, 19.ix.12, 6♀, 23.v.12, 12♀, 3♂, 14.iv.12, 3♀; Islamabad, 1.iv.12, 4♀; Murree, 14.x.12, 4♀; Attock, 20.v.12, 1♂, 26.v.12, 6♀; Jhelum, 25.ix.12, 5♀; Chakwal, 16.iv.12, 7♀, 1♂.

Distribution. Pakistan, Bhutan, Vietnam, China, Indonesia, Taiwan Laos, Thailand, Malaysia, Myanmar and India; introduced into France, Spain and Portugal (Carpenter & Kojima 1997, Dvořák 2007, Mahmood *et al.* 2012).

Comments. These specimens were compared with the published description by Mahmood *et al.* (2012). This species can be recognized on basis of following characters: first and second metasomal segments with apical yellow band and 4th to 6th segments are golden. New locality records have been provided for this species.



FIGURE 35. *Vespa velutina*. **a.** Head, frontal view. **b.** Mesosoma, lateral view.

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