

## An updated checklist of Sepsidae (Diptera) from Gilgit-Baltistan, Pakistan

Mumammad Asghar Hassan, Imran Bodlah\*, Junaid Ali Siddiqui, Muhammad Tariq Rasheed, Ammara Gull-E-Fareen

Insect Biodiversity and Conservation group, Department of Entomology, Faculty of Food and Crop Sciences, PMAS-Arid Agriculture University Rawalpindi, Pakistan,

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\*Corresponding author email:  
imranbodlah@gmail.com

### Abstract

An updated checklist of twelve species of black scavenger flies under four genera has been enlisted from Gilgit-Baltistan. Two species belonging to subfamily Sepsinae are recorded for the first time from Baltistan division, namely; *Sepsis dissimilis* Brunetti, 1910 and *Sepsis violacea* Meigen, 1826. Of these, *Sepsis dissimilis* Brunetti, 1910 is new recorded for Gilgit-Baltistan. Local distribution of all known species is provided.

**Keywords:** Checklist, Sepsidae, Gilgit-Baltistan, Pakistan, New records

### Introduction

The Sepsidae (Diptera) are a moderately large, cosmopolitan family of saprophagous flies, known from all zoogeographical regions of the world. It comprises more than 312 described species under 38 genera worldwide (Ozerov, 2005). The adult flies and larvae are found on animal dung, human excrement and manure heaps (Meier, 1996). The adult Sepsids are ant-like, generally small, waisted abdomen, their dark shining bodies, sometimes wings with or without round spot near apex of vein R2+3, presence of posterior thoracic spiracle with one or more fine bristles, with bristles or hairs on body can easily be differentiate this group of saprophagous flies from their natural habitats (Pont and Meier, 2002).

In Pakistan, 25 species under 8 genera were recognized by Iwasa (1989). Later, Ozerov (2005) presented the world check list of Sepsidae and listed 27 species from Pakistan. Recently, Hassan et al., (2017a) reported 4 species from Baltistan region. Hassan et al., (2017b) reported *Saltella setigera* Brunetti, 1909 for the first time from Pakistan. Three species under the genus *Dicranosepsis* has been reported from Narowal region of Punjab, with *Dicranosepsis crinita* (Duda, 1926) as new country

record (Hassan et al., 2017c). Here we updated the reported and new records of family Sepsidae from Gilgit-Baltistan, Pakistan.

### Material and Methods

During the year 2017, adult Sepsid flies were collected from the various localities of Baltistan Division, District Skardu (Organic village and Agriculture office), District Ghanche (Keris Valley and Ghawari) and District Shigar (Chutron, Wazirpur, Gulapur and Hashupi). The collections were done from the dung of cow by using the aerial net. The adult specimens were killed by using 70% ethanol and in a killing jar (Potassium Cyanide). The specimens were identified by using following literatures, Iwasa (1980 and 1989) under CZM6 Labomed binocular Microscope at Biosystematics Laboratory, Department of Entomology, Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi, Pakistan. The digital photographs of the new records are available at, sepsidnet-rmbr.nus.edu.sg. The identified specimens were deposited at Biosystematics Laboratory, Department of Entomology, Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi, Pakistan.



## Results

### Subfamily Sepsinae

Genus *Decachaetophora* Duda, 1926

1. *Decachaetophora aeneips* (De Meijere, 1911)

**Material Examined: Baltistan: Shigar:** Chutron, 12♂, 16.viii.2017, Wazirpur, 11♂, 16.viii.2017, Gulapur, 2♂, 16.viii.2017, Hashupi, 2♂, 16.viii.2017; **Skardu:** Organic Village, 14♂, 12.viii.2017; **Ghanche:** Ghawari, 13♂, 16.viii.2017, Keris Valley, 22♂, 16.viii.2017, leg. M.A. Hassan.

**Distribution:** Gilgit-Baltistan: Gilgit: Bagroth, Naltar; Baltistan: Skardu city, Hussain Abad, forest office (Iwasa, 1989; Hassan et al., 2017a).

Genus *Dicranosepsis* Duda, 1926

2. *Dicranosepsis quadrigemina* Iwasa, 1989

**Distribution:** Gilgit-Baltistan: Gilgit: Babusar Pass, Chilas (Iwasa, 1989).

Genus *Sepsis* Fallén, 1810

3. *Sepsis dissimilis* Brunetti, 1910

**Material Examined: Baltistan: Skardu:** Agriculture office Skardu, 3♂, 16.viii.2017, leg. M.A. Hassan.

**Distribution:** New record for Gilgit-Baltistan.

4. *Sepsis punctum* (Fabricius 1974)

**Material Examined: Baltistan: Skardu:** Agriculture office Skardu, 2♂, 16.viii.2017, leg. M.A. Hassan.

**Distribution:** Gilgit-Baltistan: Gilgit: Bagroth, Chilas, Hunza; Baltistan: Skardu city, Hussain Abad, forest office (Iwasa, 1989; Hassan et al., 2017a).

5. *Sepsis barbata* Becker, 1907

**Material Examined: Baltistan: Shigar:** Chutron, 13♂, 20.viii.2017, Wazirpur, 21♂, 16.viii.2017, Gulapur, 23♂, 16.viii.2017, leg. M.A. Hassan.

**Distribution:** Gilgit-Baltistan: Gilgit: Bagroth, Gulmit, Hunza; Baltistan: Skardu city, Hussain Abad, forest office (Iwasa, 1989; Hassan et al., 2017a).

**Note:** This species was found very common on the dung of Yok at Shigar.

6. *Sepsis thoracica* (Robineau-Desvoidy, 1830)

**Material Examined: Baltistan: Skardu:** Agriculture office Skardu, 2♂, 16.viii.2017; **Shigar:** Chutron, 2♂, 20.viii.2017, leg. M.A. Hassan.

**Distribution:** Gilgit-Baltistan: Baltistan: Skardu city, Hussain Abad, forest office (Hassan et al., 2017a).

7. *Sepsis lateralis* Wiedemann, 1830

**Distribution:** Gilgit: Bagroth, Chilas (Iwasa, 1989).

8. *Sepsis mediana* Iwasa, 1989

**Distribution:** Gilgit: Naltar (Iwasa, 1989).

9. *Sepsis neocynipsea* Melander et Spuler, 1917

**Distribution:** Gilgit: Naltar (Iwasa, 1989).

10. *Sepsis orthocnemis* Frey, 1908

**Distribution:** Gilgit: Babusar, Chilas (Iwasa, 1989).

11. *Sepsis violacea* Meigen, 1826

**Material Examined: Baltistan: Skardu:** Agriculture office Skardu, 1♂, 16.viii.2017, leg. M.A. Hassan.

**Distribution:** Gilgit-Baltistan: Gilgit: Babusar, Bagroth, Chilas, Hunza, Naltar (Iwasa, 1989). New record for Baltistan division.

Genus *Themira* Robineau-Desvoidy, 1830

12. *Themira minor* Haliday, 1833

**Distribution:** Gilgit: Bagrot, Gakuch (Iwasa, 1989).

## Discussion

Iwasa (1989) started work on the Sepsidae of Pakistan and reported 25 species under 8 genera from the different localities of Pakistan. Of these, 10 species are known from Gilgit division. Hassan et al., (2017a) reported 4 species for the first time for Baltistan division. Recently we got an opportunity to collect the adult Sepsidae from the various localities of district Skardu, Shigar and Ghanche (Baltistan Division) during 2017. As a result of examination, six species under two genera were identified. Two species are newly recorded for Baltistan division while *Sepsis dissimilis* Brunetti, 1910 is first record for Gilgit-Baltistan. The current checklist of twelve species of black scavenger flies under four genera has been enlisted based on the current study and previous studies of Iwasa (1989) and Hassan et al., (2017a).

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