

# On the presence of Pipunculidae (Diptera) in Iran

## [Zum Vorkommen der Pipunculidae (Diptera) im Iran]

by

Christian KEHLMAIER and Bahareh MAJNON JAHROMI

Dresden (Germany)      Shiraz (Iran)

---

### Abstract

This study is based on 152 specimens of big-headed flies collected in Alborz province, northern Iran. Of the 15 species identified, 14 represent first records for the Iranian fauna, including *Tomosvaryella demeyeri* KUZNETZOV, 1993 and *Tomosvaryella gazliensis* KUZNETZOV, 1994, previously known only from their respective type localities. DNA barcodes of the mitochondrial COI gene are provided for taxonomically difficult species.

### Key words

Diptera, Pipunculidae, Palaearctic Region, Middle East, Iran, taxonomy, faunistics, DNA barcoding, COI.

---

### Zusammenfassung

Diese Studie beruht auf 152 Individuen, die in der nordiranischen Provinz Alborz gesammelt wurden. Insgesamt 15 Pipunculiden-Arten wurden identifiziert. Zwei davon, *Tomosvaryella demeyeri* KUZNETZOV, 1993 und *Tomosvaryella gazliensis* KUZNETZOV, 1994, waren bislang nur von ihren jeweiligen Typuslokalitäten bekannt. Vierzehn der gefundenen Arten wurden erstmalig für die Fauna Irans nachgewiesen. Für taxonomisch schwierige Arten werden DNA-Barcodes des mitochondrialen Gens COI bereitgestellt.

### Stichwörter

Diptera, Pipunculidae, paläarktische Region, Mittlerer Osten, Iran, Taxonomie, Faunistik, DNA-Barcoding, COI.

---

## Introduction

Pipunculidae or big-headed flies are an inconspicuous family of brachycerous Diptera with slightly more than 1,400 species described from all biogeographic regions worldwide (RAFAEL & SKEVINGTON 2010). With their small body size (2–12 mm), their predominantly dark appearance and their rather cryptic life-style, it takes some effort to detect them in the field. Like the Syrphidae, they are capable of hovering on the spot and perform accurate manoeuvring in dense herbal vegetation or among leaves of bushes and trees. In such environments, pipunculids can be spotted most frequently in search of food sources (almost exclusively honey dew) and mating partners or for suitable hosts for their larvae, which are known as important endoparasitoids of Auchenorrhyncha (all Chalarinae and Pipunculinae) and recently also of adult Tipulidae (Nephrocerinae) (KOENIG & YOUNG 2007). This highly specialized life-style separates them from any other known family of Diptera.

The Iranian fauna of Pipunculidae is almost completely unknown. BECKER (1913) was the first to cite the family from Iran, providing descriptions of two new species. Thereafter, only GHARALI et al. (2008) account for an additional two described species and some tentatively affiliated specimens.

## Material and methods

The material was collected with Malaise traps at the following localities:

- Iran, Alborz Province, Karaj, Arganeh village, 35°55'40"N 51°04'42"E, 1,800 m a. s. l., 13.–27.IX.2012, leg. Bahareh MAJNON JAHROMI. The small village lies within the South Alborz Protected Area. The Malaise trap is pictured in Fig. 1.