

Short communication

The genus *Sphenometopa* Townsend in Iran (Diptera: Sarcophagidae: Miltogramminae)

Mehrdad Parchami-Araghi* & Ebrahim Gilasian

Insect Taxonomy Research Department, Iranian Research Institute of Plant Protection (IRIPP),
Agricultural Research, Education and Extension Organization (AREEO), Tehran, Iran

* Corresponding author, E-mail: maraghi20@yahoo.ca

جنس *Sphenometopa* Townsend در ایران (Diptera: Sarcophagidae: Miltogramminae)

مehرداد پرچمی عراقی* و ابراهیم گیلاسیان

بخش تحقیقات رده‌بندی حشرات، مؤسسه تحقیقات گیاه‌پزشکی کشور، سازمان تحقیقات، آموزش و ترویج کشاورزی،
تهران، ایران

* مسئول مکاتبات، پست الکترونیکی: maraghi20@yahoo.ca

چکیده

جنس *Sphenometopa* Townsend و سه گونه *S. claripennis*، *S. bifasciata* (Brauer & Bergenstamm) و *S. steinii* (Schiner) (Villeneuve) از ایران گزارش می‌شود. همچنین تصاویر حشرات کامل و اندام زادآوری جنس نر گونه‌های *S. steinii* و *S. bifasciata* ارائه شده است.

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Miltogramminae are common dwellers of arid regions of northern hemisphere including Iran whose estimated fauna is thought to significantly exceed its existing 39 members and virtually reach about 100 species (Szpila, pers. comm.). The world catalogue of Sarcophagidae has included 33 species of Iranian Miltogramminae (Pape, 1996) and the recent molecular reconstruction of phylogeny of the subfamily added further four species to its Iranian fauna (Piwczynski *et al.*, 2017: Supplementary Table A.1). Szpila *et al.* (2017) described the larvae of two unidentified miltogrammine species within the genera *Sphecapatodes* Villeneuve and *Sphecapatoclea* Villeneuve, based on the specimens from the North Khorasan province of Iran.

Largely known as a Holarctic genus, *Sphenometopa* Townsend comprised at least 43 species in the Palaearctic region (Pape, 1998). The molecular reconstruction of phylogeny of miltogrammine species suggests the position of the genus *Sphenometopa* within 'higher' Miltogramminae, with strong support for its monophyly (Piwczynski *et al.*, 2017). Available information on the biology of *Sphenometopa* remains scarce, although it is established that some species like most of 'higher' Miltogramminae commonly behave as kleptoparasites in the nests of the hymenopteran families Pompilidae and Sphecidae (Spofford *et al.*, 1989;

Pape, 1996; Piwczynski *et al.*, 2017). To date the highest level of diversity of this genus has been reported from the mountainous regions of the Central Asia (Rohdendorf, 1971). Despite the Rohdendorf's diagnosis of and keys to the Palaearctic *Sphenometopa* date back to half a century ago, it still suffices for the taxonomical needs in this region (Rohdendorf, 1967, 1971) as other sarcophagid experts such as Pape (1996, 1998) and Verves (1994) mainly followed the same set of data in their respective diagnosis of *Sphenometopa* as well as key to the Palaearctic genera and subgenera of Miltogramminae. It is worth noting that the latest record of the genus in the Middle East region belongs to Turkey (Verves, 2017).

Methods. Malaise traps were used for collecting flies during the course of this study. The AXA-method was employed for extracting the flies from alcohol (van Achterberg, 2009). To study the male genitalia, abdomens were heated in 10% KOH and then transferred into glacial acetic acid to neutralize the base. Dissection of male genitalia was performed in glycerin under an OlympusTM stereomicroscope. Genitalia and abdomen were finally placed into microvials containing glycerin and pinned below the associate specimen.

The specimens of *Sphenometopa steinii* (Schiner) (Fig. 1A–F) and *Sphenometopa bifasciata* (Brauer & Bergenstamm) (Fig. 2A–F) were collected in the western mountainous region close to the Iran-Iraq border. The record of *S. claripennis* and additional records of *S. bifasciata* were obtained from the Natural History Museum in Berlin (ZMHB), resulted from Dr. Joachim Ziegler's collecting expedition in Iran.

Specimen data. IRAN: *Kermanshah Province*, Paveh, Doodan village, 1106 m, fruit orchard, 5.vi.2016, 35°00'26.28"N 46°12'51.41"E, Malaise trap, leg. M. Zardouei (4 ♂, *S. steinii*), (2 ♂, *S. bifasciata*) [Hayk Mirzayans Insect Museum (HMIM), Tehran, Iran]; *East-Azerbaijan Province*, Komar (Kiyamaki Dagh), SE Jolfa, NW Tabriz, Valley, 1240 m, 12.viii.2005, 38°43'44.2"N 45°59'55.3"E, leg. J. Ziegler (2 ♂, *S. bifasciata*), (1 ♂, *S. claripennis*) [Natural History Museum in Berlin (ZMHB), Berlin, Germany].

In spite of the scant information on the satellite flies of Iran, it is hypothesized that Iran serves as the terra typica for this subfamily in which many new records or undescribed species are awaiting taxonomic studies.

In line with our ongoing research on the Diptera fauna of Iran, we have developed a large collection of miltogrammine flies from poorly studied areas of southern and western provinces. We continue to collect and document the flies of Iran's natural habitats to underscore the need for genuine measures to curb the widespread destruction of these areas.

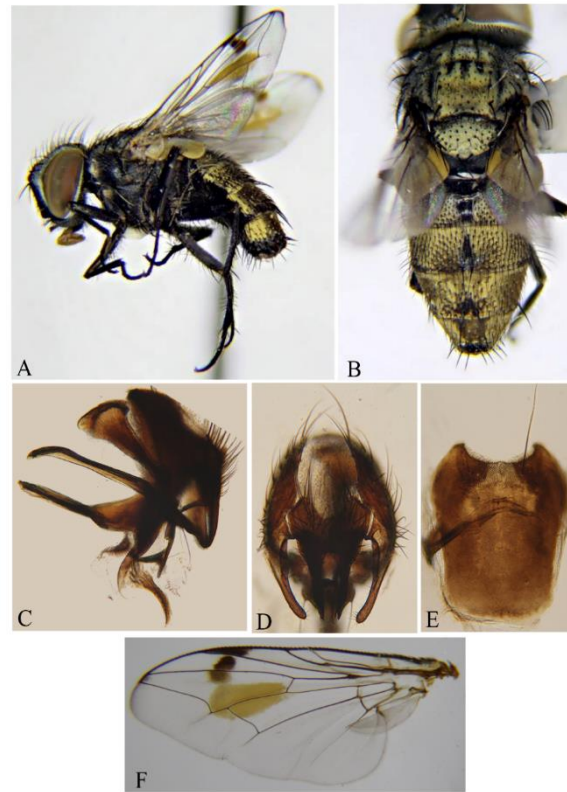


Fig. 1. ♂ *Sphenometopa steinii* (Schiner): **A.** Habitus, lateral view; **B.** Habitus, dorsal view; **C.** Genitalia, lateral view; **D.** Genitalia, posterior view; **E.** Sternite 5; **F.** Left wing, dorsal.

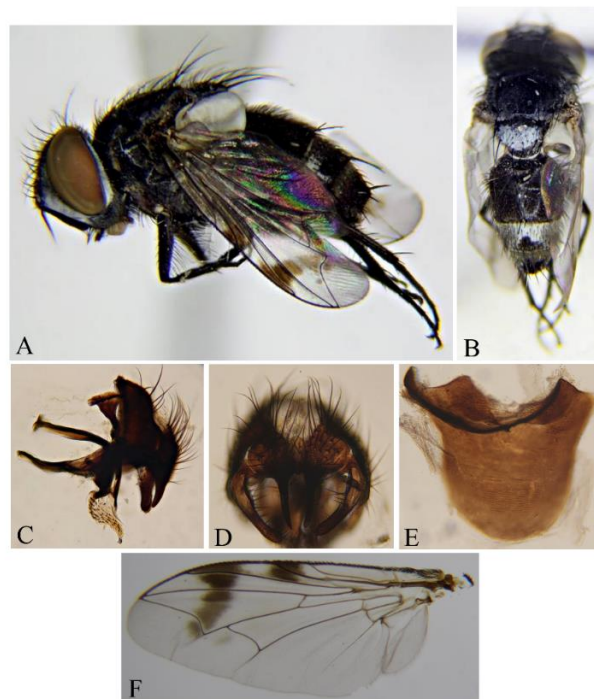


Fig. 2. ♂ *Sphenometopa bifasciata* (Brauer & Bergenstamm): **A.** Habitus, lateral view; **B.** Habitus, dorsal view; **C.** Genitalia, lateral view; **D.** Genitalia, posterior view; **E.** Sternite 5; **F.** Left wing, dorsal.

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