

Scientific Note

The first faunistic records of soldier flies (Stratiomyidae: Diptera) from Oman with taxonomic notes

Ali A. Al-Jahdhami 

Ministry of Agriculture and Fisheries Wealth, Department of plant protection, Samad Ashan, Sultante of Oman.

✉ Corresponding author: entomologistali96@gmail.com

Edited by: Alberto M. Silva-Neto

Received: February 19, 2021. Accepted: March 02, 2021. Published: March 12, 2021.

Abstract. Stratiomyidae is a diverse family of orthorrhaphous Brachycera. It exhibits great morphological variation and is the largest family in the infraorder Stratiomyomorpha. The present communication deals with the recording of five species of soldier flies from Oman, of which *Odontomyia angulata* (Panzer, 1798), *Odontomyia xanthopus* Bezzi, 1906, *Oplodontha pulchriceps* Loew, 1858, *Nemotelus (Nemotelus) niloticus* Olivier, 1811 from northern Oman and an unidentified specimen of *Tinda* Walker, 1859 from southern Oman, in Dhofar region.

Keywords: Oman insects, *Odontomyia*, *Oplodontha*, *Nemotelus*, *Tinda*.

Soldier flies (Stratiomyidae Latreille, 1802) are a worldwide group of flies of the suborder Brachycera, with circa 2700 described species within 12 subfamilies (Hauser 2009). The size of these flies varies from 2–20 mm, and they have different body colors, some are wasp mimics marked with different color patterns such as black and yellow, green, and sometimes metallic (Woodley 2001; Hauser 2009; Hassan et al. 2017). The adult soldier flies usually prefer to live near the larval habitats, mostly found visiting flowers or landing on leaves whereas the larvae are found in various substrates: decaying organic material (Beridinae Westwood, 1838, Sarginae Walker, 1834, Clitellariinae Brauer, 1882), ant nests (*Clitellaria* Meigen, 1803), under bark (Pachygastrinae Loew, 1856), as well as in standing or slow moving water (Nemotelinae Kertész, 1912, Stratiomyinae Latreille, 1802) (Hauser 2009).

There are no published records of Stratiomyidae from Oman. Two papers have been published by Martin Hauser with the description of two new species and the record of seven species from United Arab Emirates (UAE) (Hauser 2009; Hauser 2014). The arid climate of the Arabian Peninsula is not the ideal environment for soldier flies, because the family is more likely to be found in moist habitats with abundant vegetation. Also, some of the species with aquatic larvae have very few and small habitats in which they could maintain stable populations in the Arabian Peninsula, and could therefore be locally endangered (Hauser 2014). Oman is located in the southwestern corner of Asia and it is biogeographically located at the junction of the Palaearctic and the Afrotropical Regions. The faunal affiliation of Oman is mainly Palaearctic with exception of Dhofar region (Personal observation).

This paper is not a complete checklist of Stratiomyidae for the whole Oman because most of the specimens were collected from few locations in northern and southern Oman, and with limited collecting methods like hand net. However, this paper aims to present the first faunistic records of Stratiomyidae, with four new records of species and one morphospecies for Oman.

The specimens were collected using sweeping net from vegetation on flowers. The collected specimens were killed with ethyl acetate and were deposited in the private collection of the author. The specimens were collected legally under the Permit n° 6210/10/87 issued by the Ministry of environment and climate affair. Species are listed alphabetically. Records are presented following a standardized format: [town, locality name, geographic coordinates, date of collection (day, month, year), number of specimens and collecting method].

In total eight specimens of Stratiomyidae were collected. Among them, five species of four genera and three subfamilies are new records for Oman: *Odontomyia angulata* (Panzer, 1798), *O. xanthopus* Bezzi, 1906, *Oplodontha pulchriceps* Loew, 1858, *Nemotelus (Nemotelus) niloticus* Olivier, 1811 and an unidentified specimen of *Tinda* Walker, 1859.

Stratiomyinae Latreille, 1802

Stratiomyini Latreille, 1802

Odontomyia Meigen, 1803

Morphological characteristics: This genus is characterized by short antennal scape and pedicel, together distinctly shorter than flagellum, both segments sometimes subequal, but scape frequently longer than pedicel. The scutum of the male is not clothed with dense silvery pilosity (see Hauser et al. 2017 for identification key).

Odontomyia angulata (Panzer, 1798) (Fig. 1)

Specimens examined: Bawshar sand dunes, 23.5588 N 58.4048 E, 19.iii.2019, 1 ♂, hand net, leg. A. Al-Jahdhami.

Distribution: Afghanistan, Albania, Algeria, Austria, Belgium, Bulgaria, China, Czech Republic, Denmark, Egypt, England, Estonia, Finland, France, Germany, Greece, Hungary, Iran, Israel, Italy, Kazakhstan, Morocco, Netherlands, Poland, Romania, Russia, Slovakia, Spain, Sweden, Switzerland, Turkey and UAE (Woodley 2001; Mason et al. 2009; Hauser 2014). New record for Oman.

Odontomyia xanthopus Bezzi, 1906 (Fig. 2)

Specimens examined: Wady Tayeen, Mizbar, 23.1404 N 58.4229 E, 23.iii.2017, 1 ♀, 1 ♂, hand net, leg. A. Al-Jahdhami.

Distribution: Eritrea, Malawi (Woodley 2001). New record for Oman.

Oplodontha Rondani, 1863

Morphological characteristics: The genus is characterized by greatly reduced discal cell, small to absent, r–m crossvein absent; veins M1 and M2 absent or at most vein M2 faintly discernible (see Hauser et al. 2017 for identification key).

Oplodontha pulchriceps Loew, 1858 (Fig. 3–4)

Specimens examined: Samad Ashan, 22.8591 N 58.1971 E, 15.viii.2018, 1 ♂ 1 ♀, hand net, leg. A. Al-Jahdhami.

Distribution: Algeria, Armenia, Austria, Bulgaria, Cyprus, Czech Republic, Egypt, France, Germany, Hungary, Iran, Israel, Italy,

Kazakhstan, Morocco, Poland, Romania, Russia, Slovakia, Spain, Syria, Tunisia, Turkey and Turkmenistan (Woodley 2001). New record for Oman.

Nemotelinae Kertész, 1912

Nemotelus Geoffroy, 1762

Morphological characteristics: *Nemotelus* is characterized by the wing membrane with large areas lacking microtrichia, or with microtrichia inconspicuous when present; and the head with face conically produced below antennae. (see Hauser et al. 2017 for identification key).

Nemotelus (Nemotelus) niloticus Olivier, 1811 (Fig. 5)

Specimens examined: Aseeb, Alkhoudh, 23.6325 N 58.1879 E, 12.iii.2018, 1 ♂ 2 ♀, hand net, leg. A. Al-Jahdhami.

Distribution: Algeria, Egypt, Israel, Italy (Sardinia), Tunisia, and UAE (Woodley 2001; Mason et al. 2009; Hauser 2009). New record for Oman.

Remarks: The long snout and the yellow postalar callus in the specimens are indicative that they belong to the *N. niloticus* group. For now, there are several species synonymized under *N. niloticus*, with a lot of variation including *N. fasciatus* Olivier, 1811, *N. albifasciatus*

Becker, 1902, *N. theodori* Lindner, 1974 and *N. duofasciatus* Woodley, 2001. The presence of the white spot on the face to the eyes is the same in *N. theodori*, which is a synonym of *N. niloticus*.

Pachygastrinae Loew, 1856

Tinda Walker, 1859

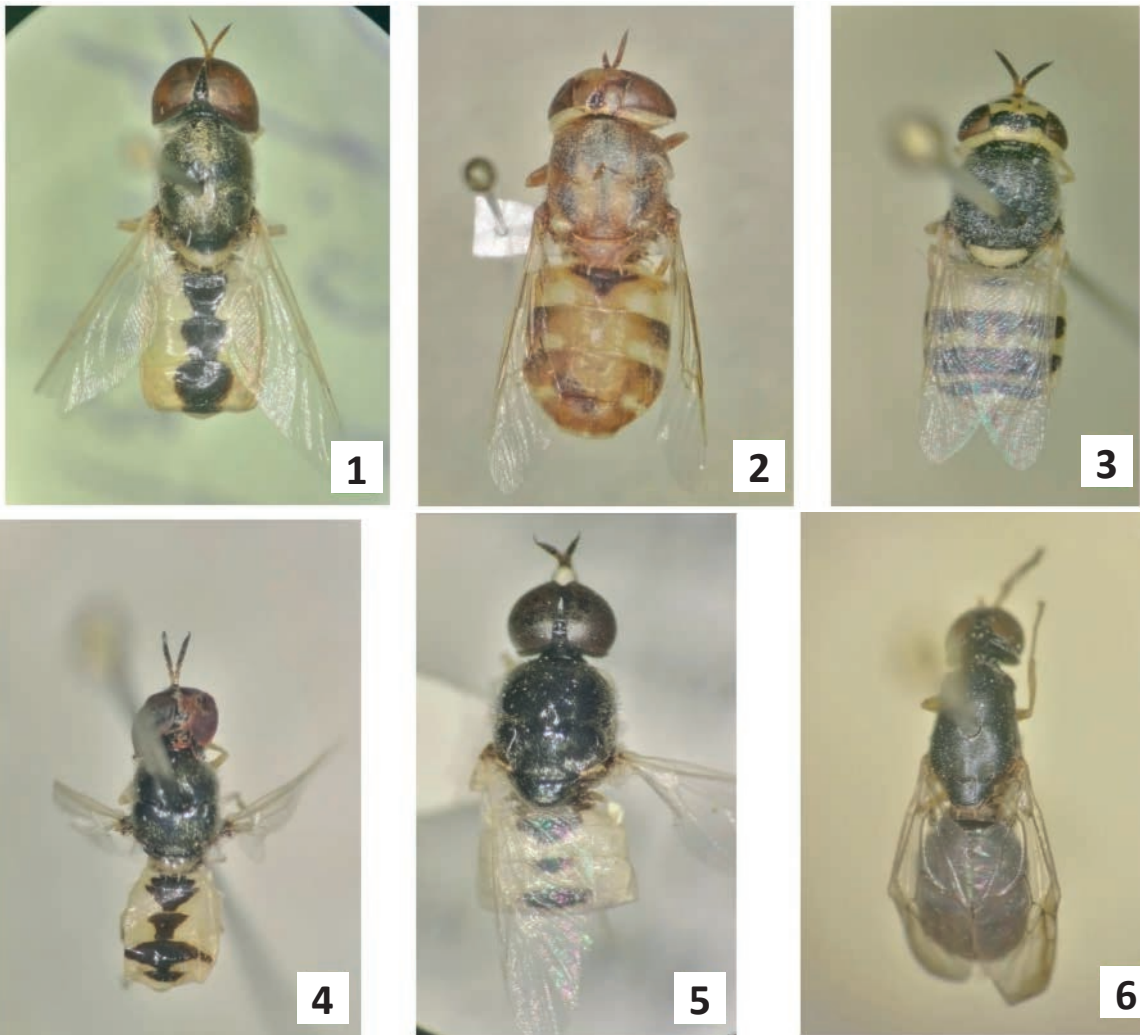
***Tinda* sp.** (Fig. 6)

Specimens examined: Dhofar, Salalah, 17.0167 N 54.1539 E, 31.viii.2018, 1 ♀, hand net, leg. A. Al-Jahdhami.

Distribution: Afrotropical, Australasian and Oriental Regions (Hauser et al. 2017). New record for Oman (south Oman) and Arabian Peninsula.

Morphological characteristics: *Tinda* is characterized by scutellar spines shorter than scutellum; scutellum and mesonotum in the same plane; abdomen distinctly longer than wide, only marginally wider than thorax (see Hauser et al. 2017 for identification key).

Remarks: This specimen could only be identified to generic level because no males were available. This genus is a taxonomic mess and there are multiple species in Africa and Asia. Therefore, the exact identification of the species is not possible right now.



Figures 1-6. Habitus of Stratiomyidae: 1. Male of *Odontomyia angulata*; 2. Female of *Odontomyia xanthopus*; 3. Female of *Oplodontha pulchriceps*; 4. Male of *O. pulchriceps*; 5. Male of *Nemotelus (Nemotelus) niloticus*; 6. Female of *Tinda* sp..

Acknowledgements

I thank Dr. Martin Hauser for providing helpful remarks on the manuscript. I would like to acknowledge Mansoor Al-Jahdhami for facilitating the field work. Thanks extended to the Sultan Qaboos University (Entomology department) for facilitating lab equipment use. My thanks and regards to Dr. Adel Al-Shihi (Head of Locust control center) for his help in the paper checkup.

References

- Hassan, M. A.; Bodlah, I.; Iqbal, Z.; Jabeen, R. (2017) New records of the subfamily Stratiomyinae (Diptera: Stratiomyidae) from Pakistan. *Journal of Threatened Taxa*, 9(10): 10831-10834. doi: [10.11609/jott.3562.9.10.10831-10834](https://doi.org/10.11609/jott.3562.9.10.10831-10834)
- Hauser, M. (2009) Order Diptera, family Stratiomyidae. *Arthropod fauna of the UAE*, 1: 591-601.
- Hauser, M. (2014) Order Diptera, family Stratiomyidae. Further records



- and the description of a new species. *Arthropod Fauna of the UAE*, 5: 695-703.
- Hauser, M.; Woodley, N. E.; Fachin, D. A. (2017) Stratiomyidae (Soldier Flies). In: Kirk-Spriggs A. H.; Sinclair, B. J. (Eds.), *Manual of Afrotropical Diptera*. Vol. 2, pp. 919-979, South African National Biodiversity Institute, Pretoria.
- Mason, F.; Rozkošný, R.; Hauser, M. (2009) A review of the soldier flies (Diptera: Stratiomyidae) of Sardinia. *Zootaxa*, 2318: 507-530.
- Woodley, N. E. (2001) A world catalog of Stratiomyidae (Insecta: Diptera). *Myia*, 11(8): 1-475.