

Addenda to: A Checklist of Dryinidae (Hymenoptera: Chrysidoidea) of the Middle East

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INTRODUCTION

In a recent paper comprising a list of the family Dryinidae (Hymenoptera: Chrysidoidea) of the Middle East, some species were not listed, in addition to the discovery of mistakes in some of the species names' spelling. We detail below the missing species list, followed by a table comprising the corrected mistakes.

List of the dryinid species overlooked in Gadallah, Macek, Ghahari, & de Rond (2024)

Subfamily Anteoninae Perkins, 1912

Genus *Anteon* Jurine, 1807

Anteon flavicorne (Dalman, 1818)

Gonatopus flavicornis Dalman, 1818: 83.

Distribution in the Middle East: Türkiye (Speranza, Olmi, Capradossi, & Contarini, 2021).

Extralimital distribution: Algeria, Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, Italy, Latvia, Netherlands, Norway, Poland, Spain, Sweden, Switzerland, Ukraine, United Kingdom (Olmi, 1999), Kazakhstan, Mongolia, Russia, South Korea (Olmi & Xu, 2015).

Gadallah, G. S., Ghahari, H., & Can, İ. (2025). Addenda to: A checklist of Dryinidae (Hymenoptera: Chrysidoidea) of the Middle East. *Journal of the Entomological Research Society*, 27(2), 211-217

Received: September 24, 2024

Accepted: July 25, 2025

***Anteon fulviventre* (Haliday, 1828)**

Dryinus fulviventris Haliday in Curtis, 1828: 206.

Distribution in the Middle East: Türkiye (Speranza et al., 2021).

Extralimital distribution: Algeria, Austria, Belgium, Bulgaria, Czech Republic, Denmark, European Russia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxemburg, Madeira Islands, Morocco, Netherlands, Norway, Spain, Sweden, Switzerland, United Kingdom (Olmi, 1984, 1999), Kazakhstan, Russia (Olmi & Xu, 2015).

***Anteon gaullei* Kieffer, 1905**

Anteon gaullei Kieffer in Kieffer & Marshall, 1905: 161.

Distribution in the Middle East: Türkiye (Speranza et al., 2021).

Extralimital distribution: Austria, Belgium, Bulgaria, Czech Republic, Denmark, European Russia, Finland, France, Germany, Hungary, Ireland, Italy, Luxemburg, Netherlands, Norway, Poland, Slovakia, Spain, Sweden, Switzerland, United Kingdom (Olmi 1984, 1999), Kazakhstan, Kyrgyzstan, South Korea (Olmi & Xu, 2015; Kochetkov, 2024), Russia (Kochetkov et al., 2019).

***Anteon reticulatum* Kieffer, 1905**

Anteon reticulatum Kieffer in Kieffer & Marshall, 1905: 140.

Distribution in the Middle East: Türkiye (Speranza et al., 2021).

Extralimital distribution: Austria, Germany, Hungary, Netherlands, United Kingdom (Olmi 1999; Xu et al. 2013), Bulgaria, China, Japan, Nepal, South Korea (Olmi, 1999; Olmi & Xu, 2015), France, Italy (Olmi, 1984, 1999; Xu et al. 2013).

***Anteon tripartitum* Kieffer, 1905**

Anteon tripartitus Kieffer in Kieffer & Marshall, 1905: 194.

Distribution in the Middle East: Türkiye (Speranza et al., 2021).

Extralimital distribution: Austria, Belgium, Bulgaria, Croatia, Denmark, Finland, France, European Russia, Germany, Hungary, Ireland, Italy, Netherlands, Norway, Romania, Spain, Sweden, Switzerland, United Kingdom (Olmi, 1984, 1999), Japan (Olmi & Xu, 2015).

***Anteon tschirnhausi* Olmi, 2011**

Anteon tschirnhausi Olmi, 2011: 49.

Distribution in the Middle East: Türkiye (Speranza et al., 2021).

Extralimital distribution: Bulgaria (Olmi, 2011).

***Anteon* sp.**

Distribution in the Middle East: Kuwait (Al-Houty, 1989).

Comments. This species may represent any of the mentioned species in this genus in the Middle Eastern area (especially those mentioned in the Arabian Peninsula).

Subfamily Bocchinae Richards, 1939**Genus *Mirodryinus* Ponomamarenko, 1972*****Mirodryinus xerophilus* (Benoit, 1951)**

Anteon xerophilus Benoit, 1951: 301.

Distribution in the Middle East: Egypt (Olmi, 1984, 1999).

Extralimital distribution: Libya (Olmi, 1984, 1999)

Subfamily Gonatopodinae Kieffer, 1906**Genus *Echthrodelpfax* R. Perkins, 1903*****Echthrodelpfax tauricus* Ponomarenko, 1970**

Echthrodelpfax tauricus Ponomarenko, 1970: 432.

Distribution in the Middle East: Egypt, Israel/Palestine, Lebanon, Türkiye (Olmi, Copeland, & van Noort, 2019), Iran (Derefsan et al., 2020), Oman (Olmi, 2008, 2014, 2020; Olmi et al., 2019), United Arab Emirates (Olmi, 1998 as *E. hortusensis*; Howarth & Gillett 2008 as *E. hortusensis*; Olmi 2008, 2014, 2020; Olmi et al., 2019).

Extralimital distribution: widely distributed in sub-saharan Africa (Olmi, van Noort, & Gugiellino, 2016; Olmi et al., 2019).

Remark: This species was listed in Gadallah et al. (2024), however, some of the Middle Eastern countries (Egypt, Israel/Palestine, Lebanon, and Türkiye) were overlooked in this list.

Genus *Gonatopus* Ljungh, 1810***Gonatopus abdunnouri* Olmi, 1987**

Gonatopus abdunnouri Olmi, 1987: 57.

Distribution in the Middle East: Lebanon (Olmi, 1987, 1999; Olmi & Xu, 2015), Türkiye (Kaplan Yavuz, Tunaz, & Mutlu, 2024).

Extralimital distribution: Afghanistan (Olmi, 1999; Olmi & Xu, 2015).

Remark: This species was listed in Gadallah et al. (2024) as present in Lebanon, however, in a recent study carried by Kaplan Yavuz et al. (2024), they recorded its presence in Türkiye as a parasitoid of cicadellid *Psammotettix striatus* (L.).

***Gonatopus albolineatus* Kieffer, 1905**

Gonatopus albolineatus Kieffer in Kieffer & Marshall, 1905: 95.

Distribution in the Middle East: Egypt (Olmi, 1984, 1999).

Extralimital distribution: Algeria, France, Italy, Libya (Olmi, 1984, 1999), Hungary, Morocco (Olmi, 1999).

***Gonatopus dimidiatus* Sahlberg, 1910**

Gonatopus dimidiatus Sahlberg, 1910: 17.

Distribution in the Middle East: Israel/Palestine (Olmi, 1984, 1999).

Extralimital distribution: None.

***Gonatopus dromedarius* (A. Costa, 1882)**

Dicondylus dromedarius A. Costa, 1882: 38

Distribution in the Middle East: Egypt, Israel/Palestine, Türkiye (Olmi, 1999).

Extralimital distribution: Algeria, France, Greece, Hungary, Italy, Netherlands, Spain, Switzerland (Olmi, 1999).

Remarks. This species was listed in Gadallah et al. (2024) as present in the Middle East in Egypt and Türkiye, while Israel/Palestine was overlooked. Here we add Israel/Palestine as one of the Middle Eastern countries from which *G. dromedarius* occurs.

***Gonatopus europaeus* (Olmi, 1986)**

Apterodryinus europaeus Olmi, 1986: 83

Distribution in the Middle East: Lebanon (Olmi, 1999).

Extralimital distribution: Greece (Olmi, 1999).

***Gonatopus lycius* Olmi, 1989**

Gonatopus lycius Olmi, 1989: 337.

Distribution in the Middle East: Türkiye (Olmi, 1989, 1991, 1999; Başpınar, Kersting, & Uygun, 1994).

Extralimital distribution: Italy (Olmi, 1989).

***Gonatopus pedestris* Dalman, 1818**

Gonatopus pedestris Dalman, 1818: 86.

Distribution in the Middle East: Türkiye (Olmi, 1989, 1999; Olmi & Xu, 2015).

Extralimital distribution: China, Japan (Terayama & Mita, 2014), Austria, Denmark, Finland, France, Italy, Romania, Russia, Siberia, Sweden, Ukraine, United Kingdom (Olmi, 1999; Olmi & Xu, 2015).

***Gonatopus plumbeus* Olmi, 1984**

Gonatopus plumbeus Olmi, 1984: 1535.

Distribution in the Middle East: Israel/Palestine (Olmi, 1984, 1999).

Extralimital distribution: Italy, Morocco (Olmi, 1999, 2009).

***Gonatopus unilineatus* Kieffer, 1904**

Gonatopus unilineatus Kieffer, 1904: 358.

Distribution in the Middle East: Türkiye (Olmi, 1999).

Extralimital distribution: Greece, Italy (Olmi, 1999).

Gonatopus wittmeri* Olmi, 1984Gonatopus wittmeri* Olmi, 1984: 1551.

Distribution in the Middle East: Egypt (Olmi, 1984, 1999).

Extralimital distribution: Morocco (Olmi, 1999).

Genus *Neodryinus* Perkins, 1905***Neodryinus typhlocybae* (Ashmead, 1893)***Labeo typhlocybae* Ashmead, 1893: 89.

Distribution in the Middle East: Türkiye (Can, 2025).

Extralimital distribution: Austria, Bulgaria, Croatia, France, Greece, Hungary, Italy, Netherlands, Romania, Serbia, Switzerland, Slovenia, Spain, Slovakia (Can, 2025).

Corrigenda

The following table comprises the corrected mistakes in the names of some dryinid species mentioned in Gadallah et al. (2024) (Table 1).

Table. Corrected mistakes in the names of some dryinid species mentioned in Gadallah et al. (2024).

Species names	Corrected names
<i>Anteon felis</i> Olmi & van Harten, 2006	<i>Anteon felice</i> Olmi & van Harten, 2006
<i>Anteon kawadanum</i> Olmi, 1984	<i>Anteon kawandanum</i> Olmi, 1984
<i>Anteon oculatum</i> Olmi & van Harten, 2006	<i>Anteon occultum</i> Olmi & van Harten, 2006
<i>Dryinus saussurae</i> (Ceballos, 1936)	<i>Dryinus saussurei</i> (Ceballos, 1936)
<i>Gonatopus mirus</i> Olmi & van Harten, 2000	<i>Gonatopus mirus</i> Olmi & van Harten, 2006
<i>Gonaporus pulicarius</i> Klug, 1810	<i>Gonatopus pulicarius</i> Klug, 1810
<i>Gonaporus striatus</i> Kieffer in André, Kieffer & Marshall, 1905	<i>Gonatopus striatus</i> Kieffer in André, Kieffer & Marshall, 1905

CONCLUSION

Finally, the total number of dryinid species in the Middle East should be 98 valid species (5% of the world extant species) in 12 genera and five subfamilies: Anteoninae (three genera, 27 species), Aphelopinae (one genus, eight species), Bocchinae (three genera, eight species), Dryininae (one genus, 15 species), and Gonatopodinae (four genera, 40 species).

Among the 12 genera of the Middle Eastern Dryinidae, *Gonatopus* with 34 species is the most species-rich genus, followed by *Anteon* (25 species), and *Dryinus* (15 species) (Fig. 1).

In the 16 Middle Eastern countries, it was found that Türkiye with 38 species is the most diverse country (about 39% of the total number of the Middle Eastern species), followed by Yemen with 29 species, Iran (26 species), United Arab Emirates (15 species), Egypt (14 species), Lebanon (10 species), Oman (nine species), Cyprus (seven species), Israel/Palestine (six species), Jordan (two species), and Iraq (one species). In Kuwait, an unidentified *Anteon* sp. was recorded by Al-Houty (1989), which may represent any of the mentioned species in this genus in the Middle Eastern area (especially those mentioned in the Arabian Peninsula). No records were found in four other countries, Bahrain, Qatar, Saudi Arabia, and Syria (see Gadallah et al., 2024). The much lower number of species

recorded from some other countries compared to Türkiye and Iran probably not only reflects a smaller land area but also little comprehensive surveys in those countries.

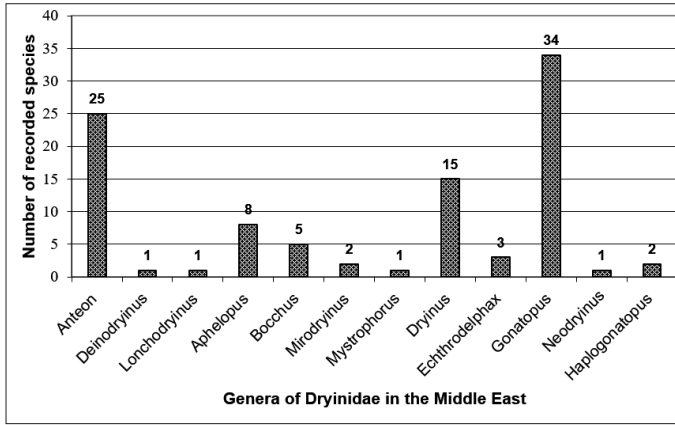


Figure 1. Species diversity of Dryinidae in the Middle East by genus.

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