

Description of a new species of *Dryinus* Latreille (Hymenoptera: Dryinidae) from French Guiana

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ABSTRACT

A new species, *Dryinus dalensi* n. sp., is described from French Guiana. An amended part of the key to the Neotropical species dealing with *Dryinus* Group 3 is provided.

KEYWORDS: Chrysidoidea, Dryininae, Group 3, *Dryinus dalensi*, pincer wasps, parasitoids, Neotropics, identification key.

RÉSUMÉ

Une nouvelle espèce, *Dryinus dalensi* n. sp., est décrite de Guyane française. La clé des espèces Neotropicales du group 3 de *Dryinus* est changée.

MOTS-CLÉS: Chrysidoidea, Dryininae, Group 3, *Dryinus dalensi*, parasitoïdes, région Neotropicale, clé d'identification.

INTRODUCTION

Dryinidae (Hymenoptera: Chrysidoidea) are parasitoids of Hemiptera Auchenorrhyncha (Guglielmino & Bückle 2003, 2010; Guglielmino *et al.* 2013, 2015). The Neotropical Dryinidae have been studied in recent years mainly by Olmi and Virla (2014). After 2014, other contributions were made by Guglielmino *et al.* (2016), Martins (2015, 2018), Martins and Domahovski (2017a, b), Martins *et al.* (2015a, b), Martins and Krinski (2016), Olmi and Guglielmino (2016a, b), and Speranza *et al.* (2019). The French Guiana dryinid fauna was covered principally by Olmi and Guglielmino (2016a).

With 297 world species (112 in the Neotropical Region), the genus *Dryinus* Latreille, 1804, is the largest in the subfamily Dryininae. Species of *Dryinus* are known to parasitize various planthoppers, many of which are important pests of cultivated plants (Guglielmino *et al.* 2013, 2015). *Dryinus* females were divided for the sake of convenience by Olmi (1993) and Olmi & Virla (2014) into four groups on the basis of the following characters:

Group 1: enlarged claw not reduced, much longer than arolium, with one subapical tooth, never with one broad apical lamella; notauli at least partly present.

Group 2: enlarged claw not reduced, much longer than arolium, with one subapical tooth, never with one broad apical lamella; notauli absent.

Group 3: enlarged claw not reduced, much longer than arolium, without subapical tooth or with at least two subapical teeth; rarely with only one subapical tooth, then with one very broad apical lamella.

Group 4: enlarged claw greatly reduced, approximately as long as or slightly longer than arolium.

In 2018, the authors examined dryinids collected in French Guiana and sent for identification from Dr C. Villemant (Muséum National d'Histoire Naturelle, Paris, France). The study resulted in the discovery of a new species described herein.

MATERIALS AND METHODS

The description follows the terminology used by Olmi (1984) and Olmi & Virla (2014). The measurements reported are relative, except for the total length (head to abdominal tip, excluding antennae), which is expressed in millimetres. The following abbreviations are used in the descriptions: POL – the distance between the inner edges of the two lateral ocelli, OL – the distance between the inner edges of a lateral ocellus and the median ocellus, OOL – the distance from the outer edge of a lateral ocellus to the compound eye, OPL – the distance from the posterior edge of a lateral ocellus to the occipital carina, TL – the distance from the posterior edge of an eye to the occipital carina. The term “disc of metapectal-propodeal complex” is here used in the sense of Kawada *et al.* (2015). It corresponds to the term “dorsal surface of propodeum” *sensu* Olmi (1984) and Olmi & Virla (2014). The term “propodeal declivity” *sensu* Kawada *et al.* (2015) used here, corresponds to the term “posterior surface of propodeum” *sensu* Olmi (1984) and Olmi & Virla (2014). The names of veins of the forewing are here used in the sense of Azevedo *et al.* (2018). To be exact, the “stigmatal vein” (*sensu* Olmi 1984 and Olmi & Virla 2014) is here named “second radial-radial sector crossvein & radial sector vein (2-rs&Rs)”. The term “ADOs” (= Antennal Dorsal Organs) is here used in the sense of Riolo *et al.* (2016). It corresponds to the term “rhinaria” *sensu* Olmi & Virla (2014). According to Riolo *et al.* (2016), ADOs are sensory structures, that might mediate the antennal responses to vibratory stimuli. As far as we know, they are present in antennae of dryinid females attacking Fulgoromorpha (Olmi 1994).

The types of all Neotropical species of *Dryinus* Group 3 have been previously examined by the authors.

The specimen studied in this paper is deposited in the collections of the Muséum National d'Histoire Naturelle, Paris (France) (MNHN).

TAXONOMY

Genus *Dryinus* Latreille, 1804

Dryinus dalensi n. sp.

(Figs 1–4)

LSID: urn:lsid:zoobank.org:act:90D5E03A-8C44-41C0-9D5D-530F36841F0E.

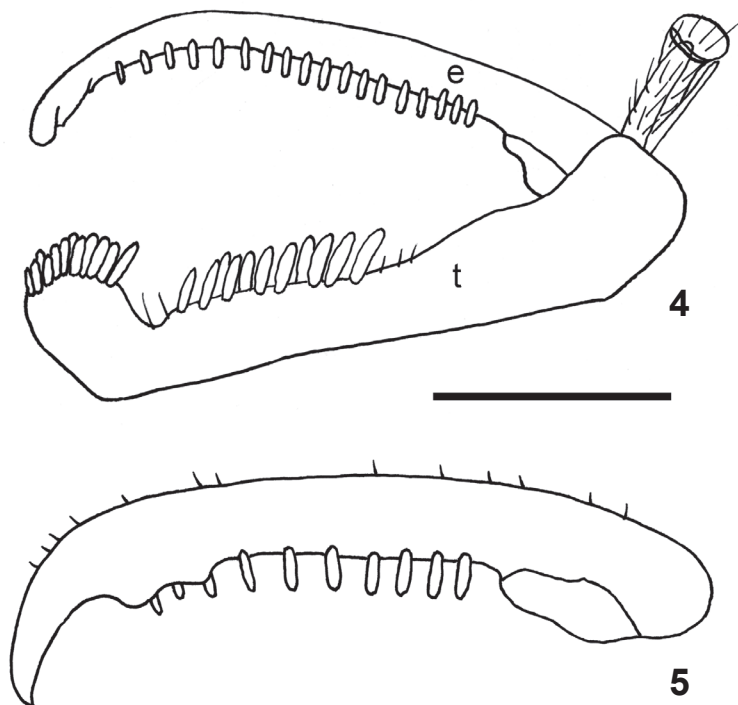
Etymology: The species is named after one of the two collectors, Mr Pierre-Henry Dalens.

Diagnosis: Female with head granulate and reticulate rugose (Figs 1, 2); disc of pronotum rounded, not pointed (Fig. 1); mesoscutum completely granulate and reticulate rugose, without two longitudinal keels instead of notauli (Fig. 1); notauli absent (Fig. 1); metapectal-propodeal complex reticulate rugose, not sculptured by many longitudinal and subparallel keels (Fig. 1); protarsomere 2 produced into hook; protarsomere 5 about as long as 1 (Fig. 4); enlarged claw (Fig. 4) with two very small subapical teeth and one row of lamellae, without distal lamella larger than others.

Description: Female (Figs 1, 3). Fully winged; length 7.2 mm. Head testaceous, except large part of frons and vertex black; antenna brown, except antennomeres 7–10 and ventral side of scape testaceous; mesosoma black, except lateral margins of pronotum testaceous; metasoma brown; foreleg testaceous, except part of femur club brown; mid- and hindleg testaceous, except part of metatibia and club of femora brown. Antenna clavate; antennomeres in following proportions:13:6:44:26:18:12:10:10:8:13; ADOs present in antennomeres 6–10. Head (Figs 1, 2) flat,



Figs 1–3: Female holotype of *Dryinus dalensi* n. sp., habitus in dorsal (1) and lateral (3) views, and head in frontal view (2). Scale bar = 4.5 mm for Figs 1 and 3, 1.6 mm for Fig. 2.



Figs 4, 5: Chela of holotype of *Dryinus dalensi* n. sp. (4) and enlarged claw of *Dryinus garcetei* Olmi (5), specimen from Mexico, Oaxaca, 8 mi NE El Punto. Abbreviations: e – enlarged claw, t – protarsomere 5. Scale bar = 0.39 mm for Fig. 4, 0.27 mm for Fig. 5.

dull, granulate and reticulate rugose; eye normally bulging; frontal line complete, reaching clypeus, not divided into two branches directed towards antennal toruli; occipital carina incomplete, present behind and on sides of lateral ocelli, laterally not reaching eyes; temple absent; lateral ocelli touching occipital carina; POL=3; OL=9; OOL=11; greatest breadth of lateral ocelli longer than POL (4:3); anterior ocellus larger than posterior one. Pronotum crossed by anterior transverse impression; anterior collar shiny, sculptured by many longitudinal striae; disc rounded, reticulate rugose; posterior collar absent; pronotal tubercle not reaching tegula. Mesoscutum (Fig. 1) dull, completely granulate and reticulate rugose, without two longitudinal keels instead of notauli. Notauli absent. Mesoscutellum dull, granulate and reticulate rugose. Metanotum very short, reduced, shiny, unsculptured, except central reticulate rugose area. Disc of metapectal-propodeal complex (Fig. 1) reticulate rugose, not sculptured by many subparallel longitudinal keels; propodeal declivity reticulate rugose, with two strong longitudinal keels. Metapectal-propodeal complex about as long as propodeal declivity. Forewing (Fig. 1) with two dark transverse bands; distal part (Rs) of 2r-rs&Rs vein longer than proximal part (2r-rs) (29:12). Protarsomeres in

following proportions: 27:5:12:27:45. Protarsomere 2 produced into hook. Enlarged claw (Fig. 4) much longer than arolium, with two very small subapical teeth and one row of 18 lamellae, without distal lamella larger than others. Protarsomere 5 (Fig. 4) with two rows of 3+8 lamellae; distal apex with about 13 lamellae. Tibial spurs 1/1/2.

Male. Unknown.

Holotype: ♀ **French Guiana:** Saint-Laurent-du-Maroni, Maripasoula, Crique Alama/borne 1, 2°14'1.8996"N 54°27'0.3990"W, 16.iii.2015, APA-973-1, Malaise trap, MTK SLAM, E. Poirier & P.H. Dalens (MNHN).

Hosts: Unknown.

DISCUSSION

On the basis of the details of the mesoscutum with the notauli being absent and the enlarged claw that is much longer than the arolium and bears two very small subapical teeth, *Dryinus dalensi* n. sp. belongs to Group 3 of *Dryinus* (see the key to the groups reported in the introduction of this paper). Following its description, the key to the females of the Neotropical species of Group 3, published by Olmi and Virla (2014), must be modified by replacing couplet 36 as follows:

- 36 Mesoscutum reticulate rugose, without two longitudinal keels instead of notauli.....36'
- Mesoscutum reticulate rugose, with two longitudinal keels instead of notauli37
- 36' Enlarged claw with one or two big subapical teeth (Fig. 5); protarsomere 3 produced into hook; metapectal-propodeal complex sculptured by many longitudinal and subparallel keels, connected by many short irregular transverse keels*D. garcetei* Olmi
- Enlarged claw with two very small subapical teeth (Fig. 4) ; protarsomere 2 produced into hook; metapectal-propodeal complex reticulate rugose, not sculptured by many longitudinal and subparallel keels (Fig. 1)*D. dalensi* n. sp.
- 37 Head and mesosoma completely testaceous; head with POL about twice as long as OL *D. xanthopus* Olmi & Virla
- Head and mesosoma mostly black; head with POL about as long as OL*D. giorgioi* Olmi

According to Olmi and Guglielmino (2016a), 41 species of Dryinidae were recorded from French Guiana, including 21 species of *Dryinus*. With description of *Dryinus dalensi* n. sp., the number of *Dryinus* species known from the country is now 22; they belong to Group 1 (nine species), Group 2 (five species), and Group 3 (eight species). The knowledge of the Dryinidae of the small French Guiana (83,534 km²) can be considered sufficient compared to the neighboring Guyana and Suriname. In fact, with a greater surface of 163,270 km² and 214,970 km²,

Suriname and Guyana host respectively 16 and 3 species of Dryinidae (Olmí & Virla 2014). However, the dryinid fauna of French Guiana is still poorly known, if compared with other Neotropical countries similar in terms of habitat biodiversity, such as Costa Rica. With an area of only 51,100 km², Costa Rica hosts 148 species of the Dryinidae (Olmí & Virla 2014). We conclude that the dryinid fauna of French Guiana is under-sampled and further collecting efforts are needed to improve the situation.

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