

On the *Poecilotiphia* Cameron, 1902 (Hymenoptera Tiphidae) from Cape Verde Islands, with description of a new species

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ABSTRACT

During recent faunal surveys, a micropterous female belonging to the genus *Poecilotiphia* Cameron, 1902 (Hymenoptera Tiphidae) was found on a tiny islet near Boa Vista Island (Cape Verde). It differs from all Palaearctic and Afrotropical congeners and might possibly represent the opposite sex of *P. diffinis* (Turner, 1908), the only tiphid so far known for the archipelago. However, in light of the remarkable sexual dimorphism of these wasps, as well as of several biogeographical considerations, it was thought more appropriate to assign the examined specimen to a new species, described in the present paper.

KEY WORDS

Tiphidae; Myzininae; *Poecilotiphia*; island endemics; Cape Verde archipelago; new species.

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INTRODUCTION

Tiphidae is a relatively small family of parasitic aculeate wasps with cosmopolitan (but predominantly tropical) distribution, comprising approximately two thousand species and ninety genera. Among these latter, the genus *Poecilotiphia* Cameron, 1902 includes more than 50 species mainly distributed in the Palaearctic region, with some representatives also occurring in the Afrotropical region and one species in China (Boni Bartalucci, 2016; 2018; Liao et al., 2022).

In March 2026, the Non-Governmental Organization (NGO) Initiative PIM (Petites Îles de Méditerranée - Mediterranean Small Islands) organized a scientific mission to assess the biodiversity of some satellite islets of Boa Vista Island (Cape Verde Archipelago). During the surveys it was collected some entomological material which was then entrusted to me for its identification.

The studied specimens included an enigmatic micropterous female belonging to the wasp family Typhidae that immediately caught my attention, because the only species so far recorded for Cape Verde archipelago was the endemic *Poecilotiphia diffinis* (Turner, 1908). This latter was described as *Myzine* from just one male specimen collected on São Vicente Island and successively placed into the current genus by Boni Bartalucci (1997) (see also Báez et al., 2005; Boni Bartalucci, 2017).

This female specimen belongs to the same genus (as detailed in the diagnosis) but after a careful examination resulted to differ from all other *Poecilotiphia* species known for the Palaearctic and Afrotropical regions (see Boni Bartalucci, 2008; 2016; 2017; 2018).

It could therefore represent the complementary sex of *P. diffinis*, which is still undescribed. However, tiphid wasps are characterized by a remark-

able sexual dimorphism, which prevent any attempt to identify morphological correspondences with the only known male specimen and to establish a correct sex association.

The provenance of the type of *P. diffinis* and the examined specimen is different: São Vicente is located at the western end of the Barlavento islands (in the northern sector of Cape Verde archipelago), while Boa Vista is 225 km away from it and is the easternmost and southernmost island of this group. Furthermore, both remarkably differ in geological age: Boa Vista emerged since 16.6 Ma, while the oldest formations of São Vicente are dated around 6.6 Ma (Holm et al., 2008; Dyhr & Holm, 2010). Such differences have broad implications on the biogeography and the faunal composition of these oceanic islands (see Cunha et al., 2017; Leal Pena, 2017). Finally, due to their low dispersal ability, tiphiid wasps are often represented by endemic species on islands (see Krombein, 1982; Kimsey, 2011; Terayama & Mita, 2015; Boni Bartalucci, 2016).

For the above reasons, I decided to refer the examined specimen as a distinct, new species which is described below.

MATERIAL AND METHODS

The studied specimen was mounted on glue board and examined by using Optika SZM-2 stereobinocular microscope equipped with a micrometer eyepiece.

Pictures were made with a Canon R7 camera equipped with a RF 100 mm F/2.8 IS L Macro objective; images were subsequently processed with Helicon Focus software.

Taxonomic placement and species comparison was done following keys and/or according to the descriptions provided in literature (Kimsey, 1991; Argaman, 1994; Boni Bartalucci, 2004; 2008; 2016; 2017; 2018).

Terms used in morphological description follow Huber & Sharkey (1993) and Boni Bartalucci (2004), while details on the surface sculpture are given according to Harris (1979).

ABBREVIATIONS AND ACRONYMS. Natural History Museum, London (NHM); Nesos Biodiversity Centre entomological collection, Lipari (NBC).

RESULTS

Systematics

Ordo HYMENOPTERA Linnaeus, 1758

Familia TIPHIIDAE Leach, 1815

Subfamilia MYZININAE Börner, 1919

Tribus MERIINI Argaman, 1994

Genus *Poecilotiphia* Cameron, 1902

Poecilotiphia rivierei n. sp. Figs. 1–4

<https://zoobank.org/0F2EE80D-4EFC-4268-8A27-3BC47987BE50>

DIAGNOSIS. A micropterous *Poecilotiphia* weakly built, with pigmentation largely black and shiny appearance, body largely unpunctuated, scattered but prominent tufts of bristles, frons and pronotum with subrectilinear profile in lateral view, mandible without inner upper lobe in frontal view, 3-segmented labial palpi and 4-segmented maxillary palpi, forecoxa ventrally without inner longitudinal carina, last hind tarsomere shorter than the penultimate, absence of sulcus between upper petiolar and the 1st tergal surface.

TYPE MATERIAL. Holotype. CABO VERDE • female; Sal Rei Islet (Boa Vista Island), 16°10'11"N, 22°55'46"W; 16 Mar 2026, S. Pasta legit; NBC.

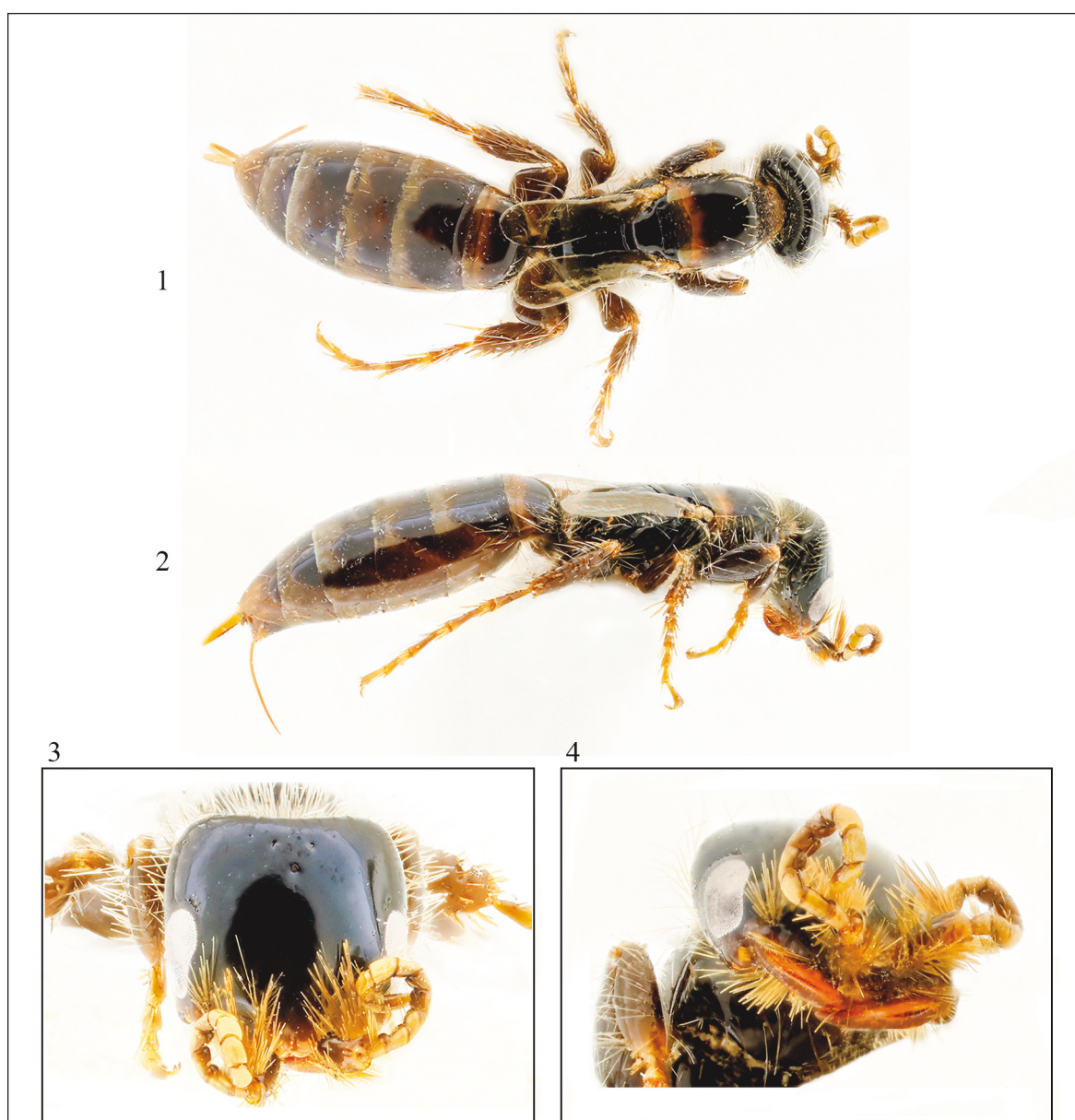
HOLOTYPE DESCRIPTION. Female. Body length 6.8 mm. Habitus as in Figs. 1, 2; general appearance shiny and unpunctuated, metameri with translucent integuments; black except scapes and flagellomeres, pronotal collar, tarsi and ovipositor which are light brown, mandible ferruginous, and yellowish shades on the posterior margins of pronotum, 1st tergite, 2nd and 4th sternites.

Head (Fig. 3) sub-rectangular shaped, 1.1 wider than long and 1.6 longer than high, with slightly convex occiput; clypeal disc transverse; mandibles simple and slightly curved at apex; long and thin yellowish erect bristles above and below the clypeal margin; genae sparsely but deeply punctate, postgena and malar spaces with sparse, foveolate punctures and pale erect bristles. Eyes with inner margin slightly sinuated, delimited behind by areolae of sparse dotting; eye diameter equal to 0.8 of its distance from the median ocellus. Antennae with 10 flagellomeres; pedicel concealed into the apical concavity of the scape, this latter elongated and ex-

panded anteriorly, with subcylindrical shape; scape has short, erect, facing-forward bristles on the whole surface, and dense tufts of longer and thicker facing-backwards bristles in the upper side (Fig. 4), while only short and scattered erect yellow bristles occur on flagellomeres.

Pronotum 0.7 as wide as the head, with tufts of erect pale bristles on the anterior angles. Scutum, scutellum, metanotum and propodeum smooth, shiny and unpunctated; tufts of lateral bristles along

the margins of postmetanotum. Lower surface of pro-, meso- and metapleuron finely but densely punctate. Median and posterior coxae smooth and strongly expanded, as well as the femora where few, scattered and thin pale setae occur. Mesotibiae with scattered long and thin pale setae, three series of paired spurs on the outer margin, three apical spurs, the central one slightly longer than the others. Metatibiae with thin pale setae regularly spaced along the inner margin, this latter weakly serrated,



Figures 1–4. *Poecilotiphia rivierei* n. sp., holotype. Fig. 1: in dorsal view, length 6.8 mm. Fig. 2: in lateral view. Fig. 3: head in frontal view. Fig. 4: details of mandibles, antennae and tufts of bristles.

four series of paired spurs on the outer margin, two apical spurs of which the first 3 times longer than the second (almost as long as the 1st tarsomere).

Forewings hyaline, completely lacking cells and veins, non-functional, narrowed and short, just reaching the anterior margin of 1st tergite; hind wings not visible. Tergites smooth with few scattered foveolate punctures with short, pale bristles; 2nd and 3rd tergites feebly and finely strigulated on the middle; long and recumbent pale bristles on the anterior side of 1st tergite; sternites with surface very finely strigulate (visible up to 40x magnification).

VARIABILITY. Male unknown.

ETIMOLOGY. I am pleased to dedicate the new species to my friend and colleague Vincent Rivière, a French island-enthusiast herpetologist who participated to the PIM mission during which the studied specimen was collected. Treated as a noun in the genitive case.

DISTRIBUTION AND BIOLOGY. Sal Rei has a surface of 85 hectares and reaches a maximum elevation of 27 m a.s.l.; the islet lies just 900 m off the north-western coast of Boa Vista Island, where the new species is likely also occurring. Wasps of the subfamily Myzininae are known to be ectoparasitoids of soil dwelling beetle larvae (Krombein, 1938; 1968; Brothers & Finnamore, 1993; O'Neill, 2001; Boni Bartalucci, 2004); in particular, females of the genus *Poecilotiphia* parasitize the larvae of the tenebrionid genus *Tentyria* Latreille, 1802 (Ferton, 1911; Pantaleoni & Boni Bartalucci, 2011). However, the only Tenebrionidae so far collected on the islet are *Oxycara gestroi* Gridelli, 1954 and *Oxycara feae* Gridelli, 1954 (P. Lo Cascio, unpublished data), which could represent its hosts.

COMPARATIVE NOTES. The new species clearly differs from the Macaronesian congeners *P. trichogastra* Boni Bartalucci, 2004, which has the gastro reddish; *P. guichardi* (Guiglia, 1967), which is entirely reddish-brown pigmented; while it shares more or less the same colour pattern with *P. gracilis* (Brullé, 1840) (also occurring on North Africa) that however is fully winged, as well as the abovementioned species.

Other Afrotropical species, such as *P. australis* Boni Bartalucci, 2018, *P. idioptera* Boni Bartalucci, 2018, *P. kristenseni* (Turner, 1913) and *P. lacteipennis*

(Saunders, 1901) have different coloration and are fully winged. According to Liao et al. (2022), the absence of an inner longitudinal carina on the ventral side of the forecoxa leads to exclude the new species from the *P. nigripes* group, which includes *P. nigripes* (Guérin-Méneville, 1837), *P. dakarensis* (Du Buysson, 1910) and *P. mogadorensis* (Turner, 1911).

Poecilotiphia rivierei n. sp. seems to be more related to two micropterous species, *P. ruficornis* (Lucas, 1846) from Morocco and *P. diptera* Boni Bartalucci, 2016 from Tunisia. However, *P. ruficornis* has a reddish testaceous colour, a less translucent scutum, forewings narrower, tufts of bristles at the base of the antennae are completely missing, and in general is less pubescent. *P. diptera* has a different coloration (brown and ferruginous), especially on the 1st metamere, and the pigmentation of the bristles is also different (dark on the scape); furthermore, the head is narrower than the thorax and there is a dense and long pubescence on the sides of the propodeum.

To better define the taxonomic status of this new species in relation to *P. diffinis* — the only species previously reported from the Cape Verde Islands based on a single male specimen — and in light of the considerations outlined in the introduction, only direct observation of mating or the discovery of syntopic specimens can support a possible association between these two species.

Poecilotiphia diffinis Turner, 1908 Figs. 5–7

DESCRIPTION. Apart from those reported in the original description (Turner, 1908: 498), other characters of this species have been described and illustrated by Boni Bartalucci (2017: 46, drawings in figs. 18–27) on the basis of the examination of the type, which is also the only specimen known to date. To provide a better understanding of the morphology of this species, images in dorsal and lateral views are presented here (Figs. 5–7).

DISTRIBUTION AND BIOLOGY. The holotype has been collected on São Vicente Island (Turner, 1908). Its biology is unknown.

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Figures 5–7. *Poecilotiphia diffinis* (Turner, 1908), holotype, ©The Trustees of the Natural History Museum. Fig. 5: in dorsal view (length 7.0 mm). Fig. 6: in lateral view. Fig. 7: *Poecilotiphia diffinis* (Turner, 1908), holotype labels.

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