

**REVISION OF CHARIPINAE  
(HYMENOPTERA: CYNIPOIDEA: FIGITIDAE) FROM MADEIRA  
AND FIRST RECORD OF *ALLOXYSTA* FROM PORTUGAL**

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With 3 plates

*RESUMO.* O presente trabalho atualiza o conhecimento acerca da fauna de Charipinae da Madeira e de Portugal Continental. A validade das cinco espécies citadas para a Madeira é discutida: *Alloxysta brevis* (Thomson, 1862), *A. pedestris* (Curtis, 1838), *A. minuta* (Hartig, 1840), *A. victrix* (Westwood, 1833) e *Phaenoglyphis villosa* (Hartig, 1841). Outras quatro espécies são citadas pela primeira vez para a Madeira: *Alloxysta arcuata* (Kieffer, 1902), *A. castanea* (Hartig, 1841), *A. halterata* (Thomson, 1862) e *A. nigrita* (Thomson, 1862). A espécie *Alloxysta citripes* (Thomson, 1862) é citada pela primeira vez para Portugal Continental. Disponibilizam-se descrições sumárias e de diagnóstico para todas as espécies de Charipinae conhecidas da Madeira e de Portugal Continental, assim como uma chave para as separar.

PALAVRAS CHAVE: Charipinae, Figitidae, *Alloxysta*, Madeira, Portugal.

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*ABSTRACT.* The fauna of Charipinae from Madeira and Portugal (mainland) is studied here. The validity of the five species previously cited from Madeira is discussed: *Alloxysta brevis* (Thomson, 1862), *A. pedestris* (Curtis, 1838), *A. minuta* (Hartig, 1840), *A. victrix* (Westwood, 1833) and *Phaenoglyphis villosa* (Hartig, 1841). Four species are cited for the first time in Madeira: *Alloxysta arcuata* (Kieffer, 1902), *A. castanea* (Hartig, 1841), *A. halterata* (Thomson, 1862) and *A. nigrita* (Thomson, 1862). *Alloxysta citripes* (Thomson, 1862) is recorded for the first time in Portugal. Short descriptions and diagnoses are provided for all species of Charipinae in Madeira and Portugal, and a key to distinguish them.

KEYWORDS: Charipinae, Figitidae, *Alloxysta*, Madeira Island, Portugal.

## INTRODUCTION

Members of subfamily Charipinae (Hymenoptera: Cynipoidea: Figitidae) are characterized by being very small wasps (0.8-2.0mm), with a smooth and shiny body, antennae filiform and significant reduction of wing venation. The taxonomy of the Charipinae has always been very complicated due to the few morphological characters that are available to distinguish them, and the large number of described species, including many synonymies.

Species of Charipinae are biologically characterized by being secondary parasitoids of aphids *via* Aphidiinae (Hymenoptera: Braconidae) and Aphelininae (Hymenoptera: Aphelinidae) and secondary parasitoids of psyllids *via* Encyrtidae (Hymenoptera: Chalcidoidea) (MENKE & EVENHUIS, 1991). The charipines impact on biological control effectiveness of primary parasitoids, decreasing their abundance and modifying their behaviour, resulting in a significant increase of host populations (MÜLLER *et al.*, 1999; VAN VEEN *et al.*, 2001), which can become important pests of vegetal species of commercial interest. For this reason, studies on subfamily Charipinae are economically and biologically very important.

Two papers have previously dealt with the Charipinae fauna from Madeira (GRAHAM, 1984; NIEVES-ALDREY *et al.*, 2008), and none from Portugal. GRAHAM (1984) was the first to record the subfamily Charipinae from Madeira, including members of *Alloxysta* and *Phaenoglyphis*. The five species previously recorded from Madeira are: *A. minuta* (Hartig, 1840), *A. pedestris* (Curtis, 1838), *A. victrix* (Westwood, 1833) and *Phaenoglyphis villosa* (Hartig, 1841) in GRAHAM (1984). *Alloxysta brevis* (Thomson, 1862) in NIEVES-ALDREY *et al.* (2008). We have studied the material deposited in the Natural History Museum of London (BMNH) and conclude that some determinations of these species are incorrect. Furthermore, four species are here recorded for the first time from Madeira: *Alloxysta arcuata* (Kieffer, 1902), *A. castanea* (Hartig, 1841), *A. halterata* (Thomson, 1862) and *A. nigrita* (Thomson, 1862). We consider seven species as valid records for Madeira: *Alloxysta arcuata* new

record, *A. castanea* new record, *A. halterata* new record, *A. nigrita* new record, *A. ramulifera* (Thomson, 1862) (= *A. minuta*), *A. victrix* and *P. villosa*. *Alloxysta citripes* (Thomson, 1862) is here cited for the first time from peninsular Portugal (mainland), being the first record of this genus in mainland Portugal. A key to all species of Charipinae present in Madeira and Portugal is given.

#### MATERIAL AND METHODS

The material studied is deposited in the Natural History Museum of London (BMNH).

Specimens were studied using stereomicroscopy (NIKON SMZ-1). The field-emission gun environmental scanning electron microscope (FEI Quanta 200 ESEM) was used for high-resolution imaging without gold-coating of the specimens.

Morphological terms used are taken from PARETAS-MARTÍNEZ *et al.* (2007). Measurements and abbreviations include F1–F12, first and subsequent flagellomeres. The width of the forewing radial cell is measured from the margin of the wing to the beginning Rs vein. Females and males have the same morphology unless indicated to the contrary.

Figure 1 shows the two types of mesopleuron present in Charipinae from Madeira, with mesopleural sulcus (Fig. 1a) and lacking mesopleural sulcus (Fig. 1b). For better comparison, all antennae of the *Alloxysta* species described here are grouped in figure 2 (Fig. 2a-f), and all radial cells in figure 3 (Fig. 3a-f).

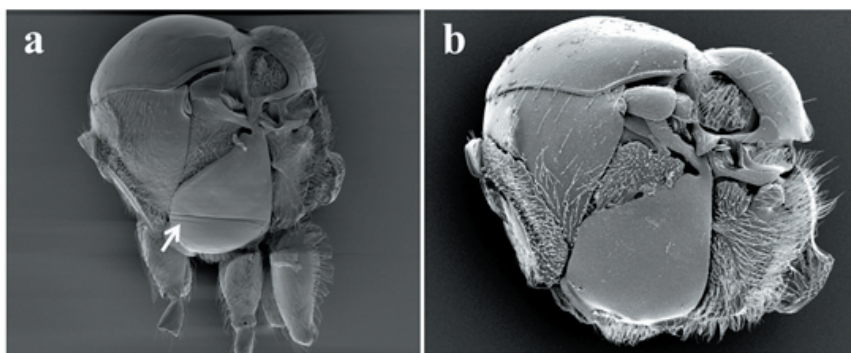


Fig. 1 - Mesopleuron: a) *Phaenoglyphis* sp., arrow points to mesopleural sulcus; b) *Alloxysta* sp., lacking mesopleural sulcus.

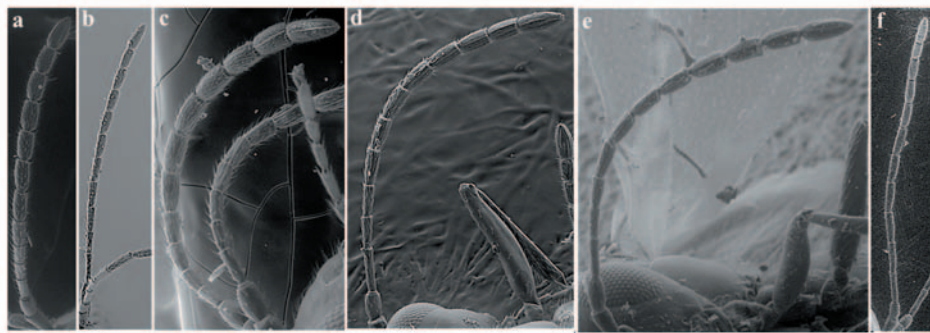


Fig. 2 - Female antennae of *Alloxysta* species: a) *A. arcuata*; b) *A. castanea*; c) *A. citripes*; d) *A. nigrita*; e) *A. ramulifera*; f) *A. victrix*.

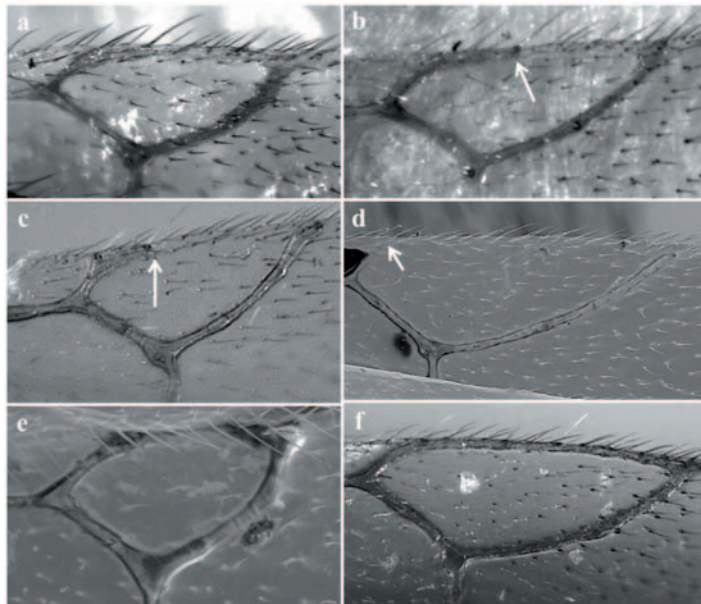


Fig. 3 - Radial cell of *Alloxysta* species: a) *A. arcuata*; b) *A. castanea*; c) *A. citripes*; d) *A. nigrita*; e) *A. ramulifera*; f) *A. victrix*.

## RESULTS

*Alloxysta arcuata* (Kiffer, 1902)

*Diagnosis:* *Alloxysta arcuata* is very similar to *A. ramulifera* both species having pronotal carinae, propodeal plate, and radial cell small and closed. They can be distinguished by: shape of pronotal carinae, thick and clearly visible in *A. arcuata* (small and sometimes very difficult to see under the pubescence in *A. ramulifera*); shape of propodeal plate, forming a complete plate in *A. arcuata* (in *A. ramulifera* the carinae are separated by setae in the first 1/3 and forming a plate in the last two 2/3); and size of radial cell, 2.3 times as long as wide in *A. arcuata* (Fig. 3a) (2.0 times in *A. ramulifera* (Fig. 3e)).

*Material examined:* (2♀). “Romeiros (1), 13.5.1980”, “? nr. tscheki”, “Madeira: M. W. R. de V. Graham coll. BMNH (E) 1995-177”: 1♀; “Madeira: Romeiros (2), 15.v.1980”, “M. W. R. de V. Graham coll. BMNH(E) 1995-489”: 1♀.

*Short description:* Head yellowish brown, mesosoma and metasoma dark brown; scape, pedicel, F1 and F2 dark yellow, rest of flagellomeres yellowish brown; legs yellow and vein yellowish brown. Female antennae 13-segmented; F1 and F2 smooth, thinner than remaining flagellomeres, F3-F11 with rhinaria and club shaped (more evident from F4); F1 subequal to pedicel, F1 > F2, F2 subequal to F3, F3 < F4 (Fig. 2a). Male antennae 14-segmented; F1 smooth and thinner than remaining flagellomeres, F2-F12 with rhinaria and club shaped; F1 straight, longer than pedicel and subequal to F2; F2 slightly curved, shorter than F3, F3 < F4. Pronotal carinae present, clearly visible under the pubescence. Propodeum covered by abundant pubescence; with two carinae forming a plate separated by few setae on top, with sides slightly curved. Forewing longer than body; radial cell closed; 2.2 times as long as wide in both male and female (Fig. 3a).

*Comments:* The first specimen determined here as *A. arcuata* corresponds to the specimen established as *Alloxysta* sp. indet. 3 by GRAHAM (1984: 106).

*Distribution:* Palaearctic and Neotropical. New record from Madeira.

*Alloxysta castanea* (Hartig, 1841)

*Diagnosis:* Of all *Alloxysta* species present here, *A. castanea* is very similar to *A. citripes*, both species having a partially open radial cell, pronotal and propodeal carinae present. They can be distinguished by: shape of propodeal carinae, thick and protruding in *A. castanea* (not protruding in *A. citripes*); relative lengths of F1 and pedicel, F1 longer than pedicel in *A. castanea* (Fig. 2b) (F1 subequal to pedicel in *A. citripes* (Fig. 2c)); and size of radial cell: 2.3 times as long as wide in *A. castanea* (Fig. 3b) (2.1 times as long as wide in *A. citripes* (Fig. 3c)).

*Material examined:* (1♂). “Queimadas, 14.5.1980”, “Madeira, BMNH 1995-177, M. W. R. de V. Graham coll.”: 1♂.

*Short description:* Head yellowish brown, mesosoma brown and metasoma dark brown; scape, pedicel, F1 and F2 yellow, F3-F11 brown; legs yellow and veins yellowish brown. Female antennae 13-segmented; F1 and F2 smooth and thinner than other segments; F3-F11 with rhinaria and club shaped; F1 longer than pedicel and F2, F2-F4 subequal in length (Fig. 2b). Male antennae 14-segmented; as female but with F1 and F2 slightly curved. Pronotum densely pubescent bearing a pair of strong carinae. Propodeum densely covered with long setae bearing a pair of carinae forming a plate with slightly curved lateral sides, sparsely setose on top. Forewing longer than body; radial cell partially open, 2.4 times as long as wide (Fig. 3b).

*Distribution:* Palaearctic and Neotropical. New record from Madeira.

*Alloxysta citripes* (Thomson, 1862)

*Diagnosis:* *Alloxysta citripes* is very similar to *A. castanea*, both species having partially open radial cell, pronotal and propodeal carinae present. They can be distinguished by: shape of propodeal carinae, not protruding in *A. citripes* (thick and protruding in *A. castanea*); relation between F1 and pedicel, F1 subequal to pedicel in *A. citripes* (Fig. 2c) (F1 longer than pedicel in *A. castanea* (Fig. 2b)); and size of radial cell: 2.1 times as long as wide in *A. citripes* (Fig. 3c) (2.3 times as long as wide in *A. castanea* (Fig. 3b)).

*Material examined:* (2♂ & 1♀). “Portugal: Santarém, 14.V.1981, A. Costa”, “hyperparasite of *Chromaphis juglandicola* on *Juglans regia*”: 2♂ & 1♀.

*Short description:* Head, mesosoma and metasoma yellowish brown; antennae yellow darkening towards the end; legs yellowish and veins almost transparent. Female antennae 13-segmented; F1-F3 smooth and thinner than remaining flagellomeres, F4-F11 with rhinaria and club shaped; F1 subequal to pedicel, F1-F3 subequal, F3 < F4 (Fig. 2c). Male antennae 14-segmented, as female without any flagellomere curved. Pronotum covered by setae, being less abundant on distolateral margins and with two carinae clearly visible. Propodeum covered by abundant pubescence, carinae present forming a plate not protruding and with curved sides. Forewing longer than body; radial cell partially open, 2.1 times as long as wide (Fig. 3c).

*Distribution:* Palaearctic. New record from Portugal.

*Alloxysta halterata* (Thomson, 1862)

*Diagnosis:* *Alloxysta halterata* is easily differentiated from the other *Alloxysta* species from Madeira because it is the only brachypterous species. Females with normal size wing are similar to *A. victrix* because both species have closed radial cell and propodeal carinae absent, but they can be differentiated by the size of radial cell: 2.4 times as long as wide in some *A. halterata* female but 3.0 times in *A. victrix*; and relation between F1 and F2 in females: F1 subequal to F2 in *A. halterata* while F1 longer than F2 in *A. victrix*.

*Material examined:* (2♂ & 6♀). “Curral das Freiras, 22.5.1980”, “Madeira, Graham coll. BMNH(E) 1995-177”: 1♂; “Romeiros (2), 13/5/80”, “*pedestris* (Curt.), “Madeira: M. W. R. de V. Graham coll. BMNH(E) 1995-177”, “Figitidae, Charipinae, *Alloxysta pedestris* J. L. Nieves det.”: 1♀; “? *Pezophycta* Cursor”, “? *pedestris* Curt.”, “*A. pedestris*, det. N. D. M. Fergusson, 1984”, “Madeira: M. W. R. de V. Graham coll. BMNH(E) 1995-177”, “Figitidae, Charipinae, *Alloxysta pedestris* J. L. Nieves det.”: 1♂ & 2♀; “Madeira: Curral dos Romeiros (2), 15.v.1980”, “M. W. R. de V. Graham coll. BMNH(E) 1995-489”, “Figitidae, Charipinae, *Alloxysta pedestris* J. L. Nieves det.”: 2♀; “Madeira: Curral dos Romeiros (2), 11.v.1980”, “M. W. R. de V. Graham coll. BMNH(E) 1995-489”, “Figitidae, Charipinae, *Alloxysta pedestris* J. L. Nieves det.”: 1♀.

*Short description:* Head, mesosoma and metasoma yellowish brown; escape, pedicel, F1-F4 yellow, F5-F12 yellowish brown; leg yellow. Female antennae 13-segmented; F1-F3 smooth and thinner than remaining flagellomeres, F4-F11 with rhinaria and club shaped; F1 > pedicel, F1-F4 subequal in length. Male antennae 14-segmented; F1-F3 smooth and thinner than remaining ones, F4-F12 with rhinaria and club shaped; F1 > pedicel, F1 > F2, F2-F4 subequal in length. Pronotum covered by setae, being in less at central area; with two thick and dark carinae, clearly visible. Propodeum covered by setae, without carinae present. Forewing shorter than body in males and some females; without radial cell visible. Some females with forewing longer than body; radial cell closed, 2.4 times as long as wide.

*Comments:* According to the redescription of *A. halterata* (FERRER-SUAY *et al.*, *in press*), males of this species are brachypterous but females have normal size wing. However, after studying the material deposited in the BMNH, it is clear that the females sometimes are also brachypterous. Females of this species can have both forewing morphotypes.

*Distribution:* Palaearctic. New record from Madeira.

### *Alloxysta nigrita* (Thomson, 1862)

*Diagnosis:* *Alloxysta nigrita* is easily differentiated from the other *Alloxysta* species from Madeira because this is the only species having a completely open radial cell.

*Material examined:* (1♀). “nr. Pousada dos Vinhaticos, 18.5.1980”, “? piceomacul”, “Madeira: M. W. R. de V. Graham coll. BMNH(E) 1995-177”: 1♀.

*Short description:* Head, mesosoma and metasoma dark brown; scape, pedicel, F1-F3 yellow, F4-F12 yellowish brown; leg and venation yellow. Female antennae, 13-segmented; F1-F3 smooth and thinner than remaining ones, F4-F11 with rhinaria and club shaped; F1 > pedicel, F1 > F2, F2 < F3, F3 > F4 (Fig. 2d). Male antennae 14-segmented; F1-F3 smooth and thinner than remaining ones, F4-F12 with rhinaria and club shaped; F1 > pedicel, F1 subequal to F2, F2 > F3, F3 < F4. Pronotum covered by setae, being in less at central area and in the distolateral margins; with two carinae clearly visible under the pubescence. Propodeum

covered by abundant pubescence, without carinae present. Forewing longer than body; radial cell completely open, 2.9 times as long as wide (Fig. 3d).

*Distribution:* Palaearctic. New record from Madeira.

***Alloxysta ramulifera*** (Thomson, 1862)

*Diagnosis:* *Alloxysta ramulifera* is very similar to *A. arcuata*, both species having pronotal carinae, propodeal plate, and radial cell small and closed. They can be distinguished by: shape of pronotal carinae, small and sometimes very difficult to see under the pubescence in *A. ramulifera* (thick and clearly visible in *A. arcuata*); shape of propodeal plate, in *A. ramulifera* the carinae are straight separated by setae in the first 1/3 and forming a plate in the last 2/3 (forming a complete plate in *A. arcuata*); and in size of radial cell: 2.0 times as long as wide in *A. ramulifera* (Fig. 3e) (2.3 times as long as wide in *A. arcuata* (Fig. 3a)).

*Material examined:* (7♀). “Romeiros, 11/5/80, E. M. Graham”, “Madeira: M. W. R. de V. Graham coll., BMNH(E) 1995-177”, “Figitidae, Charipinae, *Alloxysta minuta* J. L. Nieves det.”: 1♀; “Madeira: Curral dos Romeiros (2), 11.v.1980”, “M. W. R. de V. Graham coll. BMNH(E) 1995-489”, “Figitidae, Charipinae, *Alloxysta minuta* J. L. Nieves det.”: 1♀; “Balcões, 21/7/82”, “? *Alloxysta minuta* Htg”, “Madeira: M. W. R. de V. Graham coll. BMNH(E) 1995-177”, “Figitidae, Charipinae, *Alloxysta minuta* J. L. Nieves det.”: 2♀; “Romeiros (1), 11/5/80”, “*Alloxysta minuta*?”, “*A. minuta* det. N.D.M. Fergusson, 1984”, “Madeira: M. W. R. de V. Graham coll. BMNH(E) 1995-177”, “Figitidae, Charipinae, *Alloxysta minuta* J. L. Nieves det.”: 3♀.

*Short description:* Head, mesosoma and metasoma yellowish brown; scape, pedicel, F1-F3 dark yellow, F4-F12 yellowish brown; legs yellow and veins yellowish brown. Female antennae 13-segmented; F1-F3 smooth and thinner than remaining ones, F4-F11 with rhinaria and club shaped; F1 subequal to pedicel, F1 > F2, F2 subequal to F3, F3 < F4 (Fig. 2e). Male unknown. Pronotum covered by setae, being less dense in the central area and in the distolateral margins; with two small carinae under the pubescence. Propodeum covered by abundant setae, with two carinae forming a plate and separated by setae in the first third. Forewing longer than body; radial cell closed, 2.0 times as long as wide (Fig. 3e).

*Distribution:* Palaearctic. Previously cited from Madeira by GRAHAM (1984) and NIEVES-ALDREY *et al.* (2008).

***Alloxysta victrix*** (Westwood, 1833)

*Diagnosis:* *Alloxysta victrix* is easily differentiated from the other *Alloxysta* species from Madeira with a closed radial cell (*A. ramulifera* and *A. arcuata*), because this is the only species lacking propodeal carinae.

*Material examined:* (3♂ & 9♀). “Madeira: Curral dos Romeiros, 11.v.1980”, “M.



W. R. de V. Graham coll. BMNH(E) 1995-489”, “Figitidae, Charipinae, *Alloxysta brevis* J. L. Nieves det.”: 1♂; “Romeiros (1), 11/5/80”, “*Phaenoglyphis villosa*?”, “Madeira: M. W. R. de V. Graham coll. BMNH(E) 1995-177”, “Figitidae, Charipinae, *Phaenoglyphis villosa*, J. L. Nieves det.”: 1♂; “São Martinho, 8.5.1980, E. M. Graham”, “Madeira, M. W. R. de V. Graham coll. BMNH(E) 1995-177”, “Figitidae, Charipinae, *Alloxysta victrix* J. L. Nieves det.”: 1♀; “Madeira: Romeiros (2), 15.v.1980”, “M. W. R. de V. Graham coll. BMNH(E) 1995-489”, “Figitidae, Charipinae, *Alloxysta victrix*, J. L. Nieves det.”: 2♀; “Romeiros (2) 20.7.1982”, “Madeira: M. W. R. de V. Graham coll. BMNH(E) 1995-177”, “Cynipoidea, Figitidae, Charipinae, *Alloxysta victrix* J. L. Nieves det.”: 1♀; “Madeira: São Martinho, 21.v.1980”, “M. W. R. de V. Graham coll., BMNH (E) 1995-489”, “Figitidae, Charipinae, *Alloxysta victrix* J. L. Nieves det.”: 1♀; “Madeira: Curral dos Romeiros (2), 11.v.1980”, “M. W. R. de V. Graham coll. BMNH (E) 1995-489”, “Figitidae, Charipinae, *Alloxysta victrix* J. L. Nieves det.”: 1♂ & 1♀; “Curral dos Romeiros, 11/5/80, Mrs. E. M. G.”, “sp. indet 1”, “Madeira: M. W. R. de V. Graham coll. BMNH (E) 1995-177”, “Figitidae, Charipinae, *Alloxysta victrix*, J. L. Nieves det.”: 1♀; “*Alloxysta victrix*?”, “Romeiros, 11/5/80, EMG”, “Madeira: M. W. R. de V. Graham coll. BMNH(E) 1995-177”, “Figitidae, Charipinae, *Alloxysta victrix* J. L. Nieves det.”: 1♀; “Machico Rocha Alta, 1.1.1973”, “?*victrix*”, *A. victrix* det. N. D. M. Fergusson, 1984”, “Madeira: M. W. R. de V. Graham coll. BMNH(E) 1995-177”, “Figitidae, Charipinae, *Alloxysta victrix* J. L. Nieves det.”: 1♀.

*Short description:* Head dark yellow, mesosoma and metasoma dark brown; scape, pedicel, F1 and F2 yellow and the rest of flagellomeres yellowish brown; legs dark yellow and veins yellowish brown. Female antennae 13-segmented; F1 and F2 smooth and thinner than remaining flagellomeres, F3-F12 with rhinaria and club shaped; F1 > pedicel, F1 > F2, F2-F4 subequal in length (Fig. 2f). Male antennae 14-segmented similar to female but with F1-F3 curved (F1 slightly curved and F2-F3 strongly curved). Pronotum covered by setae, being abundant in the anterior margin, with two long and thick carinae. Propodeum covered by abundant setae, without carinae and without setae where the carinae are usually present. Forewing longer than body; closed radial cell, 3.0 times as long as wide (Fig. 3f).

*Distribution:* Cosmopolitan. Previously cited from Madeira by GRAHAM (1984) and NIEVES-ALDREY *et al.* (2008).

### ***Phaenoglyphis villosa* (Hartig, 1841)**

*Diagnosis:* *Phaenoglyphis villosa* is the only species of *Phaenoglyphis* recorded in Madeira, and is easily differentiated from the other species of Charipinae in this island by the presence of a mesopleural sulcus (Fig. 1a).

*Material examined:* (1♂ & 5♀). “Romeiros, 11/5/80, E. M. Graham”, “*Phaenoglyphis piceiceps*?”, “Madeira: M. W. R. de V. Graham coll. BMNH(E) 1995-177”, “Figitidae, Charipinae, *Phaenoglyphis villosa* J. L. Nieves det.”: 1♂; “The Madeira Is.”, T. V. Wollaston”,

“Figitidae, Charipinae, *Phaenoglyphis villosa* J. L. Nieves det.”: 1♀; “Madeira: Curral dos Romeiros (2), 11.v.1980”, “M. W. R. de V. Graham coll. BMNH(E) 1995-489”, “Figitidae, Charipinae, *Phaenoglyphis villosa* J. L. Nieves det.”: 2♀; “Romeiros (1), 11/5/80”, “*Phaenoglyphis villosa*?”, “Madeira: M. W. R. de V. Graham coll. BMNH(E) 1995-177”, “Figitidae, Charipinae, *Phaenoglyphis villosa*, J. L. Nieves det.”: 1♀; “Romeiros (2), 13.5.1980”: 1♀.

*Short description:* Head, mesosoma and metasoma dark brown to blackish-brown; scape, pedicel, F1-F2 and sometimes F3 yellow to light brown, subsequent flagellomeres dark, reddish-brown; legs yellow and veins yellowish to brownish. Female antennae 13-segmented; F1 and F2 smooth and thinner than remaining ones, F3-F11 with rhinaria and club shaped; F1 as long as pedicel or slightly longer, F1 subequal to F2, F2 shorter than F3, F3 shorter than F4. Male antennae 14-segmented; F1 and F2 smooth and thinner than remaining flagellomeres, F3-F12 with rhinaria and club shaped; F1 slightly bowed and longer than pedicel, F1 subequal to F2, F2 shorter than F3. Pronotum covered by sparse setae with pronotal carinae present. Lower part of mesopleuron with horizontal sulcus. Mesoscutum without notauli, scutellum with two deep oval foveae more or less separated by a carina or completely fused. Propodeum with dense long setae, two carinae well defined, straight and parallel. Forewing longer than body; radial cell partially open, 2.1-2.7 times as long as wide.

*Distribution:* Cosmopolitan. Previously cited from Madeira by GRAHAM (1984) and NIEVES-ALDREY *et al.* (2008).

## DISCUSSION

The Charipinae is a very poorly studied hymenopteran group. After studying Charipinae material from Madeira and deposited in the BMNH, we considered some of the previously Charipinae records to be incorrect. The record of *A. brevis* is here considered not valid, because this specimen is clearly a male of *A. victrix*. The record of *A. pedestris* is also not valid, because all material determined as *A. pedestris* belongs to *A. halterata*. Both species are brachypterous but they can be easily differentiated by the pronotal carinae: present in *A. halterata* but absent in *A. pedestris*. The record of *A. minuta* is correct, but the current valid name of this species is *A. ramulifera* (EVENHUIS & BARBOTIN, 1987: 218).

A key for all Charipinae species recorded in Madeira and mainland Portugal is presented below:

1. Lower part of mesopleuron with horizontal sulcus (Fig. 1a) ..... *Phaenoglyphis*  
[Only one species present, *P. villosa* (Hartig, 1841), characterized being the only species of this genus with partially open radial cell.]  
- Mesopleuron lacks horizontal sulcus (Fig. 1b) ..... *Alloxysta* 2
2. Brachypterous, forewing reaching only the beginning of metasoma .....  
..... *A. halterata* (Thomson, 1862)  
- Species with completely developed forewing, longer than mesosoma and metasoma together ..... 3
3. Radial cell open or partially open (Fig. 3d) ..... 4  
- Radial cell closed (Fig. 3a-b) ..... 6
4. Radial cell completely open; propodeum lacking carinae; F2 shorter than F3 (Fig. 2d); radial cell 2.9 times as long as wide (Fig. 3d) ..... *A. nigrita* (Thomson, 1862)  
- Radial cell partially open; propodeum with carinae; F2 subequal to F3; radial cell less than 2.9 times as long as wide ..... 5
5. Propodeal carinae not protruding; F1 subequal to pedicel in both male and female (Fig. 2c); radial cell 2.1 times as long as wide (Fig. 3c) ..... *A. citripes* (Thomson, 1862)  
- Propodeal carinae thick and protruding; F1 longer than pedicel in both male and female (Fig. 2b); radial cell 2.3 times as long as wide (Fig. 3b) ..... *A. castanea* (Hartig, 1841)
6. Propodeum lacking carinae; radial cell 3.0 times as long as wide (Fig. 3f) .....  
..... *A. victrix* (Westwood, 1833)  
- Propodeum with carinae forming a plate; radial cell less than 3.0 times as long as wide ..... 7
7. Pronotum with two small carinae, sometimes difficult to see; propodeum with two carinae separated in the first 1/3 and forming a plate on the last 2/3; radial cell 2.0 times as long as wide (Fig. 3e) ..... *A. ramulifera* (Thomson, 1862)  
- Pronotum with two thick carinae clearly visible; propodeum with two carinae forming a plate, with curved sides; radial cell 2.3 times as long as wide (Fig. 3a) .....  
..... *A. arcuata* (Kieffer, 1902)

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