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First record of Charipinae (Hymenoptera: Cynipoidea: Figitidae) from Tunisia

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A b s t r a c t : In this paper the following three species of Charipinae from Tunisia has been studied, including providing of collection data: *Alloxysta pilipennis* (HARTIG, 1840), *Alloxysta victrix* (WESTWOOD, 1833) and *Phaenoglyphis villosa* (HARTIG, 1841). This means the first records of the subfamily Charipinae and the genera *Alloxysta* and *Phaenoglyphis* from Tunisia.

K e y w o r d s : Charipinae, *Alloxysta*, *Phaenoglyphis*, Tunisia, first record.

Introduction

Members of the subfamily Charipinae (Hymenoptera: Cynipoidea: Figitidae) are characterized being very small wasps (0.8-2.0mm) with smooth and shiny body, antennae filiform and important reduction of wing venation. The taxonomy of the Charipinae has always been very complicated due to the few morphological characters that enable us to distinguish them, and the large number of described species, including many synonymies. This subfamily has been recently deeply studied. The type material of each species has been revised establishing the valid taxonomic state (FERRER-SUAY et al. 2012a, b; 2013a, b, c, d). Additionally, the Charipinae fauna present in every continent has also been studied, establishing new records and describing many new species (FERRER-SUAY et al. 2013e, f, g; 2014).

Eight genera of Charipinae are recognized in the world: *Alloxysta* FÖRSTER, 1869 (cosmopolitan), *Apocharips* FERGUSSON, 1986 (Palearctic and Neotropical), *Dilapothor* PARETAS-MARTÍNEZ & PUJADE-VILLAR, 2006, (Australia), *Dilyta* FÖRSTER, 1869 (cosmopolitan except South America and Australia), *Loboptercharips* PARETAS-MARTÍNEZ & PUJADE-VILLAR 2007 (Nepal), *Lytoxysta* KIEFFER, 1909 (North America), *Phaenoglyphis* FÖRSTER 1869 (cosmopolitan) and *Thoreauana* GIRAULT, 1930 (Australia). Both genera mentioned here, *Alloxysta* and *Phaenoglyphis*, are biologically characterized being hyperparasitoids of aphids via primary parasitoids Aphidiinae (Hymenoptera: Ichneumonoidea: Braconidae) and Aphelininae (Hymenoptera: Chalcidoidea: Aphelinidae) (MENKE & EVENHUIS 1991). For this reason, they are economically important affecting the biological control of the primary parasitoids through their host. Activity of Charipinae hyperparasitoids can modify the efficiency of these biological control agents in at least three ways: (i) increasing mortality of the primary parasitoid;

(ii) increasing the growth rate of the aphid population indirectly; and (iii) increasing the propensity for primary parasitoids to disperse (VAN VEEN et al. 2001).

In this study we have identified material of Charipinae collected on *Aphis gossypii* (Hemiptera: Aphididae) from protected crop on pepper in Chott Mariem (Tunisia) (36°48'N. 10°11'E) (25 May 1989) 1-15 June 1989. Three species have been identified: *Alloxysta pilipennis* (HARTIG, 1840) (2 ♀ ♀), *Alloxysta victrix* (WESTWOOD, 1833) (4 ♂ ♂ & 5 ♀ ♀) and *Phaenoglyphis villosa* (HARTIG, 1841) (4 ♀ ♀). The material is deposited in the University of Barcelona (J. P-V coll.).

Despite the Charipinae are well distributed, with respect to Tunisia no Charipinae species have been cited yet, thus these identifications suppose the first records of the subfamily Charipinae and the genera *Alloxysta* and *Phaenoglyphis* from Tunisia.

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Zusammenfassung

Vorliegende Arbeit behandelt das Vorkommen der Unterfamilie Charipinae (Hymenoptera: Cynipoidea: Figitidae) in Tunesien. Es gelang der Erstnachweis der Unterfamilie Charipinae und somit folgender drei Arten für dieses Land: *Alloxysta pilipennis* (HARTIG, 1840), *Alloxysta victrix* (WESTWOOD, 1833) und *Phaenoglyphis villosa* (HARTIG, 1841).

References

- FERGUSON N.D.M. (1986): Charipidae, Ibalidae and Figitidae (Hymenoptera: Cynipoidea). — Handbook of Identification British Insects **8** (1c): 1-55.
- FERRER-SUAY M., SELFA J. & J. PUJADE-VILLAR (2012a): Revision of V.I. Belizin's type material of *Alloxysta* (Hymenoptera: Figitidae: Charipinae) deposited in the Zoological Institute of the Russian Academy of Sciences. — Zoosystematica Rossica **21** (2): 279-290.
- FERRER-SUAY M., SELFA J. & J. PUJADE-VILLAR (2012b): Revision of the type material of Ionescu collection related to Charipinae subfamily (Hymenoptera: Figitidae) deposited in the "Grigore Antipa" National Museum of Natural History (Bucharest). — Travaux du Museum d'Histoire Naturelle "Grigore Antipa" **55** (2): 277-284.
- FERRER-SUAY M., SELFA J., NOTTON D. & J. PUJADE-VILLAR (2013a): Revision of the types of species of *Alloxysta* FÖRSTER, 1869 described by Cameron and Fergusson (Hymenoptera: Figitidae: Charipinae) deposited in the Natural History Museum (London) including a key to *Alloxysta* species of the Great Britain fauna. — European Journal of Taxonomy **53**: 1-27.
- FERRER-SUAY M., SELFA J. & J. PUJADE-VILLAR (2013b): The *Alloxysta* type material (Hym., Figitidae: Charipinae) in the National Museum of Natural History, Washington, DC and the Canadian National Collection of Insects, Ottawa. — The Canadian Entomologist **145** (6): 603-625.
- FERRER-SUAY M., SELFA J. & J. PUJADE-VILLAR (2013c): Revision of Thomson and Zetterstedt collections of *Alloxysta* genus deposited in Lund Museum of Zoology (Sweden). — Entomologisk Tidskrift **134**: 77-102.

- FERRER-SUAY M., SELFA J. & J. PUJADE-VILLAR (2013d): Revision of Curtis collection of *Alloxysta* (Hymenoptera: Figitidae: Charipinae) deposited in National Museum of Victoria (Australia). — *Memoirs of Museum Victoria* **70**: 11-16.
- FERRER-SUAY M., SELFA J. & J. PUJADE-VILLAR (2013e): A review of *Alloxysta* species (Hymenoptera: Cynipoidea: Figitidae: Charipinae) from Africa. — *African Entomology* **21** (2): 255-266.
- FERRER-SUAY M., SELFA J. & J. PUJADE-VILLAR (2013f): Revision of the Charipinae (Hymenoptera: Cynipoidea: Figitidae) present in the Neotropical region. — *Revista Brasileira de Entomologia* **57** (3): 279-299.
- FERRER-SUAY M., SELFA J. & J. PUJADE-VILLAR (2013g): Charipinae fauna (Hymenoptera: Figitidae) from Asia, with description of eleven new species. — *Zoological studies*, **52**: 41.
- FERRER-SUAY M., SELFA J. & J. PUJADE-VILLAR (2014): First records, new species and a key of the Charipinae (Hymenoptera: Cynipoidea: Figitidae) from the Nearctic region. — *Annals of the Entomological Society of America* **107** (1): 50-73.
- FÖRSTER A. (1869): Ueber die Gallwespen. — *Verhandlungen der Zoologisch-Botanischen Gesellschaft in Wien* **19**: 327-370.
- GIRAULT A.A. (1930): New pests from Australia, VIII. — Privately published. Brisbane, Australia, 6 pp.
- HARTIG T. (1840): Ueber die Familie der Gallwespen. — *Zeitschrift für Entomologie (Germar)* **2**: 176-210.
- HARTIG T. (1841): Erster Nachtrag zur Naturgeschichte der Gallwespen. — *Zeitschrift für Entomologie (Germar)* **3**: 322-358.
- KIEFFER J.J. (1909): Beschreibung neuer in Blattläusen schmarotzender Cynipiden. — *Naturwissenschaftliche Zeitschrift für Forst- und Landwirtschaft Stuttgart* **7**: 479-482.
- MENKE A.S. & H.H. EVENHUIS (1991): North American Charipidae: key to genera, nomenclature, species checklists, and a new species of *Dilyta* FÖRSTER (Hymenoptera: Cynipoidea). — *Proceedings of the Entomological Society of Washington* **93**: 136-158.
- PARETAS-MARTÍNEZ J. & J. PUJADE-VILLAR (2006): Two genera of Charipinae (Hymenoptera: Figitidae) from Australia: revision of the genus *Thoreauana* GIRAULT, 1930 and description of *Dilapothor* n.gen. — *Australian Journal of Entomology* **45**: 219-226.
- PARETAS-MARTÍNEZ J., MELIKA G. & J. PUJADE-VILLAR (2007b): Description of *Loboptercharips arreplegata* gen.n. & sp.n. (Hymenoptera: Figitidae: Charipinae) from Nepal, with notes on its phylogenetic position. — *Insect systematics & evolution* **38**: 473-479.
- VAN VEEN F.J.F., RAJKUMAR A., MÜLLER C.B. & H.C.J. GODFRAY (2001): Increased reproduction by pea aphids in the presence of secondary parasitoids. — *Ecological Entomology* **26**: 425-429.
- WESTWOOD J.O. (1833): Notice of the habits of a Cynipidous insect parasitic upon the *Aphis rosae* with descriptions of several other parasitic Hymenoptera. — *Magazine of Natural History* **6**: 491-497.

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