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## Microgastrinae (Hymenoptera: Braconidae) of Reunion Island: a catalogue of the local species, including 18 new taxa and a key to species

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### Abstract

Microgastrine wasps (Hymenoptera: Braconidae) are primary parasitoids of Lepidoptera. Some of them parasitise major economic pests and have been largely used for biocontrol programs. We revise here the fauna of Reunion Island: 34 species were recorded, belonging to 13 genera. One genus and 18 species are newly described: *Dodogaster* **gen. nov.**, *Apanteles minatchy* **sp. nov.**, *A. pashmina* **sp. nov.**, *A. romei* **sp. nov.**, *Cotesia xavieri* **sp. nov.**, *Dolichogenidea ashoka* **sp. nov.**, *D. broadi* **sp. nov.**, *D. lumba* **sp. nov.**, *D. uru* **sp. nov.**, *D. villemantae* **sp. nov.**, *Distatrix yunae* **sp. nov.**, *Dodogaster grangeri* **sp. nov.**, *Exoryza safranum* **sp. nov.**, *Glyptapanteles chidra* **sp. nov.**, *Nyereria ganges* **sp. nov.**, *N. mayurus* **sp. nov.**, *Parapanteles covino* **sp. nov.**, *P. darignac* **sp. nov.** and *Wilkinsonellus narangahus* **sp. nov.**. On the remaining 16 species, 12 are new distribution records. Finally, *Glyptapanteles antsirabensis* (Granger) **comb. nov.**, *G. ficus* (Granger) **comb. nov.**, *G. subandinus* (Blanchard) **comb. nov.**, and *Venanides curticornis* (Granger) **comb. nov.** are reassigned from the traditionally defined *Apanteles* genus to these respective genera. A key to all genera and species is provided.

**Key words:** Parasitic wasps, Hot spot volcanic island, Indian Ocean, descriptions, Madagascar subregion

### Introduction

Microgastrinae form a diverse subfamily within Braconidae, with about 2000 species widespread throughout the regions of the world, except Antarctica (Yu *et al.* 2012). The subfamily is universally recognized as a monophyletic taxon, largely defined by their characteristic wing venation and the number of flagellomeres invariably fixed to 16. This latter strong apomorphic feature was nevertheless recently reconsidered with the description of the quite unusual genus *Kiwigaster* (Fernández-Triana *et al.* 2011), with the males and females having different numbers of antennal flagellomeres (females 17, males 18). Beyond this consensus, the phylogenic subdivision of Microgastrinae is still debated, though several attempts were proposed to stabilize it (*cf.* Whitfield *et al.* 2002 for a review). As a large part of the world fauna is still poorly known, the actual richness of Microgastrinae is currently expected to range between 5000 and 10000 species (Mason 1981). In this respect, the Ethiopian Region was undoubtedly one of the least investigated. The reviews of Wilkinson (1932), de Saeger (1944), Granger (1949), Risbec (1951), and Nixon (1965) for Madagascar, include about 300 species. Recent additions to the fauna bring the number of species to 362 for the entire Afrotropical area (Yu *et al.* 2012). Two third of them have been encompassed within the traditional, widely inclusive definition of *Apanteles sensu* Förster, 1862, *i.e.* all microgastrine wasps with areolet open. Most of these African “*Apanteles*” have not yet been revised and actually belong to more recently described genera. Located in the vicinity of Madagascar, Reunion Island has just four known species (Yu *et al.* 2012). Recent collecting shows that this number requires updating.

Such a revision is not only of taxonomic interest but also useful for ecological and biological studies. Microgastrinae are indeed the most commonly encountered braconid parasitoids of Lepidoptera. Biologically, they form a rather homogenous group: they are all koinobiont endoparasitoids of caterpillar, parasitizing nearly all the