

SPECIES OF *MELITTOBIA* (HYMENOPTERA: EULOPHIDAE)
ESTABLISHED IN BAHAMAS, COSTA RICA, CUBA,
HISPANIOLA, PUERTO RICO, AND TRINIDAD

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Melittobia is a cosmopolitan genus with about 13 species. They are gregarious ectoparasitoids primarily on prepupae of aculeate hymenopterans, but their wide host range includes species in orders as diverse as Coleoptera and Diptera, especially under laboratory conditions (Dahms 1984b). They are normally associated with mud dauber wasps of the genera *Trypoxylon* and *Sceliphron* (Hymenoptera: Sphecidae) and some species serve as model organisms to demonstrate biological, ecological, and behavioral concepts to students from elementary to college level (Matthews 1997, 2000; Matthews et al. 1996). Due to confusion surrounding species identity in this genus, this report is part of efforts to promote nomenclatural stability and facilitate future work on *Melittobia* (González & Matthews 2002; González et al. 2004a, b). Our findings suggest that *Melittobia* are more widely distributed in the Caribbean region than previously thought, although probably not native to this region.

Melittobia was previously reported from Cuba as parasites of the sphecid wasps *Sceliphron asimile* (Dahlbom), *S. jamaicense* (Fabricius), *Trypoxylon succintum* Cresson and *T. subimpressum* (Smith), and the solitary vespids *Pachodynerus nasidens* (Latreille), *P. cubensis* (Saussure), and *Ancistrocerus cingulatus* (Cresson) (Alayo & Hernández 1978; Fernández et al. 2002; Genaro 1994, 1996). While examining specimens of *Melittobia* deposited in the Museum of Comparative Zoology at Harvard, we found 5 females of *Melittobia acasta* (Walker) labeled: Baraguá, Cuba. VI-9-29, T.P.R.F. Ent No. 3541, taken on a mud cell, L.C. Scaramuzza, Col., *Melittobia acasta* (Walker), det. E. Dahms 1985.

Melittobia acasta is regarded as the only species of this genus native to Europe (Bouček 1977) but it also has been reported from Argentina, Canada, India, Japan, New Zealand, USA, and Venezuela (Dahms 1984a; De Santis 1983; Husain & Khan 1986; Hobbs 1968; Hobbs & Kronic 1971; González 1994; González & Terán 1996; González et al. 2004b; La Salle 1993; MacFarlane & Donovan 1989) where it presumably has been accidentally introduced.

Melittobia australica (Girault) was originally described from Australia (Girault 1912), but it has been found in Jamaica, Japan, New Zealand, Trinidad, South Africa, USA, and Venezuela

(Dahms 1984a; MacFarlane & Palma 1987; La Salle 1993; González 1994; González & Terán 1996). One of us (JAG) has collected specimens of *Melittobia australica* from two locations in Cuba comprising eight females from Playa Vitoria, Yaguajay, Sancti Spiritus, Cuba, VII-1996, from nests of *Sceliphron jamaicense* (Fabricius); and 23 females from Cienfuegos, Cuba, XI-1988 from *Sceliphron* sp.

Melittobia was reported from Costa Rica by Hanson & Gauld (1995). However, an earlier report (Hunt 1993) mentions wasps identified by one of us (RWM) as *Melittobia australica* from Guanacaste Province attacking *Sceliphron asimile* (Sphecidae). We also keep a culture in our laboratory obtained originally from a species of *Centris* (Anthophoridae) collected at Lomas Barbudal Reserve, 8.5 km NW of Bagaces, Guanacaste Province (S.B. Vinson, March 2001) in Costa Rica.

Melittobia sp. was also reported to occur in Puerto Rico (Maldonado C. & Navarro 1967), and we thought it most likely to be *M. australica*. This was confirmed when we discovered many specimens of *M. australica* from various Puerto Rico localities in the collection of the National Museum of Natural History (Smithsonian Institution).

As far as we know, *Melittobia* parasitoid wasps had not been reported previously from the Bahamas, Trinidad, and Hispaniola. However, in material borrowed from the Entomology Research Center—Agriculture, Canada C.E.F., we found a female of *Melittobia australica* collected at San Salvador, Bahamas (8-13/XII/80, sweeping pool, B. Brown), and from 2 localities in Trinidad (Carapichaima and Curepe) parasitizing Eumeninae wasps (Vespidae) as well as *Trypoxylon* sp. (Sphecidae). Finally, during an expedition by one of us (JAG) to Dominican Republic, *Melittobia australica* was found parasitizing *Sceliphron* sp. at Oviedo Province, Pedernales (20-XI-2003).

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SUMMARY

The presence of *Melittobia australica* (Hymenoptera: Eulophidae), a cosmopolitan ectoparasitoid, is confirmed from Bahamas, Costa Rica, Cuba, Hispaniola, Puerto Rico, and Trinidad. Also *M. acasta*, the only known European species in the genus, is reported for the first time from Cuba. Some hosts of the genus and for both species in these Latin American countries are reported.

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