

Biogeography, floral choices and redescription of *Promelitta alboclypeata* (Friese 1900) (Hymenoptera: Apoidea: Melittidae)

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Promelitta alboclypeata (Friese) is the only species included in the bee tribe Promelittini (Melittidae). Its taxonomic position is still dubious mainly because of the limited material available. On the basis of 381 new specimens and type material, we redescribe both sexes of *Promelitta alboclypeata* and designate the lectotype. Previously it was known only from Egypt. We present new biogeographical data from Morocco. In addition, taxonomy and new elements of ecology of *P. alboclypeata* are presented and discussed.

According to Engel (2001), the Melittidae are subdivided into four subfamilies: Dasypodainae, Macropidinae, Meganomiinae and Melittinae. These subfamilies consist of 14 genera, including approximately 165 species, and range worldwide, but not known in Australia and South America (Michener 1981, 2000). Most of these genera have been extensively reviewed (Stage 1966; Michener 1981; Whitehead & Steiner 2001; Michez *et al.* 2004a,b; Michez & Patiny 2005, 2006). One of the main characteristics of Melittidae is their specialist floral choices. In fact, most of melittid bees forage pollen on very few host plants (Michez *et al.* 2004b; Michez & Patiny 2005, 2006).

The taxonomic position of *Promelitta alboclypeata* (Friese) has for a long time been uncertain. Friese (1900) described this bee in the genus *Dufourea* Lepelletier (Halictidae, Rophitinae) from two males from Egypt. The genus *Promelitta* was described by Warncke (1977) on the basis of this previously described species. Michener (1981) transferred the genus to the Melittidae and proposed the new tribe, Promelittini containing the single genus *Promelitta*.

Promelitta alboclypeata is the only known species for the genus and the tribe Promelittini. Its ecology has not been recorded and its taxonomic position remains dubious because of the limited material

available (fewer than 10 specimens) until recently.

In the present paper, we designate the lectotype of *Promelitta alboclypeata*. We redescribe both sexes on basis of 381 specimens and present new biogeographical data from Morocco. In addition, taxonomy, geographic distribution and elements of ecology of *P. alboclypeata* are presented and discussed.

One of us (D.M.) studied the type material of *P. alboclypeata* in the collections of the Naturhistorisches Museum Wien (MNH, Vienna, Austria). Additional material belonging to the Oberösterreichisches Landesmuseum Linz (OOLL, Austria), the Natural History Museum, London (BMNH, U.K.) and the University of Mons-Hainaut (UMH, Belgium) was also examined.

The maps are based on 364 specimens from the OOLL, 1 specimen from the BMNH and 16 specimens from the UMH. Biogeographical data have been included in the *Banque de Données Fauniques Gembloux-Mons* (BDFGM). They were managed using Data Fauna Flora 2.0 (Barbier *et al.* 2000). Conventional geographic coordinates of the records have been searched in the numeric gazetteer included in the software (CFFGazet). Data were mapped using Carto Fauna Flora 2.0 (Barbier & Rasmont 2000). A gall geographical projection was used for mapping the data.

The glossary of Harris (1979) was used for the description of the surface sculpture and Michener (2000) for the morphology. The following abbreviations are used for morphological structures: A = antenna segment (A1 = Scape); Bt = basitarsus; Tb = tibia; S = sternum; F = femur; T = tergum.

Abbreviations followed by a number denotes either that leg or segment.

Cuticular ultrastructure was studied using SEM (JEOL JSM-6100) linked to the software package 'Semafore' (JEOL, Sollentuna, Sweden).

Morphometric values included in the diagnosis and the description are based on 30 females and three males.

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