Parasitisation of leaf-cutter bees
(Megachilidae: Apoidea) by Melittobia species

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ABSTRACT: Megachilid bees play an important role in pollination of many domesticated and wild plant species. During our attempts to trap nest these bees in southern India, we observed a heavy parasitisation by a species of Melittobia (belonging to Melittobia hawaiensis species group) (Hymenoptera: Eulophidae). Out of 173 megachilid cells collected from 29 nests belonging to four species, 148 cells were parasitized by Melittobia sp., with an average of 85.55 % parasitisation and not a single bee emerged from 55.17% of the nests. This is the first record of Melittobia hawaiensis species group parasitizing Megachile spp. in India. © 2015 Association for Advancement of Entomology

KEYWORDS: Melittobia hawaiensis species group, Pollination, Parasitization, Megachile, trap-nests, Bee-hotels

INTRODUCTION

In recent years, there has been an increasing concern on declining pollinator populations, in both natural and agricultural ecosystems (Biesmeijer et al., 2006; Potts et al., 2010). This decline could be a result of indiscriminate pesticide use (Kremen et al. 2002), habitat fragmentation (Mustajärvi et al. 2001; Aguilar et al. 2006) and/or intensified cultivation practices (Tscharntke et al. 2005; Ricketts et al. 2008). It is an established fact that pollinating agents are essential for the survival and reproduction of several wild and cultivated plant species (Kearns et al., 1998; Klein et al., 2007). Among the 18,000+ species of bees in the world, Megachilidae, forms a major group of solitary bees (Michener, 2007), which are involved in pollination of a variety of wild and cultivated plants. The role of leaf-cutter bees as major pollinators of alfalfa, blueberries and pigeon pea has been well established (McGregor, 1976; Free, 1993; Prashanth and Belavadi, 2015).