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NOTES AND COMMENTS

A survey for the small hive beetle in Egypt.

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The small hive beetle (SHB), *Aethina tumida* Murray (Coleoptera: Nitidulidae), is native to Africa south of the Sahara (Hepburn and Radloff, 1998; Neumann and Elzen, 2004; Neumann and Ellis, 2008). Recent data show that the SHB is rare in its northernmost natural distribution range in Sudan (El-Niweiri *et al*., 2008), suggesting that its presence in Egypt is as an invasive pest (Mostafa and Williams, 2000). Small hive beetles were first detected in Egypt in Etai-Al-Baroud in Summer 2000 (Mostafa and Williams, 2000; Fig. 1). Until 2003, SHBs were reported by Mostafa to occur in apiaries along the Nile Delta (Neumann and Elzen, 2004). However, since 2003 no information has been available on SHB in Egypt. To assess whether SHB are currently widespread in Egypt, we report the results of the first systematic survey of honey bee colonies for SHB in Egypt.

A total of 1239 local honey bee colonies (predominantly *Apis mellifera carnica* Pollm. hybrids) in both modern and traditional apiaries were inspected in 11 districts throughout Egypt (Fig. 1: Tanta: N= 117; Banha: N= 57; El-Fayoum: N= 182; Beni-Suef: N= 211; Maghagha: N= 58; Beni-Mazar: N= 120; El-Minia: N= 314; Mallawi: N= 63; Sohag: N= 23; Nag-Hammadi: N= 52; Esna: N= 42). All colonies were visually screened for typical SHB damage symptoms (Neumann and Elzen, 2004) and adult SHB by removing and inspecting every frame, followed by an inspection of the hive walls, bottom boards and internal feeders (Spiewok *et al*., 2007). Any suspect adult beetles (N = 11) were collected, preserved in ethanol and brought to the laboratory for taxonomic identification. Using morphometrics, the suspected adult beetles were identified as being members of the families Trogidae, Scarabaeoidae and Dermestidae respectively. Neither damage symptoms nor adult SHB were found in any of the colonies investigated.

Despite previous reports (Mostafa and Williams, 2000; Neumann and Elzen, 2004) and the large number of colonies screened throughout Egypt, we found no evidence of SHB. The underlying reasons for the absence of SHB in the area remain unknown. We suspect that as in Sudan (El-Niweiri *et al*., 2008) the dry soil conditions in large areas of Egypt are likely to be a constraint to SHB reproduction on alternative food sources (Buchholz *et al*., 2008) as well as pupation success (Ellis *et al*., 2004). The results of this survey suggest that SHB are not well established in Egypt.

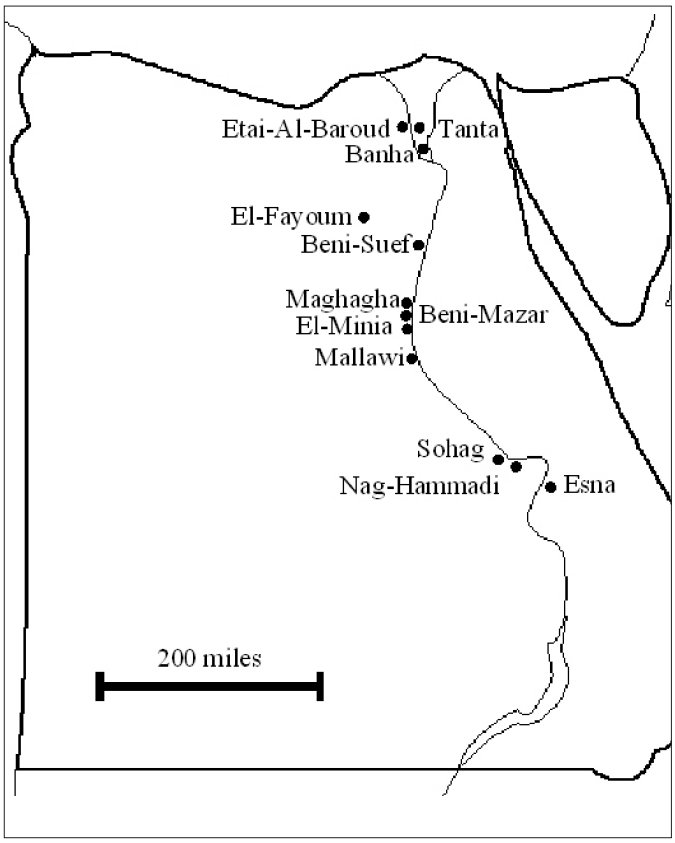

Fig 1. Map of Egypt showing the sampling locations of this survey and Etai-Al-Baroud, where SHB was reported by Mostafa and Williams (2000).

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