

Research on the Small Hive Beetle, *Aethina tumida* at the Central Science Laboratory

Introduction

The small hive beetle (SHB), *Aethina tumida*, is a serious pest of honeybee hives in the USA and Australia (Figure 1). The SHB is an invasive species originating from Africa and has recently been made notifiable within the European Community (Commission Decision 2003/881/EC).



Figure 1. Adult and larvae of the small hive beetle, *Aethina tumida*



Project objectives

Traps with attractant lures have proven to be an effective means of monitoring for the presence and population levels of insects in a wide variety of situations. Our studies are using behavioural bioassays and electrophysiological techniques to examine which of the many volatile compounds released from hive components, or from the beetles themselves, are attractive to the SHB. In addition we have investigated aspects of SHB biology and behaviour.

Project Progress

- Potential attractants have been identified (Figure 2)
- Prototype lure has been developed
- Field trials will take place in South Africa
- Greater understanding of biology and behaviour of SHB
- Progress has been made with investigation of novel control methods

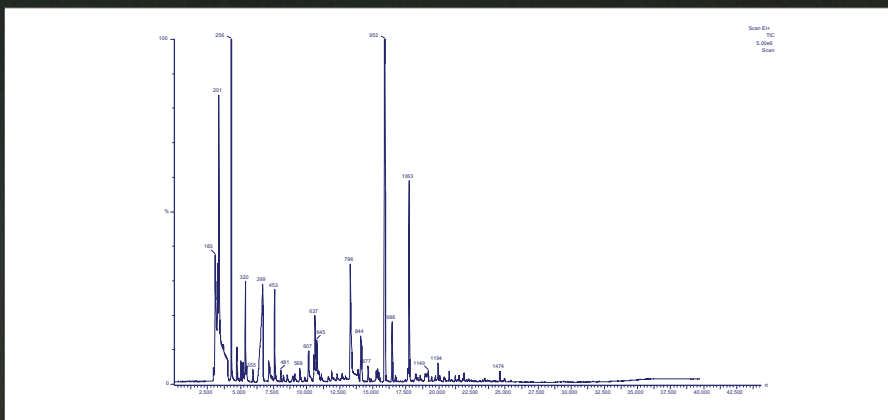


Figure 2. Typical GC-MS trace illustrating number of compounds found in a hive-associated odour source. Only a few of these compounds may act as attractants for the SHB

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Acknowledgement

The work on *A. tumida* is funded by the Department of Environment, Food and Rural Affairs, UK. We also thank both Dr Jeff Pettis, USA and Dr Mike Allsopp, South Africa, for supplying small hive beetle larvae and advice on culturing. *Aethina tumida* is held under the conditions required for quarantine licence number: PHL 251C/5580(03/2007)



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