

**Sexual Pheromones of Hybrids Males in the *Bombus terrestris* (L. 1758) Species.**

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In Bumblebees, males are known to use their cephalic labial gland secretions as sexual pheromones to attract conspecific virgin females<sup>1</sup>. These secretions are species-specific<sup>2</sup>. In the *Bombus terrestris* species, a geographic variation of these secretions has been highlighted<sup>3</sup>. This species is the most commonly used in greenhouses pollination in Europe, the most economically valuable subspecies being *B. t. dalmatinus*. This taxa is than imported in several countries assessing that few impact on local populations occurs. Sexual pheromones of *B. t. dalmatinus*, *B. t. audax* from United Kingdom and hybrids of these two taxa were compared. The main goal of this study was to show if hybrids have different sexual pheromones than their parental populations or not. The sexual pheromones (cephalic labial gland secretions, CLG secretions) were obtained by extraction of the head secretions in hexane. The solutions obtained were analysed using a GC/MS and their qualitative and relative constitution were compared. A Principal Component Analysis was applied to the data matrix. The results obtained show that CLG secretions analyses allow the identification of both *audax* and *dalmatinus*, and moreover, the differentiation of F1 hybrids from two different populations. These hybrids have intermediate CLG secretions constitution.

References

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