



INFLUENCE OF HOST FRUIT AND CONSPECIFICS ON THE RELEASE OF THE SEX PHEROMONE BY *TOXOTRYPANA CURVICAUDA* MALES (DIPTERA: TEPHRITIDAE)

ABSTRACT

The release of tephritid sex pheromones depends significantly on the age of the male, the social context (presence of conspecifics) and chemical context (host volatiles). In this study, the influence of host fruit and conspecific (males and females) on the emission of the pheromonal compound 2-methyl-6-vinylpyrazine (2,6 mvp) by *Toxotrypana curvicauda* (Gerstaecker) males was investigated under laboratory conditions. Males were divided into one control group (nonexposed to treatment) and five experimental groups were placed 1 hr before volatile collection with: 1) host fruit (unripe papaya), 2) two females, 3) two males, 4) host fruit plus two females, and 5) host fruit plus two males. The volatiles were sampled by means of solid phase microextraction and analyzed with gas chromatography-mass spectrometry, with a focus on 2,6 mvp. Males emitted volatiles from the first day after adult emergence. The maximum peak and the temporal pattern of 2,6 mvp release were modified by the presence of host fruit and conspecific males or females. On day 5, males in the presence of fruit maintained a constant release of 2,6 mvp while the presence of conspecific caused a decrease of pheromone release. The release of 2,6 mvp was increased significantly in males exposed to both types of stimuli simultaneously. The stimuli (fruit and conspecifics) modified the release of 2,6 mvp, however the effect depended on male age.

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Autores: Norma Robledo and René Arzuffi*.

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