

IS THE PHEROMONE OF *AGRIOTES* CLICK BEETLES A "CLASSICAL" SEX PHEROMONE?

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The Y-trap for catching *A. brevis*, *A. rufipalpis*, *A. sordidus* and *A. sputator*.



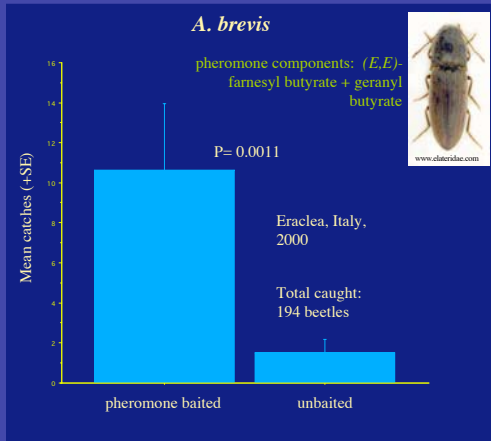
The VARb3 trap for catching *A. ustulatus*.

Females of *Agriotes* click beetles produce sex pheromones which are highly attractive to males. Traps baited with the synthetic sex pheromones have been used for trapping click beetles in many countries of Europe (Tóth et al., 2003).

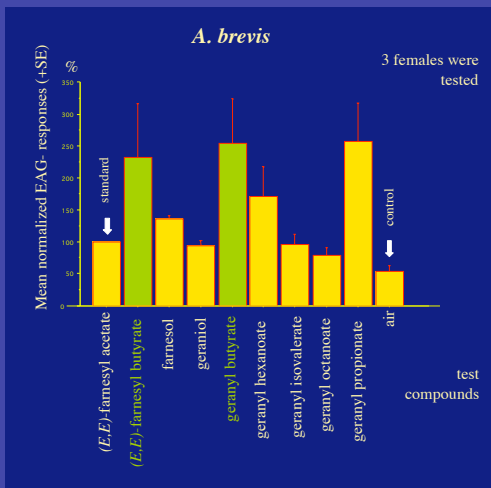
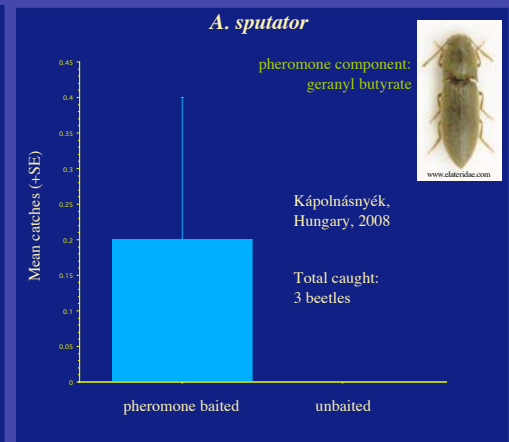
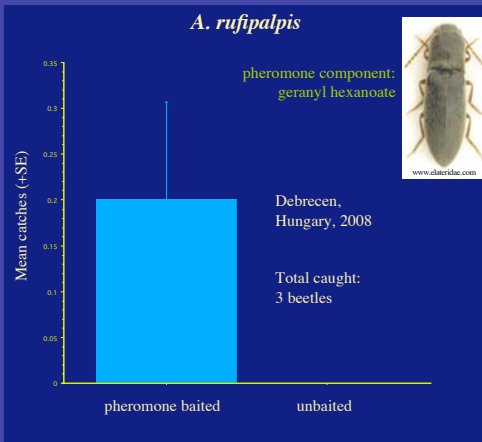
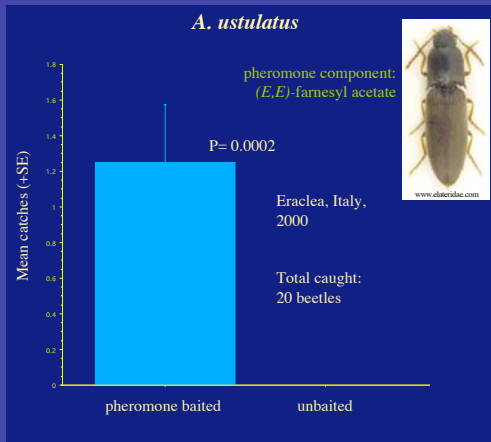
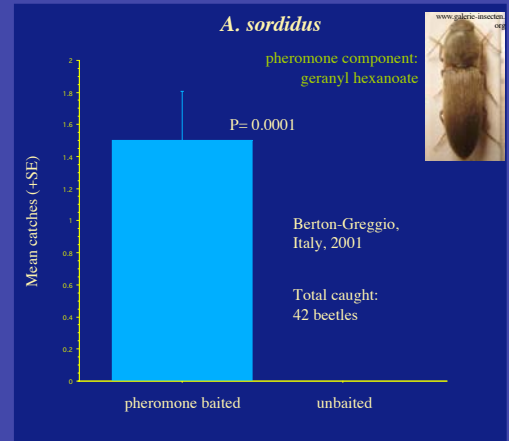
However, it was observed in several field tests that significantly higher numbers of female *A. brevis* Candèze, *A. ustulatus* Schaller and *A. sordidus* Illiger were caught in traps baited with the sex pheromones of these species than in unbaited traps. Similar indications were recorded also in *A. rufipalpis* Brullé and *A. sputator* L.

In electroantennographic studies when screening a range of synthetic click beetle pheromone components on the antennae of *A. brevis* and *A. sordidus* females and males, females also gave strongest responses to the pheromone components of the respective species.

Our preliminary results show that in these species females are capable of perceiving species specific pheromone signals, and also behaviorally respond to them. So it appears that the pheromone of these *Agriotes* species show characteristics of "aggregation" type pheromones. From the practical point of view pheromone products capable of attracting not only one sex can have a wider application in IPM approaches than "classical" sex pheromones attracting only one sex.



First preliminary results of field trapping experiments on female *Agriotes* click beetles with their synthetic pheromone components. In case of *A. rufipalpis* and *A. sputator* no statistical analyses were performed due to the overall low catches.



EAG-profiles of responses to synthetic *Agriotes* pheromone components evoked from the antennae of female *A. brevis* and *A. sordidus*. Responses were normalized against the (E,E)-farnesyl acetate standard.

References:

M. Tóth, L. Furlan, V. Yatsynin, I. Ujváry, I. Szarukán, Z. Imrei, T. Tolasch, W. Francke & W. Jossi. *Pest Manag. Sci.*, 59: 417-425., 2003.
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