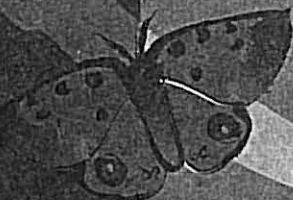


**VII<sup>th</sup>**

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**CONGRESS  
ABSTRACTS**

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L. M. Torres<sup>1</sup>, A. Bento<sup>2</sup>, J. A. Pereira<sup>2</sup> & R. Torres<sup>1</sup>  
*Effect of an artificial food spray on field  
populations of the olive moth, Prays  
oleae (Bern.)*

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Several studies have found that the application of artificial food to crops can lead to increased predator fecundity and in some cases to subsequent improved pest control. However in the case of the olive moth, *Prays oleae* (Bern.), a serious olive pest, there was no clear evidence on the effects of such spraying in reducing the attack by the pest, namely because it has been demonstrated in laboratory experiments that artificial food may increase the number of eggs produced. To study the effects of the application of an artificial food to the olive tree canopy on *P. oleae*, an experiment was carried out during 2000, in an ecological olive orchard in north-eastern Portugal. At the beginning of the fruit generation of the moth ten randomly selected groups of four trees each, separated by at least 50 m, were marked in the orchard. Five of these groups were sprayed with a mixture of yeast autolysate, sugar and water in the ratios 4:7:10. Each tree received 80 g yeast, 140 g sucrose and 200 ml water. Only the south-eastern side of each tree was sprayed. Each week for the next four weeks, 50 fruits were taken weekly from the south-eastern side of each of four randomly selected trees in each group such that every tree was sampled once. Samples were returned to the laboratory where moth eggs, total and predated, were identified and counted under the microscope. To gain insight into the predators found in the orchard, three branches per tree in each of the twenty trees of each treatment were sampled by the beating technique, one, three and five weeks after spraying. More olive moth eggs were found on olive fruits taken from trees treated with an artificial food than on fruits taken from untreated trees, one week after spraying, but the differences disappeared two weeks after spraying. The cumulative numbers of captures recorded over the course of the experiment were significantly higher in the treated trees than in the control trees, for the mirids, anthocorids and coccinellids, but were not significantly different for the formicidae, araneae and chrysopids. There were no significant differences in egg predation between the trees treated and the control, in any sample date. These results suggest that, although spraying the olive trees with an artificial food comprising yeast autolysate, sugar and water may increase the numbers of predators in olive groves, may also benefit the olive moth. In this context, further research is needed to overcome possible disadvantageous effects of this potentially interesting technique.

**Index terms:** olive tree, pest control, egg predation.

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K. G. Trencheva  
*Biological data of white peach scale  
Pseudaulacaspis pentagona (Homoptera:  
Diaspididae) in the region of south -  
western Bulgaria*

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White peach scale is an important agricultural pest in Bulgaria. The occurrence of this species is in the south - western parts of the country. It damages peach, mulberry, kiwi and grows up mainly on trunks and branches of the host plants. In case of high density of the population trees become dry after three years. Researches on the biology of this scale insect were made from February to November 2001. The material was collected from peach orchards and mulberry trees. This pest has three generations per year. The overwinter one consists of seminal females. First oviposition females from the overwinter generation were observed early in spring (22.03.), but oviposition females can be seen to mid May. Maximum actual fecundity is 167 eggs. Eggs have different colors from white to bright orange and their development is under the scale of the female. The appearance of the larvae "crawlers" is in April (11.04.), but they can be seen to the mid May (18.05). This period of development is very important for the survival and dispersal of the species. After this period of time "crawlers" begin to make their scale cover. First instar can be seen from early May (9.05) to the end of May (about three weeks). At the end of May almost all of the larvae of the future females are in second stage of their development. During the same period of time there are also nymphs of the males. In early and middle June females who have reached sexual maturity can be found. In the middle of June emergence males can also be seen. Oviposition females from the next generation were observed in June (19.06), but they can be seen to the end of July. Appearance of the larvae "crawlers" is at the end of June (30.06), but they can be seen to the end of July. At the end of July almost all of the larvae of females are in second stage of development and during the same period of time there are nymphs of the males. Emergence of the males was in the first ten days of August. The next generation was observed in the middle of August when oviposition females were found (13.08.). They can be seen to the beginning of September. From the end of August and in September it can be seen "crawlers". At the end of September to the mid of November it can be found different stages of development - second instar of females, females reached sexual maturity, nymphs of males and emergency males. This generation stays overwinter. During the whole year all stages of the development can be seen, which depend on the moment of insemination of the females.

**Index term:** *Pseudaulacaspis pentagona*, generation, oviposition.

