The invasion of *Drosophila suzukii* in Europe: a model for basic and applied research in insect ecology

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The vinegar fly *Drosophila suzukii* (Matsumura) (Diptera Drosophilidae), Spotted Wing Drosophila, is a highly polyphagous invasive pest endemic to South East Asia, which has recently invaded western countries. Its serrated ovipositor allows this fly to lay eggs on and damage unwounded ripening fruits, thus heavily threatening fruit production. *D. suzukii* is spreading rapidly and economic losses are severe, thus it is rapidly becoming a pest of great concern. *D. suzukii* presence has now been reported in nine European countries. Nonetheless, several knowledge gaps about this pest still exist and no efficient monitoring tools have been developed yet. The increasing number of insecticide applications jeopardizes the results obtained with IPM, therefore development of alternative control methods is urgent for an economic safeguard of the concerned fruit industry. Our work is aimed at highlighting the possible research approaches which may hopefully provide management solutions to the expanding challenge that *D. suzukii* poses to European fruit production.

Keywords: spotted wing drosophila, invasive species, insect communication

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My mother nursed my older sibling during pregnancy, who cares...

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In some species females commonly become pregnant shortly after parturition of previous young, which further intensifies mother-offspring conflict due to concurrent pregnancy and lactation. In accordance with this, pregnant mares across equid species wean their foals earlier than non-pregnant ones. Our recent results, however, suggested that pregnant mares compensated their suckling foal for expected earlier weaning through enhancing nursing behaviour in early stages of lactation (Bartošová et al. 2011, PLoS ONE 6(8): e22068). Present study focused on the costs for the third player, an offspring whose mother experienced lactation during pregnancy. We investigated i) birth weight of the foals born to mares that nursed during pregnancy, and ii) probability that the mated mare gave birth to the foal. Birth weight of the 74 foals of Kladruby horse born to the mares observed in above mentioned study did not differ in foals of lactating (66.2±1.01 kg) and non-lactating mares (64.4±1.04 kg, P = 0.22, GLMM, PROC MIXED, SAS). We also found no impact of nursing a foal on reproductive success in in-hand mated Kladruby mares between years 2004 and 2007 (1121 mating in 446 mares, P=0.79, generalised linear