On generalist pollinators and the role of hoverflies in communities of pollinators.

Jiří Hadrava*[1,2], Zdeněk Janovský[1], Jakub Štenc[3], and Jan Klečka[2]

[1]Department of Zoology, Faculty of Science, Charles University – Czech Republic
[2]Institute of Entomology, Czech Academy of Science – Czech Republic
[3]Department of Botany, Faculty of Science, Charles University – Czech Republic

Abstract

Hoverflies, similarly as other groups of Diptera, are supposed to be rather generalist and opportunistic pollinators. Consequently, they are usually assumed to be less effective than other groups of pollinators, such as highly specialised bees which are more likely to transfer pollen between conspecific flowers. However, even generalised pollinators have floral preferences, apparent particularly at limited spatio-temporal scales. Hence, they could provide similar quality of pollination as specialised pollinators do. Moreover, generalist pollinators may be even more beneficial for plant communities than the specialised ones as they are more flexible according to the community context and they could pollinate plants that miss other pollinators.
Here, we present results from several experiments aiming to reveal the role of hoverflies in communities of plants and their pollinators. We found that hoverflies visit different spectrum of plants than other generalist pollinators and they are choosing flowers using different floral traits than other pollinators. We also found that there is a huge variability between species of hoverflies in their floral preferences: wihle Eristalinae species have rather strong preferences for certain floral traits, Syrphinae are rather generalists in the narrow sense and they visit mainly those flowers that are overlooked by other pollinators.

Keywords: Pollination, generalised pollinators, floral preferences, hoverflies

*Speaker