

Interspecific variation in the effect of pesticides on wild pollinators

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Human imprint on earth leads to massive changes in earth ecosystems, including the introduction of a multitude of chemicals in the environment. These pollutants are primary drivers in the sharp decline of wildlife. For wild pollinator species, these xenobiotics come mainly from the development of intensive agricultural practices, including the spread of pesticides.

Wild pollinators provide unmatched ecosystemic services by ensuring the sexual reproduction of wild plant communities and improve crop yields (i.e. pollination). Given their importance, understanding pesticide effects on wild pollinators is essential. However, current testing protocols primarily focus on a few model of domesticated species (e.g. honeybees, bumblebees), excluding a wide range of wild pollinators — a discordant approach, considering that wild pollinating insects exhibit significant morphological and physiological differences.

Assessing and characterizing these interspecific differences among pollinators exposed to pesticides is one of the main objective of the European WildPosh project (Horizon program, 2024-2028). Lethal and sublethal effects of three pesticides from main product categories (i.e. Acetamiprid, Cypermethrin and Tebuconazole) are tested in controlled conditions on different species of wild bees and butterflies, at different life stages (larvae and adults), when possible, and compared with a domesticated reference species, the buff-tailed bumblebee (*Bombus terrestris* L.). First results indicate that wild bees appear to be more sensitive to pesticides than its domestic counterpart.

Presentation type: ORAL

If oral, would you like to be selected for a double slot presentation (postdoc only, non-tenured): NO

Degree: PhD students

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Scientific thematic: Ecology - Ecophysiology – Ecotoxicology