

Investigating mortality caused by environmental doses of urban pollutants, the phthalates DnBP and DEHP, on the urban pollinator *Bombus terrestris*

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Cities are environments with severe environmental constraints (e.g. fragmented habitats, urban heat islands, air and soil pollutants) which can be detrimental to wildlife development. We focus our research on the impact of urban pollutant chronic exposure, such as phthalates, on pollinators. These ubiquitous emerging pollutants are endocrine disruptors known to affect invertebrates through immune stress, reproductive impairments, and developmental issues. In this study, we first evaluated phthalates exposure at atmospheric and cuticular levels on city-caught *Bombus terrestris*. Then, we tested under laboratory conditions the effects of two commonly found phthalates, DEHP (Di(2-ethylhexyl) phthalate) and DnBP (Di-n-butyl phthalate), on the individual and colonial health of *Bombus terrestris*. Our first results suggest that environmental level exposure to those chemicals can lead to mortality in *Bombus terrestris*. Faced with these results, it appears that there is a need for deeper investigations of the role of endocrine disruptors, such as phthalates, in the current global decline of insects, and particularly, pollinator populations.

Keywords: phthalates, endocrine disruptors, urban pollutants, bee health, mortality study