

Exposure of hummingbirds and bumble bees to pesticides

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New research reveals that hummingbirds and bumble bees are being exposed to neonicotinoid and other pesticides through routes that are widespread and complex. The findings are published in *Environmental Toxicology & Chemistry*.

To measure exposure to pesticides in these avian pollinators, investigators made novel use of cloacal fluid and fecal pellets from hummingbirds living near blueberry fields in British Columbia. They also collected bumble bees native to Canada, and their pollen, and blueberry leaves and flowers from within conventionally sprayed and organic blueberry farms.

The researchers detected pesticides and related compounds in cloacal fluid and fecal pellets of hummingbirds revealing for the first time that hummingbirds are exposed to and accumulate pesticide exposures of multiple types. In addition, bumble bees, their pollen, and [blueberry](#) flowers contained [pesticides](#), with the highest concentration of the insecticide imidacloprid in pollen from organic farms.

"Hummingbirds and [bumble bees](#) are important pollinators of wild and agricultural plants and they survive each day on a razor's edge due to their high energy needs," said lead author Dr. Christine Bishop, of Environment and Climate Change Canada. "Pesticide exposure in these animals may have impacts on their health and the ecosystem services they provide to humans and wildlife."

More information: Christine A. Bishop et al, Hummingbirds and bumble bees exposed to neonicotinoid and organophosphate insecticides in the Fraser Valley, British Columbia, Canada, *Environmental Toxicology and Chemistry* (2018). [DOI: 10.1002/etc.4174](https://doi.org/10.1002/etc.4174)

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