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OPINION

The BTK insecticide used for LDD moths puts at-risk species in danger. Luckily, an alternative exists

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This year, many Ontario municipalities and conservation authorities issued public notices to conduct aerial spraying in May to kill the larvae of the LDD moth (also known as the “European gypsy” moth, a name now considered offensive). Large outbreaks of this species occur every seven to 10 years, and usually last for two to three years. The insecticide used in these spraying programs is BTK (*Bacillus thuringiensis* var. *kurstaki*), a bacterium used to treat a variety of insect pests.

Public notices describe BTK as harmless to people, and non-toxic to insects, birds, fish, mammals, and adult moths and butterflies. However, this is misleading. BTK is not species-specific and, if consumed, will result in mortality of any butterfly or moth larvae at the time it is sprayed. BTK has been sprayed in several extremely rare Ontario habitats, such as oak savannah, oak woodland and tall grass prairie — which means it can also negatively affect many rare moths and butterflies that use these habitats.

While there is no experimental evidence, the Karner blue, frosted elfin, and eastern Persius duskywing butterflies all occurred in oak savannah habitats that were treated with BTK and are now completely gone from Ontario.

The mottled duskywing, now Ontario’s only endangered butterfly, has managed to persist in small isolated areas of the Rice Lake Plains, Halton Region and southwest of Barrie. Currently, one of the main threats to this species and many other native moths and butterflies we know far less about, is aerial spraying of BTK.

Why do so many people want to get rid of the LDD moths? In some years, like this one, they are extremely abundant. It can be startling and downright gross when they cover everything and completely strip trees of their leaves. However, LDD moths rarely do permanent damage to trees, and the ones they do damage are primarily unhealthy trees, or trees stressed by drought or disease. Already, trees that were defoliated in the spring are growing new leaves in many areas.

There is an alternative to BTK that will not harm other moths and butterflies. When LDD moths build to high numbers, so does a naturally occurring virus called nuclear polyhedrosis virus (NPV) that kills LDD moth larvae. Introduction of the virus through a commercial product can be effective at lowering LDD moth abundance. Crucially, it is specific only to LDD moths. It is widely used in the United States, particularly in habitats where rare moths and butterflies occur.

A commercial form of NPV is currently going through an approval process in Canada to be registered for use in 2022. Communities should pressure their local municipalities and conservation authorities to rigorously evaluate the need to spray. We need to consider alternatives to BTK and think about the true cost of using this widespread but harmful insecticide, before more rare moths and butterflies disappear for good.

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