

University of Guelph project aims to bring back endangered butterfly to southwestern Ontario

By [Catherine Thompson](#)

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GUELPH — It's small and it's not much to look at — a greyish-brown speckled little butterfly called the mottled duskywing.

But it's at the heart of an ambitious, five-year conservation program at the University of Guelph that aims to breed the insect and reintroduce it in the few remaining pockets of oak savannah in Ontario.

The five-year project has received \$825,000 in funding for what may be our last chance to bring back a disappearing butterfly to areas where it used to thrive.

The mottled duskywing was once common in the province, but as human development decimated its preferred oak savannah and tallgrass prairie home, it has almost disappeared, retreating to just a handful of tiny pockets in the province, including populations near Peterborough and Oakville.

The duskywings are endangered because they're particular about where they live — they like oak savannah, a dry habitat that's a mix of grassland and sparse vegetation, and they lay their eggs on just two types of similar plant, New Jersey tea and prairie redroot, which have been choked out by invasive species.

Jessica Linton, a senior biologist with Waterloo consultant [Natural Resource Solutions](#), has been studying duskywings for more than a decade. When she began, it was disheartening to go to site after site in the butterfly's former range in Ontario, and not be able to find a single specimen. "It was like, 'Oh my gosh, am I ever going to see one?'" she recalls.

Other butterfly species like the frosted elfin and the Karner blue have disappeared from that habitat, Linton said. The mottled duskywing "is the last butterfly that only occurs in oak savannah that we still have," she said.

But this project is a hopeful one, that could have implications beyond the fate of a single species of butterfly. "Recovering this butterfly is more than just recovering this one species," Linton said. "It kind of paves the way to protect and revitalize all oak savannah species," including plants, reptiles and birds.

Ensuring the savannah is healthy for the duskywing likely will mean those other species will also fare better, she hopes.

Everyone knows about declining populations of monarch butterflies, says Ryan Norris, a professor of integrative biology at University of Guelph. He hopes the project will make people realize there are other butterflies in Ontario that might not be as striking as the orange-and-black monarch, but that still play an important role in the ecosystem.

The duskywing will be reintroduced to Pinery Provincial Park on southern Lake Huron and to Norfolk County on Lake Erie, on land owned by the Nature Conservancy of Canada, where the original oak savannah habitat has been restored from former farmland and pine plantations.

It's painstaking work. The butterflies are caught with nets, and put in coolers where the cold makes them lethargic and allows researchers to mark them with tiny dabs of paint. The team then set up a captive breeding program at the [Cambridge Butterfly Conservatory](#), and last year successfully released 500 butterflies into the wild near Marmora, east of Peterborough.

There has never been a butterfly successfully reintroduced in Ontario, although other species have been reintroduced elsewhere.

The fact that butterflies mature quickly and lay lots of eggs makes it easier to breed lots of babies to try and reintroduce in the wild, Norris says. The fact that so little is known about the butterflies and how to successfully reintroduce them makes it tough. Researchers will try releasing them as both caterpillars and adult butterflies to see what works best.

That experimentation means it will likely take longer than five years to fully restore stable populations in the areas the duskywing is reintroduced, Norris said.

He hopes the project is funded to reintroduce hundreds of butterflies each year to the two sites.

Right now, all of the sites where the butterfly now lives face ongoing threats. And because the duskywing populations in any one area are so small, "they're just at risk from random events, a bad period of weather that wipes out the population," Norris said. "There's no buffer.

"We want a self-sustaining network of populations into the future, so it can thrive and we don't have to be biting our nails going forward," Norris said.

The project is funded two-thirds by the Natural Sciences and Engineering Research Council and one-third by other donors. The collaboration between Guelph, genetic researchers at Western University, butterfly breeders, the private sector and conservation groups like the Nature Conservancy of Canada and [Wildlife Preservation Canada](#), is a success story that is deeply satisfying, Linton said. "We are moving in the right direction."