Press Release
For immediate release

G.D.G. CANADA, UNIVERSITY OF OTTAWA AND CITY OF OTTAWA COLLABORATING ON RESEARCH ON THE EFFECTS OF BTI TREATMENTS ON NON-BITING MIDGES IN THE SOUTH MARCH HIGHLANDS

Ottawa – July 5, 2016 – Earlier this year, the City of Ottawa hired G.D.G. Canada, an organization that specializes in biological control of biting insects, to control nuisance mosquitoes in Kanata North. The control program will be accompanied by an ecological impact study involving a collaboration between G.D.G. Canada, the University of Ottawa and the City of Ottawa. The study will focus on the effects of the treatments on a group of insects closely related to mosquitoes, known as Chironomidae, or non-biting midges.

About the mosquito control program

The program targets mosquito larvae only and will run from early spring to mid-September until 2019. It uses naturally occurring bacteria – Bti (*Bacillus thuringiensis israelensis*) – that prevents mosquito larvae from completing their development and emerging from the water. Bti is approved by Health Canada and has been found to be safe for humans, birds, fish, animals or the vast majority of other insects. "Bti is found naturally in soil. It is non-toxic, environment friendly, and has been used to control mosquitoes since the early 1980s," explains Mark Ardis, a scientific advisor with G.D.G. Canada assigned to the research project. "We've been monitoring over 30 sites within the limits of the South March Highlands and conducting continuous insect sampling on a weekly basis in order to confirm that our Bti-based operational procedures are not having a negative impact on the production of non-biting midges."

Why non-biting midges?

Non-biting midges are an important part of the South March Highlands' food web. They are one of the most diverse and abundant groups of aquatic invertebrates found in these wetlands. Similarly to mosquito larvae, most of their aquatic larvae feed on microscopic algae and organic material, and are prey to a large number of predators, aquatic and terrestrial, living in this ecosystem. Having similar habits, and sharing many physiological characteristics with mosquito larvae because of their relatedness, midge larvae are being used as a sentinels to assess the impact of the control program on the ecosystem, "It's important that the treatments do not adversely affect the supply of non-biting midges for other creatures up the food web, like birds, bats, fish, as well as other insects that play a crucial role in the food web," says Nick Stow, an official with the City of Ottawa's Land Use and Natural Systems Unit involved in the project.

It is too early for the research project to have produced any findings. But according to University of Ottawa biology professor Dr. Antoine Morin, "studies conducted in Europe have shown that for there to be any measurable impact on non-biting midge production, you would have to apply anywhere from 5 to 10 times the amount of Bti that is legally permitted in Canada."

While the legal limit in Canada is one litre of Bti per hectare, less than half this amount is being used in the South March Highlands. "I expect little direct negative effect of Bti on midges," adds Professor Morin, "but nature is complex and it is difficult to predict indirect effects with confidence. For example, will midges benefit from the removal of competing mosquito larvae?"

The South March Highlands, whose ecological value and biodiversity are among the highest of any area in the City of Ottawa, are home to more than 654 species according to the South March Highlands Carp River Conservation not-for-profit organization. The study, which got underway in early May, will continue until

the end of the mosquito control program in mid-September for this year and will be conducted annually until September 2018

About G.D.G. Canada
G.D.G. Canada is subsidiary of G.D.G. Environnement with its office in Ottawa, a unique centre of expertise with operations throughout Eastern Canada dedicated to driving ecological solutions for better living. In addition to providing services that include biological control of biting insects, the organization is also actively involved in preventing the spread of the Emerald Ash Borer and mosquito-borne diseases such as the West Nile virus. For more information, visit gdg.ca.

About the University of Ottawa
The University of Ottawa is home to over 50,000 students, faculty and staff, who live, work and study in both French and English. It is one of Canada's top 10 research universities – its professors and researchers explore new approaches to today's challenges. One of a handful of Canadian universities ranked among the top 200 in the world, it attracts exceptional thinkers and welcomes diverse perspectives from across the globe. To learn more, visit uottawa.ca

About the City of Ottawa
Ottawa is Canada's capital and the fourth largest city in the country. It is home to the Parliament of Canada, the majority of federal government departments, and approximately two thirds of the National Capital Region's population of nearly 1.3 million. Cosmopolitan, cultured, and a high-technology hub, Ottawa is also actively invested in preserving and protecting its urban and rural habitats, woodlands, water resources and local wild species. To learn more, visit ottawa.ca.

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