New Hampshire
Department of Agriculture, Markets, and Food
Shawn N. Jasper, Commissioner

Division of Plant Industry
Piera Siegert, State Entomologist

February 2, 2026

The Honorable Judy Aron, Chair
New Hampshire House Environment and Agriculture Committee
107 North Main Street
Concord, NH 03301

Subject: 2026 House Bill 1054 – "AN ACT establishing a committee to study the decline of insect populations in New Hampshire"

Dear Chair Aron and Members of the Committee:

This correspondence provides background information on the bill's subject matter and does not express a position of support or opposition. Several academic programs are actively researching insect decline. To inform these comments, I referenced the introduction to a special issue of the *Proceedings of the National Academy of Sciences* on this topic (D. L. Wagner, et al., *Insect decline in the Anthropocene: Death by a thousand cuts,* Proc. Natl. Acad. Sci. U.S.A., 10.1073/pnas2023989118 (2021)).

Background

Insects are the most diverse group of animals on Earth, with an estimated 5.5 million species globally and more than 91,000 described species in the United States. In New Hampshire, the University of New Hampshire's Insect and Arachnid Collections Record List includes over 13,000 logged species, though this is likely not a complete inventory. Many species remain undescribed—an estimated 73,000 in the U.S. alone—underscoring the complexity of insect diversity.

Insects are essential to ecosystem health, providing services such as pollination, nutrient cycling, and serving as a food source for other species. They also represent the majority of terrestrial animal biomass, with approximately 10 quintillion individuals alive worldwide at any given time. Despite their importance, insect populations face mounting pressures. While not all species are declining—some are stable or even increasing—evidence is suggestive that other species are losing abundance, justifying raised concerns about food webs and ecosystem services.

Monitoring insect trends is challenging. Comprehensive time-series data are scarce. **In New Hampshire, the state does not track insect abundance over time.** Researchers may have some data for the insects that they study, but this depends upon funding. Identification often requires specialized techniques such as microscopic analysis, genitalic dissection, or DNA analysis. That requires DNA libraries to exist for species, and keys to have been developed to separate identifying characteristics. This can add to the complexity and cost of large-scale studies. Where time-series data do exist, they are most frequently for

those insects which are agriculturally or medically significant, or for insects for which there has been long-term public interest. This can leave major knowledge gaps.

Stressors to insect populations include climate change, habitat loss, agricultural intensification, pollution (including light pollution), and invasive species. These factors often act together, creating a "death by a thousand cuts" scenario. Addressing these challenges will require increased monitoring, investment in research, citizen science initiatives, and innovative technologies such as eDNA analysis. Public education and policies that promote insect-friendly practices—such as diversified agriculture and climate change mitigation—are part of sustaining insect populations and the ecosystem services they provide.

I am not a specialist in insect conservation research, but if you would like more information, please contact me at 603-271-2561 or piera.y.siegert@agr.nh.gov.

Sincerely,

Piera Y. Siegert
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New Hampshire Division of Plant Industry
New Hampshire Department of Agriculture, Markets, and Food
Cc: Shawn N. Jasper, Commissioner, Department of Agriculture, Markets, and Food