

## Vita

Candidate's name: Almeera Salam Ahmed

Universities  
Attended: University of Guelph (2021)  
Bachelors of Science  
Zoology

University of New Brunswick (2024)  
Masters of Science  
Biology

### Publications / Conference Presentations:

Ahmed, A., J. Vickruck, S. Heard. The impact of habitat alteration and floral resources on wild bee communities in the Maritime provinces, Canada. Joint meeting Entomological Society of America and Entomological Society of Canada. November 13, 2022.

Ahmed, A., J. Vickruck, S. Heard. The impact of habitat alteration and floral resources on wild bee communities in the Maritime provinces, Canada. Joint meeting Canadian Society for Ecology and Evolution and Canadian Botanical Association. June 13, 2023.

# Buzzing Through Canada's Maritime Provinces: Unveiling Wild Bee Community Dynamics Amidst Habitat Changes and Blooming Landscapes

UNIVERSITY OF NEW BRUNSWICK  
THESIS DEFENCE AND EXAMINATION

in Partial Fulfillment

of the Requirement for the Degree of  
Master of Science

by

**Almeera S. Ahmed**

in the Department of Biology

U.N.B., Fredericton, N.B.

**Monday, April 8<sup>th</sup>, 2024  
12:00 p.m.**

via MS TEAMS

Examining Committee

Dr. Stephen Heard  
Dr. Jessica Vickruck  
Dr. Chris Edge  
Dr. Graham Forbes  
Dr. Shawn MacLellan

co-Supervisor  
co-Supervisor  
Internal Examiner  
External Examiner  
Chair of Oral Examination

## Abstract

The decline of wild pollinators, particularly bees, poses a global threat to terrestrial ecosystems. While habitat loss and agricultural intensification are recognized culprits, the complex relationship between wild bee communities, floral resources, and varied habitats remains understudied. Focusing on the forest landscapes of the Maritime Provinces in Canada, we conducted surveys across 47 sites, encompassing forests, agriculture, and pastures. Contrary to previous findings in other regions, our results indicate higher wild bee species abundance and richness in disturbed habitats compared to uncleared forests. However, our results also suggested that the wild bee community composition across the three habitats was similar. Floral resources demonstrated habitat and seasonal dependencies, influencing wild bee communities differently among the habitats. Our findings underline the need for specialized conservation strategies, balancing agricultural productivity with biodiversity preservation, and highlight avenues for future

research on wild bee populations and their complex interactions with diverse ecosystems.