

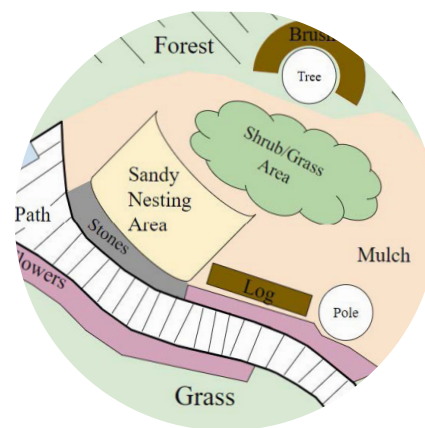
Laying the Groundwork for McMasters Ground Nesting Bee Garden

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Layout of the future ground nesting garden.
Photo credit: Emma Chau



Overview

Ground nesting bees make up 70% of the solitary native bee population, and what distinguishes them is that they lay their eggs in the bare earth.¹ They are also responsible for pollinating 80% of the world's flowering plants.² Hence, the conservation of these bees is crucial to the life of many species. Unfortunately, it is reported that 25% of North America's ground nesting bee population faces some risk of extinction.³ Since 2019, McMaster has worked to promote native bees and is a Bee City Campus. McMaster is situated in a native bee 'hotspot' with over 200 native bee species.⁴ Creating a habitat for ground nesting bees fosters preservation by providing them with a protected space to lay their eggs.⁵ Our goal was to create a plan for the eventual implementation of a nesting space for native bees that dually serves as an educational space and outdoor seating area.

Objectives

1. Design the bee nesting garden
2. Engage stakeholders in planning the design, implementation, and maintenance
3. Create a toolkit for the implementation of the garden

Reporting

To achieve our first objective, we visited the proposed site on McMaster campus and designed our initial layout. This included measuring the approximate 175 m² garden, identifying the South facing slopes for potential habitats, and designating areas for both manicured and wild gardens. Through our research, we determined the types of nests and plants for the garden, which informed our materials list.

To achieve our second objective, we first consulted with our CPCs to refine the design. From there we connected with the Facility Services Grounds Department to pitch the design and receive feedback. We revised our layout to include an accessible pathway, clearance for utilities, and improved the ease of maintenance. The updated layout was approved by Facility Services and our CPCs to commence in summer 2023.

To achieve our third objective, we created a toolkit of implementation guidelines. This included a materials list, where to source materials, community engagement plans, maintenance plans, educational elements, and more. This toolkit will be shared with future sustainability students to advance the initiative towards implementation.

Collaborators

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See a full list of references [here](#).