

Follow up resources for *Next Level Gardening for Pollinators: Nesting habitat and specialist bees*

Contact Julia Brokaw with questions (broka028@umn.edu). Thanks!

General Resources

Books by Heather Holm (MN naturalist, author and educator):

<https://www.pollinatorsnativeplants.com/>

[*The Bees in Your Backyard: A guide to North America's bees*](#) by Joseph Wilson and Olivia Messinger Carril

[iNaturalist app and website](#): Take photos of plants, insects and animals that suggests identifications and where local experts can verify correct identifications

Can also join 'projects' in the app related to nesting:

Nesting bees:

<https://www.inaturalist.org/projects/nesting-bees>

Suspected cuts from leaves:

<https://www.inaturalist.org/projects/megachile-bee-leaf-cuts>

Xerces Guide to supporting nesting habitat:

<https://www.xerces.org/blog/5-ways-to-increase-nesting-habitat-for-bees>

Ground-Nesting Bees

Over 80 percent of all bee species nest underground, but we don't know much about their nesting habitat preferences. They are usually solitary, meaning they do not have a hive or make honey. They are non-aggressive! You may notice them while gardening or enjoying the outdoors and it really helps to document your observations!

- 1) Participate in the Cellophane Bee Project this spring!

Researchers at the UMN are interested in studying the early-spring emerging cellophane bee (*Colletes inaequalis*) and need your help to find their nests.

These bees emerge in mid-late April and are active for about three weeks after emerging. They nest underground in sandy soils, usually in relatively large aggregations. These aggregations are distinctive, usually on south facing slopes and the nesting holes are surrounded by a mound of sand. If you know of nesting areas of these bees, please let us know by filling out this form:

<https://arcg.is/1XG0L1>

Our project aims to track their nesting activity and behavior to understand how they are impacted by changes in spring temperatures and what triggers their nest emergence. We will be tracking the timing of emergence, the number of active nests and potentially some nutrient analysis of the pollen they collect.

- 2) Squash bees and the 'Great Pumpkin Project'
 - a) <http://studentsdiscover.org/lesson/the-great-pumpkin-project/>

Stem-Nesting Bees

- 1) UMN Bee Lab guide for managing your yard to support stem-nesting bees
 - a) <https://www.beelab.umn.edu/sites/beelab.umn.edu/files/stem-nesting-bee-handout-v5.pdf>
- 2) Guides to make 'bee hotels'
 - a) https://www.beelab.umn.edu/sites/beelab.umn.edu/files/native_bees.pdf
 - b) <https://pollinators.msu.edu/publications/building-and-managing-bee-hotels-for-wild-bees/>

Specialist Bees

Specialist bees are bee species who have co-evolved to only visit certain plant species or plant genera for pollen and nectar (though you may see them drinking nectar from other plants). There are many specialist bee species that you can attract to your garden.

The guide by Heather Holm includes information about specialist pollinators and the plants they visit. Many spring-emerging bees are specialists. Here is a list of specialists for the central US: https://jarrodflower.com/bees_pollen.html