

Great Pollinator Project

The Pollinators

Conservation

Management

Volunteer

Education

About Us

[Home](#)

Specialist Bee Plants

Bees can be classified by the range of plants they visit for nectar or pollen. So-called polylectic species are the most generalist, gathering pollen from multiple genera in more than one plant family. This is in contrast to oligolectic species, which gather pollen from two to several species in one plant family. Monolectic species have the most restricted floral requirements, feeding on only a single plant species, even when other species in the same genus are present. Roughly 80 percent of the bee species in New York City are polylectic, suggesting that they may be better able to make do with the types of flowers found in an urban environment. Following is a list of the plants required by the city's 50 oligolectic or monolectic bees.



Aster Family (Asteraceae, 28 dependent bee species): One leaf-cutter bee, *Megachile apicalis*, specifically benefits from *Centaurea*, while the long-horned bee *Melissodes desponsa* specifically benefits from *Cirsium*. The other 26 bee species seem to have relatively broad tastes within the Aster Family.

Carrot Family (Apicaceae, 1 dependent bee species): The masked bee *Hylaeus sparsus* is very rare and has not been observed in New York City for several decades.

Cabbage Family (Brassicaceae, 1 dependent bee species): The miner bee *Andrena arabis* is also very rare and has not been observed for several decades.

Dogwood Family (Cornaceae, 3 dependent bee species): Plants in the genus *Cornus*, in particular, are preferred by three rare species of miner bee (genus *Andrena*).

Heath Family (Ericaceae, 4 dependent bee species): Plants in the genus *Vaccinium* (blueberries) are primarily used by the miner bee *Andrena carolina* and the Southeastern Blueberry Bee *Habropoda laboriosa*. *Rhododendron* is utilized by *Andrena cornelli*.

Geranium Family (Geraniaceae, 1 dependent bee species): This miner bee, *Andrena distans*, is very rare.

Mallow Family (Malvaceae, 1 dependent bee species): As its common name suggests, *Ptilothrix bombiformis*, the Hibiscus Bee, specifically prefers *Hibiscus*.

Water-lily Family (Nymphaeaceae, 1 dependent bee species): The small sweat bee *Lasioglossum nelumbonis* depends on flowers from water-lilies.

Evening Primrose Family (Onagraceae, 1 dependent bee species): *Lasioglossum oenotherae*, a small sweat bee, is dependent on evening primrose and other flowers in the genus *Oenothera*.

Primrose Family (Primulaceae, 3 dependent bee species): The exceptionally rare *Macropis* bees gather floral oils from yellow loosestrife flowers (genus *Lysimachia*). Because *Epeoloidea pilosula* is a cleptoparasite of *Macropis*, this species is also indirectly dependent on *Lysimachia*.

Rose Family (Rosaceae, 1 dependent bee species): The one dependent species is a miner bee, *Andrena melanochroa*.

Willow Family (Salicaceae, 2 dependent bee species): The miner bees *Andrena frigida* and *Andrena sigmundi* both seem to prefer willows (genus *Salix*) and are quite rare.

Purslane Family (Portulacaceae, 1 dependent bee species): The miner bee *Andrena erigeniae*, commonly known as the Spring Beauty Bee, was recently relocated by John Ascher, research scientist at the American Museum of Natural History, and colleagues on Staten Island.

Spring Beauty and Bee



Spring Beauty Bee (*Andrena erigenaea*) on Spring Beauty flower (*Claytonia virginica*). Photo by J. Ascher