

PLANT BY NUMBERS:

Bumble Bees

Plants, growing steps, and a sample design to support native bumble bees

Meet the Bumble Bees

← MORE COMMON



PHOTO: @ROXANIEBERGERON NAT

Common eastern bumble bee (*Bombus impatiens*) on goldenrod (*Solidago* sp.)



PHOTO: ERIN AVRAM

Brown-belted bumble bee (*Bombus griseocollis*) on mountainmint (*Pycnanthemum muticum*)



PHOTO: @ROAMINGTHEWOODS NAT

Two-spotted bumble bee (*Bombus bimaculatus*) on wild bergamot (*Monarda fistulosa*)



PHOTO: @STIRMARK NAT

Black and gold bumble bee (*Bombus auricomus*) on wild bergamot (*Monarda fistulosa*)

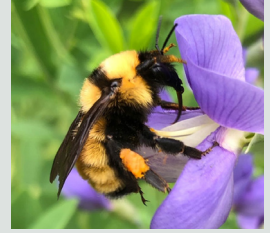


PHOTO: @JEANKLINS NAT

Golden northern bumble bee (*Bombus fervidus*) on blue wild indigo (*Baptisia australis*)

→ LESS COMMON

Bumble Bee Life Cycle

Bumble bees are social bees who live together in a colony that is active less than one year. Each colony is started anew in early spring by an overwintering queen, who lays eggs and raises female workers to increase the colony's size. These workers tend the nest and forage for pollen and nectar to feed young, developing bees. Toward the end of the colony cycle, the colony produces new queens and male drones to mate with virgin queens from other colonies. The founding queen and all workers and drones die. Mated queens overwinter underground to restart the cycle the following spring.

- Ohio is home to roughly a dozen species of bumble bees, about half of which are commonly observed in gardens and natural areas.
- In Ohio, the common eastern bumble bee (*Bombus impatiens*) can be observed in early spring as queens; in spring and summer as workers; and throughout fall as remaining workers, new queens, and male drones.
- Because they are active for many months of the year, bumble bees need to find plants with a progression of bloom to ensure

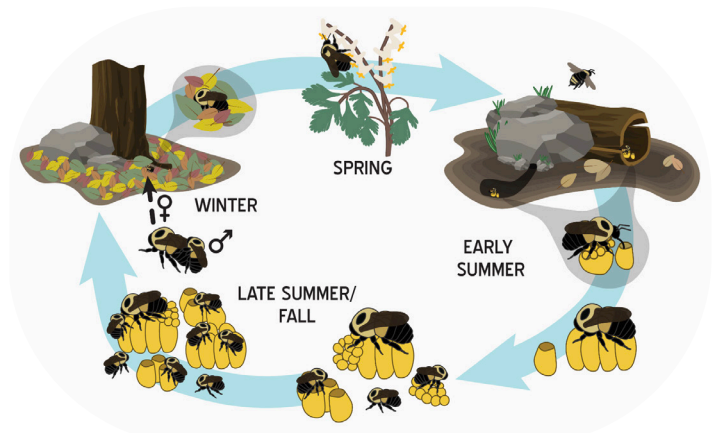


IMAGE: JEREMY HEMBERGER

they have enough pollen and nectar to rear young bees, and enough nectar to fuel adults in flight.

- Bumble bees are generalists, meaning workers visit many different species of plants to gather pollen and nectar, including herbs, garden flowers, weeds, and trees.
- The native plants in this Plant by Numbers theme are all bumble bee favorites. Female bumble bee workers may fly a mile or so from their underground nest to find these flowers in your garden.



Planting for Bumble Bees

Use this diagram to plant a small 6'x10' garden plot to attract an assortment of bumble bees to your Ohio garden, landscape, or nearby park.

These native, flowering perennials provide nectar and pollen, while bunch-type grasses (prairie dropseed or little bluestem) provide potential nesting habitat for bumble bees. The plant list offers a first and second plant option for each number, with the quantity of plants recommended in parenthesis. The first plant option is pictured in the design. Feel free to use either plant, or mix and match depending on availability and preference. Can't find a specific cultivar or don't want to plant cultivars? No problem: Use what's available locally or plant the "straight species" instead. For a larger space, include more plants, grouping the same species together. Starting with just a few plants is a fine option as well. The full design is presented here, but even a few plants will provide food for bumble bees.

1 square = 1 foot



PHOTO 1: D. ELLSWORTH | PHOTO 2: JOSHUA EASTLAKE | PHOTO 3: D. ELLSWORTH | PHOTO 4: @MOTTLED_SCULPIN | PHOTO 5: D. ELLSWORTH | PHOTO 6: EDWARD4 INAT | PHOTO 7: NEED NAME | PHOTO 8: EDWARD4 INAT | PHOTO 9: NEED NAME

Planting

- The planting site should be in full sun (6 or more hours per day) with good drainage.
- Prepare the site by completely smothering or removing all grass and weeds.
- For best results, consider adding 2 inches of compost or other organic soil amendment to the site before planting.
- Water plants after planting, then water as needed (possibly weekly) if the season is dry.
- These native perennials are relatively drought-tolerant once established.
- Mulch around newly planted perennials with straw, wood mulch, or newspaper to prevent weed growth.
- Some of the plants in this design can grow to 4 feet or taller. If planting along a walkway or sidewalk, consider softening the front edge by enlarging the plan to 8'x10', then plant the front 18 inches with native annuals such as zinnia, marigolds, or annual salvia.

Maintenance

- To prevent reseeding, cut off spent flowers, or leave seed heads as food for birds. Then, weed out or share extra seedlings.
- Cut back standing dead stalks in late winter to heights of between 12 and 18 inches. These standing stalks can provide nesting sites for other wild bees in spring and summer.
- Do not cut back "bunch grass" leaves from the prior season. This includes the prairie dropseed and little bluestem in this design. Queen bumble bees may nest at the base of these plants in spring.
- Reduce or eliminate the use of pesticides in the garden to protect bees and other pollinators. Consult your local Ohio State University Extension office for pollinator-friendly pest management strategies.
- Find your local Extension office:



Locate an Office | OSU Extension
extension.osu.edu

Native Plants for Bumble Bees

FIRST PLANT OPTION

SECOND PLANT OPTION

1

BUTTERFLY MILKWEED
Asclepias tuberosa
(4)



CULVER'S ROOT
Veronicastrum virginicum
(4)



D. ELLSWORTH

2

'Caspian Blue'
BLUE WILD INDIGO
Baptisia australis
(1)



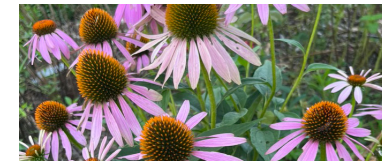
BLUE GIANT HYSSOP
Agastache foeniculum
(1)



D. ELLSWORTH

3

'Magnus'
PURPLE CONEFLOWER
Echinacea purpurea
(3)



SWAMP MILKWEED
Asclepias incarnata
(3)



D. ELLSWORTH

4

TALL BLAZING STAR
Liatris aspera
(6)



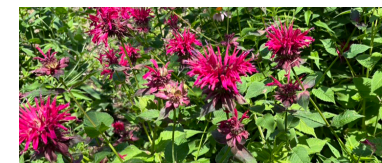
FOXGLOVE
BEARDTONGUE
Penstemon digitalis
(6)



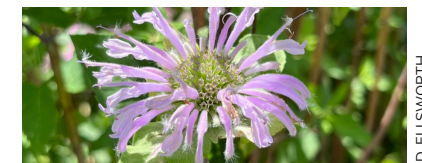
ELA119@INAT

5

'Raspberry Wine'
SCARLET BEEBALM
Monarda didyma
(3)



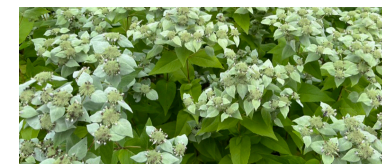
WILD BERGAMOT
Monarda fistulosa
(3)



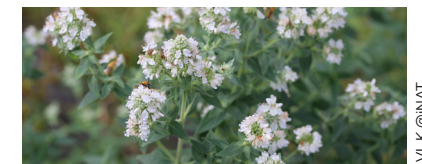
D. ELLSWORTH

6

CLUSTERED
MOUNTAINMINT
Pycnanthemum muticum
(3)



VIRGINIA
MOUNTAINMINT
Pycnanthemum virginianum
(3)



VLK@INAT

7

'Fireworks'
ROUGH GOLDENROD
Solidago rugosa
(3)



RIDDELL'S GOLDENROD
Oligoneuron riddellii
(3)



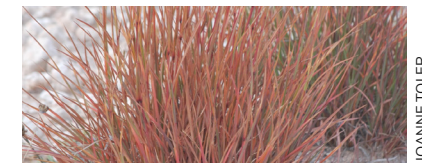
E. ARMITAGE

8

PRAIRIE DROPSEED
Sporobolus heterolepis
(6)



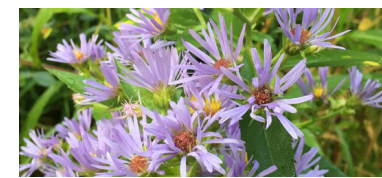
LITTLE BLUESTEM
Schizachyrium scoparium
(6)



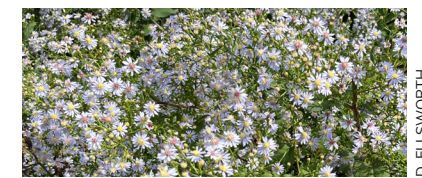
JOANNE TOLER

9

'Bluebird'
SMOOTH BLUE ASTER
Symphyotrichum laeve
(4)



COMMON BLUE
WOOD ASTER
Symphyotrichum cordifolium
(4)



D. ELLSWORTH

The number in parenthesis is the number of plants needed for the design.

Trees and Shrubs for Bumble Bees

Consider growing any of these native plants to invite even more bumble bees to the garden:

- Blueberry, *Vaccinium* spp.
- Cherry (native and introduced, edible and ornamental), *Prunus* spp.
- Eastern redbud, *Cercis canadensis*
- Rhododendron and azalea, *Rhododendron* spp.
- Willow, *Salix* spp.



HEATHER HOLM

Black and gold bumble bee on blueberry (*Vaccinium corymbosum*)



HEATHER HOLM

Two-spotted bumble bee on American plum (*Prunus americana*)



HEATHER HOLM

Two-spotted bumble bee on redbud (*Cercis canadensis*)



MACKENZIE YOUNGER

Bumble bee on early azalea (*Rhododendron prinophyllum*)



HEATHER HOLM

Two-spotted bumble bee on pussy willow (*Salix discolor*)

Finding Native Plants

Native plants are becoming easier to find and purchase at local nurseries and online. Check with both large and small nurseries as well as mail-order catalogs. To find native plant sales nearby, check with local or regional groups such as arboreta, botanical gardens, nature centers, zoos, county Soil and Water Conservation District offices, and local garden clubs and groups including Master Gardener Volunteers.

Ohio Nurseries Selling Native Plants

- Ohio Native Plant Month's website (ohionativeplantmonth.org/native-plant-sources)
- Lake Erie Allegheny Partnership's website (leapbio.github.io/nurseries)



For More Information

- *Bumble Bees in Ohio* (free PDF/fact sheet). OSU Extension.
- *Bumble Bees of the Eastern United States* (free PDF). Xerces Society for Invertebrate Conservation.
- *Bumble Bee Watch* (community science project/website). Xerces Society for Invertebrate Conservation.
- *Conserving Bumble Bees* (free PDF). Xerces Society for Invertebrate Conservation.



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