

PLANT BY NUMBERS:

Butterflies and Moths

Plants, growing steps, and a sample design to support native butterflies and moths, and the birds that eat them

Meet the Butterflies and Moths

Here are a few of the butterflies and moths (and their caterpillars) supported by this theme, along with the associated host plant.



PHOTO: ALEXANDER FOX

Giant leopard moth
(*Hypercompe scribonia*)

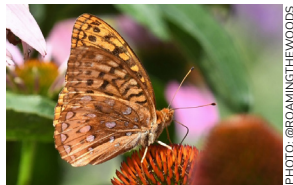


PHOTO: @ROAMINGTHEWOODS

Great spangled fritillary
(*Speyeria cybele*)



PHOTO: @RON GOETZ

Monarch
(*Danaus plexippus*)



PHOTO: JULIE ZKEFOOSE

Giant leopard moth caterpillar



PHOTO: SUSYNDER

Great spangled fritillary
caterpillar



PHOTO: @MICHAEL BUTLER

Monarch caterpillar



PHOTO: DEBRA KNAPKE

Host plant: perennial sunflower
(*Helianthus* spp.)



PHOTO: IVAN NEVRKOVETS

Host plant: prairie violet
(*Viola pedatifida*)



PHOTO: D ELLSWORTH

Host plant: swamp milkweed
(*Asclepias incarnata*)

- More than 140 species of butterflies and over 2,000 species of moths have been observed in Ohio.
- Most adult butterflies and some moths visit flowers for nectar. These carbohydrate-rich foods provide fuel for flight and other adult activity.
- Adult female butterflies and moths will seek out specific plants to lay their eggs. These “host plants” provide food for developing caterpillars.
- Native plants serve as host plants for many species of caterpillars. Most often, these caterpillars feed unnoticed on plants.

Caterpillars and adult butterflies and moths provide an essential role in the ecosystem as food for birds. Many bird species collect caterpillars and other insects as food for developing chicks.

Here are a few of the many Ohio-nesting birds that depend on caterpillars to feed their young:

Black-capped
Chickadee

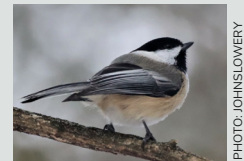


PHOTO: JOHN SLOWERY

Northern Cardinal



PHOTO: ED HASS

Red-eyed Vireo



PHOTO: DASWAMP

Wood thrush



PHOTO: CHERI PHILLIPS



Planting for Butterflies and Moths

Use this diagram to plant a small 6'x10' garden plot to support butterflies and moths in your Ohio garden, landscape, or nearby park.

The plants in this design are caterpillar host plants, nectar sources for adults, or both. 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 habitat for butterflies and moths.

1 square = 1 foot



PHOTO 1: D. ELLSWORTH | PHOTO 2: ERIK DANIELSEN | PHOTO 3: DEBRA KNAPKE | PHOTO 4: BOB HIGHCOCK | PHOTO 5-6: D. ELLSWORTH | PHOTO 7: DAVID STANG | PHOTO 8: IVAN NEVIRKOVETS | PHOTO 9: D. ELLSWORTH

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

- Be on the lookout for caterpillar activity, and learn to tolerate leaf feeding to support these important creatures.
- 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 wild bees in spring and summer.
- To attract even more butterflies and moths to the garden, consider providing water, sandy areas for puddling, and even a feeder for rotting fruit.
- Reduce or eliminate the use of pesticides in the garden to protect all butterfly and moth life stages as well as other pollinators. Consult your local Ohio State University Extension office for pollinator-friendly pest management strategies:



Native Plants for Butterflies and Moths

FIRST PLANT OPTION

SECOND PLANT OPTION

1

SWAMP MILKWEED
Asclepias incarnata
(6)

12 species



OHIO SPIDERWORT
Tradescantia ohioensis
(6)

3 species



D. ELLSWORTH

2

APPALACHIAN SEDGE
Carex appalachica
(4)

Multiple species



PRAIRIE DROPSEED
Sporobolus heterolepis
(4)

1 species

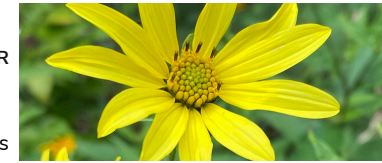


IVAN NEVIRKOVETS

3

'Lemon Queen'
PERENNIAL SUNFLOWER
Helianthus
(2)

66 species



BLUE WILD INDIGO
Baptisia australis
(2)

17 species



JOSHUA EASTLAKE

4

HAIRY BEARDTONGUE
Penstemon hirsutus
(4)

10 species



TALL BLAZING STAR
Liatris aspera
(4)

5 species

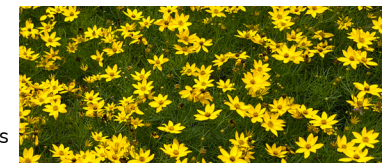


SCULPIN INAT

5

LANCELEAF TICKSEED
Coreopsis verticillata
(3)

7 species



BROWNEYED SUSAN
Rudbeckia triloba
(3)

23 species

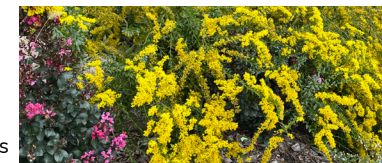


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6

'Solar Cascade'
SHORT'S GOLDENROD
Solidago shortii
(3)

104 species



AMERICAN SENNA
Senna hebecarpa
(3)

5 species

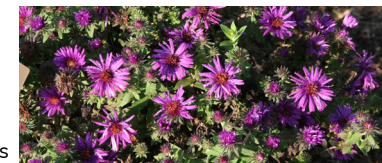


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7

'Purple Dome'
NEW ENGLAND ASTER
Symphotrichum novae-angliae
(3)

100 species



COMMON BONESET
Eupatorium perfoliatum
(3)

32 species



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8

PRAIRIE VIOLET
Viola pedatifida
(5)

29 species



ALLEGHENY MONKEYFLOWER
Mimulus ringens
(5)

5 species

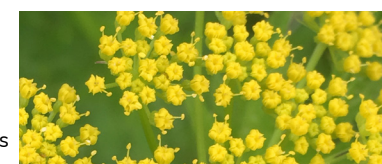


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9

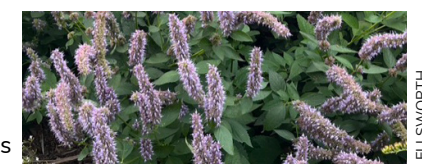
GOLDEN ZIZIA
Zizia aurea
(3)

1 species



BLUE GIANT HYSSOP
Agastache foeniculum
(3)

3 species



D. ELLSWORTH

The number in parenthesis is the number of plants needed for the design. = number of butterfly and moth species this host plant supports by providing food for caterpillars.

Source: *Garden for Wildlife* by National Wildlife Federation, *Keystone Native Plants*. Planting the full "First Plant Option" design provides habitat for about 330 butterfly and moth species. Planting the full "Second Plant Option" design provides habitat for about 94 butterfly and moth species.

Trees and Shrubs for Butterflies and Moths

Consider growing any of these native plants to invite even more birds, butterflies, and moths to the garden:

- Apple (*Malus* spp.) 🦋 237 species
- Birch (*Betula* spp.) 🦋 284 species
- Blueberry (*Vaccinium* spp.) 🦋 217 species
- Cherry (*Prunus* spp.) 🦋 340 species
- Maple (*Acer* spp.) 🦋 238 species
- Oak (*Quercus* spp.) 🦋 436 species
- Poplar (*Populus* spp.) 🦋 249 species
- Willow (*Salix* spp.) 🦋 289 species

Source: *Garden for Wildlife* by National Wildlife Federation, *Keystone Native Plants*.



BILL STITT

Spring azure and over 300 other butterfly and moth species use black cherry (*Prunus serotina*) as a caterpillar host plant.

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

- Backyards for Butterflies* (free PDF). Ohio Department of Natural Resources.
- Garden for Wildlife* by National Wildlife Federation, *Keystone Native Plants* (free PDF), including number of caterpillar species using each plant as host.
- Native Plant Finder* (website). National Wildlife Federation.



Plant by Numbers is funded by USDA NIFA 20217000635562.

Garden design created by Debra Knapke.

The authors wish to acknowledge the city of Lexington, Kentucky, for their inspiring Plant by Numbers program.

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