

Plant by Numbers

Plants, growing steps, and sample designs to support Hummers & Singers (for the Birds!) and Good Garden Bugs

Planting for Hummingbirds and Songbirds



1. GRANT MCKERCHER | 2. JOSHUA EASTLAKE | 3. D. ELLSWORTH | 4. MIA YAEGER | 5. D. ELLSWORTH | 6. RAY STEWART | 7. ELA119 NAT | 8. ASHER GORBIT | 9. USA BENJAMIN | 10. R. BAUMBACH | 11. JOANN TOLER | 12. LAM EHRMAN | 13. JACK VERDIN | 14. EDWDD4@NAT | 15. CANADIANNIPS NAT | 16. @HESR66

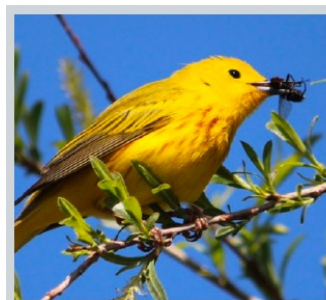


PHOTO: KATE ESTROP

Yellow warbler (*Setophaga petechia*) with insect prey

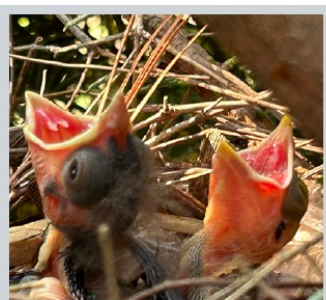


PHOTO: DOUG BERUBE

Northern cardinal chicks (*Cardinalis cardinalis*) waiting for a meal

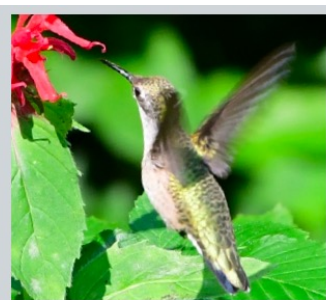


PHOTO: DOUG BERUBE

Ruby-throated hummingbird (*Archilochus colubris*) gathering nectar from scarlet beebalm (*Monarda didyma*)

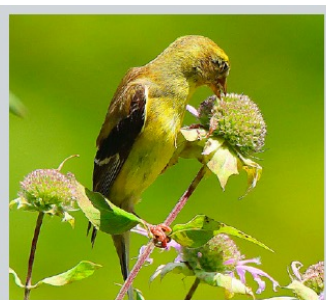


PHOTO: JOE MACHINSEWAR

American goldfinch (*Spinus tristis*) collecting seed of wild bergamot (*Monarda fistulosa*)

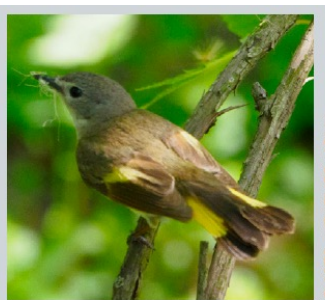


PHOTO: HEATHER HOLM

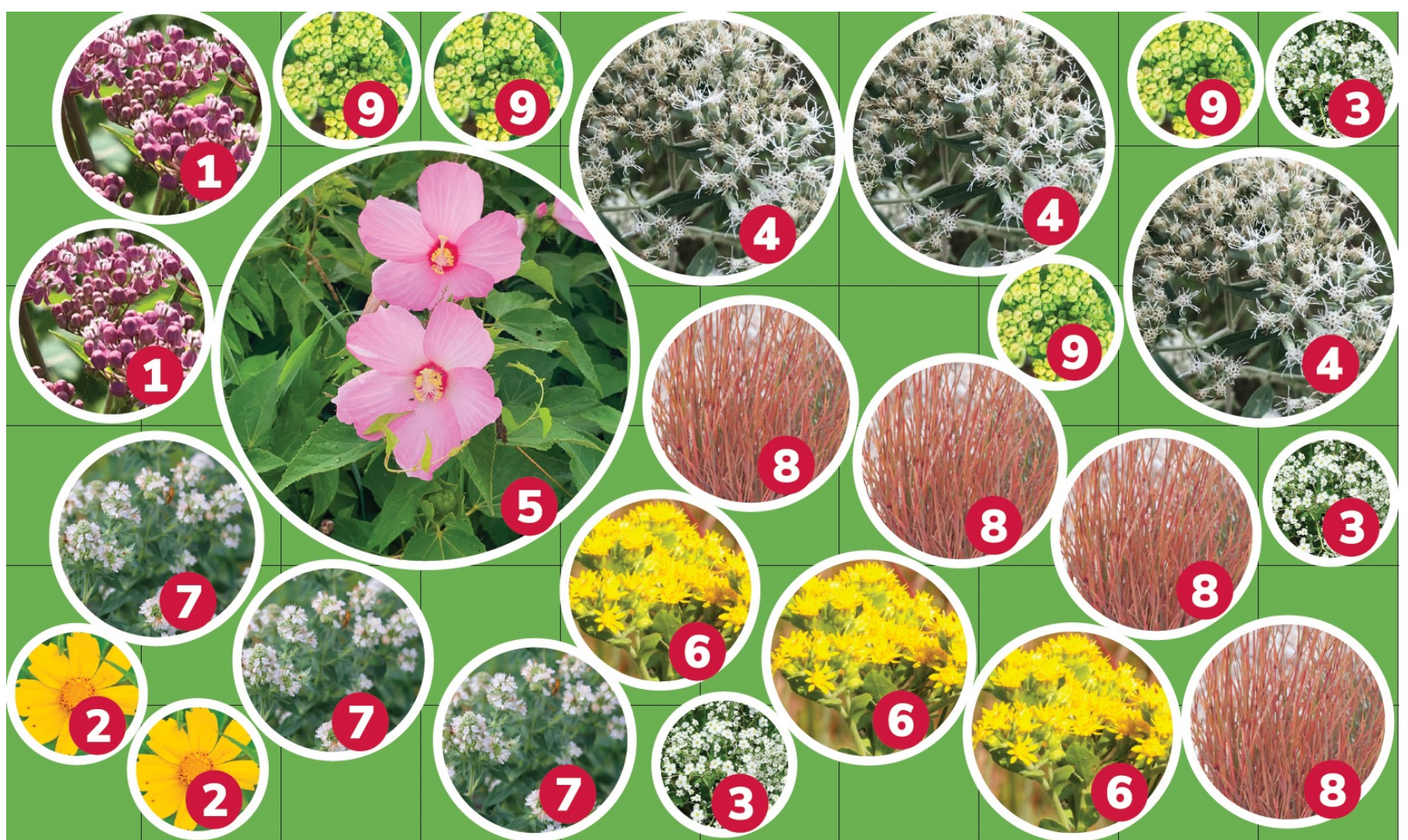
Redstart (*Setophaga ruticilla*) gathering plant fibers to use as nesting material

NATIVE PLANTS FOR HUMMINGBIRDS AND SONGBIRDS

1 RED COLUMBINE <i>Aquilegia canadensis</i> (2)	9 PINNATE PRAIRIE CONEFLOWER <i>Ratibida pinnata</i> (1)
2 BLUE WILD INDIGO <i>Baptisia australis</i> (1)	10 SWEET CONEFLOWER <i>Rudbeckia subtomentosa</i> (1)
3 PURPLE CONEFLOWER <i>Echinacea purpurea</i> (1)	11 LITTLE BLUESTEM <i>Schizachyrium scoparium</i> (4)
4 DENSE BLAZING STAR <i>Liatris spicata</i> (2)	12 CUP PLANT <i>Silphium perfoliatum</i> (1)
5 WILD BERGAMOT <i>Monarda fistulosa</i> (2)	13 INDIANGRASS <i>Sorghastrum nutans</i> (4)
6 STIFF GOLDENROD <i>Oligoneuron rigida</i> (1)	14 PRAIRIE DROPSEED <i>Sporobolus heterolepis</i> (4)
7 FOXGLOVE BEARDTONGUE <i>Penstemon digitalis</i> (3)	15 SMOOTH BLUE ASTER <i>Symphyotrichum laeve</i> (2)
8 DOWNY PHLOX <i>Phlox pilosa</i> (2)	16 NEW ENGLAND ASTER <i>Symphyotrichum novae-angliae</i> (1)

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

Planting for Good Garden Bugs



1. DEB ELLSWORTH | 2. SUSAN KAMPS | 3. @KITTYLEE | 4. DELLSWORTH | 5. @BGRNENWALI@NAT | 6. RAY STEWART | 7. V.L.K@NAT | 8. JOANNE TOLER | 9. @ERIC REINER | 10. @BGRNENWALI@NAT | 11. @BGRNENWALI@NAT | 12. @BGRNENWALI@NAT | 13. @BGRNENWALI@NAT | 14. @BGRNENWALI@NAT | 15. @BGRNENWALI@NAT | 16. @BGRNENWALI@NAT

Beetles (Coleoptera)



PHOTO: JAY HESER

Hover flies (family Syrphidae)



PHOTO: JOSHUA EASTLAKE

Lacewings (Neuroptera)



PHOTO: GWYNETHAM

Spiders (Araneae)



PHOTO: BECK NISCHL

True bug predators (Hemiptera)



PHOTO: SONGGARDEN28

Wasps (Hymenoptera)



PHOTO: DILLONMR

NATIVE PLANTS FOR GOOD GARDEN BUGS

FIRST PLANT OPTION	SECOND PLANT OPTION
1 SWAMP MILKWEED <i>Asclepias incarnata</i> (2)	1 PRAIRIE MILKWEED <i>Asclepias sullivantii</i> (2)
2 LANCELEAF TICKSEED <i>Coreopsis lanceolata</i> (2)	2 HAIRY BEARDTONGUE <i>Penstemon hirsutus</i> (2)
3 FLOWERING SPURGE* <i>Euphorbia corollata</i> (3)	3 CANADIAN ANEMONE <i>Anemone canadensis</i> (3)
4 COMMON BONESET* <i>Eupatorium perfoliatum</i> (3)	4 CULVER'S ROOT <i>Veronicastrum virginicum</i> (3)
5 CRIMSONEYED ROSEMAALLOW* <i>Hibiscus moscheutos</i> (1)	5 AMERICAN SENNA* <i>Senna hebecarpa</i> (1)
6 STIFF GOLDENROD <i>Oligoneuron rigidum</i> (3)	6 SHOWY GOLDENROD <i>Solidago speciosa</i> (3)
7 VIRGINIA MOUNTAINMINT <i>Pycnanthemum virginianum</i> (3)	7 RATTLESNAKE MASTER <i>Eryngium yuccifolium</i> (3)
8 LITTLE BLUESTEM <i>Schizachyrium scoparium</i> (4)	8 PRAIRIE DROPSEED* <i>Sporobolus heterolepis</i> (4)
9 MEADOW ZIZIA <i>Zizia aptera</i> (4)	9 GOLDEN ZIZIA <i>Zizia aurea</i> (4)

The number in parenthesis is the number of plants needed for the design. * = plants with extrafloral nectaries



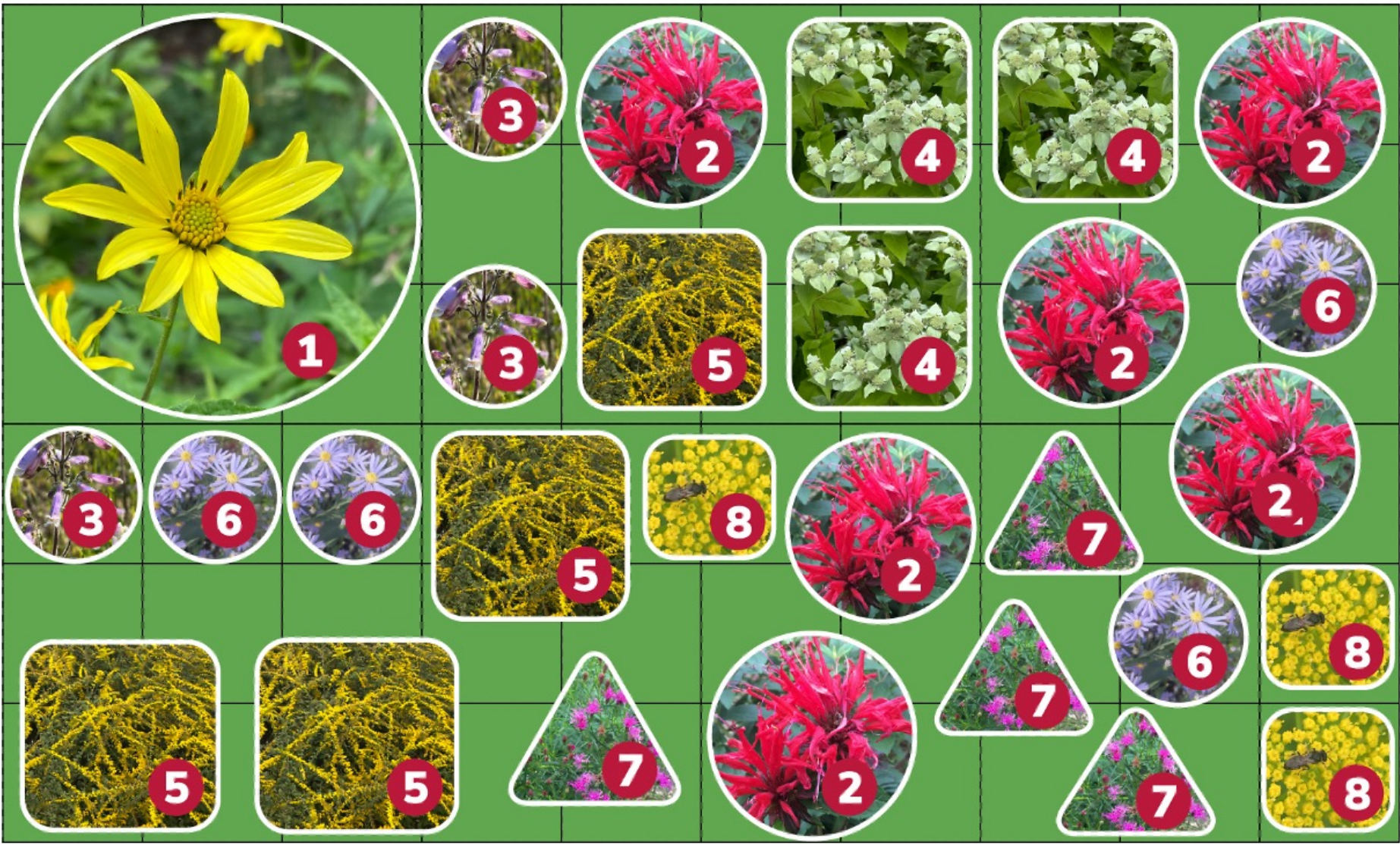
THE OHIO STATE UNIVERSITY
EXTENSION



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Learn more at: <http://u.osu.edu/plantbynumbers>

Planting for Specialist Bees




Native Perennials for Specialist Bees


1 'Lemon Queen' PERENNIAL SUNFLOWER *Helianthus* (1)




2 'Jacob Cline' SCARLET BEEBALM *Monarda didyma* (6)




3 HAIRY BEARDTONGUE *Penstemon hirsutus* (3)




4 CLUSTERED MOUNTAINMINT *Pycnanthemum muticum* (3)




5 'Fireworks' ROUGH GOLDENROD *Solidago rugosa* (4)




6 SMOOTH BLUE ASTER *Symphyotrichum laeve* (4)



7 'Iron Butterfly' NARROWLEAF IRONWEED *Vernonia lettermannii* (4)



8 GOLDEN ZIZIA *Zizia aurea* (3)



Trees and Shrubs for Specialist Bees

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

- Blueberry, *Vaccinium* spp.
- Dogwood trees or shrubs, *Cornus* spp.
- Willow trees or shrubs, *Salix* spp.



Blueberry flowers




Native dogwood in bloom




Willow flower with mining bee

Native Perennials for Bumble Bees


1 BUTTERFLY MILKWEED *Asclepias tuberosa* (4)




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




3 'Magnus' PURPLE CONEFLOWER *Echinacea purpurea* (3)




4 TALL BLAZING STAR *Liatris aspera* (6)



5 'Raspberry Wine' SCARLET BEEBALM *Monarda didyma* (3)




6 CLUSTERED MOUNTAINMINT *Pycnanthemum muticum* (3)



7 'Fireworks' ROUGH GOLDENROD *Solidago rugosa* (3)



8 PRAIRIE DROPS EED *Sporobolus heterolepis* (6)




9 'Bluebird' SMOOTH BLUE ASTER *Symphyotrichum laeve* (4)




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.




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




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



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



Bumble bee on early azalea (*Rhododendron prinophyllum*)




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

Planting for Bumble Bees




Native Perennials for Butterflies & Moths

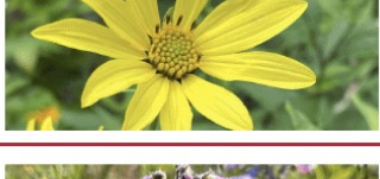
1 SWAMP MILKWEED *Asclepias incarnata* (6) 12 species




2 APPALACHIAN SEDGE *Carex appalachica* (4) Multiple species




3 'Lemon Queen' PERENNIAL SUNFLOWER *Helianthus* (2) 66 species




4 HAIRY BEARDTONGUE *Penstemon hirsutus* (4) 10 species




5 LANCELEAF TICKSEED *Coreopsis verticillata* (3) 7 species




6 'Solar Cascade' SHORT'S GOLDENROD *Solidago shortii* (3) 104 species




7 'Purple Dome' NEW ENGLAND ASTER *Symphyotrichum novae-angliae* (3) 100 species



8 PRAIRIE VIOLET *Viola pedatifida* (5) 29 species



9 GOLDEN ZIZIA *Zizia aurea* (3) 1 species



Trees and Shrubs for Butterflies and Moths

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

Planting for Butterflies and Moths

