



What is a “Pollinator Garden”?

A pollinator garden is a garden where the majority of the plants have been selected for their ability to support our local pollinators. Either the flowers provide nectar and/or pollen for various pollinators, and/or the plants themselves provide a suitable place for pollinators to lay their eggs.



Who are “Pollinators”

Pollinators commonly include bees, butterflies, moths, flies, wasps and beetles. A few birds, reptiles and mammals may also be pollinators.

What do “Pollinators” need from a Pollinator Garden?

Different pollinators need different things at different stages of their development.

Pollen

Pollination is an essential part of plant reproduction. Plants need to move pollen from the male to the female flower in order to reproduce and create seeds. Many flowers have evolved to trick pollinators into moving the pollen for them by offering them a small amount of nectar, other flowers use wind for this purpose.

Most pollinators have no need for pollen and move it around accidentally when they are visiting multiple flowers collecting nectar. Bees, however, intentionally collect both nectar and pollen to feed their young, but they accidentally move additional pollen between flowers in the process.



Nectar

Plants have evolved to produce nectar as a means of attracting and rewarding pollinators for visiting their flowers. Nearly all pollinators drink nectar and for most it is their primary food source.

Host Plant

A host plant is a specific species, or family, of plants that a pollinator (usually a butterfly, moth or beetle) needs on which to lay its eggs. Many pollinators will only lay their eggs on a very small selection of plants and the caterpillars can only eat the leaves of those specific plants.

Don’t all flowers support our local pollinators?

No!

Many flowers have been cultivated by plant lovers and/or the nursery industry to be increasingly attractive to people and in doing so no longer provide the food (nectar and/or pollen) or host plant features necessary to support the pollinators that they originally evolved to support.

Flowers evolve with their local pollinators to have special shapes and colors that attract pollinators with specific characteristics. Some flowers have long tubes that only pollinators with long tongues can access, others have very open exposed nectaries that attract a different type of pollinator. If you watch flowers you will notice that different flowers seem to attract a different assortment of pollinators. Some flowers attract lots, some don’t seem to attract many at all. Flowers that don’t attract many pollinators may be a cultivar that has been altered by people and no longer has features that attract pollinators, doesn’t provide much accessible nectar or pollen, or they may not be attractive to many of our native pollinators because they evolved in a different part of the world with a different set of pollinators.

Examples of cultivated flowers that do not support many pollinators:

Flowers that have been bred to have many petals and in which you cannot see the flower's yellow center where the pollen and nectar are located usually do not provide a good food source for pollinators. This would include many densely petaled varieties of marigolds, zinnia, roses, dahlia, echinacea, and many other flowers with an unusually large number of petals. Some varieties of these same plants have a smaller number of petals and you can still see the yellow center, in these flowers the pollinators can usually still access the nectar and pollen.

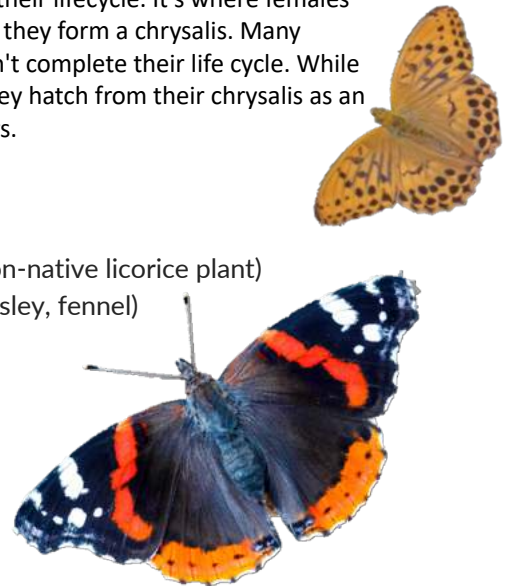
Many of the mophead hydrangea provide little or no support for pollinators. The petals that make up the mophead are decorative and do not provide nectar or pollen. The tiny balls that form the center of lacecap and some panicle hydrangea are true flowers and usually do provide some nectar and pollen.

What is a "Host" plant and why are they important?

Host plants are vital for most butterflies and some other pollinators to complete their lifecycle. It's where females lay their eggs and where larvae (caterpillar) hatch, feed, and spend their life until they form a chrysalis. Many species of butterflies only have one species of host plant, and without it, they can't complete their life cycle. While caterpillars frequently can only survive on one or a few species of plants, once they hatch from their chrysalis as an adult pollinator they can drink nectar from many different species of plant flowers.

Examples of host plants that our native butterflies require to lay their eggs:

- **American Painted Lady:** pussytoes, pearly everlasting (and non-native licorice plant)
- **Black Swallowtail:** golden alexanders (and non-native dill, parsley, fennel)
- **Eastern Tiger Swallowtail:** wild cherry, wild plum
- **Mourning Cloak:** pussy willow
- **Red Admiral, Question Mark:** nettles
- **Fritillaries:** violets
- **Skippers:** little bluestem and other native grasses
- **Monarch:** milkweed



* The very common Cabbage White Butterfly, a small white butterfly with a dark spot on its upper wing, primarily uses plants in the Brassicaceae (broccoli) family as a host plant. Neither butterfly nor plant are native to the US.

Why do so many people recommend "Native Plants" for a pollinator garden?

Plants that are native to our region and our native pollinators have evolved together over thousands of years and have adapted to each other and our local soil, climate and growing seasons. Many native pollinators require a native host plant to complete their lifecycle. Non-native plants from other parts of the world have not evolved to be attractive to or have a working relationship with our local pollinators. Even some native plant 'cultivars' have had significant changes made to the flower structure (color, number of petals, etc.) or the plant leaves that make them no longer attractive to the native insects they originally evolved to support.

A Word about Bees



You may be surprised to learn that there are over 4,000 species of native bees in the US, 380 of them call Massachusetts home. The bees most people notice on flowers in a pollinator garden are **bumble bees** and **honey bees**. There are 11 native bumble bee species in Massachusetts, but you mostly see just two or three. Honey bees are not native to the US, they were brought over from Europe 400 years ago to provide a source of sweetener for the colonists. Though cultivated by beekeepers for pollinating flowers on farms, honey bees provide little or no additional benefit to local gardens where they may compete with our native pollinators for nectar and pollen.

Newton Conservators - Pollinator Toolkit

Newton Conservators - Pollinator Toolkit								
https://newtonconservators.org/pollinator-toolkit/								
Pollinator-Friendly Perennials for Mostly Sunny Gardens								
Latin Name	Common Name	Height	Bloom / Fruit	Bees	Butterflies	Humming bi	Moths/Other	Soil Type
<i>Amsonia tabernaemontana</i>	Willow leaf bluestar	2-3'	Late spring	✓		✓		Avg
<i>Aquilegia canadensis</i>	Red columbine	8-24"	Late spring	✓	✓	✓		Dry/Avg
<i>Geranium maculatum</i>	Spotted cranesbill	12-18"	Late spring	✓	✓	✓	✓	Avg/Wet
<i>Penstemon digitalis</i>	Foxglove beardtongue	1-3'	Late spring	✓	✓	✓	✓	Dry/Avg
<i>Asclepias tuberosa</i>	Butterfly milkweed	2-3'	Summer	✓	✓	✓	✓	Dry/Avg
<i>Asclepias incarnata</i>	Swamp milkweed	3-5'	Summer	✓	✓		✓	Avg/Wet
<i>Asclepias syriaca</i>	Common milkweed	4-6'	Summer	✓	✓		✓	Dry/Avg
<i>Pycnathemum muticum</i>	Mountain mint	2-3'	Late summer	✓	✓	✓	✓	All
<i>Veronicastrum virginicum</i>	Culver's root	3-6'	Late summer	✓	✓		✓	Avg/Wet
<i>Liatris spicata</i>	Blazing star	2-3'	Summer-Fall	✓	✓			Avg
<i>Eutrochium maculatum</i>	Spotted Joe-Pye weed	4-6'	Summer-Fall		✓		✓	Avg/Wet
<i>Monarda didyma</i>	Bee balm	2-3'	Summer-Fall	✓	✓	✓	✓	Avg
<i>Vernonia noveboracensis</i>	New York ironweed	2-4'	Summer-Fall	✓	✓			Avg/Wet
<i>Solidago bicolor</i>	White goldenrod	1-3'	Late summer-Fall	✓	✓			Avg/Wet
<i>Symphotrichum novae-angliae</i>	New England aster	12-30"	Late summer-Fall	✓	✓	✓	✓	Avg/Wet
Pollinator-Friendly Perennials for Part Sun/Part Shade Gardens								
Latin Name	Common Name	Height	Bloom / Fruit	Bees	Butterflies	Humming bi	Moths/Other	Soil Type
<i>Viola pedata</i> or <i>sororia</i>	Bird's foot or common violet	4-8"	Spring	✓			✓	Dry
<i>Fragaria virginiana</i>	Wild strawberry	2-5"	Spring	✓	✓		✓	Dry/Avg
<i>Polygonatum pubescens</i>	Downy solomon's seal	8-16"	Spring	✓			✓	Avg
<i>Zizia aptera</i>	Heartleaf alexander	1-2'	Late spring	✓	✓		✓	Avg
<i>Penstemon hirsutus</i>	Hairy beardtongue	12-18"	Late spring	✓	✓	✓	✓	All
<i>Baptisia tinctoria</i>	Yellow wild indigo	3-4'	Early summer	✓	✓			Dry/Avg
<i>Spiraea tomentosa</i>	Rosy meadowsweet	2-5'	Summer	✓	✓		✓	Avg/Wet
<i>Verbena hastata</i>	Blue vervain	2-4'	Summer	✓			✓	Avg/Wet
<i>Solidago flexicaulis</i>	Zigzag goldenrod	2-3'	Summer-Fall	✓	✓	✓	✓	Dry/Avg
<i>Rudbeckia laciniata</i>	Cutleaf coneflower	3-4'	Summer-Fall	✓	✓			Avg/Wet
<i>Agastache foeniculum</i>	Anise hyssop	3-5'	Summer-Fall	✓	✓			Dry/Avg
<i>Lobelia cardinalis</i>	Cardinal flower	2-3'	Mid-summer-Early fall	✓	✓	✓	✓	Wet
<i>Monarda fistulosa</i>	Wild bergamot	24-42"	Late summer	✓	✓	✓		Avg
<i>Chelone glabra</i>	White turtlehead	18-30"	Late summer-Fall	✓		✓		Wet
<i>Symphotrichum cordifolium</i>	Blue wood aster	2-3'	Late summer-Fall	✓	✓	✓	✓	Dry/Avg

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Pollinator-Friendly Perennials for Mostly Shady Gardens								
Latin Name	Common Name	Height	Bloom / Fruit	Bees	Butterflies	Humming bi	Moths/Other	Soil Type
<i>Erythronium americanum</i>	American trout lily	4-6"	Early spring	✓				Avg/Wet
<i>Aruncus dioicus</i>	Goatsbeard	3-6'	Spring	✓	✓			Avg/Wet
<i>Caltha palustris</i>	Marsh marigold	12-18"	Spring	✓				Avg/Wet
<i>Carex pensylvanica</i>	Pennsylvania sedge	6-8"	Spring		✓		✓	Dry/Avg
<i>Maianthemum racemosum</i>	False solomon's seal	1-3'	Spring	✓			✓	Avg
<i>Tiarella cordifolia</i>	Running foam flower	3-12"	Spring	✓			✓	Avg
<i>Actaea rubra</i>	Red baneberry	2-3'	Late spring	✓			✓	Avg/Wet
<i>Phlox divaricata</i>	Woodland phlox	10-14"	Spring-Summer	✓	✓		✓	Avg
<i>Heuchera americana</i>	Common alum-root	12-24"	Spring-Summer	✓			✓	Dry/Avg
<i>Gillenia trifoliata</i>	Bowman's root	2-3'	Summer	✓	✓		✓	Dry/Avg
<i>Anemone virginiana</i>	Tall thimbleweed	12-30"	Summer				✓	Dry/Avg
<i>Actaea racemosa</i>	Black cohosh	3-6'	Summer	✓			✓	Dry/Avg
<i>Tradescantia ohiensis</i>	Ohio spiderwort	18-36"	Summer	✓			✓	Dry/Avg
<i>Solidago caesia</i>	Axillary goldenrod	18-30"	Late summer-Early fall	✓	✓	✓	✓	Dry/Avg
<i>Eurybia divaricata</i>	White wood aster	12-24"	Late summer-Fall	✓	✓		✓	Dry/Avg
Pollinator-Friendly Shrubs								
Latin Name	Common Name	Height	Bloom / Fruit	Bees	Butterflies	Humming bi	Moths/Other	Soil Type
Mostly Sunny Gardens								
<i>Salix discolor</i>	Pussy willow	6-15'	Spring	✓				Avg/Wet
<i>Morella caroliniensis</i>	Small bayberry	2-6'	Spring/Summer	✓			✓	Dry/Avg
<i>Swida sericea</i>	Red-twig dogwood	4-6'	Spring/Fall	✓	✓		✓	Avg/Wet
<i>Hypericum kalmianum</i>	St. John's wort	2-3'	Summer	✓				Dry/Avg
<i>Rosa virginiana</i>	Virginia rose	2-4'	Summer/Fall	✓	✓		✓	Dry/Avg
<i>Aronia arbutifolia</i>	Red chokeberry	5-10'	Spring/Summer/Fall	✓				All
<i>Vaccinium angustifolium</i>	Lowbush blueberry	1-2'	Spring/Summer	✓			✓	Dry/Avg
Part Sun/Part Shade Gardens								
<i>Lindera benzoin</i>	Northern spicebush	6-12'	Spring/Summer/Fall	✓			✓	Avg/Wet
<i>Ilex verticillata</i>	Common winterberry	4-8'	Spring/Fall	✓			✓	Avg/Wet
<i>Ceanothus americanus</i>	New Jersey Tea	2-3'	Summer	✓	✓			Dry
<i>Clethra alnifolia</i>	Summersweet	4-8'	Summer	✓	✓			Avg/Wet
Mostly Shady Gardens								
<i>Viburnum opulus</i>	Highbush cranberry	5-12'	Spring/Summer/Fall	✓	✓		✓	Avg/Wet
<i>Cephalanthus occidentalis</i>	Buttonbush	3-8'	Summer	✓	✓		✓	Wet
<i>Diervilla lonicera</i>	Northern bush honeysuckle	2-4'	Summer/Fall	✓	✓	✓		Dry/Avg
<i>Kalmia latifolia</i>	Mountain laurel	4-10'	Summer	✓			✓	Avg/Wet

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Pollinator-Friendly Vines								
Latin Name	Common Name	Height	Bloom / Fruit	Bees	Butterflies	Humming bi	Moths/Other	Soil Type
Mostly Sunny Gardens								
Lonicera sempervirens	Alabama crimson trumpet hor	3-15'	Spring/Summer	✓	✓	✓	✓	Avg
Mostly Sunny/Part Shade Gardens								
Vitis labrusca	Fox grape	4-40'	Spring/Summer	✓			✓	Avg
Clematis virginiana	Virgin's bower	3-8'	Summer	✓	✓			Avg/Wet
Mostly Sunny/Part Shade/Shade Gardens								
Isotrema macrophyllum	Dutchman's pipe	5-25'	Spring		✓		✓	Avg
Parthenocissus quinquefolia	Virginia creeper	4-40'	Spring/Summer/Fall	✓				Dry/Avg
Pollinator-Friendly Trees								
Latin Name	Common Name	Height	Bloom / Fruit	Bees	Butterflies	Humming bi	Moths/Other	Soil Type
Mostly Sunny/Part Shade Gardens								
Amelanchier canadensis	Canada serviceberry	10-18'	Early spring –	✓	✓	✓	✓	All
			Summer fruit					
Benthamidia florida	Flowering dogwood	12-20'	Spring –	✓	✓		✓	Avg
			Summer fruit					
Prunus serotina	Black cherry	30-60'	Spring –	✓	✓			Avg
			Summer fruit					
Cercis canadensis	Redbud	12-25'	Spring – good understory	✓	✓	✓	✓	Avg/Wet
Ostrya virginiana	Ironwood, Hop hornbeam	20-30'	Spring – good understory		✓		✓	Avg/Dry
Betula papyrifera	Paper birch	25-45'	Super host		✓		✓	Dry/Avg
Quercus bicolor	Swamp white oak	60-80'	Super host	✓	✓		✓	Wet/Avg

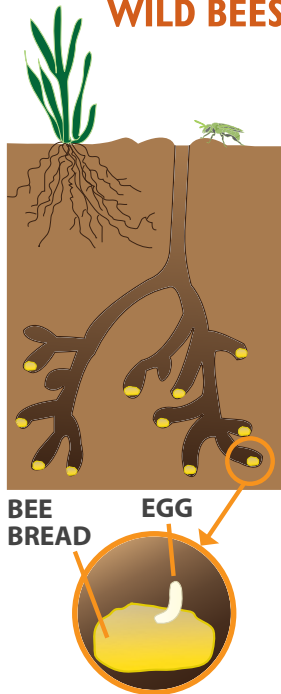
<i>Pedicularis canadensis</i>	Wood betony	Herb. perenn.	Full-Part	Wet, Med, Dry															
<i>Penstemon digitalis</i>	Foxglove beardtongue	Herb. perenn.	Full-Part	Wet, Med, Dry															
<i>Penstemon hirsutus</i>	Northeastern beardtongue	Herb. perenn.	Full-Shade	Wet, Med, Dry															
<i>Pontederia cordata</i>	Pickernelweed	Herb. perenn.	Full-Part	Aquatic															
<i>Physostegia virginiana</i>	Obedient plant	Herb. perenn.	Full-Part	Wet, Med															
<i>Prunella vulgaris</i>	Common selfheal	Herb. perenn.	Full-Part	Med															
<i>Scutellaria galericulata</i>	Hooded skullcap	Herb. perenn.	Full-Part	Wet, Med															
<i>Scutellaria lateriflora</i>	Mad dog skullcap	Herb. perenn.	Full-Part	Wet, Med															
<i>Stachys pilosa</i>	Hairy hedge-nettle	Herb. perenn.	Full-Part	Med															
<i>Vaccinium angustifolium</i>	Lowbush blueberry	Shrub	Full-Part	Med, Dry															
<i>Vaccinium corymbosum</i>	Highbush blueberry	Shrub	Full-Shade	Wet, Med, Dry															
<i>Vaccinium fuscatum</i>	Black highbush blueberry	Shrub	Full-Part	Med, wet															
<i>Vaccinium myrtilloides</i>	Velvet-leaved blueberry	Shrub	Full-Shade	Med															
<i>Vaccinium oxycoccos</i>	Small cranberry	Shrub	Full-Shade	Med, wet															
<i>Vaccinium pallidum</i>	Hillside blueberry	shrub	Full-Shade	Wet, Med, Dry															
Host plants (all regions)					BLOOM TIME						BUMBLEBEES			BUTTER FLIES	OTHER BEES				
LATIN NAME	COMMON NAME	PLANT TYPE	SUN	SOIL	Early		Mid		Late		B. terricola	B. fervidus	B. vagans	BUTTER FLIES	OTHER BEES				
					M	A	M	J	J	A						S	O		
<i>Viola sororia</i>	Common violet	Herb. perenn.	Full-Shade	Wet, Med, Dry										See accompanying table for species present in your region					
<i>Viola pedata</i>	Bird's foot violet	Herb. perenn.	Full-Part	Med, Dry															
<i>Viola pedatifida</i>	Prairie violet	Herb. perenn.	Full-Part	Med, Dry															
<i>Viola sororia</i>	Common Blue Violet	Herb. perenn.	Full-Shade	Wet, Med, Dry															
<i>Viola pubescens</i>	Smooth Yellow Violet	Herb. perenn.	Part	Wet, Med, Dry															
<i>Viola striata</i>	Cream Violet	Herb. perenn.	Part, Shade	Wet, Med, Dry															
<i>Baptisia tinctoria</i>	Small Yellow Wild Indigo	Herb. perenn.	Full-Part	Wet, Med, Dry															
<i>Doellingeria umbellate</i>	Flat topped aster	Herb. perenn.	Full-Part	Wet, Med															
<i>Rumex spp.</i>	Water dock	Herb. perenn.																	
<i>Vaccinium macrocarpon</i>	Cranberry	trailing shrub	Part	Wet															
<i>Quercus spp.</i>	Oak	Tree																	
<i>Juniperus virginiana</i>	Eastern red cedar	Tree	Full-Shade	Dry															
<i>Ribes spp.</i>	Gooseberry	Herb. perenn.	Full-Shade	Wet, Med, Dry															
<i>Cardamine spp.</i>	Bitter-cress	Herb. perenn.																	
<i>Fagus grandifolia</i>	American Beech	Tree	Shade, Part	Med															
<i>Carex stricta</i>	Tussock sedge	Grass	Part-Full	Wet, Med															
<i>Andropogon gerardii</i>	Big bluestem	Grass	Full	Med, Dry															
<i>Schizachyrium scoparium</i>	Little bluestem	Grass	Part-Full	Med, Dry															
<i>Panicum virgatum</i>	Switch grass	Grass	Part-Full	Wet, Med															
<i>Poa pratensis</i>	Kentucky bluegrass	Grass	Full	Wet, Med															
<i>Sorghastrum nutans</i>	Indiangrass	Grass	Full-Shade	Wet, Med															
<i>Chasmanthium latifolia</i>	Indian woodoats grass	Grass	Full-Part	Wet, Med															
<i>Eragrostis spp.</i>	Lovegrass	Grass	Full	Med, Dry															
<i>Agrostis perennans</i>	Bentgrass	Grass	Part	Wet															
<i>Danthonia spicata</i>	Poverty grass	Grass	Full-Part	Dry															
<i>Calamagrostis canadensis</i>	Reed grass	Grass	Full-Shade	Wet, Med															
<i>Bromus spp.</i>	Brome	Grass	Full	Med															
Nectar/pollen - butterflies and other bees at risk					BLOOM TIME						BUMBLEBEES			BUTTER FLIES	OTHER BEES				
LATIN NAME	COMMON NAME	PLANT TYPE	SUN	SOIL	Early		Mid		Late		B. terricola	B. fervidus	B. vagans	BUTTER FLIES	OTHER BEES				
					M	A	M	J	J	A						S	O		
<i>Zizia aurea</i>	Golden alexander	Herb. perenn.	Full-Part	Med															
<i>Zizia aptera</i>	Meadow zizia	Herb. perenn.	Full-Part	Med															
<i>Geranium maculatum</i>	Wild geranium	Herb. perenn.	Full-Part	Med															
<i>Lysimachia spp.</i>	Loosestrife	Herb. perenn.	Part-Shade	Wet- Med															
<i>Cardamine spp.</i>	Bitter-cress	Herb. perenn.	Part	Wet- Med															
<i>Solidago altissima</i>	Tall goldenrod	Herb. perenn.	Full-Part	Med, Dry															
<i>Solidago arguta</i>	Forest goldenrod	Herb. perenn.	Part	Med, Dry															
<i>Solidago gigantea</i>	Smooth goldenrod	Herb. perenn.	Full-Part	Wet, Med															
<i>Solidago juncea</i>	Early goldenrod	Herb. perenn.	Full-Part	Med, Dry															
<i>Solidago odora</i>	Sweet goldenrod	Herb. perenn.	Full-Part	Med, Dry															
<i>Solidago rugosa</i>	Rough-stemmed goldenrod	Herb. perenn.	Full-Part	Med															
<i>Rubus allegheniensis</i>	Common blackberry	Shrub	Full-Part	Med															
<i>Rubus canadensis</i>	Smooth blackberry	Shrub	Full-Part	Med, Dry															
<i>Rubus flagellaris</i>	Northern blackberry	Shrub	Full-Part	Med, Dry															
<i>Rubus pensilvanicus</i>	Pennsylvania blackberry	Shrub	Full-Part	Med, Dry															
<i>Hydrophyllum virginianum</i>	Virginia waterleaf	Herb. perenn.	Part-Shade	Med															

Thank you to Amy Meltzer for help with compiling plant information!

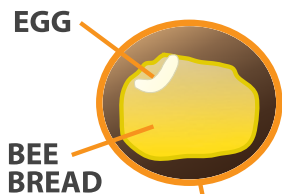
NATIVE PERENNIALS FOR POLLINATORS

						BLOOM							POLLINATORS					
BOTANICAL NAME	COMMON NAME	COLOR	SOIL	MOISTURE	HT	APR	MAY	JUN	JUL	AUG	SEP	OCT	BEEES	BUTT/MOTH	WASPS	FLIES	BEEETLES	OTHER/NOTES
SUN / UPLAND	Agastache foeniculum	Anise Hyssop	purple	sand to clay-loam	med to dry	1-2 ft							X	both	X	X	X	hummingbirds
	Allium cernuum	Nodding Onion	pink	sand to clay	med	1-2 ft							X		X	X	X	
	Asclepias tuberosa	Butterfly Milkweed	orange	sand to loam	med to dry	1-3 ft							X	butterflies	X		X	ants, hummingbirds
	Baptisia lactea	Wild White Indigo	white	sand to clay-loam	wet-med to dry	3-6 ft							X					important spring bumble bee plant
	Campanula rotundifolia	Harebell	violet	sand to loam	med to dry	0.5-1.5 ft							X	moths				grows well in containers
	Coreopsis palmata	Prairie Coreopsis	yellow	sand to loamy clay	med to dry	2-3 ft							X	butterflies				
	Dalea purpurea	Purple Prairie Clover	pink	sand to clay	med to dry	1-2.5 ft							X			X	X	browsed by rabbits
	Echinacea pallida	Pale Purple Coneflower	pink	sand to clay-loam	med to dry	3-5 ft							X	both	X	X	X	
	Eryngium yuccifolium	Rattlesnake Master	white	sand to clay-loam	wet-med to dry	3-5 ft							X	both	X	X	X	
	Helianthus maximilianii	Maximilian Sunflower	yellow	sandy-loam to clay	med to dry	3-8 ft							X	both	X	X	X	
	Heliopsis helianthoides	False Sunflower	yellow	sandy-loam to clay	med to dry	2-5 ft							X	both	X	X	X	
	Heuchera richardsonii	Prairie Alumroot	yell/lime	loam	wet-med to dry	1-3 ft							X					grows well in containers
	Liatris ligulistylis	Meadow Blazingstar	purple	loam to clay-loam	wet to med	3-5 ft							X	both	X	X		hummingbirds, monarch nectar plant
	Lupinus perennis	Wild Lupine	blue-violet	sand to loam-sand	med-dry to dry	1-2 ft							X			X		larval host plant for karner blue butterfly
	Monarda fistulosa	Wild Bergamot	pink	sand to clay-loam	wet-med to med	2-5 ft							X	both	X	X	X	hummingbirds, important bumble bee plant
	Monarda punctata	Spotted Bee Balm	white/pink	sand to sand-loam	med-dry to dry	1-3 ft							X		X		X	short-lived perennial, reseeds
	Penstemon digitalis	Smooth Beardtongue	white	sand to clay-loam	wet-med to med	2-3 ft							X		X	X		hummingbirds
	Phlox pilosa	Prairie Phlox	pink	sand to clay-loam	wet-med to dry	0.5-2 ft							X	both				hummingbirds
	Ratibida pinnata	Gray-Headed Coneflower	yellow	sand to clay-loam	wet-med to dry	3-6 ft							X	both		X	X	
	Rudbeckia hirta	Black-Eyed Susan	yellow	sand to clay-loam	wet-med to dry	1-3 ft							X		X	X	X	short-lived perennial, reseeds
Solidago rigida	Stiff Goldenrod	yellow	sand to clay-loam	med to dry	3-5 ft							X	both	X	X	X	clump-forming, fibrous-rooted	
Tradescantia occidentalis	Western Spiderwort	blue-violet	loam to clay-loam	med-dry to dry	1-2 ft							X			X		nectarless flowers	
Verbena stricta	Hoary Vervain	purple	sand to loam	med to dry	2-4 ft							X	both		X	X	hummingbirds	
Zizia aurea	Golden Alexanders	yellow	sand to clay-loam	wet-med to dry	2-5 ft							X	butterflies	X	X	X	important spring forage plant	
WETLAND EDGE	Asclepias incarnata	Swamp Milkweed	pink	sand to clay-loam	wet to med	3-5 ft							X	both	X	X	X	hummingbirds, pollinators visit for nectar
	Chelone glabra	White Turtlehead	white	sandy-loam to clay	wet to wet-med	2-4 ft							X					larval host plant for Baltimore checkerspot
	Eupatorium perfoliatum	Common Boneset	white	sand to clay-loam	wet to med	2-5 ft							X	both	X	X	X	attracts beneficial predatory wasps
	Eutrochium maculatum	Spotted Joe Pye Weed	pink	sand to clay-loam	wet to med	4-10 ft							X	both				
	Helenium autumnale	Sneezeweed	yellow	sand to clay-loam	wet to wet-med	3-5 ft							X	both	X	X	X	
	Liatris pycnostachya	Prairie Blazingstar	pink	sandy-loam to clay	wet to med	2-4 ft							X	both		X		hummingbirds
	Lobelia siphilitica	Blue Lobelia	blue-violet	sandy-loam to clay	wet to med	1-4 ft							X					hummingbirds
	Pycnanthemum virginianum	Virginia Mountain Mint	white	sandy-loam to clay	wet to med-dry	1-3 ft							X	butterflies	X	X	X	mint-scented foliage
	Symphotrichum novae-angliae	New England Aster	purple	sandy-loam to clay	wet-med to med	2-6 ft							X	both		X	X	
	Verbena hastata	Blue Vervain	blue-violet	sand to clay-loam	wet to med	3-5 ft							X	butterflies		X		
Vernonia fasciculata	Common Ironweed	purple	sand to clay-loam	wet to med	3-6 ft							X	butterflies		X	X		
Veronicastrum virginicum	Culver's Root	white	sand to clay-loam	wet to med-dry	3-6 ft							X	both	X	X	X		
WOODLAND / SHADE	Dicentra cucullaria	Dutchman's Breeches	white	loam to clay-loam	wet-med to med	0.5-1 ft							X					important spring bumble bee plant
	Eurybia macrophylla	Large-Leaved Aster	white-pink	sandy-loam to clay	wet-med to med	1-4 ft							X			X		
	Geranium maculatum	Wild Geranium	pink	sand to clay-loam	med to dry	1-3 ft							X			X	X	
	Hydrophyllum virginianum	Virginia Waterleaf	pink-violet	sand to clay-loam	wet-med to dry	0.5-2 ft							X			X		reseeds
	Osmorhiza longistylis	Long-Styled Sweet Cicely	white	sand to loamy-clay	med	1-3 ft							X			X		
	Polemonium reptans	Jacob's Ladder	blue-violet	sandy-loam to clay	wet-med to med	1-2 ft							X			X		
Solidago flexicaulis	Zigzag Goldenrod	yellow	sandy-loam to loam	med to dry	1-4 ft							X		X	X	X		

GROUND-NESTING WILD BEES



CAVITY-NESTING WILD BEES



Russell's Exclusive Garden Designs

Flights of Fancy

Butterfly Garden for Sun

- A. *Asclepias tuberosa* or *Asclepias incarnata* any variety(4-7)
- B. *Aster novae-angliae* or *novae-belgii* any variety (3)
- C. *Hydrangea arborescens/paniculata* hybrid or *Clethra alnifolia* (1)
- D. *Liatris spicata* (any cultivar) (3-5)
- E. *Solidago 'Little Lemon'* or *Coreopsis*, any cultivar, *Rudbeckia* any cultivar (3-5)
- F. *Malva alcea 'Fastigiata'* or *Sidalcea*, *Phlox paniculata* any cultivar (3)
- G. *Eupatorium rugosum 'Chocolate'* or *Eupatorium coelestinum*, *Eupatorium 'Baby Joe'* (2)
- H. *Trifolium repens*, *Dalea purpurea*, *Gaillardia*, *Achillea* (3)
- I. *Salvia*, *Achillea*, *Geum coccineum* or *Gaillardia grandiflora* (3)
- J. *Vernonia lettermanii* or *Liatris microcephala* (3)
- K. *Echinacea* any cultivar (3-5)

Watching butterflies in a garden is one of the pleasures of summer. This garden combines host plants where butterflies lay their eggs with plants that supply nectar for food and is a good start towards attracting butterflies to your garden. Add a small water area, partially filled with sand, and a rock or log on which the butterflies rest to complete this welcoming habitat.

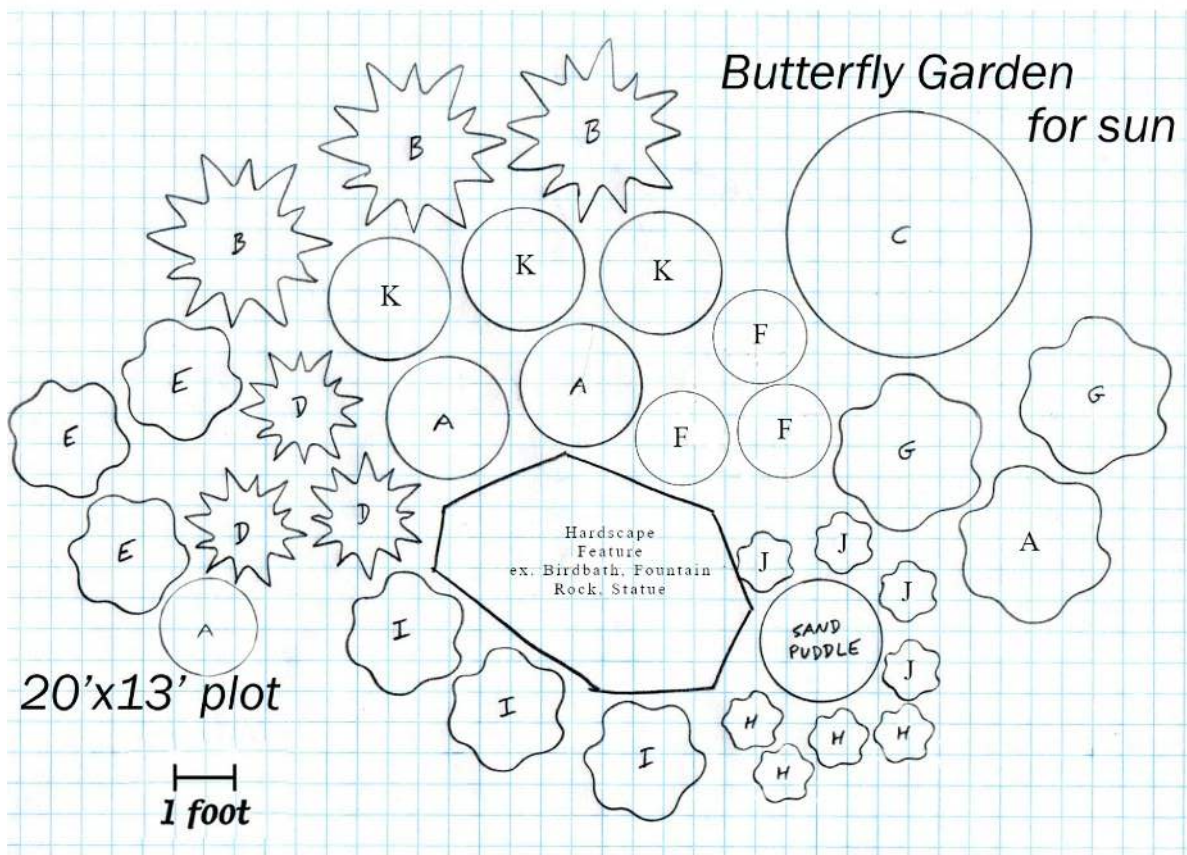


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Flights of Fancy Butterfly Garden



Asclepias tuberosa | *Aster novae-angliae* | *Hydrangea paniculata* | *Liatris spicata*
Rudbeckia fulgida | *Phlox paniculata* | *Eupatorium maculatum* 'Baby Joe'
Liatris microcephala | *Echinacea purpurea* | *Salvia* 'Caradonna' | *Achillea millefolium*



Native Meadow Garden



Panicum virgatum | *Helianthus tuberosa* | *Schyzachrium scoparium* | *Echinacea purpurea*

Pycnanthemum muticum | *Monarda bradburiana* | *Baptisia australis* | *Asclepias syriaca* | *Bouteloua gracilis*

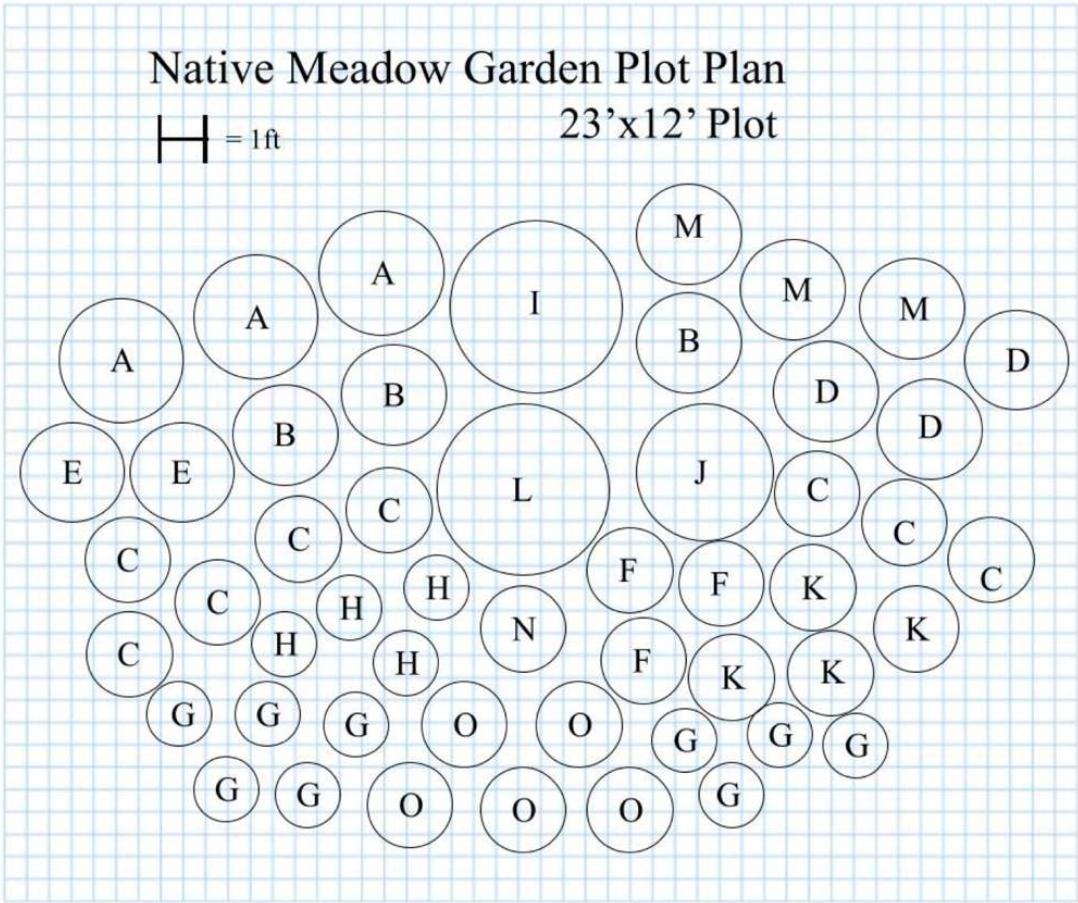
Lupinus perennis | *Geranium maculatum* | *Rosa virginiana* | *Gaura lindheimeri* | *Vaccinium angustifolium*



Native Meadow Garden Plot Plan

⊞ = 1ft

23'x12' Plot



Russell's Exclusive Garden Designs

Native Meadow Garden

A beneficial garden with all season interest
(Minimum of 6 hours of sun, average, well-drained soil)

- A. Panicum 'Totem Pole' or any 4-6 ft tall cultivar (3)
- B. Echinacea purpurea or pallida, or favorite tall echinacea cultivar (3-6)
- C. Sporobolus heterolepis or Muhlenbergia capillaris (8)
- D. Asclepias syriaca or Liatris spicata any cultivar, Vernonia lettermanii, Veronicastrum 'Fascination' (3)
- E. Eupatorium coelestinum, Pycnanthemum muticum, or Agastache foeniculum (2-3)
- F. Bouteloa gracilis or Eragrostis spectabilis (3)
- G. Geranium maculatum or Aquilegia canadensis (7-9)
- H. Lupinus perennis (3-4)
- I. Helianthus tuberosa/divericatus (1) or Rudbeckia maxima (3) or Rubeckia nitida 'Herbstonne' (1)
- J. Baptisia australis, any yellow/cream cultivar (1)
- K. Gaura lindheimeri, Asclepias tuberosa, or Gaillardia aristata (3-4)
- L. Monarda bradburiana, Monarda fistulosa, or Monarda punctata (1)
- M. Schyzachrium scoparium or Andropogon gerardii(3)
- N. Rosa virginiana, caroliniana, palustris(if site is moist) (1) or single flowering rose cultivar
- O. Vaccinium angustifolium, Vaccinium macrocarpon, Waldsteinia fragaroides (3-5)

By incorporating a native meadow garden into your landscape, you'll be providing a natural habitat and food source for native insects and birds. Many native plants host hundreds of different varieties of pollinators and insects, add a low birdbath or other water feature to make your garden a haven for local birds.

