

# Protecting Pollinators in Urban Areas

## Use of Flowering Plants

► Pollination ecologists have long recognized that a reduction in flowering plants is a significant contributor to declines in pollinators. The second in the Protecting Pollinators in Urban Areas series focuses on the best use of flowering plants in your landscape to attract pollinators.

Numerous lists of pollinator friendly plants exist online. But not every plant can stand up to the heat and humidity in the southern states. As you plan your garden areas, it is important to consider the variety of plant for your location as well as the bloom times. The goal is to create a garden where flowers are available from spring to frost each year.

### Annual and Perennial Plants

Bees are more attracted to perennial plants than they are to annual plants. It is, therefore, best to choose a perennial variety when you can.



Figure 1. Garden cosmos.

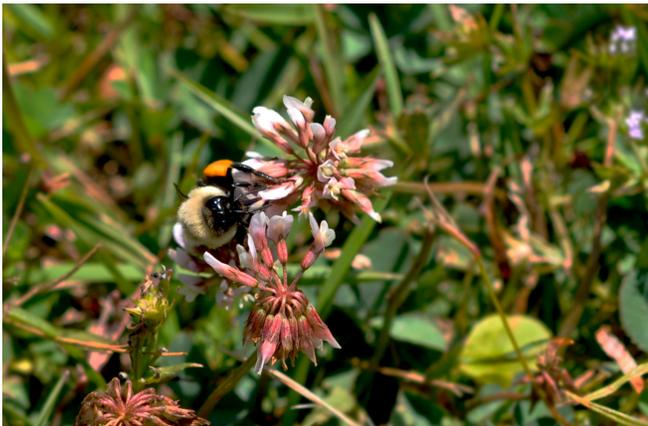


Figure 2. White clover.



Figure 3. Lantana.



Figure 4. Butterfly weed.

Table 1. Annuals and Herbaceous Perennials Attractive to Insect Pollinators*						
Genus/Species		Native <sup>a</sup>	Zone	Attracts <sup>b</sup>		Bloom Time
Scientific Name	Common Name			Bees	Butterflies	
<i>Achillea millefolium</i>	yarrow	*	3–9	x	x	summer and early fall
<i>Agapanthus africanus</i>	lily of the Nile		8–10	x	x	summer
<i>Agastache foeniculum</i>	anise hyssop	*	4–8		x	summer and early fall
<i>Allium tuberosum</i>	garlic chives		3–9	x	x	fall
<i>Amsonia ciliata</i>	bluestar	x	5–9	x		summer
<i>Amsonia tabernaemontana</i>	eastern bluestar	*	3–9	x	x	summer
<i>Aquilegia canadensis</i> and hybrids	columbine	x	3–8	x	x	spring
<i>Asclepias amplexicaulis</i>	clasping milkweed	*	3–9	x	x (caterpillar)	summer
<i>Asclepias incarnata</i>	swamp milkweed	*	3–9	x	x (caterpillar)	summer and fall
<i>Asclepias perennis</i>	aquatic milkweed	*	6–9	x	x (caterpillar)	spring/summer/fall
<i>Asclepias tuberosa</i>	butterfly milkweed	*	3–9	x	x	summer
<i>Asclepias verticillata</i>	whorled milkweed	*	3–10	x	x (caterpillar)	summer and fall
<i>Asclepias viridis</i>	green antelopehorn	*	4–9	x	x (caterpillar)	summer
<i>Baptisia alba</i>	white false indigo	*	5–9	x	x	spring and early summer
<i>Baptisia australis</i>	blue false indigo	*	3–9	x	x	summer
<i>Baptisia sphaerocarpa</i>	yellow wild indigo	*	5–8	x	x	summer
<i>Berlandiera lyrata</i>	chocolate flower	x	4–10	x		spring to fall
<i>Bidens aristosa</i>	tickseed sunflower	*	5–8	x	x (caterpillar)	early fall
<i>Bidens</i> spp. and hybrids	bidens		4–8		x (caterpillar)	summer or fall
<i>Caesalpinia pulcherrima</i>	pride of Barbados	*	8–11		x	summer
<i>Capsicum annuum</i>	ornamental pepper		9–11	x		summer
<i>Calamintha nepeta</i>	calamint		4–7	x		summer to early fall
<i>Celosia argentea</i> (some)	celosia		2–11	x		summer and fall
<i>Centaurea americana</i>	basket flower	*	4–8	x	x	spring
<i>Centaurea</i> spp.	cornflower		4–8 some 3–9	x	x	late spring and summer
<i>Chrysanthemum</i> spp.	chrysanthemum		3–10	x	x	fall
<i>Chrysogonum virginianum</i>	goldenknee	x	5–9	x		summer to early fall
<i>Clematis</i> spp. (vine)	clematis		4–9	x	x	summer to early fall
<i>Clethra alnifolia</i>	sweet pepperbush	*	3–9	x	x	summer
<i>Clinopodium georgianum</i>	Georgia savory	X	6–9	x		fall

Table 1. Annuals and Herbaceous Perennials Attractive to Insect Pollinators* (cont.)						
Genus/Species		Native <sup>a</sup>	Zone	Attracts <sup>b</sup>		Bloom Time
Scientific Name	Common Name			Bees	Butterflies	
<i>Coreopsis lanceolata</i>	lance-leaved coreopsis	*	4–9	x	x	summer
<i>Coreopsis pubescens</i>	star tickseed	*	6–9		x	summer
<i>Coreopsis tripteris</i>	tall tickseed	*	3–8	x	x	summer
<i>Cosmos bipinnatus</i>	garden cosmos	*	4–9	x	x	summer
<i>Cuphea</i> cv. 'David Verity'	David Verity		8–11	x	x	summer to fall
<i>Cuphea hyssopifolia</i> and hybrids	false heather		8–11	x	x	summer to fall
<i>Cuphea ignea</i> and hybrids	cigar plant		8–10	x	x	summer
<i>Cuphea micropetala</i>	giant cigar plant		9–11	x	x	fall
<i>Delphinium</i> spp.	larkspur		3–9	x	x	spring <sup>c</sup>
<i>Digitalis</i> spp.	foxglove		4–8	x		spring <sup>c</sup>
<i>Echinacea purpurea</i>	purple coneflower	*	3–8	x	x	summer
<i>Erigeron philadelphicus</i>	fleabane	x	2–7	x		spring
<i>Eryngium aquaticum</i>	marsh rattlesnake master	*	6–8	x	x	fall
<i>Eryngium yuccifolium</i>	rattlesnake master	*	3–8	x	x	summer and fall
<i>Eurybia macrophylla</i>	large-leaved aster	x	3–7	x	x	fall
<i>Eutrochium fistulosum</i>	joe pye weed	*	4–9	x	x	fall
<i>Eutrochium perfoliatum</i>	boneset	x	3–8	x	x	summer
<i>Eutrochium purpureum</i>	sweetscented joe pye weed	*	4–9	x	x	summer
<i>Foeniculum vulgare</i>	fennel		4–9	x	x	summer
<i>Gaillardia</i> × <i>grandiflora</i>	blanketflower		3–10	x	x	summer and fall
<i>Gaillardia aristata</i>	blanketflower	x	3–8		x	summer and early fall
<i>Gaillardia pulchella</i>	blanketflower	*	2–11	x	x	summer and fall
<i>Gaura</i> (syn. <i>Oenothera lindheimeri</i> )	gaura	x	5–9	x	x	summer and fall
<i>Geranium maculatum</i>	wild geranium	x	3–8	x	x	spring
<i>Glandularia x hybrida</i>	verbena	*	7–10	x	x	summer
<i>Gomphrena globosa</i>	globe amaranth		4–11	x	x	summer and fall
<i>Helenium amarum</i>	yellow sneezeweed	*	3–8	x	x	summer and fall
<i>Helenium autumnale</i>	sneezeweed	x	3–8	x	x	fall
<i>Helianthus angustifolius</i>	swamp sunflower	*	5–8	x	x	spring
<i>Heliopsis helianthoides</i>	oxeye sunflower	x	4–9	x	x	summer

**Table 1. Annuals and Herbaceous Perennials Attractive to Insect Pollinators\* (cont.)**

Genus/Species		Native <sup>a</sup>	Zone	Attracts <sup>b</sup>		Bloom Time
Scientific Name	Common Name			Bees	Butterflies	
<i>Hibiscus coccineus</i>	scarlet hibiscus	*	6–9		x	summer
<i>Hibiscus moscheutos</i>	rosemallow	*	6–9	x	x (caterpillar)	summer
<i>Hosta plantaginea</i> and hybrids	hosta		3–9	x		summer <sup>d</sup>
<i>Hyssopus officinalis</i>	hyssop		4–9	x	x	summer
<i>Lavandula stoechas</i> <sup>g</sup>	lavender		5–8	x	x	summer <sup>d</sup>
<i>Leonotis leonurus</i>	lion's ear		10–11	x	x	summer
<i>Leucanthemella serotina</i>	leucanthemella		4–9	x	x	fall
<i>Leucophyllum frutescens</i>	Texas sage	*	8–10	x		seasonal <sup>e</sup>
<i>Liatris spicata</i>	dense blazing star	*	3–8		x	late summer
<i>Lobelia cardinalis</i>	cardinal flower	*	3–9	x	x	late summer
<i>Lobularia maritima</i>	sweet alyssum		5–9	x	x	spring
<i>Lupinus spp.</i>	bluebonnet	x	4–8	x	x	summer <sup>d</sup>
<i>Melissa officinalis</i>	lemon balm		3–8	x		summer
<i>Mentha spp.</i>	common mint		5–10	x	x	summer
<i>Monarda didyma</i>	bee balm, bergamot		4–9		x (caterpillar)	summer to early fall
<i>Monarda fistulosa</i>	wild bergamot	*	3–9	x	x	summer to early fall
<i>Monarda punctata</i>	spotted bee balm	*	3–9		x	summer
<i>Nepeta nepetella</i>	lesser catmint		5–9	x		summer
<i>Nepeta x faassenii</i>	catmint		5–8	x		summer
<i>Ocimum basilicum</i>	basil		2–11	x	x (caterpillar)	summer and fall
<i>Origanum vulgare</i>	oregano		4–8	x	x	summer to fall
<i>Pachysandra terminalis</i>	pachysandra		5–7	x		spring <sup>d</sup>
<i>Passiflora incarnate</i> (vine)	passionflower	*	5–9		x caterpillar	summer and early fall
<i>Penstemon canescens</i>	eastern gray beardtongue	*	5–8	x	x	late spring
<i>Penstemon digitalis</i>	beardtongue	*	3–8	x	x	spring and summer
<i>Penstemon hirsutus</i>	hairy beardtongue	*	3–9	x	x	spring and summer <sup>f</sup>
<i>Penstemon laevigatus</i>	eastern smooth bluetongue	*	3–8	x	x	spring and summer
<i>Penstemon tenuis</i>	brazos penstemon	*	6–8	x	x	summer
<i>Pentas lanceolate</i>	pentas		9–11	x	x	summer and early fall
<i>Perovskia atriplicifolia</i>	Russian sage		4–9	x		summer and fall
<i>Phlox paniculata</i>	garden phlox	*	3–9	x	x	spring
<i>Physostegia virginiana</i>	obedient plant	x	3–9	x	x	summer
<i>Pycnanthemum flexuosum</i>	mountain mint	*	6–8	x	x	summer

Table 1. Annuals and Herbaceous Perennials Attractive to Insect Pollinators* (cont.)						
Genus/Species		Native <sup>a</sup>	Zone	Attracts <sup>b</sup>		Bloom Time
Scientific Name	Common Name			Bees	Butterflies	
<i>Pycnanthemum muticum</i>	blunt mountain mint	*	4–8	x	x caterpillar	summer and fall
<i>Ratibida columnifera</i>	prairie coneflower	x	4–9	x	x	summer
<i>Rosmarinus officinalis</i>	rosemary		8–10	x	x	summer
<i>Rudbeckia fulgida</i>	orange coneflower	*	3–9	x	x	summer and fall
<i>Rudbeckia hirta</i>	black-eyed Susan	*	3–9	x	x	summer
<i>Rudbeckia nitida</i>	shiny coneflower		4–9	x	x	summer
<i>Rudbeckia triloba</i>	brown-eyed Susan	*	4–8	x	x	summer
<i>Ruellia brittoniana</i>	Mexican petunia		8–10	x	x	summer <sup>g</sup>
<i>Salvia elegans</i>	pineapple sage		8–10	x	x	fall
<i>Salvia farinacea</i>	mealy blue sage	*	4–8	x		summer and fall
<i>Salvia greggii</i>	autumn sage		6–9	x	x	summer
<i>Salvia leucantha</i>	Mexican bush sage		6–10	x	x	fall
<i>Salvia longispicata</i> x <i>farinacea</i>	'Mystic Spires Blue'		8–9	x		summer
<i>Salvia uliginosa</i>	bog sage		8–10	x		summer
<i>Scabiosa columbaria</i>	pincushion flower		5–9	x	x	summer <sup>d</sup>
<i>Scutellaria lateriflora</i>	blue skullcap	x	5–9	x		summer
<i>Sedum</i> spp.	sedum		3–9	x		fall
<i>Solidago rigida</i>	stiff goldenrod	*	3–8	x	x	fall
<i>Solidago speciose</i>	goldenrod	*	3–9	x	x	fall
<i>Stachys monieri</i>	betony		5–9	x		late summer and fall
<i>Stachytarpheta urticifolia</i>	porter weed		10–11	x	x	summer and fall
<i>Stokesia laevis</i>	Stokes' aster	*	5–9	x		summer
<i>Symphyotrichum laeve</i>	smooth blue aster	*	3–8	x	x	fall
<i>Symphyotrichum novae-angliae</i>	New England aster	*	4–8	x	x	fall
<i>Symphyotrichum oblongifolium</i>	aromatic aster		3–8	x	x	fall
<i>Symphyotrichum patens</i>	spreading aster	*	4–8	x	x	fall
<i>Tagetes erecta</i>	African marigold		4–11	x	x	summer and fall
<i>Thermopsis villosa</i>	Carolina lupine	*	4–9	x		summer
<i>Thunbergia alata</i> (vine)	climbing black-eyed Susan		10–11		x	seasonal <sup>e</sup>
<i>Thymus vulgaris</i>	thyme		5–9	x		summer
<i>Trachelospermum jasminoides</i> (vine)	confederate jasmine		8–10	x		summer

**Table 1. Annuals and Herbaceous Perennials Attractive to Insect Pollinators\* (cont.)**

Genus/Species		Native <sup>a</sup>	Zone	Attracts <sup>b</sup>		Bloom Time
Scientific Name	Common Name			Bees	Butterflies	
<i>Tradescantia</i> sp.	spiderwort	x	5–10	x		summer and fall
<i>Trifolium repens</i>	clover		3–10	x		spring and summer
<i>Verbena bonariensis</i>	purpletop verbena		7–10	x	x	summer and fall
<i>Verbena canadensis</i>	verbena	*	7–10	x	x	summer and fall
<i>Verbesina virginica</i>	frostweed	*	6–11		x	fall
<i>Vernonia altissima</i>	ironweed	*	4–9	x	x	fall
<i>Vernonia gigantea</i>	giant ironweed	*	5–10	x	x	fall
<i>Veronica longifolia</i>	speedwell	x	4–9	x	x	summer
<i>Zinnia</i> spp.	zinnia		4–10	x	x	summer and fall

<sup>a</sup>Native to the Gulf region (\*); naturalized (x). Invasive species are not included, even if they attract pollinators.

<sup>b</sup>Attractive to bees or butterflies; hummingbirds not included. List is for insect pollinators only.

<sup>c</sup>These plants are cool-season annuals and need to be planted in fall to bloom in spring.

<sup>d</sup>Some but not all cultivars of these species can do well in hardiness zone 8 and above.

<sup>e</sup>The plant is probably a tropical and can rebloom year-round.

<sup>f</sup>Plants that are hard to find for the gardening public but very important to pollinators.

<sup>g</sup>These species can be invasive in Florida; only sterile varieties are recommended. Check with a horticulture agent to identify other alternatives.

## Woody Plants

Many common trees and shrubs that are grown for showy flowers (lantana, chaste tree, and camellia) can be beneficial to pollinators. Some woody plants, such as camellia, can also provide blooms during winter when few other floral resources are available.



Figure 5. Eastern redbud in bloom.



Figure 6. Chaste tree.

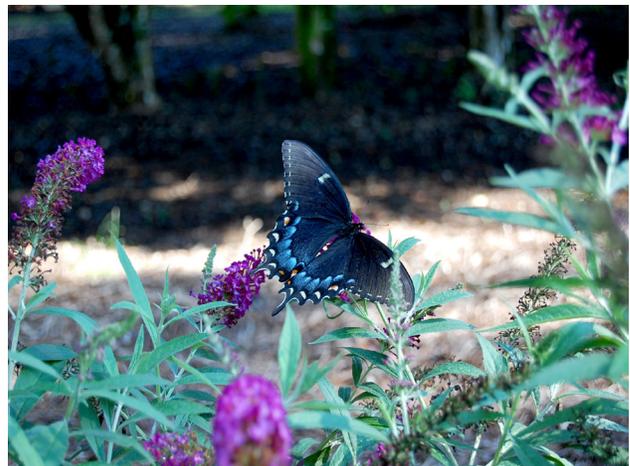


Figure 7. Butterfly bush.

**Table 2. Shrubs and Trees Attractive to Pollinators**

Genus/Species	Common Name	Native <sup>a</sup>	Zone	Attracts <sup>b</sup>		Bloom Time
				Bees	Butterflies	
<i>Abelia x grandiflora</i>	glossy abelia		5–9	x	x	summer and early fall
<i>Abelia chinensis</i>	Chinese abelia		7–9	x	x	summer and early fall
<i>Asimina triloba</i>	pawpaw	*	5–9		caterpillar (zebra swallowtail)	early summer
<i>Buddleia davidii</i> and hybrids	butterfly bush		5–9	x	x	summer to early fall
<i>Caesalpinia pulcherrima</i>	pride of Barbados		9–11	x	x	seasonal <sup>c</sup>
<i>Camellia japonica</i>	*cultivars w/pollen		7–11	x		early spring <sup>d</sup>
<i>Camellia sasanqua</i>	*cultivars w/pollen		6–9	x		winter <sup>d</sup>
<i>Catalpa bignonioides</i>	southern catalpa	*	4–8	x		spring
<i>Ceanothus americanus</i>	New Jersey tea	*	4–8	x	x	summer
<i>Celtis occidentalis</i>	hackberry	*	3–9		caterpillar	spring
<i>Cephalanthus occidentalis</i>	Buttonbush	*	5–9	x	x	summer
<i>Cercis canadensis</i>	eastern redbud	*	5–9	x	x	spring
<i>Cercis chinensis</i>	Chinese redbud		6–9	x	x	spring
<i>Clethra alnifolia</i>	coastal sweet pepperbush	*	4–9	x	x	summer
<i>Duranta erecta</i>	golden dewdrop		10–11	x	x	seasonal <sup>c</sup>
<i>Jatropha integerrima</i>	spicy jatropha		10–11	x	x	seasonal <sup>c</sup>
<i>Galphimia glauca</i>	golden thryallis		9–11	x	x	seasonal <sup>c</sup>
<i>Gleditsia triacanthos</i>	honey locust	*	3–8	x	x	summer
<i>Hibiscus syriacus</i>	rose of sharon		5–8	x	x	summer and early fall
<i>Ilex</i> spp.	holly	some	6–8	x		summer
<i>Lagerstroemia indica</i> and hybrids with <i>L. fauriei</i>	crapemyrtle		6–9	x		summer
<i>Lantana</i> spp.	lantana		8–11	x	x	summer and fall <sup>e</sup>
<i>Lindera benzoin</i>	spicebush	*	4–9		x caterpillar	spring
<i>Liriodendron tulipifera</i>	tuliptree	*	6–10	x		summer
<i>Magnolia grandiflora</i>	southern magnolia	*	6–9	x		summer
<i>Mahonia</i> spp.	grape holly		5–8	x	x	spring
<i>Malus angustifolia</i>	Southern crabapple	*	5–8	x	x	spring
<i>Malvaviscus arboreus drummondii</i>	Turk's cap	*	7–9	x	x	summer and fall
<i>Myrcianthes fragrans</i>	Simpson's stopper	*	10–11	x	x	seasonal <sup>c</sup>
<i>Osmanthus fragrans</i>	sweet olive		9–11	x	x	reblooms in early spring, summer, and fall

**Table 2. Shrubs and Trees Attractive to Pollinators (cont.)**

Genus/Species	Common Name	Native <sup>a</sup>	Zone	Attracts <sup>b</sup>		Bloom Time
				Bees	Butterflies	
<i>Oxydendrum arboreum</i>	sourwood	*	5–9	x		summer
<i>Prunus</i> spp. (i.e., <i>P. cerasifera</i> )	cherry/plum	Some	4–8	x	caterpillar	spring
<i>Prunus serotina</i>	black cherry	*	4–9		x caterpillar	spring
<i>Rhododendron austrinum</i>	American native azalea	*	6–8	x		spring
<i>Rhododendron canescens</i>	honeysuckle azalea	*	5–9	x	x	spring
<i>Rhododendron</i> sub. <i>Tsutsusi</i> and hybrids	evergreen azalea		6–8	x		spring
<i>Rosa</i> spp. and hybrids	rose (many varieties provide pollen)	* <i>R. carolina</i>	4–9	x	x	summer
<i>Sabal brazoriensis</i>	Brazoria palmetto palm		7–11	x		seasonal
<i>Salix nigra</i>	black willow	*	4–9	x		summer
<i>Sapindus drummondii</i>	soapberry	*	6–9	x		spring
<i>Tecoma stans</i> 'Gold Star'	esperanza	*	9–11	x	x	summer
<i>Vaccinium ovatum</i>	native huckleberry	*	4–8	x		spring
<i>Vaccinium corymbosum</i> and hybrids with <i>V. darrowii</i>	highbush blueberry	*	4–8	x		spring
<i>Vaccinium elliotii</i>	Elliott's blueberry	*	4–8	x		spring
<i>Vitex agnus-castus</i>	chaste tree		6–11	x	x	summer
<i>Wisteria frutescens</i>	American wisteria	*	5–9	x	x	spring

<sup>a</sup>Native to the Gulf region (\*); naturalized (x). Invasive species are not included, even if they attract pollinators.

<sup>b</sup>Attractive to bees or butterflies; hummingbirds not included. List is for insect pollinators only.

<sup>c</sup>The plant is probably a tropical and can rebloom year-round.

<sup>d</sup>Based on field observations in ornamental gardens.

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