Gardening for Wildlife ~Marie S. Rojas

Why Garden for Wildlife?  

**BENEFICIAL:** birds, toads, frogs, bats, and other insects eat lots of pest insects, feed them to their young.  

**RESPONSIBLE:** habitat loss and fragmentation (construction, deer) reducing populations, especially migrants.  

**TO ENCOURAGE THE GOOD GUYS (Natural Enemies)**  
- Most insect pests have parasites and predators that keep their populations below serious damage levels.  
- Spiders, wasps, beetles, true bugs, flies.  
- Alternate between floral resources and insects for their food.  

**HELP POLLINATORS**  
- Honey Bees: brought here by settlers in to pollinate crops.  
- Responsible for about 80% of the pollination of fruits, nuts, grains and vegetables in the U.S.  
- Bumble Bees: native, 50 known species in North America. Valuable pollinators, responsible for about 15% of the pollination of U.S. crops. Readily used to pollinate tomatoes, blueberries, cranberries, watermelon, peppers, squash, cucumbers, apples, and plums.  
- Other Bees: Maryland is home to around 400 species of native bees!  

Habitat Analysis - Take stock, look at your neighborhood to determine your habitat type:  
- “Grassland Dependent” (open, old farmland, upcounty): Bluebird, Meadowlark, Bobwhite.  
- “Forest Interior” (heavily wooded): Wood Thrush, Scarlet Tanager, Tufted Titmouse.  
- “Edge” (mix, mature suburban): most diverse - American Goldfinch, House Wren, Blue Jay.  

Next, look at your yard to see what elements are already there.  

**Shelter/Cover/Nesting:** dense shrubs, evergreen/deciduous trees.  
**Water:** drinking, bathing; critical, especially in winter!  
**Food:** berries, nuts, seeds; nectar, larval food; also leaves, buds, catkins.  
Elements should be placed near each other, in a sheltered spot.  
Shelter should be close by, but not so close that it provides a place for predators to hide!  
Diversity is key – the more elements you provide, the wider range of wildlife you will attract.  

**Shelter:** used to escape from predators, protection from the elements, and to raise young.  
Dense, twiggy shrubs, Evergreens, Brush piles, Dead trees, Houses  
Allow dead or dying trees and branches to stand if they do not pose a hazard. Birds use them for food, nest sites and protection.  
Create a brush pile by crisscrossing large limbs at the base and adding smaller branches on top to create pockets for nesting, escape, cover, and winter protection. Butterflies may also overwinter in brush piles.  
Locate in the more remote parts of your yard, away from feeders and the house.  

**Housing:** Can supplement nest sites with bird houses. Best time to erect is in the fall to “season” through the winter. Diameter of entrance hole, size and placement of house may be species specific. No perches or nuisance birds will pester smaller birds. May want to consider predator guards  

**Water:** key to attracting the most species. The sound of moving water is especially appealing!  
Ponds should have shallow shelves with pebbles on the bottom or a branch across. Birdbaths should have a rock. Mud puddles for bees and butterflies.  
*Hummingbirds won’t land in water over ¼” deep!*  
Food: Feeders: can be used to augment plants. Birds have preferences for type of seed and how it is presented. Place feeders within 20’ of shelter. Best all around seed is black oil sunflower. Clean regularly!
Ground feeder: white proso millet - mourning dove, junco, towhee. 
Hopper: larger birds – cardinal, blue jay. 
Platform: biggest variety, plus squirrels, fun to put in window! 
Suet: great for woodpeckers, white-breasted nuthatch, chickadee. 

Butterflies & Moths
Select a sunny site, protected from the wind – complete lifecycle faster! Put out rocks for basking – butterflies use the sun to warm up. Need 50° temp to fly. Plant both nectar sources and larval food plants. Like white, purple, yellow over blue and red, but local tastes vary! Avoid pesticides, even those deemed “natural” or organic. 
Baltimore Checkerspot: Official state butterfly. On Maryland’s “watch list”, rapidly declining since the early 1990s. Exploding deer population browsing on host plant one theory for decline. Found in wet meadows. One generation/year; females lay eggs only on white turtlehead, *Chelone glabra*. 

New study just published on monarch butterflies and how they locate and colonize milkweed. Studied gardens containing exact same mix of milkweeds, nectar sources and ornamental grasses. Monarch eggs and larvae were 2.5 – 4x more abundant in gardens having milkweeds evenly spaced in a 1m (3.28’) corridor around the perimeter, surrounding the nectar plants and grasses. Gardens that have 100m (328’) of north/south access unimpeded by structures had significantly more eggs and larvae. 
**Beneficials:** Adding a mixture of flowering plants that produce nectar and pollen will draw in the most diversity. 

- Plan for a full season of flowering, *especially early spring and late summer/fall!* 
- Vary the size and shape of the flowers. 
  - Small, shallow flowers attract small bees, flies and wasps. 
  - Larger, deeper flowers tend to attract honey bees and bumble bees. 
- Plants can be native and non-native. 
  - Can it survive/thrive in landscape? 
  - Pest resistance (IPM) and good nectar/pollen. 
- Bigger patches of plants better than small. 

Easier, cheaper, and much more sustainable than buying ladybugs! 
*Don’t forget you are leaving the seed heads and fruit for the birds – No deadheading!!* 

**Plants:** Mixture of evergreen and deciduous trees and shrubs, plus annuals and perennials. Seed, nectar, pollen, and berry producing. Three-season or as close as possible! Large drifts of plants better than “one of each” approach. 

Things to consider: 
- Minimize pesticides and avoid applications when plants are in bloom. 
- Don’t use systemic neonicotinoides on woody plants highly attractive to bees. 
  - Linden, single petal rose varieties, crape myrtle, crabapple, hawthorn, holly. 
- If you must, prune off all flower buds. 
- Don’t spray fungicides on flowers. 
- IPM – least toxic, most effective, application method, timing. 
- Follow label directions! 

**Trees & Shrubs** 
**Eastern Redcedar** *Juniperus virginiana*
Native evergreen to 50’ tall. 54 species of birds eat the berries (cedar waxwings, mockingbirds), good for shelter, birds strip bark for nesting material. Separate male & female plants. Likes sunny, poor/dry soil. Smaller cultivars are available.

Cultivars: ‘Grey Owl’: 3’- x 6’; silvery grey foliage, good fruiting female, spreading habit. ‘Emerald Sentinel’: 15-20’ x 6-8’; dark green, columnar habit, female.

**Eastern White Pine Pinus strobus** Native evergreen to 150’. 38 species of birds eat seeds from cones (chickadee, titmouse, nuthatch, junco), also good for cover/nesting. Sun to part shade, prefers fertile soil but tolerates less. Smaller cultivars are available.

cultivars: ‘Contorta’ (Tortuosa’); 15-20’ x 12’, pyramidal form with twisted needles. ‘Blue Shag’; 3 x 4’, bluish needles, mounded form.

Maples (Acer species) 33 species of birds and other wildlife eat seeds, buds, twigs, flowers, including bobwhite, chickadee, nuthatch, turkey, and purple finch; crucial early season nectar and pollen source for many species of bees. Hedge Maple - *Acer campestre* Small, fits under most power lines! Tolerates a wide range of urban conditions, including dry soil, compaction, and pollution, in full sun to light shade. Good nest site for birds. Queen Elizabeth - *Acer c. ‘Evelyn’* More upright and uniform than the species, 25’-35’ x 20-30’,

**Spicebush Lindera benzoin** Native shrub 6 – 12’. Good fall food source, 12 spp. of birds eat; bobwhite, kingbird, flycatcher. Prefers moist, well-drained soils in part shade. Will tolerate some dryness. Larval food plant of the Spicebush Swallowtail.

**Downy Serviceberry Amelanchier arborea** Shadblow Serviceberry *Amelanchier canadensis* Multi-stemmed large native shrubs/small trees, 6 – 20’. 26 species of birds eat serviceberries (wood thrush, catbird, oriole, scarlet tanager), good for nesting. Great early nectar and pollen source for spring mining and sweat bees, also hover and tachinid flies. Red berry June/July, moist or dry soils, full sun to part shade. Lots of cultivars.

**Allegheny Serviceberry Amelanchier laevis** Native small tree 15 – 25’. Berries are blue-black when ripe and were eaten by Native Americans. Many different hybrids and cultivars available.

Flowering Crabapples (*Malus* species) Some natives, although cross-fertile and hybridize freely; hybrids more disease resistant. 9 species of birds use, including mockingbird, robin, and cedar waxwing; early season nectar and pollen source for insects.

*Malus* ‘Calocarpa’ 20’-25’ X 25’-30’; red flower buds, open white, fragrant, red fruit. Good disease resistance, urban tolerant, soil adaptable.


Pink Princess Crabapple *Malus* ‘Parrsi’ Natural dwarf, 8’; low spreading. Blooms April/early May. Excellent disease resistance!

**American Holly Ilex opaca** Native evergreen to 40’. 28 species of birds eat holly berries (robin, cedar waxwing, mocking bird), also good for shelter. Blooms in May; great nectar and pollen source for honey and bumble bees, files and wasps. Separate male and female plants – use 1 male for every 2 – 3 females. Sun to part shade in well drained, acid soil. ‘Maryland Dwarf’ – 3’ tall x 10’ wide.

Foster’s Holly *Ilex x attenutata* ‘Fosteri’ Hybrid, smaller and narrower 15 – 20’, with native parents (*I. cassine x I. opaca*) Good for food/cover.

**BIRDS DON’T LIKE CHINESE OR ENGLISH HOLLIES!**
**Winterberry Holly** *Ilex verticillata* Native, deciduous shrub 6 – 10’. Nice and dense/twiggy – great for nests/cover and food. Native to swampy areas, prefers acidic (4.5 - 6.5) high organic matter soils in sun to part shade.

**Highbush Blueberry** *Vaccinium corymbosum* Native shrub 6 – 12’. 36 species of birds eat the berries (bluebird, catbird). Honey, bumble, mason and mining bees visit flowers. Blue fruit in June/July; sun to part shade, moist acid soil.

**Lowbush Blueberry** *Vaccinium angustifolium* Native, low growing groundcover shrub. 12 – 24”, spreading via roots. Very tolerant of dry soil.

**American Elderberry** *Sambucus nigra ssp. canadensis* Native, dense, twiggy stoloniferous shrub; 5 – 12’. 51 species of birds eat the berries (bluebird, cardinal, catbird), also good for nesting/cover. Good nectar and pollen source for honey bees, native bees; larval food (Bent-Line Gray, Curved-Tooth Geometer, Ruby Quaker). Blue fruit Aug/Sep; does well in moist soil, tolerates dry; alkaline or acid soil; sun to part shade; deer resistant. Smaller cultivars available, including a golden foliage form.

**European Elderberry** *Sambucus nigra Black Lace™* Purplish-black foliage, pink flowers, blackish-red fall berries, 8 x 6’. Full sun for best color. Non-suckering, blooms earlier than native. Both species are good nest site for little carpenter and mason bees, which tunnel into soft pith of broken stems.

**Flowering Dogwood** *Cornus florida* Small native understory tree to 20’. 45 species of birds eat dogwood berries (bluebird, cardinal, oriole, robin, mockingbird). Good early nectar and pollen; larval food (Spring Azure, Polyphemus Moth, Unicorn Caterpillar). Red fruit in Sept/Oct; prefers part shade in moist, acid soil. Can have problems if not happy. Dogwood Hybrids (C. floridus X C. kousa) Cornus ‘Celestial’ 17’ x 14’, vigorous, erect, uniform. White flowers with a tinge of green. Highly resistant to powdery mildew, anthracnose, and dogwood borer. ‘Aurora’ 18’ x 18’, vigorous, erect, low branching. Flowers heavily; white flowers turning creamy white as they age. Highly resistant to powdery mildew and dogwood borer. Partially resistant to anthracnose. ‘Stellar Pink’ 20’ x 19’, vigorous, erect, low branching. Flowers are a soft pink, rounded, overlapping. Highly resistant to powdery mildew, anthracnose, and dogwood borer. New Appalachian series of Cornus florida, from University of Tennessee, featuring mildew and anthracnose resistance.

**Tatarian Dogwood** *Cornus alba* Redosier Dogwood *Cornus sericea* Both red or yellow-twigged shrubs 8 – 10’; *C. sericea* is native. Great for white berries and cover. Both do well in sun or shade, moist or dry soil. Prone to stem canker.

**Hawthorns** *Crataegus* species Resistant selections from native species. 29 species of birds eat berries, including blue jay, cardinal, mockingbird; frequently use as nest site; great early season nectar source for honey and other bees, hover flies, predatory wasps. Tolerate a wide range of sites and adverse conditions; spring planting in full sun recommended. Crusader Hawthorn - C. ‘Cruzam’ 15-20’ x 20-25’; pollution tolerant, disease resistant, very few thorns. Washington Hawthorn - C. ‘Winter King’ 25-30’ x 20-30’; a bit broader and slower growing than Cruzam. Crimson Cloud English Hawthorn *Crataegus laevigata Superba* 20’ x 15 – 25’ wide. Blooms in May. Tolerates drought, occasionally wet soils, adaptable to many soil types/pHs. Disease resistant.

**Highbush Cranberry** *Viburnum opulus var. americana (V. trilobum)* Native shrub 6 – 12’ 34 species of birds eat berries of *Viburnum* spp. (brown thrasher, bluebird, vireo, northern flicker). Larval food for Spring Azure and Hummingbird Clearwing. Red fruit in September; sun to part shade, well-drained moist soil.

**Arrowwood Viburnum** *Viburnum dentatum* Native dense, multi-stemmed shrub, 6 – 15’. Good for food and cover. Blue-black fruit Sept/Oct; most adaptable to varied soils, sun to part shade.
American Beautyberry *Callicarpa americana* Coarse native shrub, 3 – 8’. 12 species of birds eat berries (bobwhite, cardinal, robin). Good nectar and pollen source for honey and bumble bees. Pretty pink flowers early summer. magenta berries fall. Does well in sun to part shade, average soil. Purple Beautyberry *Callicarpa dichotoma* Arching, 3 – 4’ shrub. Pretty habit with striking berries in the fall.Smaller and more refined than native. Can renewal prune in winter. Glossy Abelia *Abelia x grandiflora* Semi-evergreen shrub, 3 – 6’. Good late-season nectar and pollen source for monarchs, bees and hummingbirds. Full sun to half shade; prefers acid, well-drained soil, but very tough. Lots of cultivars. Purple Coneflower *Echinacea purpurea* Native, blooms summer to fall, 2 – 4’. Good nectar and pollen for honey and native bees, butterflies; and seed source; goldfinches and bumble bees love! Likes sunny/hot, average soil. Swamp Milkweed *Asclepias incarnate* Native to moist/wet areas, pink blooms June – Aug, 2 – 4’ tall. Good butterfly nectar and larval food plant for Monarchs. Honey, bumble, long-horn, plasterer and sweat bees visit flowers. Lacewings, lady and soldier beetles, tachinid flies, minute pirate bugs, parasitic and predatory wasps visit. Full sun, pretty tolerant of drier conditions. Higher Monarch eggs/caterpillars than *A. tuberosa*! ‘Soulmate’ – 3-4’ tall, cherry-pink flowers with tiny white centers; vanilla fragrance. ‘Cinderella’ – 3-5’ tall, rose-pink flowers, vanilla fragrance. ‘Ice Ballet’ – 3-3.5’ tall, fragrant white flowers. All three cultivars were more attractive to various bee types than the straight species! Black-eyed Susan *Rudbeckia* species Native, blooms summer to fall, good seed, nectar and pollen.
Honey, mason, bumble, mining, sweat, and leaf-cutter bees visit the flowers. Predatory plant bugs, lady beetles, hover and tachinid flies, predatory and parasitic wasps visit. Many varieties available from 1’ – 3’ or taller. Likes hot, sunny, dry situations.

Quilled black-eyed Susan Rudbeckia subtomentosa ‘Little Henry’
Native cultivar, upright/compact grower, 36” tall x 24” wide. Unusual quilled yellow petals. Long bloom time July – October! Sun to part shade, soil adaptable, drought tolerant. Reportedly deer/rabbit resistant.

*Monarda* species **Scarlet Beebalm** *M. didyma* Good in wet/rich soil. **Wild Bergamot** *M. fistulosa* Good in dry/poor soil. Native, great for hummingbirds and butterflies, blooms in summer, 2 – 3’ tall. Likes sun to part shade. Good for honey, bumble, digger, mason, leaf-cutter, and sweat bees. Predatory and parasitic wasps, hover flies, and soldier beetles also visit.

**Summer Phlox** - *Phlox paniculata* 'David' Native cultivar, 2 – 3’ x same. Good nectar source for butterflies and hummingbirds, larval food plant for several sphinx moths. Large, fragrant white flowers starting in July, deep green, powdery mildew resistant foliage. Tolerates some shade (needs 4-6+ hours of sun). Tolerates clay, moist, and sandy soils. A former Perennial of the Year winner! *Phlox paniculata* ‘Jeana’ Best-performing phlox from the Mt. Cuba Center trial. This cultivar was discovered growing along the Harpeth River near Nashville, Tennessee and named after its discoverer, Jean Prewitt. ‘Jeana’ stood out for its exceptionally mildew-free foliage. 5’ tall, produces an impressive floral display from mid-July through early September. Individual flowers, are much smaller than any other garden phlox. Actually attracted more butterflies than any other garden phlox in the entire trial! Tolerates, deer, clay soil, black walnut. Full sun to part shade. Excellent powdery mildew resistance.

**Woodland Phlox** *Phlox divaricata* Native, 12-15” tall, partial shade to shade. Blooms in spring (April/May) Creeping Phlox *Phlox stolonifera* Native, 6-10” tall, semi-evergreen creeper. Part shade to shade. Blooms in spring.

**White Turtlehead** *Chelone glabra* Native, blooms late summer to fall. 2 – 3’ tall, white flowers often with a pink tinge. Full sun to part shade in moist to wet soils. Sole larval food plant of the Baltimore Checkerspot.

**Joe-Pye Weed** *Eupatorium purpurea* (*Eutrochium purpureum*)
Native, 4 – 8’ tall. Nectar and pollen source butterflies and bees; seed source for birds (turkey, sparrow, goldfinch); blooms summer to fall. Sun to part shade, moist soil. *E. dubium* ‘Little Joe’ a smaller form, 3’.

**New York Ironweed** *Vernonia noveboracensis* Native, 3-5’ tall. Good nectar and pollen source for honey and bumble bees, blooms summer to fall. Found in moist thickets and low areas in full sun, but is drought tolerant. *V. lettermannii* ‘Iron Butterfly’ Narrow-leaved Ironweed Cultivar of native, finer texture. 3’, heat/drought tolerant, but can withstand periodic flooding. Bit more heat/cold hardy – Zones 4-9.

**American Mountain Mint** *Pycnanthemum virginianum*
Native, 2 – 3’. **Clustered Mountain Mint** *Pycnanthemum muticum* Native, 1 – 3’. Blooms July – September, full sun to part shade, average soil. Terrific nectar and pollen source for honey bees; bumble, cuckoo, and sweat bees; tachinid and hover flies, wasps, and beetles visit. Highest number of insect visitors in Penn State Extension Pollinator trial – 51 insects observed in 2 minutes!
Perennial Sunflowers *Helianthus* species Native, good for late-season nectar; bees, beneficials, and butterflies; 50+ species of birds eat seeds. Likes full sun, average soil. Several species adapted to wet or dry. Range of sizes. *Helianthus maximiliani* – latest blooming!


Goldenrod *Solidago spp.* (Oligoneuron spp.) Native, 12” – 4’ tall, depending on species/cultivar. Good nectar and pollen source for butterflies, bees, beneficials; blooms late summer to fall. Goldfinch, junco, pine siskin, and sparrows eat the seeds.

Vines
Trumpet Honeysuckle *Lonicera sempervirens* Native, good for hummingbirds, also fruit in fall (robin, purple finch). Blooms early summer to fall. Sun to shade

Annuals
Violets/Pansies *Viola* species Anywhere from 2” – 8” and blooming spring and fall. Technically a perennial, but not heat tolerant. Larval food plant of Meadow, Great Spangled and Variegated Fritillary; also Giant Leopard Moth. Sun to partial shade, with moist, well drained soil.

Tickseed *Coreopsis tinctoria* Native, 2 – 3’. Good seed source for birds; nectar and pollen source for honey bees, native bees, flies, beetles, and wasps. Blooms all summer. Likes hot, dry, average soils in full sun.

Indian Blanket *Gaillardia pulchella*, Native, 1 – 1.5’. Blooms June to frost. Good nectar and pollen source for honey bees; native bees, lady beetles, lacewings, hover flies also visit. Full sun, dry soil.

Cosmos *C. bipinnatus*: pink, magenta, white, to 5’. *C. sulphureus*: yellow, orange, red, to 3’. Both good for seeds, especially attractive to goldfinches! Both good nectar and pollen source for honey and bumble bees, butterflies, lacewings, hover flies, and parasitic wasps. Both like full sun, average to dry soil.

Verbena *Verbena canadensis* (syn. *Glandularia canadensis*) Native, perennial, treated as an annual, 8” – 18”. Good nectar and pollen source for honey and bumble bees, butterflies; also larval food for several moths. Clumping, spreading habit. ‘Homestead Purple’ very long blooming (spring to fall).

Fan Flower *Scaevola aemula* 8 – 12” tall, trailing up to 2’. Plant in spring after last frost; blooms continue into fall in blue, purple, pink, or white. Flowers are self-cleaning, no deadheading! Full sun to part shade; does well in hot, dry summers. Prefers medium, well-drained soil that is kept evenly moist, but not wet. Allow to dry out between watering to prevent root rot. Great for hanging baskets, window boxes, and landscape beds. Butterflies, honey bees and other pollinators visit flowers.

Globe Amaranth *Gomphrena globosa* 12 – 24” tall; plant in spring after frost; full sun. True flowers are tiny and insignificant. The bright magenta bract arrange in ball-shaped, papery flower heads are showy summer to frost. Colors of pink, purple, lilac and white also available. Long-lasting cut flower; excellent dried flower.

Parsley and Dill Culinary biennial herbs, grown as annuals. Plant spring and fall, sun to part shade.
Larval food of Black Swallowtail.

Bulbs
Crocus species Blooms Feb-March. Honey bees, other pollinators.
Ornamental Onion *Allium* species 1 – 2’. Honey, bumble, digger, and sweat bees; hover flies also visit blooms, spring to fall, depending on the species. Full sun, drought tolerant, deer resistant.

Gardening for Wildlife Resources
- *Garden Plants For Honey Bees*, Peter Lindtner
- National Wildlife Federation: [www.nwf.org](http://www.nwf.org)
- Wildlife Habitat Council: [www.wildlifehc.org](http://www.wildlifehc.org)
- Windstar Wildlife Institute: [www.windstar.org](http://www.windstar.org)
- North American Pollinator Protection Campaign (NAPPC): [www.NAPPC.org](http://www.NAPPC.org)
- Biological Control, a Guide to Natural Enemies in North America: [https://biocontrol.entomology.cornell.edu/index.php](https://biocontrol.entomology.cornell.edu/index.php)

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