

KEYSTONE PLANTS FOR BIRDS IN NORTH CAROLINA PIEDMONT

rank ordered within category

Doug Tallamy has developed the concept of keystone species to describe the native plant genera that support the most caterpillars and thus are one of the best food sources for baby birds. This spreadsheet lists all of the larval host plants from New Hope Audubon's recommended native plants for birds and then rank orders them from most caterpillars supported to least. Thus the "keystone" plants in each category are the ones at the top of each section.

Common name	Scientific name	Benefit to Wildlife	# of caterpillars supported by genus
Trees			
native Oaks (White, Willow, Red, Overcup, Scarlet, Shumard)	<i>Quercus spp.</i>	LH,SE	488
Black cherry	<i>Prunus serotina</i>	BE, NE, LH	362
native Plums (Wild, Chickasaw)	<i>Prunus spp.</i>	LH, BE, NE	362
Carolina Cherry-laurel (e)	<i>Prunus caroliniana</i>	BE, LH, NE	362
River birch	<i>Betula nigra</i>	LH, SE	299
Black willow	<i>Salix nigra</i>	LH	279
Maples (Red, Southern Sugar, Chalk)	<i>Acer spp.</i>	NE,SE, LH	254
Flowering crabapple	<i>Malus angustifolia</i>	BE, LH	245
Hickories	<i>Carya spp.</i>	SE, LH	242
Pines (Shortleaf, Virginia, Longleaf) (e)	<i>Pinus spp.</i>	SE, LH	232
Elms (American, Winged)	<i>Ulmus spp.</i>	SE, LH	171
Hawthorns	<i>Crataegus spp.</i>	NE, BE, LH	138
American beech	<i>Fagus grandifolia</i>	SE, LH	124
Ash (White, Green)	<i>Fraxinus spp.</i>	SE, LH	121
native Dogwoods (Flowering, Silky)	<i>Cornus spp.</i>	NE, BE, LH	101
American Hop-hornbeam	<i>Ostrya virginiana</i>	SE, LH	82
Ironwood	<i>Carpinus caroliniana</i>	SE, LH	71
American persimmon, Common persimmon	<i>Diospyros virginiana</i>	NE, BE, LH	55
Hackberries (Southern, Dwarf)	<i>Celtis spp.</i>	NE, BE, LH	47
American holly (e)	<i>Ilex opaca</i>	BE, NE, LH	44
American Sycamore	<i>Platanus occidentalis</i>	NE, SE, LH	42
Sweetgum	<i>Liquidambar styraciflua</i>	NE, SE, LH	37
Black gum	<i>Nyssa sylvatica</i>	NE, BE, LH	37
Sassafras	<i>Sassafras albidum</i>	BE, LH	32
Eastern red cedar (e)	<i>Juniperus virginiana</i>	BE, LH	29
Eastern Redbud	<i>Cercis canadensis</i>	NE, SE, LH	25
Magnolias (some (e))	<i>Magnolia spp.</i>	BE, LH	24
Tulip Tree, Yellow Poplar	<i>Liriodendron tulipifera</i>	SE, NE, LH	18
Sourwood	<i>Oxydendrum arboreum</i>	NE, LH	14
Pawpaws (Common, Dwarf)	<i>Asimina spp.</i>	BE, LH	12

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Fringe tree	<i>Chionanthus virginicus</i>	BE, LH	12
Shrubs			
Native blueberries (Sparkleberry, Smooth highbush, Deerberry, Rabbit Eye)	<i>Vaccinium spp.</i>	BE, NE, LH	237
Tag Alder	<i>Alnus serrulata</i>	SE, LH	168
native Roses (Carolina/Pasture, Swamp)	<i>Rosa spp.</i>	BE, NE, LH	105
Viburnums (Blackhaw, Southern arrowwood, Maple-leaf, Possumhaw, Downy arrowwood)	<i>Viburnum spp.</i>	BE, NE, LH	99
Serviceberries (Eastern, Downy)	<i>Amelanchier spp.</i>	BE, NE, LH	94
native Azaleas (Sweet, Flame, Swamp,	<i>Rhododendron spp.</i>	NE, LH	53
Sumacs (Smooth, Shining)	<i>Rhus spp.</i>	BE, NE, LH	53
native Hollies (Winterberry, Inkberry (e), Deciduous, Yaupon (e))	<i>Ilex spp.</i>	BE, NE, LH	44
Buckeyes (Red, Painted)	<i>Aesculus spp.</i>	LH,NE,SE	38
New Jersey tea	<i>Ceanothus americanus</i>	LH, NE	37
Ninebark	<i>Physocarpus opulifolius</i>	NE,LH	29
Elderberry	<i>Sambucus canadensis</i>	BE, NE, LH	29
Buttonbush	<i>Cephalanthus occidentalis</i>	SE, NE, LH	24
Mountain Laurel (e)	<i>Kalmia latifolia</i>	SE,NE,LH	23
Spicebush	<i>Lindera benzoin</i>	BE, LH	11
Red Chokeberry	<i>Aronia arbutifolia</i>	BE, NE, LH	3
Carolina allspice, Sweetshrub	<i>Calycanthus floridus</i>	NE, SE. LH	3
American beautyberry	<i>Callicarpa americana</i>	BE, NE, LH	2
Wax myrtle (e)	<i>Morella (Myrica) cerifera</i>	BE, LH	2
Sweet pepperbush	<i>Clethra alnifolia</i>	NE, SE, LH	1
Strawberry-bush, Hearts-a-burstin'	<i>Euonymus americanus</i>	BE, LH	1
Virginia sweetspire	<i>Itea virginica</i>	NE,SE,LH	1
Red chokeberry	<i>Photinia (Aronia) pyrifolia</i>	BE, NE, LH	?
Perennial Flowers			
Goldenrods (Rough, Wreath)	<i>Solidago spp.</i>	NE,SE, LH	102
native Sunflowers (Appalachian, Woodland, Swamp)	<i>Helianthus spp.</i>	SE, NE, LH	64
Common boneset	<i>Eupatorium perfoliatum</i>	NE, LH	33
Crimson-eyed Rose-mallow	<i>Hibiscus moscheutos</i>	NE, LH	28
Ironweed	<i>Vernonia noveboracensis</i>	NE, LH	21
Wild indigos	<i>Baptisia spp.</i>	NE, LH	20
Southern Sundrops	<i>Oenothera fruticosa</i>	NE, SE, LH	17

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Black-eyed susan	<i>Rudbeckia fulgida</i>	NE, SE, LH	16
Green-headed Coneflower	<i>Rudbeckia laciniata</i>	NE, SE, LH	16
Wild quinine	<i>Parthenium integrifolium</i>	NE, LH	15
Milkweeds (Eastern Swamp, Butterflyweed)	<i>Asclepias</i> spp. (native)	NE, LH	13
Beebalm (Spotted Horsemint, Wild Bergamot, Scarlet Beebalm)	<i>Monarda</i> spp.	NE, LH	12
native fall Asters (Eastern aromatic, Smooth blue, Largeflower)	<i>Symphotrichum</i> spp.	SE, NE, LH	11
Wild Columbine	<i>Aquilegia canadensis</i>	NE, SE, LH	10
Lyre-leaf Sage	<i>Salvia lyrata</i>	NE, LH	8
Beardtongues	<i>Penstemon</i> spp. (native)	NE, LH	7
Phlox (Eastern Blue, Trailing, Creeping, Garden)	<i>Phlox</i> spp.	NE, LH	7
Coreopsis (Threadleaf, Lobed tickseed, Star tickseed, Greater tickseed)	<i>Coreopsis</i> spp.	SE, NE, LH	6
Cardinal flower	<i>Lobelia cardinalis</i>	NE, SE, LH	6
Maryland golden-aster	<i>Chrysopsis mariana</i>	NE, LH	5
Blazing star	<i>Liatris</i> spp.	NE, SE, LH	5
Mountain-mint (Silverleaf, Short-toothed, Narrow-leaf)	<i>Pycnanthemum</i> spp.	NE, LH	4
Fire pink	<i>Silene virginica</i>	SE, NE, LH	4
Joe-Pye weed	<i>Eutrochium fistulosum</i>	SE, NE, LH	2
Eastern Solomon's-plume, False Solomon's-seal	<i>Maianthemum racemosum</i>	BE, NE, LH	2
Bloodroot, Red Puccoon	<i>Sanguinaria canadensis</i>	NE, BE, LH	2
Eastern bluestar	<i>Amsonia tabernaemontana</i>	NE, LH	1
Purple coneflower	<i>Echinacea purpurea</i>	SE, NE, LH	1
Golden alexander	<i>Zizia aurea</i>	NE, LH	1
White wood aster	<i>Eurybia divaricata</i>	SE, NE, LH	?
Carolina False Lupine	<i>Thermopsis villosa</i>	LH	?
Grasses and sedges			
Switchgrass	<i>Panicum virgatum</i>	SE, LH	31
Bluestem	<i>Andropogon</i> spp.	SE, LH	19
Little bluestem	<i>Schizachyrium scoparium</i>	SE, LH	9
Yellow indian grass	<i>Sorghastrum nutans</i>	SE, LH	8
River oats	<i>Chasmanthium latifolium</i>	SE, LH	7
Pink muhly	<i>Muhlenbergia capillaris</i>	SE, LH	3
native Sedges (many species)	<i>Carex</i> spp.	SE, LH	?

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Vines			
Coral honeysuckle	<i>Lonicera sempervirens</i>	NE, BE, LH	31
Virginia creeper	<i>Parthenocissus quinquefolia</i>	BE, LH	29
Lanceleaf greenbrier, Jacksonbrier (e)	<i>Smilax smallii</i>	NE, BE, LH	19
Trumpet creeper	<i>Campsis radicans</i>	NE, LH	7
Yellow Passionflower	<i>Passiflora lutea</i>	NE, BE, LH	5
Cross-vine (e)	<i>Bignonia capreolata</i>	NE, LH	2
Butterfly pea	<i>Centrosema virginianum</i>	NE, LH	2
Pipevine	<i>Isotrema macrophylla</i>	NE, LH	1

KEY

Evergreen:	Marked with " (e) " next to plant name		
Benefit to Wildlife:	LH = larval host, SE = seed/nut producing, BE = berry/fruit producing, NE = nectar producing		
# of Caterpillars supported	This is for the entire genus rather than each species. It relates to Doug Tallamy's concept of Keystone genera that he recommends planting to provide the most food for wildlife		
Primary source for Keystone species (# of caterpillars supported)	https://www.nwf.org/NativePlantFinder/About		
Compiled by New Hope Audubon Society, serving Chatham, Durham, and Orange Counties in North Carolina newhopeaudubon.org			