



Native Trees and Shrubs Important for Lepidoptera Species in the Eastern United States



PLANT GENUS	COMMON NAME	NUMBER OF LEPIDOPTERA SPECIES
<i>Quercus</i>	Oak	518
<i>Prunus</i>	Cherry, Plum	429
<i>Salix</i>	Willow	440
<i>Betula</i>	Birch	400
<i>Populus</i>	Poplar	358
<i>Acer</i>	Maple	287
<i>Vaccinium</i>	Blueberry	286
<i>Malus</i>	Crabapple	284
<i>Alnus</i>	Alder	248
<i>Carya</i>	Hickory	233
<i>Ulmus</i>	Elm	206
<i>Pinus</i>	Pine	191
<i>Rubus</i>	Blackberry, Raspberry	151
<i>Crataegus</i>	Hawthorn	150
<i>Picea</i>	Spruce	146
<i>Tilia</i>	Basswood	142
<i>Fraxinus</i>	Ash	141
<i>Castanea</i>	Chestnut	125
<i>Corylus</i>	Hazel	124
<i>Fagus</i>	Beech	124
<i>Juglans</i>	Walnut	123
<i>Rosa</i>	Rose	122
<i>Amelanchier</i>	Serviceberry	119
<i>Cornus</i>	Dogwood	115
<i>Viburnum</i>	Viburnum	97
<i>Ostrya</i>	Ironwood	91

Lepidoptera data from Tallamy and Shropshire 2008 and WV native plants from the Checklist and Atlas of the Vascular Flora of West Virginia

Native Trees and Shrubs in West Virginia

<i>QUERCUS</i> (OAK)	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	Soil pH
White oak (<i>Q. alba</i>)	50-80'	No	Intermediate	Dry-Moist	6.0-8.0
Swamp white oak (<i>Q. bicolor</i>)	60-75'	No	Intermediate	Moist-Wet	6.0-8.0
Scarlet oak (<i>Q. coccinea</i>)	60-80'	No	Intolerant	Dry-Moist	<6.0
Southern red oak (<i>Q. falcata</i>)	60-80'	No	Intolerant	Dry-Moist	<6.0
Scrub oak (<i>Q. ilicifolia</i>)	3-30'	No	Intolerant	Dry	4.0-7.5
Shingle oak (<i>Q. imbricaria</i>)	40-60'	No	Intermediate	Moist	<6.8
Bur oak (<i>Q. macrocarpa</i>)	70-80'	No	Intermediate	Moist	<6.8
Blackjack oak (<i>Q. marilandica</i>)	30-50'	No	Intermediate	Dry-Moist	5.0-8.0
Chinquapin oak (<i>Q. muehlenbergii</i>)	40-50'	No	Intolerant	Dry-Moist	<7.0
Pin oak (<i>Q. palustris</i>)	60-70'	No	Intolerant	Moist-Wet	5.0-6.5
Chestnut oak (<i>Q. montana</i>)	50-70'	No	Intermediate	Moist-Dry	4.5-7.0
Red oak (<i>Q. rubra</i>)	60-75'	No	Intermediate	Dry-Moist	4.0-7.0
Post oak (<i>Q. stellata</i>)	30-80'	No	Intolerant	Dry-Moist	4.3-7.0
Black oak (<i>Q. velutina</i>)	60-80'	No	Intermediate	Dry	4.5-6.5
<i>PRUNUS</i> (CHERRY AND PLUM)					
Pin cherry (<i>P. pensylvanica</i>)	5-15'	Yes	Intolerant	Dry-Moist	6.8-7.2
Wild black cherry (<i>P. serotina</i>)	50-80'	Yes	Intolerant	Dry-Moist	5.6-7.5
Choke cherry (<i>P. virginiana</i>)	20-30'	Yes	Intolerant	Dry-Moist	6.0-7.6
<i>SALIX</i> (WILLOW)					
Ward's willow (<i>S. caroliniana</i>)	20-30'	Yes	Tolerant	Wet	6.3
Heartleaf willow (<i>S. eriocephala</i>)	6-22'	Yes	Intermediate	Wet-Moist	4.0-7.0
Upland willow (<i>S. humilis</i>)	6-10'	Yes	Intermediate	Moist-Dry	6.1-7.5
Sandbar willow (<i>S. interior</i>)	6-22'	Yes	Intermediate	Wet	5.5-8.0
Black willow (<i>S. nigra</i>)*	70-80'	Yes	Intermediate	Moist-Wet	5.1-7.8
Silky willow (<i>S. sericea</i>)	6-15'	Yes	Intermediate	Moist-Wet	5.5-8.0

*=can be aggressive, spreads rapidly

<i>BETULA</i> (BIRCH)	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	Soil pH
Yellow birch (<i>B. alleghaniensis</i>)	40-70'	No	Intermediate	Moist	6.5-8.0
Black birch (<i>B. lenta</i>)	60-70'	No	Intermediate	Moist-Dry	6.0-8.0
River birch (<i>B. nigra</i>)	40-70'	No	Intermediate	Moist-Wet	5.0-6.5
<i>POPULUS</i> (POPLAR)					
Cottonwood (<i>P. deltoides</i>)	80-90'	No	Intermediate	Dry-Wet	6.8-7.2
Bigtooth aspen (<i>P. grandidentata</i>)	60-80'	No	Intolerant	Moist	5.5-8.0
Quaking aspen (<i>P. tremuloides</i>)	66-82'	No	Intolerant	Dry-Moist	5.5-8.0
<i>ACER</i> (MAPLE)					
Boxelder (<i>A. negundo</i>)	40-70'	No	Tolerant	Moist	6.5-7.5
Striped maple (<i>A. pensylvanicum</i>)	15-45'	No	Tolerant	Moist	5.0-7.4
Red maple (<i>A. rubrum</i>)	60-90'	Yes	Tolerant	Wet-Dry	4.5-6.5
Silver maple (<i>A. saccharinum</i>)	80-100'	Yes	Tolerant	Moist-Dry	4.5-7.0
Sugar maple (<i>A. saccharum</i>)	90-120'	No	Tolerant	Moist	5.5-7.3
Mountain maple (<i>A. spicatum</i>)	10-25'	No	Tolerant	Moist	4.5-6.5
<i>VACCINIUM</i> (BLUEBERRY AND CRANBERRY)					
Lowbush blueberry (<i>V. angustifolium</i>)	2-24''	Yes	Tolerant	Dry-Moist	4.2-5.2
Highbush blueberry (<i>V. corymbosum</i>)	5-8'	Yes	Intermediate	Dry-Wet	4.5-5.5
Velvetleaf blueberry (<i>V. myrtilloides</i>)	4-35''	Yes	Intermediate	Dry-Moist	3.0-6.0
Upland low blueberry (<i>V. pallidum</i>)	2-3'	Yes	Intermediate	Moist-Dry	4.2-5.2
Deerberry (<i>V. stamineum</i>)	5-15'	Yes	Intermediate	Dry-Moist	3.4-5.9
<i>MALUS</i> (CRABAPPLE)					
Southern crabapple (<i>M. angustifolia</i>)	20-30'	Yes	Intermediate	Moist	5.0-6.5
Sweet crabapple (<i>M. coronaria</i>)	15-30'	Yes	Intermediate	Moist	5.5-7.5
<i>ALNUS</i> (ALDER)					
Speckled alder (<i>A. incana</i>)	20-35'	No	Intermediate	Wet-Moist	3.4-7.7
Brookside alder (<i>A. serrulata</i>)	10-20'	No	Intermediate	Wet-Moist	5.0-7.0

<i>CARYA</i> (HICKORY)	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	Soil pH
Mockernut hickory (<i>C. alba</i>)	65-100'	No	Intolerant	Dry-Moist	5.0-7.0
Bitternut hickory (<i>C. cordiformis</i>)	60-100'	No	Intolerant	Moist	5.5-7.5
Pignut hickory (<i>C. glabra</i>)	50-100'	No	Intermediate	Moist	5.0-8.0
Shellbark hickory (<i>C. laciniosa</i>)	60-100'	No	Tolerant	Moist-Wet	6.4-7.4
Red hickory (<i>C. ovalis</i>)	50-80'	No	Intermediate	Moist-Dry	5.0-8.0
Shagbark hickory (<i>C. ovata</i>)	70-100'	No	Intermediate	Moist-Dry	6.0-8.0

ULMUS (ELM)

American elm (<i>U. americana</i>)	80-100'	No	Intermediate	Moist	5.5-8.0
Slippery elm (<i>U. rubra</i>)	40-70'	No	Tolerant	Moist	6.5-8.0

PINUS (PINE)

Shortleaf pine (<i>P. echinata</i>)	100-125'	No	Intolerant	Dry-Moist	4.5-7.0
Table Mountain pine (<i>P. pungens</i>)	60-90'	No	Intolerant	Dry	4.5-5.5
Pitch pine (<i>P. rigida</i>)	50-83'	No	Intolerant	Dry-Wet	3.4-4.5
White pine (<i>P. strobus</i>)	150-210'	No	Intermediate	Dry-Moist	4.0-7.0
Scrub pine (<i>P. virginiana</i>)	35-60'	No	Intolerant	Dry-Moist	4.6-7.9

RUBUS (BLACKBERRY AND RASPBERRY) *

Common blackberry (<i>R. allegheniensis</i>)	4-8'	Yes	Intermediate	Moist-Dry	5.5-6.0
Thornless blackberry (<i>R. canadensis</i>)	7-10'	Yes	Intermediate	Dry-Moist	5.5-6.0
Black raspberry (<i>R. occidentalis</i>)	6-10'	Yes	Intermediate	Moist-Dry	5.5-7.0
Purple flowering raspberry (<i>R. odoratus</i>)	6-12'	Yes	Intermediate	Moist	5.5-6.8

*=*Rubus* spp (over 80 species found in WV, considerable interbreeding and most very difficult to ID)

CRATAEGUS (HAWTHORN) *

Cockspur hawthorn (<i>C. crus-galli</i>)	25-35'	Yes	Intermediate	Moist	6.0-7.5
Dotted hawthorn (<i>C. carolina</i>)	20-35'	Yes	Intermediate	Moist	6.0-7.5
Variable hawthorn (<i>C. macrosperma</i>)	12-26'	Yes	Intermediate	Moist	6.0-7.5
Washington hawthorn (<i>C. phaenopyrum</i>)	25-30'	Yes	Intermediate	Moist	6.0-7.5
Fleshy hawthorn (<i>C. succulenta</i>)	8-25'	Yes	Intermediate	Dry-Wet	6.0-7.5
Green Haw (<i>C. viridis</i>)	20-35'	Yes	Intermediate	Moist-Dry	6.0-7.5

*=Over 20 species found in WV, considerable interbreeding and very difficult to distinguish most

<i>PICEA</i> (SPRUCE)	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	Soil pH
Red spruce (<i>P. rubens</i>)	60-75'	No	Tolerant	Moist	4.0-5.5
<i>TILIA</i> (BASSWOOD OR LINDEN)					
Basswood (<i>T. americana</i>)	75-130'	Yes	Tolerant	Moist	4.5-7.5
White basswood (<i>T. heterophylla</i>)	50-120'	Yes	Intermediate	Moist	4.5-7.5
<i>FRAXINUS</i> (ASH)					
White ash (<i>F. americana</i>)	60-90'	No	Intermediate	Moist	5.0-7.5
Green ash (<i>F. pennsylvanica</i>)	50-60'	No	Tolerant	Moist-Wet	3.6-7.5
<i>CASTANEA</i> (CHESTNUT)					
Chestnut (<i>C. dentata</i>)	*90-100'	No	Tolerant	Dry-Moist	4.5-6.5
Chinquapin (<i>C. pumila</i>)	6-65'	No	Intermediate	Dry-Moist	6.5-7.5
* = Historical records, average height now is approximately 20-30' due to chestnut blight					
<i>CORYLUS</i> (HAZEL)					
Hazelnut (<i>C. americana</i>)	3-10'	No	Tolerant	Moist	5.5-7.5
Beaked hazelnut (<i>C. cornuta</i>)	12-20'	No	Intermediate	Moist-Dry	5.8-7.5
<i>FAGUS</i> (BEECH)					
American beech (<i>F. grandifolia</i>)	60-80'	No	Tolerant	Moist	5.0-6.5
<i>JUGLANS</i> (WALNUT)					
Butternut (<i>J. cinerea</i>)	40-60'	No	Intolerant	Moist	5.0-7.5
Black walnut (<i>J. nigra</i>)	50-90'	No	Intolerant	Moist	5.0-7.5
<i>ROSA</i> (ROSE)					
Pasture rose (<i>R. carolina</i>)	3-6'	Yes	Intermediate	Moist-Dry	6.0-8.5
Swamp rose (<i>R. palustris</i>)	3-6'	Yes	Intermediate	Moist-Wet	5.6-6.5
Prairie rose (<i>R. setigera</i>)	8-15'	Yes	Intolerant	Dry-Moist	7.0-8.0
Virginia rose (<i>R. virginiana</i>)	4-6'	Yes	Intermediate	Moist	6.0-8.0

<i>AMELANCHIER</i> (SERVICEBERRY)	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	Soil pH
Common serviceberry (<i>A. arborea</i>)	15-30'	Yes	Intermediate	Dry-Moist	5.5-7.0
Canadian Serviceberry (<i>C. canadensis</i>)	15-25'	Yes	Intermediate	Moist	5.5-7.0
Smooth serviceberry (<i>A. laevis</i>)	6-10'	Yes	Intermediate	Moist	5.5-7.0
Roundleaf serviceberry (<i>A. sanguinea</i>)	6-10'	Yes	Intermediate	Moist	5.5-7.0
Low serviceberry (<i>A. stolonifera</i>)	3-5'	Yes	Intermediate	Dry-Moist	5.5-7.0
Neglected serviceberry (<i>A. neglecta</i>)	15-30'	Yes	Intermediate	Moist	5.5-7.0

CORNUS (DOGWOOD)

Alternate-leaved dogwood (<i>C. alternifolia</i>)	15-25'	Yes	Intermediate	Moist	5.8-7.5
Silky cornel (<i>C. amomum</i>)	6-12'	Yes	Tolerant	Moist	<6.0
Flowering dogwood (<i>C. florida</i>)	15-30'	Yes	Intermediate	Moist	5.5-6.0
Silky dogwood (<i>C. obliqua</i>)	6-12'	Yes	Intermediate	Moist	6.0-8.5
Panicled dogwood (<i>C. racemosa</i>)	10-15'	Yes	Intermediate	Moist	6.8-7.2
Red-osier dogwood (<i>C. sericea</i>)	6-10'	Yes	Intermediate	Moist-Wet	6.8-7.2

VIBURNUM (VIBURNUM)

Maple-leaf viburnum (<i>V. acerifolium</i>)	3-6'	Yes	Tolerant	Moist	5.0-6.5
Rough arrowwood (<i>V. dentatum</i>)	6-15'	Yes	Intermediate	Moist-Wet	5.0-8.0
Hobblebush (<i>V. lantanoides</i>)	3-10'	Yes	Tolerant	Moist-Wet	5.5-6.5
Cranberry tree (<i>V. trilobum</i>)	8-12'	Yes	Intermediate	Moist	4.5-7.0
Black haw (<i>V. prunifolium</i>)	12-15'	Yes	Intermediate	Moist	5.0-8.5
Smooth arrowwood (<i>V. recognitum</i>)	5-15'	Yes	Intermediate	Moist	4.4-7.0

OSTRYA (IRONWOOD)

Ironwood or hop hornbeam (<i>O. virginiana</i>)	20-50'	No	Intermediate	Moist	4.2-7.6
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Selecting a native tree or shrub with nectar can provide food to bees, adult lepidoptera, and other beneficial insects.



Many of these trees and shrubs do not have nectar, however, many bee species will collect pollen from wind pollinated species.



Birds prefer to nest and forage in specific areas of the tree and shrub layer, so providing many diverse heights will accommodate greater bird biodiversity.