



## NATIVE TREES for Riparian Buffers in the Upper Connecticut River Valley of New Hampshire and Vermont

NAME	DECID/ EVERGR	MATURE HEIGHT	GROWTH RATE	ROOTING	LIGHT PREFERENCE		SOIL PREFERENCE			WILDLIFE HABITAT & FOOD VALUE	ORNAMENTAL VALUE	BANK STABILIZING VALUE	HARDINESS ZONE
					full/ part shade	full sun	dry	moist	flood tolerant				
Silver maple <i>Acer saccharinum</i>	d	60'	moderate	shallow	x	x		x	x	low – moderate; provides cover	silvery foliage	very good, esp. for flood chute	4
Box elder <i>Acer negundo</i>	d	40-70'	very fast	deep lateral		x	x	x	x	low - seeds eaten; provides cover		very good, esp. for flood chute	3
Pagoda dogwood <i>Cornus alternifolia</i>	d	15'	fast	shallow	x	x		x		high – fruits eaten by many birds inc. bluebirds, turkey, grouse	elegant branching habit; white flowers	very good	3
Black willow <i>Salix nigra</i>	d	50'	very fast	very shallow		x		x	x	high – cover for nesting	new foliage is attractively colored	excellent, esp. for flood chute	3
Red maple <i>Acer rubrum</i>	d	40–75'	moderate to fast	very shallow		x	x	x	x	high – seeds, buds eaten by birds & mammals	early red flowers, bright fall color	very good	3
Striped maple <i>Acer pensylvanicum</i>	d	20–35'	moderate	shallow	x			x		low – moderate	white striped bark attractive all seasons		3
Sugar maple <i>Acer saccharum</i>	d	60–100'	slow	shallow	x	x		x		moderate – seeds and buds eaten by large & small mammals, seeds eaten by grosbeaks & finches	excellent fall color, attractive shape		3
American beech <i>Fagus grandifolius</i>	d	70–90'	slow	shallow	x	x	x	x		high – nuts valued by large and small mammals, turkey, favorite tree for black bears	smooth gray bark in winter, copper fall color		3
Black cherry <i>Prunus serotina</i>	d	40–60'	moderate	deep taproot	x		x			high – berries eaten by many songbirds, mammals, inc. thrushes, foxes, bears, raccoons; avoid planting near areas used by livestock	flowers, attractive reddish brown bark; <i>however</i> , prone to tent caterpillar		3
Wild plum <i>Prunus nigra</i>	d	25'	moderate	shallow	x	x	x	x		moderate	early white flowers, attractive black bark; handsome fall foliage		3
American mountain ash <i>Sorbus americana</i>	d	25'	fast	shallow	x	x	x	x		high – early fruit eaten by grosbeaks, bluebirds	attractive shape, good for small lawns; brilliant orange red fall foliage, showy white flowers, clusters of bright red or orange berries		3
Shadbush, serviceberry <i>Amelanchier laevis</i>	d	15–25'	slow	shallow	x	x	x	x	x	high – berries eaten by many songbirds; bluebirds, cardinals, orioles, thrushes	masses of early white flowers, berries, bright fall color; effective screening		4
Black walnut <i>Juglans nigra</i>	d	50–75'	moderate	very deep	x			x		high – nuts eaten by mammals; plant away from edge of water and from gardens: a chemical in the roots and husks of nuts affects fish and many garden plants	edible nuts, attractive shape		4
Northern red oak <i>Quercus rubra</i>	d	60–80'	moderate	deep lateral	x	x	x	x		high – acorns for bear, raccoon, turkey, grouse; favored by hawks for nesting	attractive shape, fine fall color		3
Yellow birch <i>Betula allegheniensis</i>	d	60–90'	slow	shallow/ moderate	x		x	x		high – seeds favorite winter food of pine siskins and redpolls; also snowshoe hare; used by hawks for nesting	shining golden bark		3

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					full/ part shade	full sun	dry	moist	flood tolerant				
Paper birch <i>Betula papyrifera</i>	d	50–75'	fast	shallow		x	x	x		moderate – seeds eaten by grouse, siskins; buds by small mammals	attractive white bark (avoid planting in public areas to avoid problem of bark stripping)		3
Grey birch <i>Betula populifolia</i>	d	20–35'	fast	shallow			x	x		moderate – seeds, buds	gray bark		3
Black birch <i>Betula lenta</i>	d	50–75'	moderate	shallow	x			x		moderate – catkins, seeds	reddish brown bark		4
Hophornbeam <i>Ostrya virginiana</i>	d	25–50'	slow	shallow	x	x	x	x		moderate – seeds	yellow fall color; red bark		4
American hornbeam <i>Carpinus caroliniana</i>	d	20–30'	slow	moderate	x	x	x	x	x	moderate – seeds eaten by birds, squirrels	gray bark, fall color		3
White ash <i>Fraxinus americana</i>	d	70–100'	moderate	shallow	x	x		x	x	moderate	purple fall color		3
Green ash <i>Fraxinus pennsylvanica</i>	d	60–80'	fast	shallow	x	x		x	x	low	purple fall color	very good	3
Black ash <i>Fraxinus nigra</i>	d	60–80'	moderate	shallow	x			x	x	moderate	wood used for splint baskets	excellent	3
Basswood <i>Tilia americana</i>	d	70–80'	moderate	deep	x	x		x		moderate	attractive foliage and shape		3
Balsam poplar <i>Populus balsamea</i>	d	60–80'	fast	shallow		x	x	x		low	can be brittle and drop branches	very good	3
Eastern cottonwood <i>Populus deltoides</i>	d	80–100'	fast	shallow		x	x	x	x	low – grouse browse catkins	can be brittle and drop branches		3
Quaking aspen <i>Populus tremuloides</i>	d	40–60'	fast	shallow		x	x	x		moderate – beaver, porcupine, deer; favorite food of beaver and snowshoe hare; buds important to grouse	can be brittle and drop branches; fluttering gray–green leaves		3
White pine <i>Pinus strobus</i>	e	70–100'	moderate	shallow		x	x	x		high – food & cover for birds & mammals, inc. crossbills and cardinals	feathery foliage; good year–round screen		3
Red pine <i>Pinus resinosa</i>	e	50–80'	moderate	shallow		x	x	x		moderate	orange–red bark; good year–round screen		4
White spruce <i>Picea glauca</i>	e	40–70'	moderate	shallow	x	x	x	x		moderate – seeds	foliage; windbreak, screen		3
Balsam fir <i>Abies balsamea</i>	e	50–75'	fast	shallow		x		x	x	high – seeds; bird roosting, nesting	fragrant, glossy foliage, attractive habit, Xmas trees		3
Hemlock <i>Tsuga canadensis</i>	e	40–70'	moderate	shallow lateral	x		x	x		moderate – winter deer cover, seeds eaten by small mammals, chickadees, siskins, crossbills, grouse; nesting cover for warblers	attractive foliage, habit; screen		3
Northern white cedar <i>Thuja occidentalis</i>	e	25–50'	slow/mod	shallow		x		x	x	moderate – winter cover	attractive foliage; screen		3
Tamarack <i>Larix laricina</i>	d	40–80'	variable	moderate		x		x	x	high	pale new foliage; yellow fall color		3



## NATIVE GROUND COVERS, Vines, and Herbaceous Perennials for Riparian Buffers in the Upper Connecticut River Valley of New Hampshire and Vermont

NAME	DECID/ EVERGR	HT	LIGHT PREFERENCE		SOIL PREFERENCE			WILDLIFE HABITAT & FOOD VALUE	ORNAMENTAL VALUE
			full/part shade	full sun	dry	moist	flood tolerant		
Riverbank grape <i>Vitis riparia</i>	d	25'	x	x		x	x	very high – fruits a favorite of turkeys, grouse, wood duck, pileated woodpeckers, & mammals inc. bear	vines useful for making wreaths
Virginia creeper, woodbine <i>Parthenocissus quinquefolia</i>	d	25'	x	x	x	x		moderate – provides cover; pileated woodpecker, crested flycatcher, vireo	foliage – good cover for walls and rockpiles when leafed out
Partridge berry <i>Mitchella repens</i>	e	2"	x		x	x		high – berries eaten by grouse & mammals	dark green, glossy foliage; paired white flowers in June; bright red berries in late summer, fall
Bearberry <i>Arctostaphylos uva-ursi</i>	e	1'		x	x			high – fruits	handsome foliage; good ground cover
Wintergreen <i>Gaultheria procumbens</i>	e	4"	x			x		high – fruits	flowers, fruits, glossy aromatic foliage
Blue flag iris <i>Iris versicolor</i>	d	1-3'		x		x	x	low	showy purple-blue flowers in late spring
Milkweed <i>Asclepias tuberosa</i>	d	2		x		x		very high – one of most important butterfly plants; monarchs rely exclusively on it; hummingbirds & many other insects use flower nectar	fragrant pink-purple flowers; distinctive seed pods useful for decorations
Blue-eyed grasses <i>Sisyrinchium spp.</i>	d	1'		x	x	x		low	stiff, grass-like plants with blue-violet flowers
Ginseng <i>Panax quinquefolius</i>	d	8-16"	x			x		low	woodland wildflower of pharmaceutical interest. Wild populations are suffering from over-collecting, but cultivated plants could be harvested from a forested riparian buffer.
Bunchberry <i>Cornus canadensis</i>	e	6"	x			x		high – fruits eaten by birds and mammals	showy white spring flowers and red summer berries, purplish fall color; excellent ground cover
Foamflower <i>Tiarella cordifolia</i>	d	1'	x			x		low	small star-like flowers in a loose spike
Twinflower <i>Linnaea borealis</i>	e	6"	x			x		low	trailing plant; white and pink paired flowers
Marsh marigold <i>Caltha palustris</i>	d	1-2'		x		x	x	low	early yellow flowers
Whorled loosestrife <i>Lysimachia quadrifolia</i>	d	4'	x	x	x	x		low	yellow flowers with red markings; attractive foliage; not related to invasive purple loosestrife
Cardinal flower <i>Lobelia cardinalis</i>	d	2-4'		x		x	x	moderate – hummingbirds attracted to flowers	brilliant red flowers
Blue false indigo <i>Baptisia australis</i>	d	3-4'	x	x	x	x		low	large dark blue or violet flowers
Joe pye weed <i>Eupatorium purpureum</i>	d	5-6'		x		x	x	high – butterflies are attracted to flowers	large flat-topped cluster of fuzzy purple flowers
Boneset <i>Eupatorium perfoliatum</i>	d	4-6'		x	x	x		high – attracts butterflies & other insects	white flowers

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			full/part shade	full sun	dry	moist	flood tolerant		
Wild lupine <i>Lupinus perennis</i>	d	1-3'		x	x	x		low	purple-blue flower spires in June; attractive foliage
Harebell <i>Campanula rotundifolia</i>	d	1'	x		x			low	delicate wildflower with blue-lavender bell shaped flowers
Jewelweed <i>Impatiens capensis</i>	d	1-3'	x	x		x	x	high – favored by hummingbirds, butterflies	orange flowers in summer; seed capsules burst when touched; juice of plant said to help defend against exposure to poison ivy
Daisy <i>Chrysanthemum leucanthemum</i>	d	1-4'		x	x	x		moderate – seeds favored by finches; common nectar source for butterflies	familiar white ray flower with yellow center
Goldenrod <i>Solidago</i> spp.	d	1-5'		x	x	x		moderate – seeds eaten by finches; nectar by butterflies	many species of wildflowers in midsummer to early fall; all except silverrod are yellow
New England aster <i>Aster novae-angliae</i>	d	5'		x	x	x		high – seeds used by songbirds; attracts butterflies	late summer/fall purple flowers with yellow centers
Christmas fern <i>Polystichum acrostichoides</i>	e	1'	x			x		low	evergreen ground cover; glossy foliage
Hay-scented fern <i>Dennstaedtia punctilobula</i>	d	2'	x	x	x	x		low	fragrant light-green foliage; spreads well, forms pure stands; tolerates full sun
Bracken fern <i>Pteridium aquilinum</i>	d	2-3'	x	x	x			low	sturdy foliage; tolerates full sun
Cinnamon fern <i>Osmunda cinnamomea</i>	d	3-4'	x			x	x	low	vase-shaped clusters; handsome foliage; cinnamon colored fertile fronds
Royal fern <i>Osmunda regalis</i>	d	6'	x	x		x	x	low	handsome foliage; new crosiers edible as “fiddle heads”
Interrupted fern <i>Osmunda claytoniana</i>	d	3-4'	x			x		low	vase-shaped clusters
Sensitive fern <i>Onoclea sensibilis</i>	d	2'	x			x	x	low	fertile fronds used in dried arrangements
Cattail <i>Typha latifolia</i>	d	6'		x		x	x	high – seed heads valuable food for birds	strap shaped leaves; brown seed head is distinctive and often used in horticultural arrangements
Reed grass <i>Calamagrostis canadensis</i>	d	5'		x		x	x	moderate	attractive grass forms clumps, stabilizes soils well
Pennsylvania sedge <i>Carex pensylvanica</i>	d	2'		x	x			low	forms low turf on sunny dry soils
Tussock sedge <i>Carex stricta</i>	d	4'		x		x	x	moderate – food for sparrows, grouse, snipe, others	forms clumps or tussocks
Rattlesnake manna grass <i>Glyceria canadensis</i>	d	3'		x		x		moderate	grass with delicate and distinctive inflorescence; plant in clusters where no competition by others is likely
Rice cutgrass <i>Leersia oryzoides</i>	d	5'		x		x	x	high – food for waterfowl; cover for fish, reptiles, amphibians	attractive seed head
Tufted hair grass <i>Deschampsia caespitosa</i>	d	4'				x		moderate	attractive seed head
Reed canary grass <i>Phalaris arundinacea</i>	d	2-8'		x	x	x	x	moderate – provides cover but European form is very aggressive, especially in wetlands, and can overtake plants with better wildlife value	excellent for bank stabilization, plant only where needed for soil stability, such as on the entrance to flood chutes



## NATIVE SHRUBS for Riparian Buffers in the Upper Connecticut River Valley of New Hampshire and Vermont

NAME	DECID/ EVERGR	MATURE HEIGHT	GROWTH RATE	LIGHT PREFERENCE		SOIL PREFERENCE			WILDLIFE HABITAT & FOOD VALUE	ORNAMENTAL VALUE	BANK STABILIZING VALUE	HARDINESS ZONE
				full/ part shade	full sun	dry	moist	flood tolerant				
Silky dogwood <i>Cornus amomum</i>	d	6-10'	fast	x	x	x	x	x	high – fruits eaten by birds & mammals; cover	purple twigs	excellent	4
Grey dogwood <i>Cornus racemosa</i>	d	10'	moderate	x	x	x	x		very high – fruit eaten by grouse and pheasant	small whitish flower cluster, white fruits	very good	4
Red osier dogwood <i>Cornus sericea, ssp. stolonifera</i>	d	4-8'	fast	x	x		x	x	high – whitish fruit eaten by birds	bright red stems attractive in winter; white flowers	very good	3
Willows <i>Salix spp.</i>	d	4-10'	fast		x		x	x	high – provides good cover	foliage	excellent	3
Pussy willow <i>Salix discolor</i>	d	20'	fast		x		x	x	moderate – nesting; buds eaten; male flowers attract butterflies	early buds are used in horticultural arrangements	excellent	3
Buttonbush <i>Cephalanthus occidentalis</i>	d	6-12'	moderate	x	x		x	x	moderate – high; nectar used by hummingbirds; waterfowl eat seed	white pom-pom like flower clusters; glossy foliage	excellent	4
Highbush blueberry <i>Vaccinium corymbosum</i>	d	6-12'	slow	x	x	x	x	x	high – fruits eaten by birds & mammals; favorite of scarlet tanagers, bluebirds, grouse	flowers, fruits, bright fall color, attractive habit		3
Lowbush blueberry <i>Vaccinium angustifolium</i>	d	1 -2'	slow	x	x	x	x		high – fruits eaten by birds and mammals	flowers, fruits, scarlet fall color, good ground cover		3
Black chokeberry <i>Aronia melanocarpa</i>	d	10'	moderate	x	x	x	x	x	very high – fruits	purple fruits, purple fall color		4
Pin cherry, bird cherry <i>Prunus pennsylvanica</i>	d	30'	fast		x	x			high – fruits used by birds	shining dark red bark, white flower clusters, red fruits		3
Chokecherry <i>Prunus virginiana</i>	d	15-25'	moderate	x	x	x	x		moderate – fruits, cover	flowers, fruits, good fall color		3
American cranberry bush <i>Viburnum trilobum</i>	d	10'	slow to moderate	x	x	x	x	x	high – fruits persist into winter	white flower clusters, scarlet fruits, good fall color		3
Wild raisin, witherod <i>Viburnum cassinoides</i>	d	6-10'	moderate	x			x	x	high – fruit eaten by grouse, songbirds; rabbits & deer browse twigs	white flowers, edible blue-black fruits, good fall color		4
Nannyberry <i>Viburnum lentago</i>	d	10-20'	moderate	x	x	x	x		high – fruits remain into winter	fruits, good fall color		3
Northern arrowwood <i>Viburnum recognitum</i>	d	10-15'	moderate	x	x		x	x	moderate – fruits eaten by birds; nesting	flowers, blue fruits, good fall color		3
Maple-leaf viburnum <i>Viburnum acerifolium</i>	d	3-6'	moderate	x	x		x		moderate – fruits eaten by birds	fruits, attractive foliage, good fall color		3
Hobblebush <i>Viburnum alnifolium</i>	d	10'	moderate	x			x	x	moderate – fruits eaten by birds	very showy white flower clusters in halo arrangement; purple fall color; open habit		4
Winterberry holly <i>Ilex verticillata</i>	d	6-10'	slow	x	x		x	x	high – fruits eaten by flickers, thrushes, cedar waxwings, also birds in winter	attractive bright red berries persist into winter, make excellent Xmas decorations		3
Inkberry holly <i>Ilex glabra</i>	e	6-8'	slow	x	x		x	x	high – fruits eaten by songbirds, turkey, grouse	leathery evergreen foliage; black fruits		4

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				full/ part shade	full sun	dry	moist	flood tolerant				
Sheep laurel <i>Kalmia angustifolia</i>	semi-e	4'	slow	x	x	x	x	x	(poisonous to livestock)	very showy pink-red flowers		3
Elderberry <i>Sambucus canadensis</i>	d	12'	moderate	x	x		x	x	very high – berries an important summer food for songbirds inc. bluebirds, rose-breasted grosbeaks, pileated woodpeckers, thrushes	showy white flower clusters; blue berries; jelly and wine can be made from berries	very good	3
Sweet pepperbush <i>Clethra alnifolia</i>	d	8'	moderate	x	x		x	x	high – fruits	white flowers		4
Hazelnut <i>Corylus americana</i>	d	10'	moderate	x	x		x		high – nuts eaten by mammals, grouse, pheasant	edible nuts		3
Beaked hazelnut <i>Corylus cornuta</i>	d	6-10'	moderate	x	x		x		high – beaked nuts used by both mammals & birds	good for hedges; edible nuts		5
Speckled alder <i>Alnus rugosa</i>	d	15-25'	fast		x		x	x	moderate – buds & twigs browsed by muskrat, rabbits, moose, deer, beaver, grouse	tiny cones make Xmas decorations	very good	3
Spicebush <i>Lindera benzoin</i>	d	12'	moderate		x		x	x	high – many mammals and birds eat fruits, buds, & twigs; attracts swallowtail butterflies	spicy scented flowers and leaves; shiny red fruits		5
Witch hazel <i>Hamamelis virginiana</i>	d	20-30'	slow	x	x		x		moderate	yellow flowers in autumn after leaves fall		4
Rhodora azalea <i>Rhododendron canadense</i>	d	3-4'	slow		x		x	x	low	very showy rose purple flowers before leaves		3
Swamp azalea <i>Rhododendron viscosum</i>	d	5'	moderate	x	x		x	x	low	glossy leaves, very showy white - pink flowers		5
Early azalea <i>Rhododendron roseum</i>	d	10'	slow	x		x	x		low	very showy white or pink flowers		4
Blackberry <i>Rubus allegheniensis</i>	d	6'	fast		x	x	x	x	very high – fruits eaten by over 40 species of birds inc. woodcock, turkey, grouse; also by many mammals	makes good barrier		3
Raspberry <i>Rubus idaeus</i>	d	6'	fast	x	x	x	x		same as above – fruits eaten by many mammals & birds	makes good barrier		3
Meadowsweet <i>Spiraea latifolia</i>	d	5'	moderate		x		x		low	white or pale pink flowers	very good	2
Steeplebush <i>Spiraea tomentosa</i>	d	4'	moderate	x	x		x	x	low	spires of pink flowers		3
Staghorn sumac <i>Rhus typhina</i>	d	20'	fast	x	x	x			very high – fruits late winter survival food for mammals and migrating songbirds; twigs eaten by moose, deer, N E cottontail rabbit	colorful fruit clusters, brilliant fall color; velvet covered branches	good	3
Smooth sumac <i>Rhus glabra</i>	d	9-15'	fast		x	x			high – fruits	red fruit clusters, orange-red fall color		3
Sweet gale <i>Myrica gale</i>	d	2-4'	slow		x		x	x	moderate – grouse eat buds and leaves; deer browse	aromatic foliage		3
Sweetfern <i>Comptonia peregrina</i>	d	2-4'	slow- moderate	x	x	x			moderate – grouse, deer feed on foliage	gray green aromatic fern-like leaves		3
Pasture juniper <i>Juniperus communis</i>	e	1-4'	slow		x	x			moderate – food for grouse, pheasant, deer, moose, small mammals, & birds	foliage; good ground cover		3