

Appendix B

STATE IMPERILED PLANT SPECIES

Appendix B: State Imperiled Plant Species of the Bluestone National Scenic River, New River Gorge National River, and the Gauley River National Recreation Area

Legend:

State Ranks

State ranks are assigned by the West Virginia Natural Heritage Program and refer to the conservation status within West Virginia.

Rank Definition

- S1: Five or fewer documented occurrences, or very few remaining individuals within the state. Extremely rare and critically imperiled; or because of some factor(s) making it especially vulnerable to extirpation.
- S2: Six to 20 documented occurrences, or few remaining individuals within the state. Very rare and imperiled; or because of some factor(s) making it vulnerable to extirpation.
- S3: Twenty-one to 100 documented occurrences. May be somewhat vulnerable to extirpation.
- S4: Common and apparently secure with more than 100 occurrences.
- S5: Very common and demonstrably secure.
- SH: Historical. Species which have not been relocated within the last 20 years. May be rediscovered.
- B: Breeding population
- N: Non breeding population

Global Ranks

Global ranks are assigned by NatureServe and refer to the conservation status across the global range of the element.

Rank Definition

- G1: Critically Imperiled - At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
- G2: Imperiled - At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.
- G3: Vulnerable - At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.
- G4: Apparently Secure - Uncommon but not rare; some cause for long-term concern due to declines or other factors.
- G5: Secure - Common; widespread and abundant.
- GNR: Not ranked

Rank Qualifiers

- ?: Denotes inexact numeric rank
- Q: Taxonomic distinctiveness of this entity at the current level is questionable; resolution of this uncertainty may result in change from a species to a subspecies

or hybrid, or the inclusion of this taxon in another taxon, with the resulting taxon having a lower-priority conservation priority.

Intraspecific Taxon Conservation Status Ranks

T#: The status of intraspecific taxa (subspecies or varieties) are indicated by a "T-rank" following the species' global rank. Rules for assigning T-ranks follow the same principles outlined above for global conservation status ranks. For example, the global rank of a critically imperiled subspecies of an otherwise widespread and common species would be G5T1. A T-rank cannot imply the subspecies or variety is more abundant than the species as a whole—for example, a G1T2 cannot occur. A vertebrate animal population, such as those listed as distinct population segments under the U.S. Endangered Species Act, may be considered an intraspecific taxon and assigned a T-rank; in such cases a Q is used after the T-rank to denote the taxon's informal taxonomic status.

Park Occurrences:

B: Bluestone National Scenic River
NR: New River Gorge National River
GR: Gauley River National Recreation Area

Sources:

New England Wild Flower Society. 2016. GoBotany Database
(<https://gobotany.newenglandwild.org/>). c/o New England Wild Flower Society,
Framingham, MA.

Virginia Botanical Associates. 2016. Digital Atlas of the Virginia Flora
(<http://www.vaplantatlas.org>). c/o Virginia Botanical Associates, Blacksburg, VA.

USFWS. 2014. Final Planning Aid Letter, Bluestone Dam Safety Project.

Common Name	Scientific Name	State Rank	Global Rank	Park Occurrences	Primary Habitat
climbing fumitory/ allegheeny vine	<i>Adlumia fungosa</i>	S2?	G4	NR, GR	wooded or rocky slopes
smallfruit agrimony	<i>Agrimonia microcarpa</i>	S1	G5	B	shallow wooded ravines
Lillydale onion	<i>Allium oxyphilum</i>	S2	G2Q	B	Rocky woods and outcrops
bushy bluestem	<i>Andropogon glomeratus</i> var. <i>glomeratus</i>	S2	G5T5	GR	riverbanks, wetland edges, woodlands
Canadian anemone	<i>Anemone canadensis</i>	S1	G5	B	floodplain openings
dwarf anemone/nightcaps	<i>Anemone quinquefolia</i> var. <i>minima</i>	S2	G5T3	NR, B	woodland borders
hairy rock-cress	<i>Arabis hirsuta</i> var. <i>pycnocarpa</i>	S2	G5	NR	dry forests, bluffs
spreading rock-cress	<i>Arabis patens</i>	S2	G3	NR	shaded outcrops and floodplains
purple needlegrass/ arrowfeather threeawn	<i>Aristida purpurascens</i> var. <i>purpurascens</i>	S1	G5	NR	flat rocks/old fields
blue wild indigo/ wild false indigo	<i>Baptisia australis</i> var. <i>australis</i>	S3	G5TNR	GR, B, NR	floodplain openings
American barberry	<i>Berberis canadensis</i>	S1	G3	B	barrens and clearings
grass pink	<i>Calopogon tuberosus</i> var. <i>tuberosus</i>	S1	G5	NR	bogs and seeps
eastern sweetshrub	<i>Calycanthus floridus</i> var. <i>glaucus</i>	SH	G5T5	B	mesic slope forests
bitter cress	<i>Cardamine flagellifera</i>	S1S2	G3	NR	floodplain forests
Blue Ridge bittercress	<i>Cardamine flagellifera</i> var. <i>flagellifera</i>	S2	G3	B	rocky forests, streambanks
summer sedge	<i>Carex aestivalis</i>	S2	G4	GR, NR	sandstone cliffs
glomerate sedge	<i>Carex aggregata</i>	S2	G5	B	mesic to dry forests; distrubed floodplains

Common Name	Scientific Name	State Rank	Global Rank	Park Occurrences	Primary Habitat
Appalachian sedge	<i>Carex appalachia</i>	S2	G4	NR	shaded rock outcrops
brome-like sedge	<i>Carex bromoides</i> ssp. <i>bromoides</i>	S3	G5T5	GR	floodplain forests
Carey's sedge	<i>Carex careyana</i>	S1	G4	NR	floodplain forests
bearded sedge	<i>Carex comosa</i>	S2	G5	NR	marsh, wet meadow
Cumberland's sedge	<i>Carex cumberlandensis</i>	S1	GNR	NR, B, GR	floodplain forests
Emory's sedge	<i>Carex emoryi</i>	S2	G5	B, NR, GR	riverbanks
pubescent sedge	<i>Carex hirtifolia</i>	S2	G5	B	floodplain forests
inland sedge	<i>Carex interior</i>	S1	G5	NR	seeps, wet meadows
spreading sedge	<i>Carex laxiculmis</i> var. <i>copulata</i>	S1	G5T3T5	NR	floodplain forests
midland sedge	<i>Carex mesochorea</i>	S2	G4G5	NR	upland forests and clearings
troublesome sedge	<i>Carex molesta</i>	S3	G4	B, NR, GR	floodplain openings
black-edge sedge	<i>Carex nigromarginata</i>	S3	G5	NR	woodland edges
greater straw sedge	<i>Carex normalis</i>	S3	G5	B	floodplain forests
wesk stellate sedge	<i>Carex seorsa</i>	S1	G4	NR, GR	wet flatwoods
bent sedge	<i>Carex styloflexa</i>	S1	G4G5	NR	streambanks, floodplain forests
praire straw sedge	<i>Carex suberecta</i>	S1	G4	NR	flat rock pools
quill sedge	<i>Carex tenera</i>	S1	G5	B	forests, meadows
shaved sedge	<i>Carex tonsa</i> var. <i>rugosperma</i>	S2S3	G5	NR	dry forests and clearings
cattail sedge	<i>Carex typhina</i>	S2	G5	B, NR	wet ditches/ floodplains
pretty sedge	<i>Carex woodii</i>	S2	G4	B, NR	middle to high elevation forests

Common Name	Scientific Name	State Rank	Global Rank	Park Occurrences	Primary Habitat
slender day-flower	<i>Commelina erecta</i> var. <i>angustifolia</i>	S2	G5	NR	flat rocks
spring coralroot	<i>Corallorhiza wisteriana</i>	S1	G5	NR	dry, rocky forest
star tickseed	<i>Coreopsis pubescens</i> var. <i>robusta</i>	S2	G5?T3T5	NR	floodplain openings
northern croton	<i>Croton glandulosus</i> var. <i>septentrionalis</i>	S3	G5T5	NR	fields, roadsides
pretty dodder	<i>Cuscuta indecora</i> var. <i>neuropetala</i>	S1	G5T5	NR	flat rocks
Fraser's cymophyllus/sedge	<i>Cymophyllus fraserianus</i>	S3	G4	GR, NR	cove forests
reflexed flatsedge	<i>Cyperus refractus</i>	S3	G5	NR	dry floodplain woods
awned cyperus	<i>Cyperus squarrosus</i>	S3	G5	NR	reservoir shores
downy danthonia	<i>Danthonia sericea</i>	S1	G5?	GR, NR	outcrops, clearings, roadsides
fewflower ticktrefoil	<i>Desmodium pauciflorum</i>	S1	G5	GR, NR	mesic woods
sand tick-trefoil	<i>Desmodium lineatum</i>	S1	G5	NR	forest edges
hemlock rosette grass/ American panic grass	<i>Dichanthelium acuminatum</i> ssp. <i>columbianum</i>	S1	G5T5	GR, NR	openings, roadsides
slender crabgrass	<i>Digitaria filiformis</i>	S1	G5	GR	dry clearings, outcrops
flat-stemmed spike-rush	<i>Eleocharis compressa</i>	S2	G4	NR	flat rocks
matted spike-rush	<i>Eleocharis intermedia</i>	S1	G5	NR	flat rocks
common spikerush/ creeping spikerush	<i>Eleocharis palustris</i>	S3	G5	B/NR	rivershores
yellow buckwheat	<i>Eriogonum allenii</i>	S2	G4	NR	shale barrens
Godfrey's thoroughwort/ godfrey's boneset	<i>Eupatorium godfreyanum</i>	S2S3	G4	GR, NR	clearings, roadsides
vervain thoroughwort	<i>Eupatorium pilosum</i>	S2	G5	NR	wet flatwoods, clearings

Common Name	Scientific Name	State Rank	Global Rank	Park Occurrences	Primary Habitat
annual fimbry	<i>Fibristylis annua</i>	S1	G5	NR	flat rocks
downy milkpea	<i>Galactia volubilis</i>	S2	G5	NR	floodplain openings
Appalachian gentian	<i>Gentiana austromontana</i>	S1	G3	NR	middle to high elevation forests
lesser rattlesnake plantain	<i>Goodyera repens</i>	S1S2	G5	B	hemlock forests
false Indian plaintain	<i>Hasteola suaveolens</i>	S3	G3	B	floodplain forests
Bicknell's forstweed	<i>Helianthemum bicknellii</i>	S1	G5	GR	prairie
Canada frostweed	<i>Helianthemum canadense</i>	S2	G5	NR	open woods, clearings
low frostweed	<i>Helianthemum propinquum</i>	S1	G4	GR	meadows, barrens
smooth sunflower	<i>Helianthus laevigatus</i>	S2	G4	B, NR, GR	open forests, clearings, roadsides
fewleaf sunflower/ McDowell sunflower	<i>Helianthus occidentalis ssp. occidentalis</i>	S2	G5T5	GR, NR	floodplain openings
Rough alumroot	<i>Heuchera americana var. hispida</i>	S2	G5	B	rocky forests, outcrops
halbred-leaved mallow	<i>Hibiscus laevis</i>	S2	G5	NR	muddy riverbank
coppery St. John's-wort	<i>Hypericum virgatum</i>	S1	G4?	NR	high flat rocks
butternut	<i>Juglans cinerea</i>	S3	G3G4	B, GR	mesic woods
forked rush	<i>Juncus dichotomus</i>	S1	G5	B, NR	streamside bars
narrowleaf pinweed	<i>Lechea tenuifolia</i>	S1	G5	GR	clearings, roadsides
valdivia duckweed	<i>Lemna valdiviana</i>	S3	G5	B	aquatic
Northern blazing star	<i>Liatris scariosa var. nieuwlandii</i>	S1	G5	GR	barrens, outcrops, roadsides
Appalachian blazing star	<i>Liatris squarrulosa</i>	S1	G4G5	GR	prairie
Turgid gay-feather	<i>Liatristurgida</i>	S2	G3	GR	cliffs
American fly honeysuckle	<i>Lonicera canadensis</i>	S2	G5	B	middle to high elevation forests

Common Name	Scientific Name	State Rank	Global Rank	Park Occurences	Primary Habitat
American climbing fern	<i>Lygodium palmatum</i>	S3	G4	GR	upland and floodplain forests
southern yellow loosestrife	<i>Lysimachia tonsa</i>	SH	G4	B	upland forests
winged-loosestrife	<i>Lythrum alatum</i> <i>var. alatum</i>	S2	G5T5	NR	riverside prairies, flood-scoured bars
starflower false Solomon's-seal	<i>Maianthemum stellatum</i>	S2	G5	NR	riverside bars, floodplain forests
Monongahela Barbara's buttons	<i>Marshallia grandiflora</i>	S2	G2	GR	streambanks , gravel bars
two-flower melic grass	<i>Melica mutica</i>	S2	G5	NR	mesic floodplain
wild bergamot	<i>Monarda fistulosa</i> ssp. <i>brevis</i>	S1	G5T1	B, GR	open shale banks
largeseed forget-me-not	<i>Myosotis macrosperma</i>	S2	G5	B, GR, NR	floodplain forests
slender water nymph	<i>Najas gracillima</i>	S2	G5?	NR	aquatic
evening-primrose	<i>Oenothera pilosella</i>	S2	G5T5?	NR	distrubed landscape
balsam groundsel	<i>Packera paupercula</i>	S2	G5	GR	barrens, riverside prairies
red pine	<i>Pinus resinosa</i>	S1	G5	NR	barrens, riverside prairies
blackseed needlegrass	<i>Piptochaetium avenaceum</i>	S1	G5	NR	flat rocks
yellow fringed orchid	<i>Platanthera ciliaris</i>	S3	G5	NR	boggy flatwoods, roadsides
small purple-fringe orchid	<i>Platanthera psycodes</i>	S1	G5	NR	mesic high-elevation forests, wet meadows
drooping bluegrass	<i>Poa saltuensis</i>	S1	G5	NR	roaky woodlands, barrens
rose pogonia	<i>Pogonia ophioglossoides</i>	S2	G5	NR	bogs, boggy clearings
Curtiss' milkwort	<i>Polygala curtissii</i>	S2	G5	GR, NR	clearings and edges

Common Name	Scientific Name	State Rank	Global Rank	Park Occurences	Primary Habitat
water smartweed	<i>Polygonum amphibium</i> var. <i>emersum</i>	S2S3	G5T5	NR	aquatic or waterlogged soils
Allegheny plum	<i>Prunus alleghaniensis</i> var. <i>alleghaniensis</i>	S3	G4T4	B	shale barrens
eastern sandcherry	<i>Prunus pumila</i> var. <i>depressa</i>	S1	G5T5	GR	river scoured meadows
Loomis' mountain-mint	<i>Pycnanthemum loomisii</i>	S2	G4?	NR	floodplain woods
Torrey's mountain-mint	<i>Pycnanthemum torrei</i>	S1	G2	NR	flat rocks
Pennsylvania buttercup	<i>Ranunculus pensylvanicus</i>	S1	G5	NR	stream banks, wet clearings
low spearwort	<i>Ranunculus pusillus</i> var. <i>pusillus</i>	S1	G5T4?	NR	flat rock wet areas
globe beaksedge/rush	<i>Rhynchospora recognita</i>	S2	G5?	GR, NR	wet meadows, bogs
prickly currant	<i>Ribes lacustre</i>	S2	G5	B	rock outcrops and forests
Smooth rose	<i>Rosa blanda</i> var. <i>blanda</i>	S2	G5	GR	roadsides
orange coneflower	<i>Rudbeckia fulgida</i> var. <i>fulgida</i>	S2	G5T4?	GR	barrens, clearings meadows
shining willow	<i>Salix lucida</i> ssp <i>Lucida</i>	S1	G5T5	NR	montane alluvial bottom
Carey saxifrage	<i>Saxifraga careyana</i>	S3	G3	NR	wet meadow, mountains
weakstalk bulrush	<i>Schoenoplectus purshianus</i>	S3	G4G5	NR	sandy rivershores, wet meadows
smooth rock skullcap	<i>Scutellaria saxatilis</i>	S2	G3	B, NR	moist rocky woods
Virginia cress	<i>Sibara virginica</i>	S2?	G5	NR	disturbed areas
Virginia mallow	<i>Sida hermaphrodita</i>	S2	G3	NR	road openings
snowy campion	<i>Silene nivea</i>	S1	G4	NR	flood-scoured riverbanks

Common Name	Scientific Name	State Rank	Global Rank	Park Occurrences	Primary Habitat
Virginia cup-plant	<i>Silphium perfoliatum</i> var. <i>connatum</i>	S1	G5T3T4	NR	floodplain forests
Rand's goldenrod	<i>Solidago simplex</i> ssp. <i>randii</i> var. <i>racemosa</i>	S2	G5T3?	GR, NR	river shore outcrops
Virginia meadowsweet	<i>Spiraea virginiana</i>	S1	G2	B, GR	rocky riverbank
shining ladies'-tresses	<i>Spiranthes lucida</i>	S1S2	G5	GR	moist open riverbanks
oval ladies'-tresses	<i>Spiranthes ovalis</i> var. <i>erostellata</i>	S1	G5?T4?	NR	floodplain forests
little ladies'-tresses	<i>Spiranthes tuberosa</i>	S3	G5	NR	dry open forests
spring ladies'-tresses	<i>Spiranthes vernalis</i>	S3	G5	GR	meadows, roadsides
rough dropseed	<i>Sporobolus clandestinus</i>	S1	G5	NR	flat rocks
heartleaf hedgenettle/ Nuttall's hedge-nettle	<i>Stachys nuttallii</i>	S3	G5?	B, GR, NR	flat rocks
smooth hedgenettle	<i>Stachys tenuifolia</i>	S3	G5	B, NR	floodplain forests
smooth blue aster	<i>Symphyotrichum laeve</i> var. <i>concinnum</i>	S2	G5T4	GR	steep slopes, shale barrens
Canada yew	<i>Taxus canadensis</i>	S2S3	G5	B	cliffs, rocky forests
mountain meadow-rue	<i>Thalictrum clavatum</i>	S2	G4	GR, NR	rocky stream banks; wet cliffs
White cedar	<i>Thuja occidentalis</i>	S2	G5	B	cliffs/old riverbed
buffalo clover	<i>Trifolium reflexum</i>	S1	G3G4	B	disturbed woodlands
nodding pogonia	<i>Triphora trianthophora</i>	S2	G4	NR	floodplain forests
Nannyberry	<i>Viburnum lentago</i>	S1S2	G5	GR	streambanks
downy arrowwood	<i>Viburnum rafinesquianum</i>	S2	G5	B	dry slopes
rusty blackhaw	<i>Viburnum rufidulum</i>	S1	G5	B, NR	dry forest
Appalachian violet	<i>Viola appalachiensis</i>	S3	G3	GR	barrens and forests

Common Name	Scientific Name	State Rank	Global Rank	Park Occurences	Primary Habitat
sand grape	<i>Vitis rupestris</i>	S2	G3	B, NR	flood-scoured riverbanks