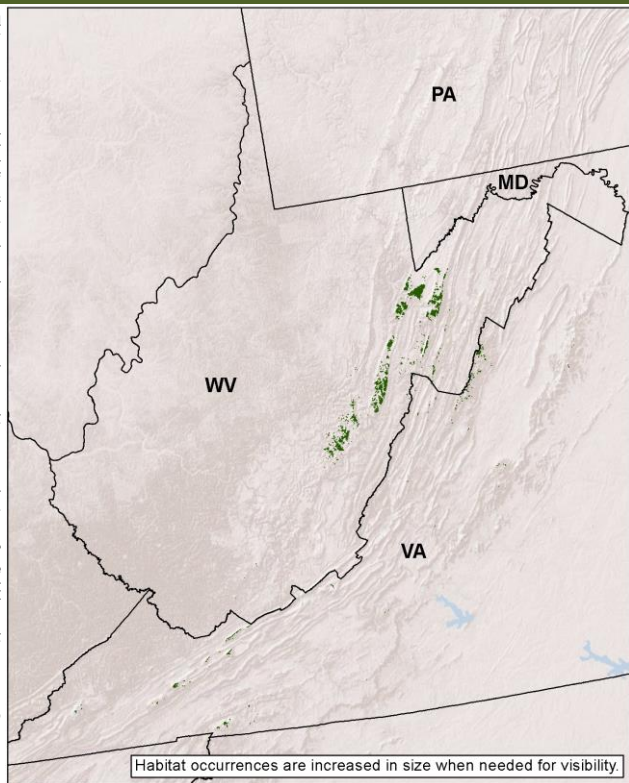


Central and Southern Appalachian Spruce-Fir Forest



Macrogroup: Boreal Upland Forest

This map is a modeled distribution based on current data and is not a substitute for field based inventory. Contact your State Natural Heritage Ecologist for more information about this habitat.



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Description:

A high elevation conifer forest dominated by red spruce and either Fraser fir (in very southwestern Virginia) or balsam fir (to the north). Mountain ash, yellow birch, hemlock, and red oak are locally common. Mosses, ferns, and forbs make up a typically lush ground cover; in many examples a dense shrub layer develops in which hobblebush and mountain cranberry, and occasionally evergreen rhododendrons, are prevalent. This is the characteristic forest of the cold, wet, windy highest peaks in the central and southern Appalachians. Some very large patches of this system remain, but unnatural fires fueled by logging slash turned large expanses of it into grass-shrub-hardwood scrub that has not recovered to conifer dominance after 90 years.

Ecological Setting and Natural Processes:

Found in rocky soils on exposed high elevation landforms, from 3200 feet at the northern end of its range to over 5500 feet. Strong winds, rime ice, severe cold, and other weather extremes are important natural disturbances, fire less so. Human-caused stresses have also had major effects on this habitat type: an introduced pest has killed all the mature Fraser firs, and air pollutants and climate change pose existential threats.

Similar Habitat Types:

Similar to the spruce-fir system of the northern Appalachians, but has less frequent natural fire, a more moderate climate, and flora and fauna of a more southern character, though some species are shared. There is a gradual transition to southern and central Appalachian northern hardwood forests below. Balds and outcrops may occur within larger examples.

Crosswalk to State Wildlife Action Plans:

Forest Habitat - Coniferous Forest (VA), Red Spruce Forests (WV)

State Distribution: VA, WV

Total Habitat Acreage: 64,954

Percent Conserved: 87.5%

State	State Habitat %	State Acreage	GAP 1&2 (acres)	GAP 3 (acres)	Unsecured (acres)
WV	90%	58,553	16,660	35,088	6,805
VA	10%	6,401	3,626	1,452	1,323

Crosswalk to State Name Examples:

Central Appalachian Red Spruce Forest (VA), Red Spruce Forests (WV)

Places to Visit this Habitat:

Appalachian Trail Corridor | VA
 George Washington and Jefferson National Forest | VA
 Dolly Sods Wilderness | WV
 Monongahela National Forest | WV
 Otter Creek Wilderness | WV

Associated Species: *Appendix lists scientific names*

BIRDS: blackburnian warbler, black-capped chickadee, black-throated green warbler, canada warbler, dark-eyed junco, golden-crowned kinglet, hermit thrush, magnolia warbler, purple finch, red-breasted nuthatch, swainson's thrush, winter wren

PLANTS: canada mayflower (*Maianthemum canadense*), catawba rhododendron (*Rhododendron catawbiense*), great laurel (*Rhododendron maximum*), hobblebush (*Viburnum lantanoides*), lowbush blueberry (*Vaccinium angustifolium*), mountain wood-fern (*Dryopteris campyloptera*), mountain wood-sorrel (*Oxalis montana*), shining clubmoss (*Huperzia lucidula*), southern mountain-cranberry (*Vaccinium erythrocarpum*), staghorn clubmoss (*Lycopodium clavatum*)

Species of Concern (G1-G4): *Appendix lists scientific names*

BIRDS: yellow-bellied sapsucker

MAMMALS: allegheny woodrat, appalachian cottontail, carolina northern flying squirrel, long-tailed shrew, southern pygmy shrew, southern rock vole, southern water shrew, virginia northern flying squirrel

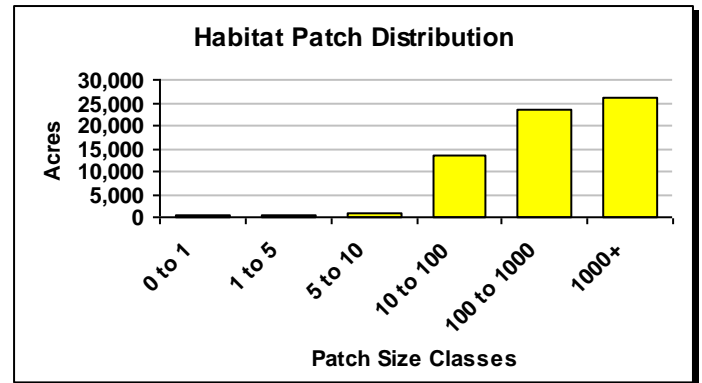
HERPTILES: cheat mountain salamander, pygmy salamander, weller's salamander, white-spotted salamander

INSECTS: pink-edged sulphur, spruce-fir moss spider

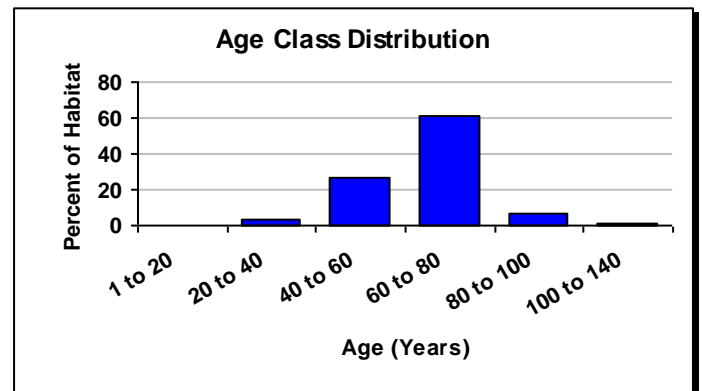
PLANTS: beaked dodder (*Cuscuta rostrata*), carolina saxifrage (*Saxifraga caroliniana*), fraser fir (*Abies fraseri*), gray's lily (*Lilium grayi*), large cranberry (*Vaccinium macrocarpon*), large-leaved phlox (*Phlox amplifolia*), long-stalked holly (*Ilex collina*), silverling (*Paronychia argyrocoma*), small mountain bittercress (*Cardamine clematitis*), white alumroot (*Heuchera alba*)



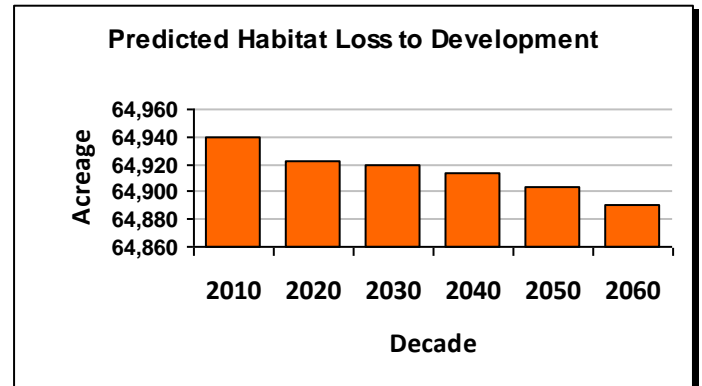
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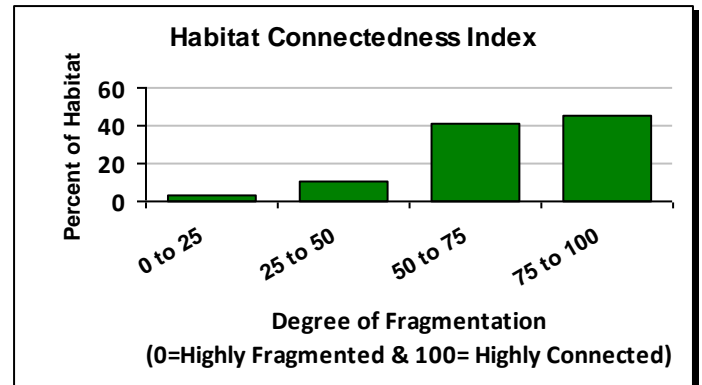
The average patch size for this habitat is 34 acres and the largest single patch is 6,790 acres. This chart shows the proportion of the habitat that is in each patch-size class.



This chart shows the average age of trees associated with this habitat based on forest inventory data. For non-forested systems or small habitats the average age is influenced by the surroundings.



This chart shows the predicted loss of habitat over the next five decades (49 acres) if loss continues at the same rate as 1990-2000. The average rate of loss is 1 acres per year.



This metric measures how connected or fragmented the land directly surrounding (18 square miles) the habitat is, this the chart shows the proportion of the habitat in each connectedness class.