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WEST VIRGINIA

West Virginia has more forest today than it did at the turn of the century, but most of it is second growth. The state's forests were clearcut on a massive scale between 1880 and 1920. Today's logging operations look small, compared with those early ventures. Old farms have grown over, and in some places the forest itself has come back. More than 90% of the state is now forested, yet some species have not recovered (Hill 1993). Also, the impressive figures we see about reforestation in the East can be a bit misleading, as much of what is now considered “forest” is little more than early regrowth following heavy logging. “Thicket” might better describe some of this regenerating vegetation. West Virginia once had over 500,000 acres of Red Spruce. Today there may be 50,000 to 70,000 acres. Only three known stands of Red Spruce are virgin (Adams and Stephenson 1989, Harmon 1989).

Nevertheless, Bill Ragette, a West Virginia conservationist who read this chapter wrote, "I believe that there is a lot more 'old growth' in West Virginia than we know about. Along the ridges/farm boundaries all over the state are old growth trees. One whose rings I counted after they timbered a nearby farm was 250 years old. Several people have told me about tracts that had untouched areas" (1993). Robert Mueller (1989 and 1993) and Steven Stephenson (1993) have told us of the existence of undocumented old growth on ridges and in ravines in the Central Appalachians (see Virginia). More recently James Vanderhorst of West Virginia Natural Heritage Program has written that the program is “coming across additional stands (on the ground and in the literature).” “There are likely to be other small virgin patches around the state. I’m sure many of the dryer types on cliffs etc. . . . have been overlooked because the trees aren’t that big and they may not be forests but woodlands” (2002).

Small, documented old-growth sites include **Hungry Beech** (Roane County): a 107-acre preserve of The Nature Conservancy that includes a probably-uncut 14-acre tract, mainly beech-oak with Northern Red Oak predominant (Hill 1993); **Meadow River Wildlife Management Area*** (Greenbrier County): approximately 20 acres of old-growth swamp forest, shrub and herbaceous wetlands (Vanderhorst 2002); **Carnifax Ferry State Park*** (Nicolas County): two stands, the second uphill from the first—12 acres of Eastern Hemlock-White Oak/*Rhododendron maxim* forest and 13 acres of White Oak-Eastern Hemlock/*Thelypteris noveboracensis* forest (Vanderhorst 2002); and the **Horner State Game Refuge** (Lewis County): 12 to 15 acres of virgin oak, including large White Oak and Chestnut Oak, through which the owners, the US Army Corps of Engineers, built a road (Harmon 1989 and 1990); **Turkey Run on Shavers Mountain** (Tucker County): probably no more than 10 acres of virgin Red Spruce, with Great Rhododendron the most important shrub (Stephenson 1993, Adams and Stephenson 1989); and **Cave Mountain*** in Monongahela National Forest (Pendleton County): Northern White-cedar scattered over less than 5 aerial acres of steep limestone cliffs, which also support several plants rare in West Virginia (Vanderhorst 2002)..

Unfortunately the Hemlock Woolly Adelgid has been documented at Fanny Bennett and is likely to spread elsewhere rapidly (Vanderhorst 2002).

On May 3, 2002, the US Forest Service (USFS) issued a public notice of intent to prepare an Environmental Impact Statement as a step in revising the management plan for Monongahela National Forest. Old growth was one of the subjects on which the USFS staff was seeking comments, as they were in the midst of trying to decide what provisions to make for old growth. USFS hopes to have a revised forest management plan in place by mid-2005 (Adamo 2002). Known old-growth sites in the forest are included below.

MONONGAHELA NATIONAL FOREST, in eastern West Virginia

--**Gaudineer Scenic Area** on Cheat Mountain (Pocahontas County). A 140-acre area, of which about 50 acres are virgin Red Spruce-northern hardwood forest. Coring has shown that some trees are about 350 years old (Stephenson 1993). "The remaining 90 acres has had some cutting, mainly salvage of blow-down, with most of the original growth still standing" (Foss 1972). What was spared by an old surveying error is, however, suffering from contemporary pollution. In recent years a large percentage of the old-growth Red Spruce have died or shown signs of dying, apparently due to acid deposition, as in many other high elevation stands in the Appalachians (and Adirondacks). As a result of the death of the older spruce, the dominant canopy is becoming mixed hardwoods. Yellow Birch, Red Maple, Sugar Maple, and beech are among the hardwoods. Young spruce seem "healthy and vigorous" and form a "thick and strong" understory (Goodrich 1990 and 1992) (Harmon 1989 and 1990).

--**Shavers Mountain Spruce-Hemlock Stand**, in Otter Creek Wilderness (Randolph County). One hundred and five acres of never logged Red Spruce-Eastern Hemlock (Vanderhorst 2002). Dispute over ownership of the land apparently prevented the tract's being cut. Much of the hemlock and older spruce are in decline here as in the better known Gaudineer Scenic Area, apparently due to acid rain (Goodrich 1990 and 1992).

--**Seneca Rocks*** (Grant County) . Twenty or more acres of old-growth Chestnut Oak and pines, including some Type A old growth [as a general rule, Type A old growth has no visible signs of anthropogenic disturbance; Type B does show some visible disturbance]. The stand is near the trail and surrounding cliffs facing west toward the North Branch of the South Fork Potomac River. The old growth, which as of mid-2002 was undocumented and unstudied, was discovered by Ken Hotopp (Hotopp 2002). Various sections of the Seneca Rocks Area are subject to three different management prescriptions; a US Forest Service spokesperson was unable to tell us under which the old growth falls (Adamo 2002).

--**Fanny Bennett Hemlock Grove** (Pendleton County). A 15 to 20-acre grove of "old, mature and large" Eastern Hemlock and adjacent White Oak, within a 70-acre area on the lower south slope of Spruce Mountain. The stand appears to have been selectively logged. It is protected as a hemlock grove under the Monongahela land management plan in force in 2002 (Goodrich 1990 and 1992, Clovis 1974, Mueller 1998). An eccentric landowner preserved the stand prior to its ownership by the USFS (Vanderhorst 2002).

--**Oak-Maple-Basswood Stand*** (Pendleton County). A 16.6-acre (6.7 ha) unlogged, uneven-aged stand on a steep, talus slope. Northern Red Oak codominates

with Sugar Maple and American Basswood. Abrams et al. believe that the “interaction of climatic, edaphic and disturbance factors” explain the fact that red oak dominates along with later successional species (1998).

--**Clark Tract** (Greenbrier County). A stand described by Abrams et al. as nine acres (3.6 ha) of uneven-age forest dominated by White Pine, White Oak, Red Maple, Northern Red Oak, and Black Oak, on the North Fork of Anthony Creek, near Neola (1995); and by Vanderhorst as 17 acres of White Pine-White Oak/American Hazelnut/Partridgeberry forest near Neola (2002). Pawelczyk posited light thinning in the 1930s or 40s (1993). However, Abrams et al. characterized the forest in 1995 as a “virgin white pine-mixed-oak valley floor forest.” They hypothesize that periodic releases were the result of small disturbances such as fire and wind-throw. White Oak have been found to be up to 295 years in age, and White Pine, up to 231 years (Abrams et al. 1995).

Stonewall Jackson Lake State Park,* central West Virginia (Lewis County)

Fifty-four acres of never-logged White Oak-American Beech forest (Vanderhorst 2002).

Cheat River,* in north-central West Virginia (Preston County).

More than 150 acres of scattered, apparently “type B” old growth stands on private land. Location information was not available in mid-2002. The old growth, which was discovered by Ken Hotopp, is unprotected (Hotopp 2002).

Murphy Preserve, in western West Virginia (Ritchie County)

Approximately 100 acres of old growth on the larger of two tracts that make up The Nature Conservancy's 276-acre Murphy Preserve. The forest is mixed mesophytic with large Cucumber Tree. Apparently it was selectively logged long ago (Harmon 1989 and 1990, Hill 1993)

Cathedral State Park, in north-central West Virginia (Preston County).

Virgin hemlock and hemlock-hardwood forests covering much of a 133-acre park. The park contains several trails and a picnic area. Two species rare in the state, the Northeastern Aster and the Virginia Big-eared Bat, are found here (Harmon 1989 and 1990, Robinowitz 1993). Conservationist Mark Robinowitz writes that the park is “Extremely beautiful, but . . . surrounded by road and cow pastures” (1993).

Coopers Rock State Forest, north-central West Virginia

--**Cheat River Canyon*** (Monongalia County). Scattered stands of old growth along rim, boulder scree and steep streambanks on acid sandstone outcrops and breakdown. The total certainly exceeds 70 acres, of mostly “type B” old growth, but some “type A.” The most common trees are Chestnut Oak and Sweet Birch, often with rhododendrons, though some areas are more diverse. As of mid-2002, the site was mostly undocumented and unstudied, although the state forest was conducting a forest inventory. Portions of the site were discovered independently by Ken Hotopp, Rick Landenberger at West Virginia University, and Adam Polinski with Coopers Rock Foundation. The area is partly protected (Hotopp 2002).

--Land leased by West Virginia University's Division of Forestry* (Preston County). Approximately ten acres of old growth within 7500 acres leased by the university from the state. The site, which was never logged, supports 300-year-old hemlock, also oaks and Tulip Trees. The understory includes rhododendron, Mountain Laurel, and other shrubs. The management plan for the university forest identifies three or four areas of the leased land for preservation, including the old growth (Landenberger 2002, Hicks 2002).

North Fork Mountain, east-central West Virginia (Pendleton County)

Old growth of undetermined extent on the crest of the mountain with its sandstone outcroppings. Hotopp writes that he has visited one site with old-growth Chestnut Oak/Table Mountain Pine that is at least 50 acres in extent. He speculates that there may be hundreds of acres of old growth along the ridge where the 50 acres are located (2002). Stough writes that the crest of the mountain and, in particular, "the summit ridge from the Fire Tower Road (FR 79) north to the Hopeville Gorge," supports considerable old growth or near old growth with a wide variety of species, including eight species of conifers, several oaks, and Yellow Birch (1994). Vanderhorst speaks of stands of "very large Chestnut Oak." The biggest Pitch Pine he has cored was about 100 years old, but smaller Pitch Pine on cliffs may be older, as may be dwarf Pitch Pine on Panther Knob (2002).

Others have described a specific indigenous population of Red Pine at its southernmost limit. The stand, which faces north to north-west, stretches along the ridge at the top of North Fork Mountain. Buell estimated in 1938 that the stand covered 50 acres (1940). According to Stephenson et al. (1986), the area appears to have undergone some logging; but Harmon of the West Virginia Natural Heritage Program characterizes the Red Pine themselves as "virgin" (1989 and 1990) and has pointed out that foresters describe the stand as uncut (1981). Red Pine dominates the ridge. A few White Pine, Pitch Pine, Northern Red Oak, Eastern Hemlock, and Sugar Maple are also present. The maximum age of the Red Pine cored in 1984 was 107 years. The pine are successfully reproducing. (Stephenson et. al. 1986). Most of the acreage belongs to various private individuals, but a part is in Monongahela National Forest (Harmon 1990).

Helmick Rock on South Branch Mountain (Hardy County) is the site of a second indigenous population of Red Pine. This stand, the only other indigenous population identified in West Virginia, is privately owned. Like the North Fork stand, the smaller stand faces north to north-west and is on a relatively steep slope. Again the logging history is unclear. The importance value of the Red Pine at Helmick Rock is only 68.5%, and more additional tree species are present. The maximum age in 1984 was 132 years. As at North Fork, the trees are reproducing (Harmon 1989 and 1990, Stephenson et. al. 1986). Foresters who have used Red Pine extensively for reforestation learned that seeds from the West Virginia stands grow better in West Virginia than do seeds from Maine (Buell 1940).

West Virginia Botanic Garden,* on Tibbs Run (Monongalia County)

A total of about 40 acres of old-growth White Oak and Eastern Hemlock stands. The old growth occurs in a patchy mosaic. Natural and unnatural disturbance events,

including chestnut blight and ice storms, resulted in much dead and downed wood in certain areas of the garden. Additional big trees are in a more managed area near the parking lot (Vanderhorst 2002).

Ice Mountain,* northeastern West Virginia (Hampshire County)

Old growth chestnut oak, sweet birch and white pine facing west on the North River, on screes and steep slopes below Raven Rocks. The site exceeds 25 acres and includes some Type A old growth. As of mid-2002, it was undocumented and unstudied. The Nature Conservancy owns and protects the area. Access is by permission only (Hotopp 2002).

Cacapon State Park,* northern West Virginia (Morgan County)

Possibly as much as 50 acres of old growth on the top and west-facing slope of the mountain. Oak dominates. Also present are White Ash, Sugar Maple, and American Beech (Sweeney 2002).

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