

By Barb Sargent

From the rolling hills in the west to the steep and rugged terrain of the southern and eastern mountains, the beauty of West Virginia is obvious. What may not be so obvious is that West Virginia provides habitat for over 450 rare plants. Many of the plants are rare in the state because their habitat, such as shale barrens, is uncommon. Others are rare because they are at the limits of their ranges. West Virginia falls at the southern, northern or western limit of several plants' ranges.

One plant at the southern extent of its range is the balsam fir (*Abies balsamea*). While this tree is common throughout most of Canada and the northeastern United States, it is rare in the southern limits of its range, including West Virginia. The balsam fir is a species of high elevation wetlands and moist woods, and can be recognized by its erect cones, needles with two white lines beneath and resin blisters on the bark—leading to the alternate common name of blister pine.

Balsam fir is currently known from Grant, Pocahontas, Randolph and Tucker counties. Canaan Valley



Balsams damaged by woolly adelgid at Canaan.

supports the largest populations of balsam fir, where it is part of two rare community types: Central Appalachian Circumneutral Seepage Swamp and North-central



Glade Spurge

Appalachian Acidic Swamp. It can also be found at Dolly Sods, the Highland Scenic Highway, Blister Swamp and Blister Run Swamp.

The greatest threat to the balsam fir is the balsam woolly adelgid (*Adelges picea*). This minute sucking insect was introduced from Europe around 1900, and causes significant damage and mortality to firs. The balsam fir is also impacted by deer browse and the drainage of wetlands.

Two other rare plants found in high elevation wetlands are Jacob's-ladder (*Polemonium vanbruntiae*) and glade spurge (*Euphorbia purpurea*). Jacob's-ladder is uncommon throughout its range of eastern Canada and the northeastern U.S., being most abundant in NY. In

West Virginia, Jacob's-ladder is currently known from six sites in Pocahontas, Preston, Randolph and Tucker counties. Again, the Canaan Valley



Woolly adelgid infestation up close.



Jacob's Ladder

area supports the majority of the plants.

Changes in the water regime and succession may threaten this plant, although it may "move" to other areas in a wetland as the canopy closes. Look for the showy purple flowers during late spring and summer.

Also uncommon throughout its range, glade spurge is known from the Mid-Atlantic states, extending west to Ohio and south to North Carolina. It is most common in the Appalachians, and in West Virginia it is known from Preston, Pocahontas, Randolph and Tucker counties. It can be found at 13 sites, including the Sinks of Gandy, Canaan Valley, Laurel Fork River and near the Highland Scenic Highway.

The primary threat to this species is changes in the water regime of wetlands and seepage habitats which support glade spurge. It also occurs in pastures underlain with limestone, and is threatened by grazing or trampling at some of these sites. The inconspicuous green flowers are present in late spring.

These are just three of the Mountain State's many rare plants. They can be found from Harpers Ferry to Spruce Knob, so remember: that unfamiliar plant you see next time you are out hiking may be something special.

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