

Wilderness Bill could protect special places such as shale barrens

Virginia's shale barrens are a distinctive feature of the geology and ecology of the state's western highlands. The rich plant life found in this rocky terrain is one reason the Central Appalachian region qualifies as a biodiversity hot spot.

Many of the shale barrens in Virginia are located in the George Washington and Jefferson national forests. The largest of these is the 3,000-acre Rough Mountain shale barren, mostly in Bath County, near the Cowpasture River. As we have seen in the case of the Atlantic Coast Pipeline, even special resources like unique shale barrens on public lands are at risk for development if not protected. Fortunately, the large Rough Mountain shale barren has been protected as part of the Rough Mountain Wilderness since it was designated in 1988 and so is considered permanently off-limits to development.

In October of 2017, U.S. Virginia Senator Tim Kaine introduced the Virginia Wilderness Additions Act. The bill was referred to the Senate floor as part of other legislation, but did not make it to a final vote. This January, the Virginia Wilderness Additions Act of 2019 (S. 247) was reintroduced in the Senate by Senators Kaine and Mark Warner. The legislation would expand Rough Mountain Wilderness and the nearby Rich Hole Wilderness by a combined 5,600 acres.



A Central Appalachian shale barren. (Steven David Johnson)

Like the Cowpasture River area, Rich Hole Wilderness is also in the George Washington National Forest, mostly in Rockbridge County. If the bill becomes law, these additions would create a nearly contiguous block of wilderness totaling more than 20,000 acres in the Lower Cowpasture River region, reinforcing protection of the region's shale barrens.

Both bills—the one introduced in 2017 and the one introduced earlier this year—have had the support of a diverse coalition of stakeholders. This year's bill (S. 247) has been referred to the Senate Committee on Agriculture, Nutrition, and Forestry. No companion legislation has yet been introduced in the House of Representatives.

The casual hiker or naturalist may walk past a shale barren thinking he or she has seen just another rocky patch along the trail. But shale barrens deserve a closer look in order to appreciate their many features and the fragile life they support.

Shale barrens are usually found on steep, southern-exposed mountain slopes in western Virginia and

eastern West Virginia (as well as in the western Maryland and western Pennsylvania) at elevations from 1,000 to 2,600 feet, often in tracts of several dozen acres. They are relatively dry, and their rocky surfaces soak up the heat of the summer sun. Their generally sparse vegetational cover nonetheless varies from one barren to the next and within a barren. Some shale barrens present a crumbly, rocky surface covered with little more than Reindeer Lichen (*Cladonia rangiferina*); others resemble a wispy prairie of Pennsylvania Sedge (*Carex pensylvanica*), Little Bluestem (*Schizachyrium scoparium*), Eastern Needlegrass (*Piptochaetium avenaceum*), and Poverty Oatgrass (*Danthonia spicata*); still others have sparse and stunted tree cover usually of Virginia Pine (*Pinus virginiana*), Northern Red Oak (*Quercus rubra*), Pignut Hickory (*Carya glabra*), and Eastern Red Cedar (*Juniperus virginiana*), sometimes above a carpet of Reindeer Lichen.

These isolated islands of habitat host many rare species of plants as well as butterflies. At least 15 species of wildflowers are endemic to Central



Two of the rare plants found on Virginia’s shale barrens are Kates Mountain Clover (*Trifolium virginicum*), above, and White-haired Leatherflower (*Clematis albicoma*). (Steven David Johnson, top, and Brad Striebig, right)

Appalachian shale barrens, including Shale Barren Rockcress (*Boechea serotina*), White-haired Leatherflower (*Clematis albicoma*), Shale-barren Ragwort (*Packera antennariifolia*), Kates Mountain Clover (*Trifolium virginicum*), Shale Barren Wild Buckwheat (*Eriogonum allenii*), Shale Barren Evening-primrose (*Oenothera argillicola*), and Shale-barren Pussytoes (*Antennaria virginica*).

Rare animals hosted by shale barrens include butterflies such as the Appalachian Grizzled Skipper (*Pyrgus centaureae wyandot*), the



Shale Barren Rockcress (*Boechea serotina*) is pollinated by the Appalachian Grizzled Skipper (*Pyrgus centaureae wyandot*), a butterfly that is declining in numbers. The Appalachian Grizzled Skipper is found in only nine counties in Virginia. It is ranked by the Virginia Natural Heritage Program as S1 (critically imperiled), and its global rating is G1 (critically imperiled). (Matt Orsie)

Olympia Marble (*Euchloe olympia*), and the Columbine Duskywing (*Erynnis lucilius*), and moths such as the Sweet Underwing (*Catocala dulciola*) and the Pine Barrens Underwing (*Catocala herodias gerhardi*). In a seeming case of the downtrodden doing what it can to help the oppressed, the globally critically imperiled Appalachian Grizzled Skipper butterfly pollinates the federally endangered Shale Barren Rock Cress. According to the Virginia Department of Conservation and Recreation, the main threat to these

plant and animal communities is from introduced invasive weeds, though some shale barrens near roads are also threatened by quarrying. More positively, the Eastern Fence Lizard (*Sceloporus undulatus*) is abundant on shale barrens.

Citizens who appreciate shale barrens and the biodiversity they support should welcome the designation of additions to the existing Wilderness areas as an effective public policy

tool to protect these ecosystems. The creation of a federal Wilderness affords the highest level of protection for public land under federal law.

Just to the northeast of the areas covered by S. 247 are several other shale barrens, including Ratcliff Hill, Big Cedar, and Reubens Draft. While these areas are protected to an extent by designation as special biological areas, they do not have Wilderness status. These unique places are all close to the proposed route of the Atlantic Coast Pipeline, and opponents cite the pipeline project and its associated construction and operation as having the potential to negatively impact these fragile and incredibly diverse mountain ecosystems.

Society members who support bills such as S. 247 could send a message to Virginia Senators thanking them for their support of the bill. —Tom Engle is a member of the board of the Virginia Wilderness Committee and lives in Augusta County, near Middlebrook. He was in the U.S. Foreign Service from 1986 to 2017.