

Shale Barren Rock Cress

Arabis serotina



A. Wieboldt

Description - The shale barren rock cress is a biennial plant in the mustard family. This plant occurs only in West Virginia and Virginia and is found on mid-Appalachian shale barrens of the Ridge and Valley Province of the Appalachian Mountains. This plant is highly habitat restricted and the number of individuals per population is low, most with fewer than 20 individuals. Because this species is a biennial, it has two age classes containing nonreproductive and reproductive individuals. Young, nonreproductive individuals have leaves in a basal rosette. Potentially reproductive individuals are present in the form of erect, flowering plants lacking a basal rosette. The flowering stem is composed of 3 to 41 branches. The flowers are small with white or creamy petals. Seeds are yellowish-brown and contain a narrow wing. Mature plants reach a height of 16 to 40 inches.

Life History - Mid-Appalachian shale barrens are characterized by an open, scrubby growth of pine, oak, red cedar, and other woody

species adapted to dry conditions and are found most frequently on eroding slopes undercut by a stream. Shale barrens are isolated islands of habitat with steep southern exposures with elevations of 1099 to 2494 feet, dry, relatively sparse vegetative cover, high temperatures, and low moisture in the summer. This plant reproduces sexually and diminished reproductive output brought about by deer grazing may lead to extirpation of some populations. The shale barren rock cress may not be a strict biennial, meaning that the rosettes may persist longer than one year, thus delaying flowering and fruiting beyond the second year. Flowering occurs from mid-July until the first killing frost, usually around November, at which time the plant dies.

Conservation - On August 14, 1989, the shale barren rock cress was federally listed as an endangered species due to the small number of populations and low numbers of individuals within those populations. Threats to this species include destruction of habitat by road construction or other human activities, herbivory by deer and insects especially during dry conditions, and drought. It has been documented that five shale barrens were destroyed due to road construction, two sites were partially destroyed from railroad construction, one site was crossed by a hiking path, and an additional site was destroyed by damming a stream. This plant is found in very stressed environments and cannot tolerate much disturbance.

What You Can Do To Help - If you find a plant that appears to be the shale barren rock-cress, take note of

the location and photograph the plant, if possible. Please do not remove the plant!

Contact one of the following agencies for assistance:

Virginia Department of Agriculture
and Consumer Services
Office of Plant Protection
P.O. Box 1163
Richmond, Virginia 23209
(804) 786-3515

Virginia Department of
Conservation and Recreation
Division of Natural Heritage
217 Governor Street, 3rd Floor
Richmond, Virginia 23219
(804) 786-7951

U.S. Fish and Wildlife Service
Virginia Field Office
6669 Short Lane
Gloucester, Virginia 23061
(804) 693-6694

References

U.S. Fish and Wildlife Service. 1989. Endangered and Threatened Wildlife and Plants: determination of endangered and threatened status for the shale barren rock cress; final rule. Federal Register 54(133): 29655-29658.

U.S. Fish and Wildlife Service. 1991. Shale barren rock cress (*Arabis serotina*) recovery plan. Newton Corner, Massachusetts.



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