

Species: White Beak-rush (*Rhynchospora alba*)
Global Rank: G5
State Rank: SNR
Climate Change Vulnerability Index: Moderately Vulnerable
Confidence: Low

Habitat:

White beak-rush occurs from Alaska and Canada, ranging southward in the United States to Georgia and Alabama in the east and to California in the west (NatureServe 2011). The species extends as far as Puerto Rico (in the upper Luquillo Mountains), and also in Eurasia. In Pennsylvania, white beak-rush is found occasionally in bogs and swamps and is sparsely scattered throughout the state (Rhoads and Klein 1993; Rhoads and Block 2007).

Current Threats:

White beak-rush is highly threatened by land use conversion, habitat fragmentation, and pollution. The species is also threatened, to a lesser extent, by succession and forest management practices (Southern Appalachian Species Viability Project 2002; NatureServe 2011).

Main Factors Contributing to Vulnerability Rank:

Distribution relative to natural barriers: White beak-rush is found in isolated wetlands in Pennsylvania that are surrounded by extensive upland forests that may likely serve as barriers against movement to new locations.

Dispersal and movement: Little is known about the dispersal of white beak-rush but the presence of bristled achenes may mean that dispersal can be facilitated by animals. However, dispersal is probably limited to a short distance within a site.

Predicted micro sensitivity to changes in temperature: White beak-rush is found mostly in cooler wetlands at higher elevations.

Predicted macro sensitivity to changes in precipitation, hydrology, or moisture regime: Within the species range in Pennsylvania, the species has experienced a slightly less than average precipitation variation in the past 50 years.

Predicted micro sensitivity to changes in precipitation, hydrology, or moisture regime: White beak-rush is an obligate wetland species that has moisture requirements that will likely change as a result of climate change.

References:

NatureServe. 2011. NatureServe Central Databases. Arlington, Virginia. USA.

Rhoads, A. and T. Block. 2007. The plants of Pennsylvania. 2nd Edition. Philadelphia. University of Pennsylvania Press.

Rhoads, A. and W.M. Klein. 1993. The vascular flora of Pennsylvania annotated checklist and atlas. American Philosophical Society, Philadelphia, PA.

Southern Appalachian Species Viability Project. 2002. A partnership between the U.S. Forest Service-Region 8, Natural Heritage Programs in the Southeast, regionally and locally rare species in the Southern Appalachian and Alabama region. Database (Access 97) provided to the U.S. Forest Service by NatureServe, Durham, North Carolina.