Species: White Fringed-orchid (*Platanthera blephariglottis*)
Global Rank: G4G5
State Rank: S2S3
Climate Change Vulnerability Index: Extremely Vulnerable
Confidence: Very High

Habitat:

White fringed-orchid grows in full sun or semi-shaded sphagnum bogs, acidic swamps, and other boggy areas. It is often found with cranberry and various sedges in a bed of sphagnum moss (PNHP 2007). The species is divided into two subspecies, one in the north (*P. blephariglottis*) and one in the south (*P. conspicua*). Pennsylvania marks the southern edge of the range for the northern subspecies which extends from Pennsylvania and New Jersey to northeastern Canada. In Pennsylvania, white fringed-orchid is limited to a few clusters of sites in the glaciated portions of the northeast and northwest and a few scattered sites at high elevations along the Allegheny Front (PNHP 2007).

Current Threats:

White fringed-orchid is somewhat threatened by land-use conversion, habitat fragmentation, and forest management practices. Other threats include alteration of hydrology, over-shading by woody growth, collection pressures (NatureServe 2010), and deer browsing.

Main Factors Contributing to Vulnerability Rank:

Distribution relative to natural barriers: Forests and mountains may limit the ability for this species to shift its range in response to climate change. Wetlands where this species is found tend to be isolated.

Dispersal and movement: Although seeds are dust-like in size, dispersal is thought to be a very limited distance (Machon et al. 2003).

Predicted micro sensitivity to changes in temperature: White fringed-orchid occurs in cooler microsites/microhabitats.

Predicted micro sensitivity to changes in precipitation, hydrology, or moisture regime: White fringed-orchid is completely or almost completely dependent on wetland habitat that is likely highly vulnerable to loss or reduction with climate change and the expected direction of moisture change is likely to reduce the species' distribution, abundance, or habitat quality.

Dependence on other species to generate habitat: The need for a mycorrhizal symbiont for germination and seedling establishment increases the vulnerability of this species to climate change.

Interspecific interactions: Reliance on a mycorrhizal symbiont somewhat increases the vulnerability of white fringed-orchid to climate change effects.

Additional Information:

This species is divided into two subspecies: one northern (in Pennsylvania) and one southern. For the northern subspecies, white fringed-orchid is at the southern end of its range and an increase in temperature may be detrimental. However, it is possible that the southern subspecies may move into the state.

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