

**Recommendation for the Designation of  
Eastern Prairie White-fringed Orchid  
*Platanthera leucophaea* (Nutt.) Lindl.  
as a Virginia Species of Greatest Conservation Need**

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The Virginia Department of Wildlife Resources, with support from the Virginia Department of Conservation and Recreation-Division of Natural Heritage, recommends the addition of Eastern Prairie White-fringed Orchid (*Platanthera leucophaea* (Nutt.) Lindl.) to Virginia's list of Species of Greatest Conservation Need as a tier **2-B\*** species (Appendix 1).

Justification

Species Summary

*Platanthera leucophaea* (Eastern Prairie White-fringed Orchid; G2G3/SH, Fed LT/State LT) (Appendix 2) was listed as Federally Threatened by the U.S. Fish and Wildlife Service on September 28, 1989 due to conversion of habitat for crops and pasturage, drainage of its wet prairie habitat, grazing, and fire suppression (USFWS 1989). *Platanthera leucophaea* is ranked G2/G3 (imperiled/vulnerable) by NatureServe and the Natural Heritage Network, meaning that it is at high risk of extinction on a global scale. (NatureServe, 2023). This perennial member of the orchid family (Orchidaceae) is found in wet prairies and similar grass-dominated habitats, predominately in the north-central states but ranging from Ontario south to Virginia and west to Oklahoma. It is of historical occurrence only in a third of the states in this range, including Virginia (NatureServe 2023, VA DCR 2023). Habitat alteration is the primary threat to the species' continued existence. Drainage and conversion of former prairie habitats to row crop agriculture has been the largest single threat to the species. Conversion of wet prairie to pasture may not entirely eliminate populations of *P. leucophaea* but the timing of mowing and intensity of grazing must be carefully managed. Competition with invasive species, particularly in such converted prairie remnants, can further impact the species (USFWS 1989, NatureServe 2023).

Trends

There is one historic population of *Platanthera leucophaea* in Virginia. Based on several unsuccessful visits to the known site, this occurrence may be extirpated. Only 8 plants were seen when the population was first discovered in 1983. A steady decline in plant numbers left only

one or two by 1990, the last date it was seen. These plants occurred on an isolated hummock surrounded by deeper water, leaving the plant vulnerable to changes in water levels caused by beavers (VA DCR 2023). Between 75 and 115 populations currently exist range-wide but the majority of these are relatively small and therefore vulnerable to extirpation (Natureserve 2023). Range-wide declines of *Platanthera leucophaea* populations are estimated at 70% long-term based on county occurrence data. The nearly wholesale conversion of eastern prairies to agriculture implies dramatic population declines before the era of botanical documentation and conservation assessments. In the short term, declines in existing populations are estimated at less than 30%, and some populations are fairly stable. Proper management of populations is critical to stabilizing or increasing plant numbers and negating downward trends due to habitat destruction or incompatible management.

### Conservation Action

It is necessary to rediscover the historically known population of *Platanthera leucophaea* and find additional sites through surveys in the Shenandoah Valley. The lone population is found in a wet meadow with other rare species that would benefit from the same management actions as *P. leucophaea*, so protection and management of the site should be the top priority. Prescribed burning and well-timed haying should be used when managing any population. The use of targeted herbicide applications should also be considered if encroaching woody plants and invasive species cannot be controlled by burning or mowing. Hydrologic issues caused by ditches, dams, or beaver impoundments should be mitigated.

The inventory of wet meadow and marsh habitats in the Ridge and Valley of Virginia has always been a priority but is far from complete. Agricultural impacts to the region have been severe so locating remnant habitats is very difficult and landowner permission is difficult to obtain. Finding additional populations will increase the chances for their conservation, particularly by minimizing human impacts.

### Summary

*Platanthera leucophaea* (Eastern Prairie White-fringed Orchid) is proposed for inclusion in the Virginia State Wildlife Action Plan as a tier 2-B species due to habitat impacts, management needs, and low population size.

**This species is only found in the Central Shenandoah Planning District Commission.**

### References

NatureServe. 2023. NatureServe Explorer [web application]. NatureServe, Arlington, Virginia. [https://explorer.natureserve.org/Taxon/ELEMENT\\_GLOBAL.2.134537/Platanthera\\_leucophaea](https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.134537/Platanthera_leucophaea) [Accessed: Mar. 27, 2023].

United States Fish and Wildlife Service (USFWS). September 28, 1989. Determination of threatened status for Eastern and Western Prairie-Fringed Orchids. Federal Register Vol 54 (Number 187): 39857-39863.

Virginia DCR Natural Heritage Program (VA DCR). 2023. Biotics 5 database. Virginia DCR Natural Heritage Program, Richmond, Virginia.

\*Rank Tier 2-B based on G2G3 rank, the species' State Threatened Status and RSGCN rank of High Concern; as far as the B rank, on the ground conservation strategies have been identified but cannot be implemented without an extant population and a management agreement with the landowner or land acquisition.