



Western Prairie Fringed Orchid

Platanthera praeclara

Sheviak and Bowles

Endangered: Species at Risk Act (2003)

Endangered: 2008 IUCN Red List

Manitoba: Tall Grass Prairie Preserve
80% of flowering population (Canada)



Habitat: Northern populations in Manitoba and Minnesota, comprising 90% of all plants, frequently occur in calcareous wet prairies and sedge meadows; the species is more likely to occupy mesic upland prairies in the southern part of its range. These prairies of the Missouri River drainage (west of Mississippi River) are the center of the Tallgrass Prairie formation, which is an ecosystem unique to the midwestern North America. The Tallgrass Prairie ecosystem is now reduced to approximately 1% of its original expanse.

Plant: Herb, erect, stout, terrestrial, 38 to 85 cm tall with underground root-stem tuberoid. Plants are non-hairy throughout. Several to many leaves have lanceolate to ovate-lanceolate leaf-blades. Up to 10 creamy-white, resupinate flowers are borne on large raceme. The lip is deeply three-lobed, and each flower measures approximately 2.5 cm wide and 3.0 cm high.

Pollinators: Large nocturnal moths.

Threats: Loss of prairie habitat to agriculture; habitat fragmentation; pesticide use for agriculture; lack of fire induced disturbance; invasive plant pressure; hydrologic changes; and illegal collecting of plants.

Economic and cultural value: The western prairie fringed orchid has economic value for ecotourism. The species is a bio-indicator of a delicate, unique, and biologically diverse ecosystem.

Conservation methods in place: Large sites harbouring its populations are protected in Manitoba, Canada and in northern Minnesota, USA. Smaller, fragmented populations elsewhere are scattered throughout the midwest and are more threatened. Research-scale efforts for fire management, augmented pollination, and *in vitro* propagation have been attempted.

Conservation measures suggested: Natural regeneration of plants will depend on *ex situ* measures, such as, site-management and management of land around the populations. Conservation of a functioning ecosystem, including appropriate mycorrhizae, hydrology, and fire induced disturbance is needed. Tile-draining and pesticide use for agriculture should be restricted on lands adjacent to the orchid's populations. Fire (or disturbances with similar effects) should be retained or introduced at sites harbouring the orchid, and invasive species in its habitat should be managed.

Research: Its response to fire, grazing, hydrologic shifts, and climatic factors is not well understood. Methods to increase natural regeneration (pollination, seed health, mycorrhizae, and overall site-suitability) also need more attention. An assessment of the effects of management practices on lands adjacent to orchid populations also is needed.

Reference: Goedeke, T., Sharma, J., Delphey, P. & Marshall Mattson, K. 2008. *Platanthera praeclara*. In: IUCN 2008. 2008 IUCN Red List of Threatened Species.

Link: <http://www.iucnredlist.org/details/132834>

Acknowledgments:

- Photo: © Jyotsna Sharma
- Distribution Map: Copyright © 2006 Michael MacConaill and his licensors. All rights reserved.