

SURVIVAL OF THE WESTERN PRAIRIE FRINGED ORCHID AT PIPESTONE NATIONAL MONUMENT

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Throughout its range in the tallgrass prairie, the threatened western prairie fringed orchid (*Platanthera praeclara*) is usually found in wet-mesic to wet habitats that are often subirrigated. The results of a demographic study of the orchid at Sheyenne National Grassland, North Dakota, suggest that in wet swale habitat that is ungrazed and prescribed burned, plants are short-lived with a possible half-life of 1 to 3 years. At Pipestone National Monument, Minnesota, the orchid is found in mesic prairie habitat of shallow soil over quartzite bedrock that is also ungrazed and burned. Because of the shallow soil, the orchid population at Pipestone may be more prone to moisture stress and lower survival than the population at Sheyenne and other populations found in more typical habitats. We monitored orchids at Pipestone to determine annual survival and to compare our results with those from the Sheyenne study. In July 1995, we permanently marked 30 orchids in the monument and revisited those locations each year for nine years and noted if plants were flowering, vegetative, or absent. We found the first year survival of the orchid at Pipestone was 86% but only 50% at Sheyenne. However, for subsequent years in the monitoring records, we found little difference in survival between the orchid populations. Orchid survival in the two distinct habitats appears to be similar.