

Species: White Trout-lily (*Erythronium albidum*)
Global Rank: G5
State Rank: S3
Climate Change Vulnerability Index: Moderately Vulnerable
Confidence: Very High

Habitat:

White trout lily occurs from Minnesota and Canada south to Texas and Georgia (NatureServe 2010). In Pennsylvania, this species occurs in mesic and floodplain forests on calcareous soils (Rhoads and Block 2007).

Current Threats:

White trout lily is threatened by deer herbivory and displacement from exotic plant species especially garlic mustard (*Alliaria petiolata*).

Main Factors Contributing to Vulnerability Rank:

Distribution relative to natural topographic or geographic habitat barriers: White trout-lily is mostly limited to floodplains and low, mesic slopes and will unlikely migrate upslope where microsite conditions are drier.

Dispersal and movements: Mechanisms for seed dispersal are mostly ant-dispersed and gravity and limited to a short dispersal distance.

Predicted macro sensitivity to changes in precipitation, hydrology, or moisture regime: Considering the range of the mean annual precipitation across the species' range in Pennsylvania, the species has experienced a less than average precipitation variation in the past 50 years.

Restriction to uncommon geological features: The species is restricted to mesic, calcareous forests in Pennsylvania. Such habitat is fairly uncommon in Pennsylvania

Dependence on other species for propagule dispersal: While vegetative reproduction can be high in white trout lily (Muller 1979, Morly 1992), seeds are adapted for ant dispersal (Thompson 1981).

References:

Morley, T. 1982. Flowering frequency and vegetative reproduction in *Erythronium albidum* and *E. propullens*, and related observations. Bulletin of the Torrey Botanical Club 109: 169-176.

Muller, R.N. 1979. Biomass accumulation and reproduction in *Erythronium albidum*. Bulletin of the Torrey Botanical Club 106:276-283.

NatureServe. 2010. NatureServe Central Databases. Arlington, Virginia. USA.

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

Thompson, J.N. 1981. Elaiosomes and fleshy fruits: phenology and selection pressures for ant-dispersed seeds. *American Naturalist* 117: 104-108.