



**Natural Heritage
& Endangered Species
Program**

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Massachusetts Division of Fisheries & Wildlife

Hooker's Orchid
Platanthera hookeri
(Torr. ex A. Gray) Linkl.

State Status: **None**
Federal Status: **None**

SPECIES DESCRIPTION: Hooker's Orchid has two oval leaves, 6 to 12 cm (2-5 in.), that lie on the ground, and a typically leafless flowering stalk grows to 40cm (16 in.) in height. The up-turned flowers are yellowish-green, with a 13 to 25 mm spur and a lip that curves up. It blooms from mid to late May into early July. It was named after an English botanist, Sir William Jackson Hooker (1785 to 1865).

DISTRIBUTION AND ABUNDANCE: The species ranges from Newfoundland west to Manitoba, south to Iowa and Pennsylvania. The species has declined 30 to 50% across its range since the early to mid-1900s. It has not been recently observed in several of the states at the southern extent of its range, including Illinois, Indiana, Ohio, New Jersey and Connecticut. It is considered critically imperiled in Iowa, Pennsylvania and New York. In Massachusetts, Hooker's Orchid is known historically from Berkshire, Franklin, Hampshire, Hampden, Worcester, Middlesex, Suffolk and Norfolk Counties. Current records are only from western Franklin County.

HABITAT DESCRIPTION: Hooker's Orchid may be found in rich, dry to moist forests and forest edges. It has been found in a variety of habitats, but is most frequently observed in secondary growth forests with rich soils. Associated species may include Sugar Maple, White Birch, Eastern Hemlock, Canada Mayflower, violets, Southern Beech-fern, and Maidenhair Fern.

THREATS: A study by Reddoch and Reddoch in 2007 of the population dynamics of this species found very little seed set, indicating a lack of pollinator visits, possibly due to shading by canopy closure, herbivory by deer, and acid deposition as the primary causes of the orchid decline. Acid deposition may be affecting the orchids directly, or it may be impacting their associated mycorrhizal fungi.

REFERENCES:

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- Reddoch, J.M., and A.H. Reddoch. 2007. Population Ecology of *Platanthera hookeri* (Orchidaceae) in Southwestern Quebec, Canada. *Journal of the Torrey Botanical Society* 134(3): 369-378.
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A Species of Greatest Conservation Need in the Massachusetts State Wildlife Action Plan

Massachusetts Division of Fisheries & Wildlife

1 Rabbit Hill Rd., Westborough, MA; tel: 508-389-6300; fax: 508-389-7890; www.mass.gov/dfw

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