



Natural Heritage & Endangered Species Program

www.mass.gov/nhesp

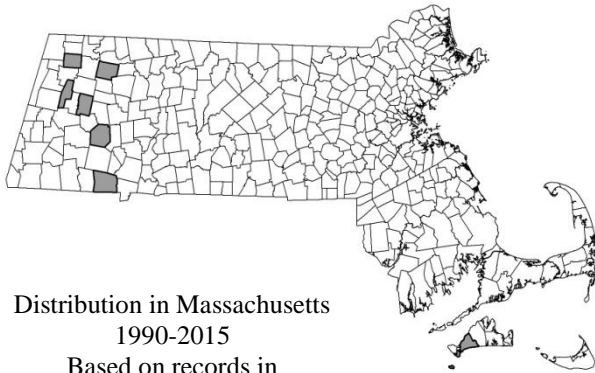
Massachusetts Division of Fisheries & Wildlife

Round-leaved Orchid *Platanthera orbiculata* (Pursh) Lindley

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

SPECIES DESCRIPTION: Round-leaved Orchid is similar to Large Round-leaved Orchid (*P. macrophylla*). Both are perennial wildflowers of moist woods or bogs and have variously been lumped as one species with two varieties and as two species. The Round-leaved Orchid is slightly smaller with two opposite, shiny, basal leaves lying on the ground, ranging in size from 5 to 10 cm (3 to 4 in.) The flowers are in a raceme and the petals range from white to greenish-brown. This species has a long nectar spur, mostly 10 to 26 mm in length, and pollinaria are 3 to 4.5mm in length. It is pollinated by at least two different noctuid moth species. It has showy flowers in bloom from late June to early August. Orchid seeds are dependent on an association with mycorrhizal fungus for germination and growth.

DISTRIBUTION AND ABUNDANCE: In Massachusetts, Large Round-leaved Orchid has been found in Berkshire, Franklin, Hampden, Essex and Dukes Counties. It is near the border of its range in Massachusetts.



Distribution in Massachusetts
1990-2015
Based on records in
Natural Heritage Database

This orchid is endemic to North America, with a range that extends across Canada from Newfoundland to Alaska south to North Carolina and Oregon. Although considered secure globally, many states and Canadian provinces considered this species vulnerable throughout most of its range. It is considered state historic (SH, meaning not observed for several years) in both Connecticut and Rhode Island.

HABITAT DESCRIPTION: This plant grows in rich, deciduous or mixed mature woodlands. The white flowers are lightly fragrant and conspicuous at night and are thought to be pollinated by night-flying hawkmoths. Associated species include *Fagus grandifolia*, *Tsuga canadensis*, *Betula alleghaniensis*, *Acer rubrum*, *A. saccharum*, *Prunus serotina*, *Viburnum acerifolium*, *Fraxinus americana*, *Viburnum lantanoides*, *Medeola virginiana*, *Viola rotundifolia*, *Uvularia sessilifolia*, and *Dennstaedtia punctilobula*. The understory is typically sparse.

THREATS: The primary threats to Large Round-leaved Orchid are not well known. Fire suppression has been noted as a possible threat in parts of its range. Increases in shading due to canopy closure may be a problem, though Reddoch and Reddoch (1997) note that these orchids disappeared after logging and after beaver removed trees adjacent to plants. Changes in hydrology and trampling are also possible threats in Massachusetts. Anything that damages or destroys its pollinators or the mycorrhizal fungus it depends on also threatens this species too. Deer browse of flowering spikes may also be a problem for this species. As this plant is often found in areas with little ground cover, densely growing invasive plant species are also a threat.

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

Please allow the Natural Heritage & Endangered Species Program to continue to conserve the biodiversity of Massachusetts with a contribution for 'endangered wildlife conservation' on your state income tax form, as these donations comprise a significant portion of our operating budget.

www.mass.gov/nhesp

REFERENCES:

- Brackley, F.E. 1985. The Orchids of New Hampshire. *Rhodora* 87(849): 1-117.
- Gleason, H.A., and A. Cronquist. 1991. *Manual of Vascular Plants of Northeastern United States and Adjacent Canada, Second Edition*. The New York Botanical Garden, Bronx, New York.
- Haines, A. 2011. *Flora Novae Angliae*. The New England Wild Flower Society. Yale University Press, New Haven, CT.
- Hornbeck, J.H., C.H. Sieg, D.J. Reyer, and D.J. Bacon. 2003. Conservation Assessment for the Large Round-leaved Orchid in the Black Hills National Forest, South Dakota and Wyoming. United States Department of Agriculture, Forest Service, Custer, SD.
- NatureServe. 2014. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <http://explorer.natureserve.org>. (Accessed: January 12, 2015).
- Reddoch, A.H., and J.M. Reddoch. 1997. The Orchids in the Ottawa District. *The Canadian Field-Naturalist* 111(1).
- Sheviak, C.J. 2003. *Platanthera* in Flora of North America. Editorial Committee, editors. Flora of North America, Volume 26 Page 555. Oxford University Press, New York, New York.

Updated 2015

A Species of Greatest Conservation Need in the Massachusetts State Wildlife Action Plan

Please allow the Natural Heritage & Endangered Species Program to continue to conserve the biodiversity of Massachusetts with a contribution for 'endangered wildlife conservation' on your state income tax form, as these donations comprise a significant portion of our operating budget.

www.mass.gov/nhesp