



Natural Heritage & Endangered Species Program

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Small Yellow Lady's Slipper *Cypripedium parviflorum* Salisb. var. *makasin* (Farw.) Sheviak

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

Description: Small Yellow Lady's-slipper is an herbaceous perennial in the Orchid Family (Orchidaceae) that grows to approximately 35cm (14in.) in height. The plant has three, or occasionally four or five, large, oval or elliptic leaves with prominent veins. It sends up one or two showy, highly fragrant flowers from a single, leafy stalk. The blossoms have a deep golden yellow lip that is enlarged into a hollow, inflated pouch, two spirally twisted side petals and two broad sepals, one above and one below the pouch. The sepals (members of the outermost floral whorl) and side petals are purplish brown, varying rarely to greenish brown. The pouch is often speckled with crimson spots inside and is usually veined with dark red along the "pleats" of the pouch. The "slipper" averages about 2-2.5 cm (3/4-1in.) in length and has a pleasant vanilla fragrance. The fruit is an ellipsoid capsule (a type of dry fruit derived from a compound pistil).

Similar species: Small Yellow Lady's-slipper is most similar to the Large Yellow Lady's-slipper (*Cypripedium parviflorum* var. *pubescens*), another North American variety of the same species. However, the larger variety may reach a height of 30 to 60cm (about 12 - 24in.) and has a pouch that may be more than 4cm. (1 3/5in.) long--although it may be as small as 2.5cm (1 in.). The leaves are usually broader than those of the small variety, the flower sepals and petals are greenish brown rather than purplish brown, and the flower is not fragrant.

Range: The documented range of Small Yellow Lady's-slipper is from Newfoundland and Nova Scotia westward to Yukon and British Columbia, and south to Pennsylvania, the northern Illinois, western Nebraska, Colorado and Oregon and California.



Small Yellow Lady's-slipper, showing dark side petals. Photo by B.A. Sorrie, NHESP.

Habitat in Massachusetts: Small Yellow Lady's-slipper grows in swamps and semi-open calcareous fens, especially in limestone wetlands. It prefers light to moderate shade. Other plants found growing with Small Yellow Lady's-slipper include Red Maple (*Acer rubrum*), Black Ash (*Fraxinus nigra*), Spicebush (*Lindera benzoin*), Purple-stemmed Aster (*Symphotrichum puniceum*), Skunk Cabbage (*Symplocarpus foetidus*), Pennsylvania Bitter Cress (*Cardamine pensylvanica*), Rough Bedstraw (*Galium asprellum*), Naked Mitre Wort (*Mitella nuda*), and Cinnamon Fern (*Osmunda cinnamomea*). Other rare plants found in association include Showy Lady's-slipper (*Cypripedium reginae*), Hemlock Parsley (*Conioselinum chinense*) and Swamp Red Currant (*Ribes triste*).

Population Status in Massachusetts: Small Yellow Lady's-slipper is listed under the Massachusetts Endangered Species Act as Endangered. All listed species are protected from killing, collecting, possessing, or sale and from activities that would destroy habitat and thus directly or indirectly cause mortality or disrupt critical behaviors. There are three current stations (1985-2010) in the Commonwealth. The species is also known to have occurred historically at seven other sites. Small Yellow Lady's-slipper is also considered rare in Vermont, New Hampshire, Quebec and New Brunswick, although not to the west in New York or Ontario where it is considered Apparently Secure. NatureServe ranks Small Yellow Lady's-slipper as Globally Apparently Secure.

Management and Threats: Small Yellow Lady's-slipper has apparently declined significantly in this state, possibly due to habitat loss from reforestation from natural succession, filling of wetlands and the alteration of natural water levels, including changes caused by beaver. Non-native invasive species occur in the Small Yellow Lady's-slipper habitats in Massachusetts; when these are abundant, they can compete for space and can be a threat to Small Yellow Lady's-slipper. Monitoring and removal of competing vegetation should be considered as a management strategy where appropriate. All active management of rare plant populations (including invasive species removal) is subject to review under the Massachusetts Endangered Species Act, and should be planned in close consultation with the Massachusetts Natural Heritage & Endangered Species Program.

For More Information See:

NatureServe. 2010. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed: December 9, 2010).

USDA, NRCS. 2010. The PLANTS Database (<http://plants.usda.gov>, 13 December 2010). National Plant Data Center, Baton Rouge, LA 70874-4490 USA. <http://plants.usda.gov/java/profile?symbol=CYPAM3>

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