



Natural Heritage & Endangered Species Program

Massachusetts Division of Fisheries & Wildlife
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Autumn Coralroot

Corallorhiza odontorhiza (Willd.) Poir

State Status: Special Concern

Federal Status: None

Description: Autumn Coralroot, a member of the Orchid family (Orchidaceae), is a brown-purple saprophyte--a type of plant that obtains its nourishment from dead organic matter present in the soil rather than from photosynthesis. It is frail and slender above, with a bulbous thickening at its base. Below ground is the branched, coral-like rhizome (underground, horizontal stem) that gives the genus its name. The 5-20 cm (2 - 8 in.) high flower stalk is erect, leafless, and hairless. The raceme (elongate, unbranched inflorescence of stalked flowers) has from 5 to 15 small blossoms, each borne on a very slender, 2-3 mm (2/25 - 3/25 in.) long, drooping stalk. The segments of the flowers spread very little but, rather, extend forward over the column (the structure formed in Orchids by the fused male and female flower parts). Both sepals and petals are dark purple or purplish green. The white "lip," or lower-most petal, is 3-4 mm (3/35 - 4/25 in.) long and is marked with a purple margin and two purple spots. The root system of *C. odontorhiza* gradually increases in size for several years before a flower stalk is produced.

Similar Species:

Other species of Coralroot do occur in our area and are somewhat similar in appearance. However, none blooms as late in the year as Autumn Coralroot. Spotted Coralroot (*C. maculata*) blooms from early July to mid August and, rarely, to late August. In addition, it is taller than Autumn Coralroot, growing from 8 to 20 in., compared to the 2 to 8 in. of Autumn Coralroot. Early Coralroot (*C. trifida*) blooms in spring and early summer, and its sepals and petals are greenish-yellow. The parasitic woodland plant Beechdrops (*Epifagus virginiana*) blooms from August through October and could also be mistaken for Autumn Coralroot. However, the flowers of Beechdrops, a member of the Broomrape family (Orobanchaceae), are tubular in shape, and the plant has many branches.



Illustration from: USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. 3 vols. Charles Scribner's Sons, New York. Vol. 1: 575.

Phenology in Massachusetts:

Autumn Coralroot blooms from early September to mid October in Massachusetts.

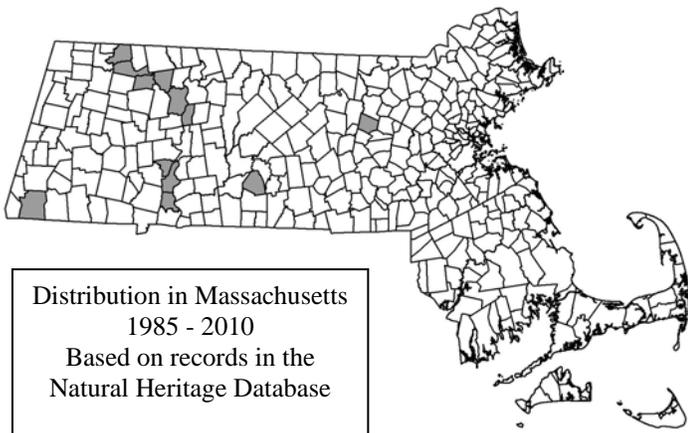
Flowering time in Massachusetts

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Habitat: In general, Autumn Coralroot grows in either light soil or rich humus in open deciduous or mixed forests. In Massachusetts, it has been found in the wooded border of a brook; on a trail in open woodland; in a rich, limey forest; in a mesic woods at the base of a talus slope; in a forested, dolomitic limestone cobble; and in an open, medium dry woods. Among the species associated with *C. odontorhiza* are White Pine (*Pinus strobus*), Sugar Maple (*Acer saccharum*), Hemlock (*Tsuga canadensis*), Spicebush (*Lindera benzoin*), Black Birch (*Betula lenta*), Sharp-leaved Goldenrod (*Solidago arguta*), and Common Speedwell (*Veronica officinalis*). Autumn Coralroot occurs at elevations ranging from sea level in North Carolina to 9,000 feet in Mexico and Guatemala.

Range:

Autumn Coralroot occurs throughout eastern North America, west into South Dakota and south through Texas, and into Central America. NatureServe ranks Autumn Coralroot as Secure (G5), however, despite the broad range, it is considered to be rare in many states and provinces.



Population Status: Autumn Coralroot is listed under the Massachusetts Endangered Species Act as a Species of Special Concern. 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 fourteen current stations (1985-2010) in ten towns in the Commonwealth. The species is also known to have occurred historically at three other sites. Due to its late blooming season and small size, it is possible that populations have been overlooked. Autumn Coralroot is also considered rare in most of New England except Connecticut.

Management and Threats: Non-native invasive species occur in many of the Autumn Coralroot habitats in Massachusetts. When these are abundant, they can compete for space and can be a threat to Autumn Coralroot. 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 6, 2010).

USDA, NRCS. 2010. The PLANTS Database (<http://plants.usda.gov>, 6 December 2010). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.
<http://plants.usda.gov/java/profile?symbol=COOD7>