



Natural Heritage & Endangered Species Program

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Massachusetts Division of Fisheries & Wildlife

Autumn Coral-root *Corallorhiza odontorhiza* (Willd.) Poir.

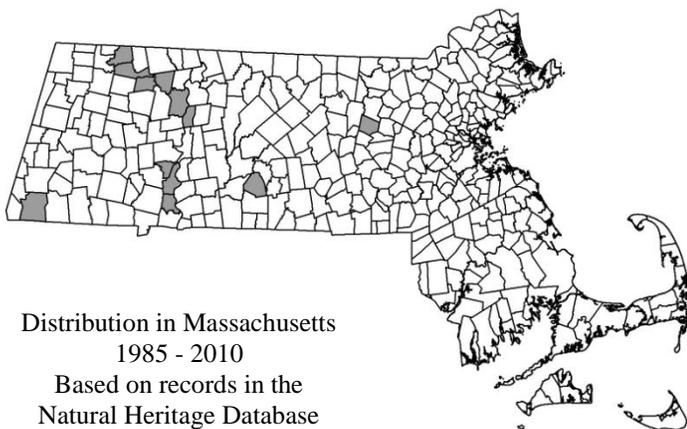
State Status: **Special Concern**

Federal Status: **None**

DESCRIPTION: Autumn Coral-root, 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 photo-synthesis. 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 ($\frac{2}{25}$ - $\frac{3}{25}$ 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 ($\frac{3}{35}$ - $\frac{4}{25}$ 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.



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.



Distribution in Massachusetts
1985 - 2010
Based on records in the
Natural Heritage Database

SIMILAR SPECIES: Other species of Coral-root do occur in our area and are somewhat similar in appearance. However, none blooms as late in the year as Autumn Coral-root. Spotted Coral-root (*C. maculata*) blooms from early July to mid August and, rarely, to late August. In addition, it is taller than Autumn Coral-root, growing from 8 to 20 in., compared to the 2 to 8 in. of Autumn Coral-root. Early Coral-root (*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 Coral-root. However, the flowers of Beechdrops, a member of the

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

Massachusetts Division of Fisheries & Wildlife

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Broomrape family (Orobanchaceae), are tubular in shape, and the plant has many branches.

HABITAT: In general, Autumn Coral-root 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*), Spice-bush (*Lindera benzoin*), Black Birch (*Betula lenta*), Sharp-leaved Goldenrod (*Solidago arguta*), and Common Speedwell (*Veronica officinalis*). Autumn Coral-root occurs at elevations ranging from sea level in North Carolina to 9,000 feet in Mexico and Guatemala.

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

POPULATION STATUS: Autumn Coral-root 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 likely that many populations have been overlooked. Autumn Coralroot is also considered rare in Maine, New Hampshire, Vermont, Rhode Island, Delaware, Georgia, Florida, Illinois, Iowa, Louisiana, Oklahoma, Wisconsin, and Nebraska. The species may be extirpated from New York. Threats to Autumn Coral-root include logging, road-widening, and general land development.

PHENOLOGY IN MASSACHUSETTS: Autumn Coral-root 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

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