



Natural Heritage & Endangered Species Program

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Massachusetts Division of Fisheries & Wildlife

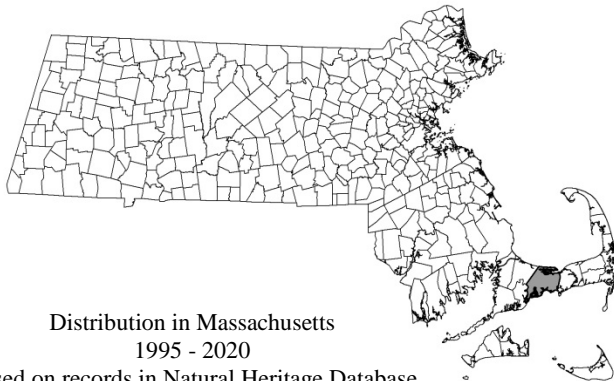
American Chaffseed *Schwalbea americana* L.

State Status: **Endangered**
Federal Status: **Endangered**

GENERAL DESCRIPTION: American Chaffseed (*Schwalbea americana*) is an herbaceous perennial typically 12 to 18 inches tall (30-46 cm) with alternate, yellow-green, untoothed, fuzzy leaves that grow between one and two inches in length (2.5 to 5 cm). The plant will bloom in early July with loosely clustered 10-12 flowers toward the top of the stem. The flowers are about 4 cm in length (1.6 inches) and 1 cm in width and are composed of a tubular calyx (joined sepals) and tubular, two-lipped corolla (joined petals), both of which are covered with short hairs and have distinct striations running lengthwise. The overall shape of the flower is that of a narrow tube, expanding slightly from base to tip. The corolla color is pinkish-red and the calyx, a yellowish green, with several distinct, pointed lobes at the opening. The plant can be single-stemmed, or it can form a small, tight circle of 5-8 stems. Bumblebees force their way into the mostly closed tube of the corolla to pollinate the flower. Fruits are hard capsules that split open eventually along a line, revealing numerous tiny, lightweight seeds that can be airborne in a strong breeze.



Photo by Troy Gipps, MassWildlife



Distribution in Massachusetts
1995 - 2020

Based on records in Natural Heritage Database
Map updated 2020

AIDS TO IDENTIFICATION: American Chaffseed is unlike almost any other plant. Studying a plant manual with good illustrations may be sufficient in being able to identify this plant correctly.

Massachusetts Division of Fisheries & Wildlife

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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.

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SIMILAR SPECIES: There is only one species in the genus *Schwalbea* and it is generally distinct from other members of the plant family *Orobanchaceae* (broomrape family) to which it belongs. This plant family consists of almost entirely parasitic plants that use structures to tap into the roots of other plants or fungal hyphae and draw on food resources or water supply or both. They often do have some chlorophyll and can produce some or most of their food through photosynthesis. Some have no chlorophyll at all and depend entirely on scavenged energy from other plants or fungi.

HABITAT: In Massachusetts, American Chaffseed is found in sandplain grasslands, an open, sunny plant community often dominated by little bluestem grass (*Schizachyrium scoparium*). These are more common on Cape Cod and the islands on glacial outwash plains of sandy, nutrient-poor soil.

Associated species include those typical of sandplain grasslands: little bluestem grass (*Schizachyrium scoparium*), yellow wild indigo (*Baptisia tinctoria*), lowbush blueberry (*Vaccinium angustifolium*), bayberry (*Morella caroliniensis*), hyssop-leaved boneset (*Eupatorium hyssopifolium*), flax-leaved aster (*Ionactis linariifolia*), Greene’s rush (*Juncus greenei*), hairy small-leaved tick-trefoil (*Desmodium ciliare*), and gray and sweet goldenrod (*Solidago nemoralis*, *S. odora*).

This species has also been observed in association with other rare and uncommon plant species including the federally endangered sandplain gerardia (*Agalinis acuta*), narrow-leaved bush clover (*Lespedeza angustifolia*), northern blazing star (*Liatris novae-angliae*), Nuttall’s and racemed milkwort (*Polygala nuttallii*, *P. polygama*), pasture thistle (*Cirsium pumilum*), post oak (*Quercus stellata*), and clasping-leaved milkweed (*Asclepias amplexicaulis*).

RANGE: Massachusetts is the only state in New England with a current population of American Chaffseed, where the species reaches its northeastern extent. It was found in Connecticut in the early 20th Century. The native range extends south along coastal states to Florida and west to Louisiana.

POPULATION STATUS IN MASSACHUSETTS: American Chaffseed 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. In Massachusetts, American Chaffseed is currently found only in Barnstable County and there is only one population. Previously, dating back to the 19th century, it was found in widely scattered locations in eastern Massachusetts as well as in Montague near the Connecticut River. The last population was seen on Cape Cod in 1965. However, a brand new and significant population was found in Barnstable County in 2018 and is being monitored and maintained.

American Chaffseed was given endangered status by the federal government in 1992. It is considered to be globally imperiled and in danger of extinction throughout its range. Further south, *Schwalbea* is generally only found in areas of frequent fire, such as Fort Bragg, North Carolina, where live artillery fire drills often catch the ground cover on fire that is left to burn. In South Carolina and Georgia, land managers working to restore habitat for Bobwhite Quail use prescribed burns on an annual or biannual basis, and in doing so, also help the maintain or increase some populations of American Chaffseed.

MANAGEMENT RECOMMENDATIONS: This species needs open habitat and is one of the most fire-dependent herbaceous plant species in North America. The current population in Massachusetts is threatened by rapid growth of seedlings of pitch pine as well as invasive autumn olive (*Elaeagnus umbellatus*) which could quickly shade out this species. Invasive grasses are also present, such as sweet vernal grass, as well as common velvet grass. Prescribed fire would assist in a variety of ways to maintain this population but must be carefully planned and executed.

FLOWERS PRESENT:

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

MATURE FRUITS PRESENT:

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

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