



**Natural Heritage
& Endangered Species
Program**

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Massachusetts Division of Fisheries & Wildlife

**Large-bracted Tick-trefoil
*Desmodium cuspidatum***

(Muhl. ex Willd.) DC. ex Loud

State Status: **Threatened**

Federal Status: **None**

DESCRIPTION: Large-bracted Tick-trefoil (*Desmodium cuspidatum*) is an erect perennial herb in the legume family (Fabaceae) that can grow up to 2 m (~6 feet). The leaves are alternate and pinnately compound. Each leaf has three acuminate, ovate-elongate leaflets, which are bright green on the upper surface and paler below. The leaflets range from 6 to 12 cm (2.4 to 4.7 inches) in length. Lateral leaflets are smaller than the terminal leaflet, and have semi-persistent lanceolate stipules, which are 8 to 17 mm in length. The flowers are pink, 6 to 12 mm in size, and arranged in a sparse raceme. The fruit is a loment (jointed seedpod), with three to seven articles (rhomboid-shaped segments). Each article is 9 to 11 mm long, and half as wide. The lower sutures of the articles are abruptly angular.

AIDS TO IDENTIFICATION: The combination of long, slender stipules (>8 mm) at the base of each leaf, sharply acuminate leaflet tips, and the article characters described above differentiate Large-bracted Tick-trefoil from the numerous tick-trefoils known from Massachusetts, some of which can co-occur with this species. Though other species may have stipules, they



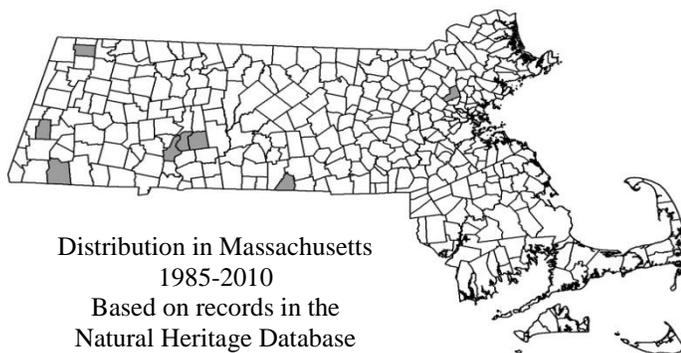
Large-bracted Tick-trefoil, photo by G.A. Cooper. Courtesy of Smithsonian Institution, Department of Systematic Biology-Botany.

are shorter and less conspicuous. The stipules of Large-bracted Tick-trefoil usually persist throughout the growing season.

FLOWERING TIME IN MASSACHUSETTS:

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

HABITAT: Large-bracted Tick-trefoil generally inhabits dry, rocky, open areas such as forest edges, rocky ridges, and embankments. It is often found in scrubby, shrub-dominated landscapes with circumneutral or alkaline bedrock. Disturbances caused by humans can create suitable habitat for Large-bracted Tick-trefoil;



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

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

Massachusetts Division of Fisheries & Wildlife

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some known habitats in Massachusetts include power line rights-of-way, and a drinking water supply service road. Associated species include Poison Ivy (*Toxicodendron radicans*), blackberries (*Rubus* spp.), Multiflora Rose (*Rosa multiflora*), and goldenrods (*Solidago* spp).

RANGE: Large-bracted Tick-trefoil is known throughout much of eastern and central North America, from New Hampshire and Vermont, west to Ontario, Minnesota, and Nebraska, and south to the Gulf states.

POPULATION STATUS IN MASSACHUSETTS:

The Large-bracted Tick-trefoil is listed under the Massachusetts Endangered Species Act as Threatened. 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. It is currently known from Berkshire, Hampden, Hampshire, Middlesex, and Worcester counties and is historically known from Franklin, Norfolk, and Suffolk counties.

THREATS AND MANAGEMENT

RECOMMENDATIONS: Competition and over-shading from exotic invasive and aggressive native species due to natural succession and lack of natural disturbance or management is a potential threat. Appropriately timed vegetation management, through controlled burning or mechanical means, for example, may increase habitat quality and extent. Many of the known Large-bracted Tick-trefoil habitats in Massachusetts are open disturbed sites (e.g., rights-of-way), which are highly susceptible to invasions by exotic species, and thus should be monitored periodically. 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.

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