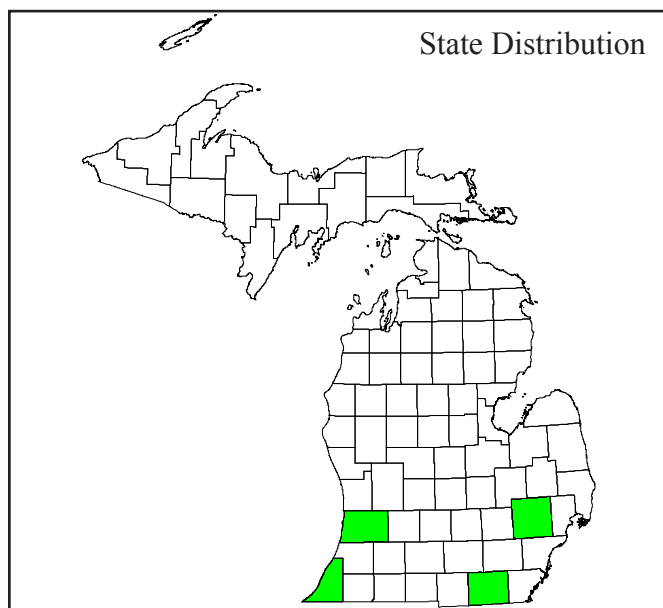




Photo by Michael R. Penskar



Best Survey Period



**Status:** State threatened

**Global and state rank:** G5?/S1

**Other common names:** trumpetweed, hollow joepyeweed, hollow Joe-pyeweed

**Family:** Asteraceae (aster family, also known as the Compositae)

**Synonyms:** *Eutrochium fistulosum* (Barratt) E.E. Lamont, *Eupatoriadelphus fistulosus* (Barratt) R.M. King & H. Robinson, *Eupatorium purpureum* L. var. *angustifolium* Torrey & A. Gray

**Taxonomy:** Long known in the genus *Eupatorium*, this species has been segregated in the genus *Eutrochium*, along with two common Michigan taxa also formerly placed in *Eupatorium* (*E. maculatum* and *E. purpureum*) according to the treatment in Flora of North America (2006); see also Lamont (1995). Based on chloroplast DNA analysis (Schilling et al. 1999) a more narrow interpretation of *Eupatorium* was suggested, splitting the genus into sect. *Verticillata* DC (including those species later transferred to *Eutrochium*) and sect. *Eupatorium*. *Eupatorium fistulosum* is retained here solely to conform to the current State Technical List, which will be updated following the next biennial review.

**Range:** *E. fistulosum* occurs principally in the eastern United State, ranging from Maine to Florida and occurring west to Missouri, Oklahoma, and Texas. It is considered rare in Maine and is known only from historical records in New Hampshire (NatureServe 2007).

**State distribution:** Hollow-stemmed Joe-pye-weed was not known in Michigan until 1991, when it was discovered in Berrien County by G. Wilhelm; it is now known from three localities in Berrien County and one locality each in Lenawee, Allegan, and Oakland counties. There are reports, as yet undocumented in the database, of additional localities in other counties, and thus this species is potentially widespread across southern Lower Michigan, although its status is far from determined.

**Recognition:** *E. fistulosum* is a tall, robust, striking Joe-pye-weed, ranging from about 0.5 m to 3.5 m or more in height. The leaves, which are whorled and **usually 6 or more per whorl**, are saw-toothed (serrate) and narrowly to broadly lance-shaped, the latter especially in large, thick-stemmed plants. In this species, **the stems are usually purplish and smooth** (or occasionally green or red-purple spotted), and – as indicated by the common name – **hollow, the hollow portion being more than half the diameter of the stem in the middle internodes** (approximately in the middle of the



plant). Terminating the tall stem is a distinctly **convex to strongly domed inflorescence of pale pink flower heads, the individual heads composed of 3-7 florets with corollas 5 mm long or less.**

*E. purpureum* (green-stemmed Joe-pye-weed) is a common Joe-pye-weed most likely to be confused with *E. fistulosum*, based on its size and similarly domed inflorescence, but can be distinguished by its greenish stems (these are sometimes purplish at the nodes) with solid pitch and leaves that are usually 3-5 per whorl. *E. maculatum* is an extremely common and widespread Joe-pye-weed that is usually much smaller than *E. fistulosum* and is distinguished by its flat-topped inflorescence, strongly purple-spotted stems, and flower heads with more florets.

**Best survey time/phenology:** This large Joe-pye-weed is a robust, distinctive plant but is best sought when in flower or fruit, from approximately early August through October.

**FQI Coefficient and Wetland Category:** 10, OBL

**Habitat:** In Berrien County *E. fistulosum* was discovered in low areas along a highway, landward from coastal high dunes along Lake Michigan, where it was associated with such species as *Acer rubrum* (red maple), *Aster lateriflorus* (side-flowering aster), *Sambucus canadensis* (elderberry), *Fraxinus pennsylvanica* (red ash), *Glyceria striata* (fowl manna grass), *Impatiens capensis* (impatiens), *Solidago gigantea* (late goldenrod), *Ulmus americana* (American elm), and other common wetland plants. Elsewhere in Michigan this species occurs in similar low ground along roads bordering wetlands, whereas in Lenawee County it was collected on a “seeping hillside”, and in Oakland County it occurred on the edge of a wet meadow/shrub carr adjacent to a fen. Elsewhere in its range it occurs in a wide variety of wetland habitats, including wet lowlands, floodplain woods, along streams, wet meadows, bogs, and marshes in both open sun and partial shade (Flora of North America (2006).

**Biology:** Little is known about the life history of this robust perennial species. It is reported to be an important pollen and nectar plant for insects, and is also known and planted for attracting butterflies such as the yellow swallowtail and other species.

**Conservation/management:** There are few known threats to this species, although its occurrence along highways suggests that it may be vulnerable to road maintenance activities. In the Allegan County locality, it occurs in a rural area along an unpaved road where there is a high degree of off-road-vehicle (ORV) use, yet it does not appear to have sustained any impacts. This species generally occurs in wetlands where there is poor access for ORVs and other traffic, and thus it is buffered by its natural habitats.

**Comments:** Owing to its vigorous, robust habit as well as its ability to attract butterflies, this colorful perennial is highly valued as an ornamental species and is offered in many nursery catalogues.

**Research needs:** A primary need at the present time is inventory to reliably determine the status of this species in Michigan. Records in both southwestern and southeastern Lower Michigan indicate that this species potentially occurs throughout southern Lower Michigan, as its habitat does not appear to be specialized, and it thus may be overlooked by botanists and others.

**Related abstracts:** Southern wet meadow, American bittern, Blanding’s turtle, eastern massasauga, marsh wren, Mitchell’s satyr butterfly, northern harrier, short-eared owl, spotted turtle, small white lady’s slipper.

**Selected references:**

- Flora of North America Editorial Committee. 2006. *Flora of North America, North of Mexico*. Volume 21: *Magnoliophyta: Asteridae*, part 8, *Asteraceae*, part 3. Oxford Univ. Press. New York, NY. 616 pp.
- Lamont, E.E. 1995. Taxonomy of Eupatorium section Verticillata (Asteraceae). *Mem. New York Bot. Gard.* 72: 1-66
- NatureServe. 2007. NatureServe Explorer: an online encyclopedia of life [web application]. Version 6.1. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed: September 11, 2007).
- Schilling, E.E., J.L. Panero, and P.B. Cox. 1999. Chloroplast DNA restriction site data support



a narrowed interpretation of *Eupatorium*  
(Asteraceae). *Plant Syst. Evol.* 219: 209-223.

Swink, F. and G. Wilhelm. 1994. *Plants of the  
Chicago Region*, 4th ed. Indiana Acad. Sci.,  
Indianapolis. 921 pp.

**Abstract citation:**

Penskar, M.R. 2009. Special Plant Abstract for  
*Eupatorium fistulosum* (hollow-stemmed  
Joe-pye-weed). Michigan Natural Features  
Inventory, Lansing, MI. 3 pp.

Copyright 2009 Michigan State University Board of Trustees.

Michigan State University Extension is an affirmative-action,  
equal-opportunity organization.

Funding for abstract provided by Michigan Department of  
Transportation.

