



spotted joe pye weed

Eutrochium maculatum (L.) E. E. Lamont

Alternate Common Names

purple boneset, spotted trumpetweed

Scientific Synonyms

Eupatoriadelphus maculatus (L.) R. M. King & H. Rob.,
Eupatorium maculatum L., *Eupatorium purpureum* L. var.
maculatum (L.) Darl., *Eupatorium purpureum* subsp. *maculatum*
(L.) Á. Löve & D. Löve, *Eupatorium trifoliatum* var. *maculatum*
(L.) Farwell

Functional Group

forbs (wildflowers)

Family

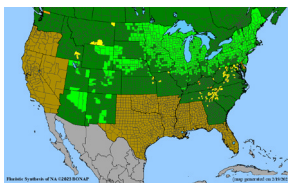
aster or sunflower family (Asteraceae)

Description

- » **Life cycle/growth form:** Perennial, spreads slowly by rhizomes to form clumps.
- » **Height:** 2-10 ft (mostly 3-6 ft)
- » **Leaves and stem:** Lance-shaped, up to 9 in long with serrated margins, whorled in groups of 4-5 (usually) at each node; unbranched stems purple to purple-spotted (the name 'maculatum' means spotted and refers to this trait).
- » **Flower:** 3-5 small, indistinct florets per head, in flat-topped to domed inflorescences with dozens to hundreds of pink to purplish heads (rarely white); inflorescences appear fuzzy due to the long styles that stick out of the florets.
- » **Fruit/seed head:** Seed clusters ripen from the center outward, becoming tan and fluffy as seed matures; seed is wind-dispersed and susceptible to shattering in windy weather.
- » **Pollination:** Insects, particularly bees and butterflies.



Habitat and Range



Moist to wet soil; full sun; wet prairies, sedge meadows, fens, ditches, and other wet places. The USDA classifies it as an Obligate Wetland species in the Midwest region. It benefits from irrigation in production systems.

Conservation Status

Global- G5, secure; Idaho and West Virginia- S1, critically

imperiled; Montana- S1/S2, critically imperiled to imperiled; Arizona, Virginia, and Georgia- S2, imperiled; Wyoming- S3, vulnerable (NatureServe)

General Comments

The sweet-scented flowerheads attract numerous and diverse pollinators including the endangered rusty patched bumble bee. We once identified seven species of butterflies along a 150 foot row of flowering spotted joe pye weed in one 15-minute observation. Traditional uses of this species by Native tribes include treatments for digestive, urinary, kidney, and women's complaints and using the hollow stems as straws. The clumped stems and whorled leaves produce dense shade that excludes most weeds from a well-established plot. Irrigation is important for seed production.

Establishment for Seed Production (Appendix A)

Direct seeding:

We do not have experience with direct seeding this species for seed production.

Greenhouse:

- » **Seed pre-treatment:** 60 days cold-moist stratification.
- » **Sowing:** Seed is small and should be surface sown or very lightly covered or seedlings will not have enough energy to emerge. If started in germination flats, transplant to individual plugs when seedlings have their first pair of true leaves.
- » **Transplanting:** Seedlings are ready to transplant to the field about 8-12 weeks after starting in plugs, when their roots are well-branched and numerous root tips are visible at hole(s) in the base of the plug. Pop out a few plugs to check for adequate root development that will provide sturdy plugs for planting. A week or two before transplanting, move flats outside to 'harden off.' (See Propagation chapter in General Information for more details).

Stand Management

- » **Weeds:** In the first season after transplanting, weeds are suppressed by a plastic weed barrier. Plants spread by short rhizomes; in second and subsequent years, holes in plastic must be expanded or plastic removed to make room for new stems. Well-established plots shade out most weeds.
- » **Pests:** None noted.
- » **Diseases:** None noted.
- » **Soil moisture:** Irrigation is necessary in most soils to obtain maximum seed yield.

Seed Production (Appendix B)

- » **First harvest:** Plants flower and set a little seed the first year when transplanted in spring.
- » **Yield:** 29-226 pounds/acre (based on 1 plot)
- » **Stand life:** Peak seed production in years 3-5, but plants are long-lived and vigorous for many years.
- » **Flowering date:** late July - early September in northeast Iowa
- » **Seed maturity/Harvest date:** second to third week of September
- » **Seed retention:** Seeds are wind dispersed soon after maturity, when fluff (pappus) expands in late August through September.

