

tall blazing star Liatris aspera Michx.

Alternate Common Names

rough blazing star, rough blazingstar, rough blazing-star, tall gay-feather, gayfeather, button snakeroot, rough gayfeather

Scientific Synonyms

Lacinaria scariosa var. intermedia Lunell, Liatris aspera var. intermedia (Lunell) Gaiser, Liatris aspera var. salutans (Lunell) Shinners, Liatris spheroidea var. salutans (Lunell) Shinners

Functional Group

forbs (wildflowers)

Family

aster family (Asteraceae)

Description

- » Life cycle/growth form: Perennial with a woody corm that can be divided.
 » Height: 1.4 ft
- » Height: 1-4 ft
- » Leaves and stem: Leaves narrowly lanceolate, alternate, with a prominent central vein and short stiff hairs; stem is rigid and rough with short hairs, green or purple in color, usually unbranched.
- Flower: Pinkish purple heads, 1 in across, are spaced along the stalk, button-like, in a 6-18 in long spike; plants in production plots may be taller and produce robust, branched inflorescences. Heads of *Liatris aspera* are usually sessile or very short-stalked, compared with the stalked (pedunculate) heads of *Liatris ligulistylis*, Rocky Mountain blazing star, which is otherwise quite similar. Bracts on the underside of *L. aspera* heads are strongly cupped, while *L. ligulistylis* bracts tend to be flattened toward the top.







- » Fruit/seed head: Dark brown seeds are 1/4 in long, ribbed, with a light brown pappus (fluff) that is finely barbed but not feathery; wind dispersed.
- » Pollination: Insects such as bees, butterflies, moths, and flies

Habitat and Range



Dry to dry-mesic, even sandy or rocky soil; full sun; prairies, savannas, prairie remnants along railroads, upland forests, limestone glades. Upland, very well-drained, loamy soils are preferred for seed production. If soils are too dry or

poor, seed production will be curtailed.

Conservation Status

Global- G4, apparently secure; North Carolina- S1, critically imperiled; South Carolina- S2, imperiled; Georgia and Virginia-S3, vulnerable (NatureServe)

General Comments

This species is best propagated in the greenhouse, and transplanted in spring into a weed-free planting bed or weed barrier. Seedlings develop pea-size corms after two months in the greenhouse. Sometimes first year corms are exposed by frost-heaving over the winter, and may be eaten by voles. Species in the genus *Liatris* are known to hybridize, therefore proper isolation should be maintained between related species to avoid hybrid seed production (Levin 1968, Menhusen 1972). *Liatris* species are also produced commercially for the cut-flower industry and some species and cultivars have become popular in gardening and landscaping.

Establishment for Seed Production (Appendix A) Direct seeding:

Not recommended for this species

Greenhouse:

- » Seed pre-treatment: Wet stratify 8-12 weeks at 40° F. Seed sometimes becomes moldy in stratification, and some growers add fungicide to the stratification media.
- **»** Sowing: Sow seed 1/4 in deep in the greenhouse two months before the last frost free date.
- **» Transplanting:** Harden off, transplant into bare soil in rows and mulch or transplant into a weed barrier at 8 in intervals after all danger of frost is past.

Stand Management

- » Weeds: Mow/cultivate between rows, mulch within rows. Post emergence grass herbicide, tillage, hoeing, hand roguing. Very sensitive to soil disturbance during bolting/flowering, so clip weeds rather than pulling or hoeing once flower stalks are apparent.
- **» Pests:** Voles will eat and/or cache corms, rabbits and deer eat young shoots, goldfinches consume seed as it ripens.
- » **Diseases:** Powdery mildew, root-knot nematodes, stem rot, verticillium wilt.
- » Hybridization risk: This species has been known to hybridize with related species *Liatris acidota*, *L. ligulistylis*, *L. punctata*, *L. pycnostachya*, and *L. squarrosa*.

Seed Production (Appendix B)

- » First harvest: Remains vegetative first year (seedlings), abundant flowering/seed production occurs second year. Fall corm division/transplanting results in abundant flowering the following growing season.
- **» Yield:** 8-130 bulk pounds/acre (extrapolated from harvests of 5 plots)
- **» Stand life:** Peak harvests second year. Good harvest third year if proper soils. Stand declines significantly fourth year and after. Plants tend to lodge second year when flowering.
- » Flowering date: early August early September in northern

Iowa

- » Seed maturity/Harvest date: late September mid-October in northern Iowa
- » Seed retention: wind dispersed soon after maturity
- » Harvest date range at TPC (2003-2023): Sept 29 Nov 6
- » Recommended harvest method: Combine at maturity, but before pappus is dry and fluffy. Seedheads mature from the top down along a stalk. When the topmost heads are fluffy, break open a few of the lower heads and observe for signs of maturity: darkcolored seeds that separate easily from the base of the head. Small plots may be hand harvested by clipping stalks as the seed matures, then drying the cut material in a building. Dry seed threshes easily from stalks.

*data based on 5 plots



Years Since Establishment (Transplants)

Seed Cleaning Process (Appendix C)

Pre-clean by scalping thru 1/2 in mesh to remove large particles and make the material flowable, brush gently with soft-bristles to remove 'plumes' (pappus), using care not to damage seed coat, then air screen.

Seed Characteristics (Appendix D)



- » Seeds per ounce: 16,000 (IA NRCS)
- **» 1000 seed weight:** 2.11 g (Seed Information Database)
- » Description: "Seeds" are achenes, nearly black, about 1/8 in to nearly 1/4 in long, with tufts of light brown hairs (pappus).
- » Seed storage: cool/dry (33-50° F, 30-50% RH); stores well for a few years if seed is not damaged during cleaning.

» Typical seed test:

PLS: 93% (n = 10) Purity: 96% (n = 10) Germination: 27% (n = 8) Dormancy: 66% (n = 10) (averages obtained from n tests of purchased seed lots)

Released Germplasm

» Source Identified material: Northern Iowa Germplasm (IA Zone 1), Central Iowa Germplasm (IA Zone 2), Southern Iowa Germplasm (IA Zone 3)





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Species Updated: 2/14/2025

Notes