

## DEVIL'S BITE

### *Liatrix scariosa* (L.) Willd.

Plant Symbol = LISC2

#### Alternative Names

*Common Names:* northern blazing star, large gayfeather, northern gayfeather, large blazing star

*Scientific Names:* *Serratula scariosa* L., *Lacinaria scariosa* L.

#### Description

*General:* Devil's bite is an upright, clump-forming perennial forb in the Asteraceae (daisy) family native to central and eastern North America. Devil's bite typically grows 1–5 ft. tall from a rounded, woody underground corm with fibrous roots (Fernald, 1950; Nesom, 2020).

Vegetative offsets are produced annually, forming dense basal tufts of long, narrow, lanceolate leaves measuring 3–12 in. long and up to 1½ in. wide (Hilty, 2025; Missouri Botanical Garden, n.d.). A single, unbranched, upright stem arises from the basal foliage and supports the inflorescence.

Stems are stiff, terete, and glabrous to pubescent (Hilty, 2025). Leaves are simple, grass-like, lanceolate to oblong, and alternately arranged with entire margins. Leaf size gradually decreases up the stem. Lower stem leaves are petiolate, 3–5 in. long and approximately 1 in. wide (Still, 1994). Upper stem leaves are smaller, 1–3 in. long, more linear, punctate, and sessile (Hilty, 2025).

Plants typically begin flowering during their second or third year. Flower heads grow on a terminal, spike-like raceme up to 24 in. long (Hilty, 2025). Individual flower heads are supported by short peduncles (up to 2 in. long) that subtend a cup-shaped involucre composed of overlapping, oval to obovate, floral bracts (phyllaries). These bracts turn from green to dark purple or red during bloom (Hilty, 2025). Pink to purple (rarely white) flowers bloom from mid-summer to early fall. Flowering progresses from the top downward (Hilty, 2025). The inflorescence consists of 10–40 discoid flower heads (Hilty, 2025; NYNHP, 2026). Flower heads measure 1–2 inches across and contain 19–80 tubular disk florets (Nesom, 2020). Each floret has 5 narrow lobes arranged like a star, exposing a long, bifurcated (forked) style. This gives the flower heads a distinctive shaggy, feathery, or thistle-like appearance (Hilty, 2025; NYNHP, 2026). Pollinated flowers produce dark, slightly ribbed cypselas (seed) approximately 1/4 in. long, topped with a 1/4–1/3 in. pappus of creamy yellow to light purple hairs (NPIN, 2013; Shinnars, 1943). Seeds may persist on the flower head over the winter or be dispersed by wind.

Three subspecies of the *L. scariosa* complex have been recognized: var. *scariosa*; var. *nieuwlandii*; and var. *novae-angliae*. They are generally distinguished by geographical distribution (Gleason & Cronquist, 1991). However, identification of these subspecies can be complicated by morphological gradation and hybridization (Deam, 1940; Kane & Schmitt, 2001; Shinnars, 1943).

*Distribution:* Devil's bite occurs naturally from Maine and Ontario south to Georgia, and westward into Arkansas, Missouri, and Illinois. There are concentrations in Michigan, Indiana, and the Mid-Atlantic states. Within this broad distribution, var. *scariosa* occurs primarily in the Mid-Atlantic and Southern states; var. *nieuwlandii* (savanna blazing star or Nieuwland's blazing star) occurs in the Great Lakes and Midwest regions; and var. *novae-angliae* (northern blazing star) is found in New England. For current distribution information, please consult the Plant Profile page for this species on the PLANTS Web site.



Figure 1. Devil's bite (*Liatrix scariosa*). Photo courtesy: Nathanael Pilla, Intermountain Biota.

*Habitat:* Devil's bite is found in open savannas, prairies, woodland edges, clearings, limestone glades, dry banks, and disturbed sites (Gleason & Cronquist, 1991; Schroeder et al., 2012.). It thrives in open, sunny environments with well-drained soils.

### **Adaptation**

Devil's bite is drought tolerant once established and thrives in full sun, but is tolerant of some shade (Pivorunas, n.d.). It is cold-hardy to USDA Zones 3–8, and adapted to lean, well-drained soils, including sandy or rocky substrates. This species is fire-adapted and benefits from periodic burning, which reduces competition and litter accumulation (Kane & Schmitt, 2001; Vickery, 2002).

### **Uses**

*Wildlife:* Devil's bite provides an important late-season nectar source for pollinators when other floral resources are scarce (Wheeler, 2017). Its vibrant purple flower heads attract bees, hoverflies, and butterflies such as migrating monarchs (*Danaus plexippus*). The species also serves as a host plant for the specialist moth including the bleeding flower moth (*Schinia sanguinea*), which feed exclusively on *Liatris* species (NCSE, 2025; Wheeler, 2017). Seeds are consumed by songbirds, while its tall, erect stems offer structural cover for small wildlife. Deer, cattle, and some small mammals will browse foliage, and rodents such as voles may consume the corms (Hilty, 2017).

*Ornamental/Landscape:* Devil's bite is prized for its tall, purple spikes that bloom late in the season, adding a vibrant color when many other perennials have faded. It grows well in full sun and well-drained soils, making it ideal for prairie-style gardens, native plant landscapes, pollinator habitats, xeriscapes, and low-maintenance plantings (NCSE, 2025). Its upright form creates a vertical design for borders and mixed beds, pairing well with grasses such as little bluestem (*Schizachyrium scoparium*) and other late-season blooming forbs including *Solidago* and *Echinacea* spp. Its flowers are suitable for fresh or dried arrangements (Rindels, 1992).

For best results, plant corms or seeds in open, sunny areas with minimal competition. Avoid overly rich soils and excessive irrigation, which can cause stems to lodge. Plants may need staking or support from other plants. Devil's bite does best when planted in masses where stems provide mutual support. Once established, the plant requires little care and will attract bees, butterflies, and hummingbirds—enhancing biodiversity in the garden.

*Conservation/Restoration:* This species is well suited for the restoration of dry prairies, barrens, and savannas where nutrient-poor, degraded soils limit other native species. Its spreading growth habit contributes to soil stabilization, water infiltration, and erosion control. Its support of biodiversity makes it an important species for pollinator conservation and habitat restoration efforts. Because devil's bite is fire-adapted, it performs well in restoration projects that incorporate prescribed fire as a management strategy (Schroeder et al., 2012).

### **Ethnobotany**

Native American tribes used devil's bite medicinally. The Omaha used roots as an appetizer, diuretic, tonic, and applied poultices for inflammation. Pawnee preparations treated abdominal and gastrointestinal problems. The Chippewa reportedly used a root decoction as a stimulant for horses before races (Moerman, 1998).

### **Status**

*Threatened or Endangered:* Populations are threatened by habitat loss due to fire suppression, landscape fragmentation, invasive species, and seed predation (Vickery, 2002). *Liatris scariosa* var. *novae-angliae* is listed as threatened in New York, Maine, Massachusetts, Connecticut, Rhode Island, and New Hampshire (MNAP, 2021; NYNHP, 2026). The var. *nieuwlandii* subspecies is listed as endangered in New York and considered rare in Illinois, Michigan, and Indiana (Spyreas et al., 2017). While *Liatris scariosa* var. *scariosa* is listed as imperiled in North Carolina (NatureServe, 2026).

*Wetland Indicator:* Devil's bite is classified as an Upland (UPL) or Facultative Upland (FACU) species. It is intolerant of saturated soils and prefers dry to medium moisture conditions.

*Weedy or Invasive:* This plant is not considered aggressive or weedy. Please consult with your local NRCS Field Office, Cooperative Extension Service office, state natural resources, or state agriculture department regarding its status and use.

Please consult the PLANTS Web site (<http://plants.usda.gov/>) and your state's Department of Natural Resources for this plant's current status (e.g., threatened or endangered species, state noxious status, and wetland indicator values).

### **Planting Guidelines**

Choose sunny sites with dry to medium moisture and well-drained sandy or rocky soils. Avoid areas with wet soils, especially those that remain wet over the winter. Seedbeds should be firm and weed-free. Devil's bite thrives in low-nutrient conditions. Avoid highly fertile soils, excessive irrigation, and overfertilization. Rich soils can cause lodging and reduce plant longevity.

Devil's bite can be grown from seed or divided corms. Corms can be purchased from native nurseries and some online retailers and are generally used in small landscaping projects due to their cost and reduced availability. Established plants can be divided in early spring by carefully digging up the corm and gently removing or cutting sections, ensuring each piece has a growing point. Plant each piece 2–3 in. deep and 10–18 in. apart. Plants started from corms will flower in the first or second year.

Plants started from seed may take several years to become established and begin flowering. Devil's bite seeds are small (10,000–12,000 seeds/ounce) so use of a carrier may improve planting. Seed should be drilled or broadcast no more than 1/8 in. deep. Use of a seed drill improves seed-to-soil contact and ensures uniform distribution. If broadcasting seed, lightly rake or cultipack after seeding for better seed-to-soil contact.

### **Management**

Once established, devil's bite is easy to care for. Timed mowing and prescribed fire reduce weed pressure and enhance vigor and seed production. (Vickery, 2002).

### **Pests and Potential Problems**

There are no serious insect pests or diseases that affect devil's bite. Poor environmental conditions may increase the risk of foliar disease, root rot, and insect damage. Some herbivory may occur in areas where deer and rodent pressure are high.

### **Environmental Concerns**

There are no known environmental concerns associated with devil's bite.

### **Seeds and Plant Production**

Collect seeds in fall after the flowers have faded and the seed heads are dry and fluffy. Seeds can be collected by hand or with a combine. Remove stems and leaves. Allow seeds to dry in paper bags or open containers and regularly mix to ensure uniform drying. Seeds can be stored and planted with the pappus intact—or the pappus can be removed with a hammermill or de-bearder (Blessman et al, 2001; Luna, 2008). Chaff can be removed by screening and air separation. Avoid excessive pressure to prevent seed damage. Smaller collections are most effectively cleaned by rubbing the seed over a screen to remove the pappus (Luna, 2008).

Collected seed should be stored in a cool, dry location or sown directly in the fall. Seeds exhibit physical dormancy and need a 60-day cycle of cold, moist stratification before germination. It is not known how long devil's bite seed will remain viable, however reports suggest that other *Liatris* species have remained viable for 12 years when properly stored (Wynia, 2001).

### **Cultivars, Improved, and Selected Materials (and area of origin)**

Few *Liatris scariosa* cultivars exist for ornamental purposes. 'September Glory' has deep purple flowers and 'White Spires' produces white blooms (Still, 1994). These cultivars may need staking to support the heavy weight of the blooming spike. Both are used in landscape plantings and in cut and dried flower arrangements. *Liatris scariosa* cultivars are prone to misidentification and should be purchased from reputable nurseries (Hawke, 1996).

Cultivars should be selected based on the local climate, resistance to local pests, and intended use. Consult with your local land grant university, local extension or local USDA NRCS office for recommendations on adapted cultivars for use in your area.

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## Citation

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