

Chamaelirium luteum (L.) A. Gray

Standardized Common Name: False Unicorn

Other Common Names: Blazing Star, Devil's Bit, Fairy Wand, False Unicorn Root, Helonias, Starwort

Family: Liliaceae

Taxonomy: *Chamaelirium* includes only one species, which is endemic to eastern North America.

Description: Perennial herb from tuberous rhizome; rhizome to 5 cm long, vertical or oblique, with numerous roots. Stem unbranched, <15 cm high; scape elongating up to 1 m in female plants at fruiting, 15–35 cm in male plants. Basal leaves in a rosette, spatulate to oblanceolate, 5–20 cm long, bases tapering; apices obtuse; cauline leaves sessile, much smaller and reduced further on upper part of stem. Dioecious. Inflorescence a terminal raceme or spike. Male racemes 7–15 cm long, white-stalked; flowers more or less pedicellate; tepals 6, white, 3–4 mm long, 1-nerved; stamens 6, anthers white. Female racemes 1.5–4 cm long, elongating to 35 cm at maturity; flowers often nearly sessile; tepals 6, greenish, 2–3 mm long, 1-nerved; staminodes 6; stigma 3-branched. Fruit a loculicidal capsule, 3-locular, 7–11 mm long, ellipsoid; seeds 5–6 mm long, narrowly ellipsoid, reddish brown.

Parts in Commerce: Rhizome with roots

Identification:

- (0.5–)2–5 cm long, to 1 cm in diameter, vertical or oblique, sometimes curving
- More or less cylindrical, with a few constrictions
- Surface grayish to yellowish brown, with annular wrinkles; oblique rhizomes may have few circular stem scars to 7 mm in diameter on upper surface
- Roots or small circular root scars numerous, mostly on one side if rhizome is oblique rather than vertical
- Rhizome apex with remains of leaf bases and small central bud
- Rhizome base terminating abruptly
- Roots several cm long, 1–2 mm wide, somewhat curved
- Root surface wrinkled, sometimes orange-tinged; outer part of root sometimes falls off leaving tough, pale brown central vascular tissue
- In cross-section, inner surface of rhizome yellowish brown; contains narrow bark, broad cortex containing traces of numerous rootlets, and central

vascular tissue with 3–4 irregular concentric rings of small vascular bundles

- Root cross-section shows epidermis, cortex, endodermis, and central vascular cylinder with 5–8 xylem strands separated by parenchyma
- Rhizome fracture hard
- Taste bitter, soapy

Adulterants: *Aletris farinosa* L. (Aletris, also called True Unicorn Root) shares several of the same common names and may be used similarly. As it is cheaper than False Unicorn, deliberate substitution has been reported. It differs in several features:

- Rhizome horizontal or oblique rather than tending to the vertical, often laterally compressed, and inconspicuously jointed
- Upper portion may bear the remains of papery leaf bases or stem bases up to 8 mm long, as well as stem scars
- Roots borne on lower surface of rhizome, very fine, pale (but when cortex has fallen off, remaining tissue may be purplish)
- Numerous small glandular hairs may be visible on rhizome epidermis
- In cross-section, one to several layers of distinctive stone cells separate the epidermis from the cortex; the endodermis between the cortex and the vascular tissue is conspicuous, several layers thick, often pulling away from the former; and the central cylinder contains numerous small vascular bundles that are scattered rather than arranged in rings
- Fracture mealy, with broken ends of vascular bundles protruding from the broken surfaces
- Taste starchy and acrid, not as bitter as *Chamaelirium*

The rhizome or root of *Liatris* species (Asteraceae) is mentioned as a historical substitute, perhaps because these species have also been called Blazing Star or Devil's Bit, though they can scarcely be mistaken for *Chamaelirium*. Their odor is described as resembling turpentine; the common species has a thickened taproot with multiple major branches, much longer than the rhizomes or roots of *Chamaelirium*.

References:

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