

Smooth Coneflower

Echinacea laevigata

Description

The smooth coneflower, *Echinacea laevigata*, one of nine species of *Echinacea* native to North America, is a herbaceous perennial of the Asteraceae, the aster family. It is closely related to the more common purple coneflower, *Echinacea purpurea*.

A basal rosette of lanceolate leaves emerges from a fleshy rhizome and fibrous roots. The leaves are 4 in. to 6 in. long and 1 in. to 3 in. wide, with three to five prominent veins. The petioles are winged and purple tinged. The leaf surface is smooth to slightly rough above and smooth beneath. A smooth stem to 4.5 ft. tall with a few alternate leaves supports a solitary flower head.

The flower heads contain 13 to 21 pale pink or lavender drooping ray flowers surrounding tubular disk flowers that form a hemisphere or cone. The ray flowers emerge rolled, appearing stringlike, and open gradually. Populations in Virginia show considerable differences in the amount of purple in leaves, petioles, and flowers.

The hemispheric or conical seed heads with their spiny protruding bracts give the genus *Echinacea* its name, from the Greek *echinos*, meaning sea urchin.

Habitat

The plant grows in open sunny areas in which it receives little competition from other plants. It requires neutral to alkaline soils rich in calcium and magnesium with good drainage. Before the arrival of Europeans, it thrived in oak savanna



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openings where its growth conditions were maintained by fire or grazing.

It is ironic that today the plant's most available habitat often happens to be places, such as power line rights-of-way and roadsides, where it is subject to harm by frequent mowing or the use of herbicides.

Distribution

The smooth coneflower occurs in only 10 counties in Virginia, North Carolina, South Carolina, and Georgia. It may once have occurred in Pennsylvania, but if so, it has been extirpated there. Populations in Virginia are found in the Upper Roanoke, Middle Roanoke, and Upper Dan watersheds.



E. laevigata, basal rosette

Life History

Plants flower from May through July and set seed from July through October. Although the flowers attract bees and butterflies, specific pollinators and seed dispersers have not been identified.

One rhizome can produce multiple rosettes, which can divide and become viable plants. Researchers in South Carolina have taken advantage of this natural tendency and propagated plants using both rosettes and cuttings from rhizomes.

Conservation

The smooth coneflower is listed by Virginia as threatened. Its federal status is endangered. Globally, it is listed as imperiled (G2). Populations are small and risk decreasing genetic diversity.

Its plight has diverse causes. Most populations have been affected by habitat loss due to agriculture or development. Mowing of highway rights-of-way threatens populations unless they are consciously protected. And fire suppression has allowed encroachment of competing plants, which the smooth coneflower cannot tolerate.

Landowners can protect smooth coneflower habitat by removing woody plants with periodic, but not frequent, mowing or by prescribed burning. Because the smooth coneflower requires at least partial sun, trees should not be allowed to shade its habitat. Where the plant occurs along roads, the area can be marked to prevent destruction by mowing.

Finally, because the smooth coneflower hybridizes readily, specimens of other *Echinacea* species, such as *purpurea*, should not be planted near natural populations of *E. laevigata*.

Virginia Natural Heritage

The Virginia Department of Conservation and Recreation's Division of Natural Heritage maintains a database of rare species, populations and natural communities in the commonwealth, and manages the State natural Area Preserve System. Natural Heritage biologists, stewardship, and protection staff can answer landowners' questions about rare species and sensitive habitats. The staff also provides information and expertise on conservation and management practices that help ensure that we preserve our rich natural heritage and pass it on to future Virginians.

To learn more about Virginia's rare plant and animal species and rich biological communities, visit the website of the Division of Natural Heritage, at www.dcr.virginia.gov/natural_heritage

For additional information on the smooth coneflower, see [NatureServe Explorer: Echinacea laevigata](#)

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