Conserving South Carolina's At-Risk Species:

Species facing threats to their survival

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Boykin's lobelia

(*Lobelia boykinii*)

Boykin's lobelia/Photo credit: Jerry Bright

Description

Boykin's lobelia is a perennial herb, 40-80 cm tall, with inconspicuous bract-like leaves. Flowers are blue with a white eye at the throat. It blooms mostly from May into August and flowering is apparently dependent on fluctuating water levels. It is distinguished from other species by its blue corolla with a tube 7 mm long or less; central stem leaves less than 0.5 mm wide, pedicels without bracteoles; subtending bracts present and plant perennial by rhizomes; leaves less than 1.0 mm wide or, to 0.8 mm wide.

Range

The range of Boykin's lobelia is restricted to scattered populations in the southeastern Coastal Plain with a few disjunct occurrences in New Jersey and Delaware. Approximately 70 occurrences are believed extant, mostly in South Carolina and Georgia. In South Carolina, the plant is known from the following counties: Allendale, Bamberg, Barnwell, Berkeley, Charleston, Chesterfield, Clarendon, Colleton, Florence, Hampton, Marion, Orangeburg, Sumter, and Williamsburg Counties.

Habitat

Boykin's lobelia inhabits cypress-gum depressions or ponds, wet pine savannahs and flatwoods. Some sites have continuous, shallow standing water; others are only seasonally very moist or inundated.

Status

NatureServe's Rounded Global Status is G2 - Imperiled. The U.S. Fish and Wildlife Service was petitioned to list the species in April 2010 and published a substantial 90-day finding in September 2011 indicating listing may be warranted.

Threats

The species' wetland habitats were once common in the southeast but are now limited in number due to drainage for agriculture and development. In addition, many southeastern wetlands are threatened by a drawdown in the regional water table, a result of intense development over the last 10-20 years. Lack of disturbance, leading to succession, is also a threat. Fire suppression and destruction of wetland transition zones by road construction and has also had an effect on the habitat. Pesticide spraying in fields near populations of Boykin's lobelia reduces the number of insect pollinators necessary for reproduction. It is also possible there has been a reduction in genetic diversity due to clonal growth and obligate outcrossing breeding system. This type of breeding system may limit seed production in small populations, as small populations typically have a reduced number of genotypes available for cross-pollination. Also, inbreeding depression effects (e.g., lower seed set, reduced germination) are typically more severe in small populations of self-incompatible species, such as Boykin's lobelia.

Management/Protection Needs

Protect depression wetlands from clearing, draining, and filling. Protect natural water table levels from excessive drawdown. Allow fires in adjacent uplands to periodically burn into and across wetlands. Avoid placing firebreaks in the transition zones between uplands and wetlands. Establish pesticide-free buffers around populations of the plant.

References

Georgia Department of Natural Resources - Rare Plant Species Profiles: http://georgiawildlife.com/speciesinfo/plants

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