



Natural Heritage & Endangered Species Program

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Shining Wedgegrass *Sphenopholis nitida* (Biehler) Scribner

State Status: Threatened
Federal Status: None

Description: Shining Wedgegrass (*Sphenopholis nitida*) is a slender perennial grass (family Poaceae). It grows in small tufts, reaching 30 to 80 cm (1–2.6 ft) tall. Plants are usually leafy at the base. Leaves are dark green and often have short soft hairs on the blade surface. The main leaf blades are 2 to 5 mm wide and 2 to 15 cm long; sheaths are hairy. The sheath of the upper most stem leaf is three to five times longer than the blade. The culm, or flowering stem, is shiny and erect. The slender and somewhat spreading flower panicle is 6 to 20 cm (2.4–8 in) long. The panicle is composed of spikelets, or flowering branchlets, which are few-flowered, set far apart, and generally 2.5–5 mm long. Shining Wedgegrass gets its name from the Greek *sphen*, meaning wedge, and *pholis*, meaning scale, in reference to the shape of the second glume. *Nitida* is Latin for shining or smooth, in reference to the stem.

Aids to Identification: At the base of each spikelet, there are two small scales or bracts called the first and second glumes. The glumes are mostly smooth with a few tiny hairs along their upper outer margins. The glumes are not quite equal in length, measuring 1.5 to 3.5 mm. The first glume is slightly longer than the second. It is one-third as wide as it is long and at least one-third as wide as the second glume. The second glume is broad at the top, somewhat wedge-shaped, and more than half as wide as long. The rest of the spikelet is made up of florets arranged in alternating rows on a central stalk or rachilla. Each floret has an outer scale, or lemma, an inner scale, or palea, and a tiny flower between them. The lemmas of Shining Wedgegrass are oval, 2 to 4 mm long and usually unawned. The lowest lemma is smooth toward the base and slightly rough toward the tip. The second lemma is strongly scabrous or rough. The lemmas above may be scabrous on the sides and very rarely awned. Shining Wedgegrass flowers in May; mature florets are present through June. Plants begin to senesce in early July.



Shining Wedgegrass. Photo:
Jennifer Garrett, NHESP.



Shining Wedgegrass. USDA-
NRCS PLANTS Database /
Britton, N.L., and A. Brown.
1913. An illustrated flora of the
northern United States, Canada
and the British Possessions. Vol.
1: 244.

Similar Species: Shining Wedgegrass is similar in appearance to Slender Wedgegrass (*Sphenopholis intermedia*) and Prairie Wedgegrass (*S. obtusata*). Shining Wedgegrass has somewhat blunt and wider first glumes than the latter two grasses. Also the second lemma of Shining Wedgegrass is strongly scabrous. The second lemma is smooth in Slender Wedgegrass and only slightly scabrous to papillose in Prairie Wedgegrass.

Habitat: Shining Wedgegrass inhabits dry, rocky fertile soils derived from base-rich bedrock such as basalt and marble. It typically occurs on steep upper slopes and ridge crests, in deciduous forests characterized by Hickory (*Carya* spp.), Hop Hornbeam (*Ostrya virginiana*), White Ash (*Fraxinus americana*), and various Oaks (*Quercus* spp.). Common associates in the herbaceous layer include Pennsylvania Sedge (*Carex pennsylvanica*), Ebony Sedge (*Carex eburnea*), Bashful

Club-sedge (*Scirpus verecundus*), Downy False Foxglove (*Aureolaria virginica*), Four-leaved Milkweed (*Asclepias quadrifolia*), Bluestem-goldenrod (*Solidago caesia*) and Blunt-lobed Hepatica (*Hepatica nobilis* var. *obtusata*). Rare plants such as Yellow Oak (*Quercus muhlenbergii*; Threatened), Drooping Speargrass (*Poa saltuensis* spp. *languida*; Endangered), and Devil's-bit (*Chamaelireum luteum*; Endangered) may be present. Many sites show evidence of past fire, grazing, or other small scale disturbances.



Distribution in Massachusetts
1985 - 2010
Based on records in the
Natural Heritage Database

Mature florets present in Massachusetts

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Range: Shining Wedgegrass ranges from Southern Ontario, Vermont, and Massachusetts, south to Florida, and west to Illinois, Missouri, Arkansas, and Texas.

Threats: Habitats are vulnerable to development, especially in the eastern half of the state. Lack of small scale disturbances such as wind-throw or fire may limit the ability of Shining Wedgegrass to compete with other species and germinate in bare soil areas. Habitats are susceptible to exotic plant invasions from species such as Swallowworts (*Cynanchum* spp.), Morrow's honeysuckle (*Lonicera morrowii*), Japanese barberry (*Berberis thunbergii*), Canada Bluegrass (*Poa compressa*), Asiatic Bittersweet (*Celastrus orbiculatus*), and Common Buckthorn (*Rhamnus cathartica*). Invasive plants can out-compete native plants for nutrients and light, excluding them over time

Population Status in Massachusetts: Shining Wedgegrass is listed under the Massachusetts Endangered Species Act as Threatened. All listed species are legally protected from killing, that would destroy habitat and thus directly or

collection, possession, or sale, and from activities indirectly cause mortality and disrupt critical behaviors. Shining Wedgegrass is currently known from Berkshire, Hampden, Hampshire, and Worcester Counties, and is historically known from Franklin, Middlesex, and Norfolk Counties

Management Recommendations: Research and monitoring aimed at understanding the natural history, biology, and population dynamics of Shining Wedgegrass are important. This species is known to respond favorably to fire management in other parts of its range. Carefully timed prescribed burns may reduce canopy closure and competition from other plants, and expose mineral soils required for Shining Wedgegrass germination and establishment. Shining Wedgegrass habitat should be monitored for exotic invasive species. If exotic plants are invading Shining Wedgegrass habitat, a plan for control should be constructed. All active management within the habitat of a rare plant population (including invasive species removal) is subject to review under MESA, and should be planned in close consultation with the Massachusetts Natural Heritage & Endangered Species Program.

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