



## Natural Heritage & Endangered Species Program

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Massachusetts Division of Fisheries & Wildlife

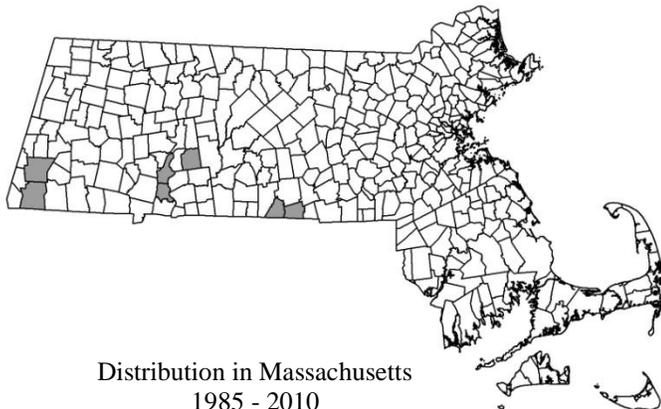
## Shining Wedgescale *Sphenopholis nitida* (Biehler) Scribner

State Status: **Threatened**  
Federal Status: **None**

**DESCRIPTION:** Shining Wedgescale (*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 Wedgescale 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.



Shining Wedgescale. Photo: Jennifer Garrett, NHESP.



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



Shining Wedgescale. 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.

**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

**A Species of Greatest Conservation Need in the Massachusetts State Wildlife Action Plan**

## Massachusetts Division of Fisheries & Wildlife

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Please allow the Natural Heritage & Endangered Species Program to continue to conserve the biodiversity of Massachusetts with a contribution for 'endangered wildlife conservation' on your state income tax form, as these donations comprise a significant portion of our operating budget.

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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 Wedgescale 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 Wedgescale flowers in May; mature florets are present through June. Plants begin to senesce in early July.

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

**HABITAT:** Shining Wedgescale 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 pensylvanica*), 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.

**RANGE:** Shining Wedgescale 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 Wedgescale 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 Wedgescale is listed under the Massachusetts Endangered Species Act as Threatened. All listed species are protected from killing, collecting, possessing, or sale and from activities that would destroy habitat and thus directly or indirectly cause mortality or disrupt critical behaviors. Shining Wedgescale 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 Wedgescale 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 Wedgescale germination and establishment. Shining Wedgescale habitat should be monitored for exotic invasive species. If exotic plants are invading Shining Wedgescale 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.

**Mature florets present in Massachusetts**

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

Updated 2015

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