



**Natural Heritage
& Endangered Species
Program**

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Massachusetts Division of Fisheries & Wildlife

**Smooth Woodsia
*Woodsia glabella***

R. Br. ex Richards

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

DESCRIPTION: Smooth Woodsia is a small, delicate fern in the family Woodsiaceae that grows in tufts from 2.5 to 16 cm (1-6 in.) in height. It is hairless or smooth all over. Its narrow fronds (leaves of a fern) are 8-14 mm (8/25-14/25 in.) wide, pale green, and linear to linear-lance shaped in overall outline. In addition, the fronds are only once-pinnate: they are dissected (cut all the way back to the rachis, or main axis of the frond) just once, into divisions called pinnae. These trilobed pinnae occur in 8 to 14 pairs and are stalkless. The green rachis is hairless. The stipe, or stalk, of the frond is green or yellowish, very slender, scaly only at its base, and marked by a characteristic dark, thickened ring, or joint, near its base. Smooth Woodsia has distinctive, round clusters of spore-bearing structures called sori on the back of its fronds. Beneath each of these sori is a minute indusium (an outgrowth of the frond that covers or contains the sorus) which ruptures to form several radiating, hair-like arms. Fruiting occurs from early June through late August.

SIMILAR SPECIES: Like Smooth Woodsia, the more common Rusty Woodsia (*Woodsia ilvensis*) is a small, tufted plant which has a jointed stipe and grows on rock ledges. However, unlike Smooth Woodsia, its rachis and the under surface of its fronds are covered with dense, rust-colored hairs.

HABITAT: Smooth Woodsia is a plant of moist, calcareous rocks and cliffs. In Massachusetts, its sole location, discovered in 1984, but not observed again after 1990, was the small overhangs of a calcareous, moist cliff. This population occurred at an elevation of approximately 2,500 feet and is exposed to harsh weather. Growing here with Smooth Woodsia is Fragile Rock-brake (*Cryptogramma stelleri*).



Britton, H.L. 1970. *An Illustrated Flora of the Northern US & Canada*. Dover. Reprint of 1913 edition.

THREATS: One reason for this species' rarity in the Commonwealth is the fact that Smooth Woodsia occurs only sporadically outside of arctic and subarctic areas. In Massachusetts, the plant is a relict of the Ice Age.

RANGE: Smooth Woodsia is characteristically a plant of arctic and subarctic regions of North America and Eurasia. In North America, its documented range extends from Newfoundland to Alaska, south to northern New Hampshire, Vermont, New York, Ontario, Minnesota and British Columbia. Its southernmost outpost is in the Catskill Mountains of New York.

Spores Present

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

Updated 2019

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

Massachusetts Division of Fisheries & Wildlife

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