reed canarygrass
Phalaris arundinacea L.

Synonyms: *Phalaris arundinacea* var. *picta* L., *Phalaroides arundinacea* (L.) Raeusch., *Phalaroides arundinacea* var. *picta* (L.) Tzvelev, *Typhoides arundinacea* (Linnaeus) Moench.
Other common names: canary grass
Family: Poaceae

Invasiveness Rank: **83** The invasiveness rank is calculated based on a species' ecological impacts, biological attributes, distribution, and response to control measures. The ranks are scaled from 0 to 100, with 0 representing a plant that poses no threat to native ecosystems and 100 representing a plant that poses a major threat to native ecosystems.

Description
Reed canarygrass is a robust, cool-season, sod-forming, perennial grass that produces culms from creeping rhizomes. Culms grow 15 to 152 ½ cm high. Leaf blades are flat, 5 to 15 cm long, and 6 to 12 ½ mm wide. Flowers are arranged in dense, branched panicles. Immature panicles are compact and resemble spikes, but open and become slightly spreading at anthesis (Whitson et al. 2000). This species is morphologically variable, and more than ten varieties have been described.

Panicle of *Phalaris arundinacea* L.

Similar species: Reed canarygrass is unique because it has a single flower per spikelet and a more open, branched inflorescence than a narrow spike like that of timothy grass (*Phleum pratense*).

Infestation of *Phalaris arundinacea* L.

Ecological Impact
Impact on community composition, structure, and interactions: Reed canarygrass forms dense, persistent, monotypic stands in wetlands. These stands exclude and displace other plant species. In Montana, reed canarygrass poses a threat to the endangered aquatic species water howellia (*Howellia aquatilis*). Invasive populations of reed canarygrass are believed to be the result of crosses between cultivated varieties and native North American strains (Merigliano and Lesica 1998). Reed canarygrass grows too densely to provide adequate cover for small mammals and waterfowl. When in flower, it can cause hay fever and allergies.

Impact on ecosystem processes: Dense stands of reed canarygrass promote silt deposition and the consequent constriction of waterways and irrigation canals. Reed canarygrass may alter soil hydrology.

Ligule of *Phalaris arundinacea* L.

Biology and Invasive Potential

Reproductive potential: Reed canarygrass reproduces sexually by seeds and vegetatively from creeping rhizomes.

Role of disturbance in establishment: Invasion is promoted by disturbances, such as ditching of wetlands, stream channelization, overgrazing, alteration of water levels, and intentional planting.

Potential for long-distance dispersal: Seeds have no adaptations for long-distance dispersal. Both rhizome fragments and seeds can be transported with the movement of water along streams and rivers.

Potential to be spread by human activity: Reed canarygrass has been widely planted as a forage crop and for erosion control.

Germination requirements: Seeds germinate most readily immediately following their maturation; they do not require cold-stratification. They germinated well in experimental conditions after soaking in water at 50°C. Mechanical damage, increased light, and increased oxygen availability also promoted germination (Vose 1962).

Growth requirements: Reed canarygrass is adapted to fine- and medium-textured soils with pH from 5.5 to 8. It is highly tolerant of fire and anaerobic soils, but it is intolerant of shade. Reed canarygrass can withstand temperatures as low as -39°C. It requires 120 frost-free days for growth and reproduction (USDA 2002).

Congeneric weeds: Bulbous canarygrass (*Phalaris aquatica*), shortspike canarygrass (*P. brachystachys*), annual canarygrass (*P. canariensis*), sunolgrass (*P. coerulescens*), littleseed canarygrass (*P. minor*), and hood canarygrass (*P. paradoxa*) are known to occur as non-native weeds in North America (USDA 2002).

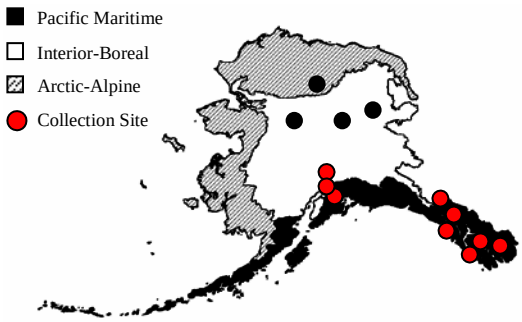
Legal Listings

- ☐ Has not been declared noxious
- ☐ Listed noxious in Alaska
- ☒ Listed noxious by other states (WA)
- ☐ Federal noxious weed
- ☐ Listed noxious in Canada or other countries

Distribution and Abundance

In the United States, the first agronomic trials of reed canarygrass probably began in the 1830s. This species is now widespread in North America. Reed canarygrass is common in stream banks, spring margins, and wet meadows in central Alaska, south-central Alaska, southeastern Alaska, southern Yukon, and northern British Columbia. It has ability to invade and dominate sedge meadows and wet prairies. It may also pose a serious threat to upland oak savannas (Henderson 1991).

Native and current distribution: There is no consensus on the native status of reed canarygrass in North America (Merigliano and Lesica 1998). Hultén (1968) states that it is native to Europe, but some authors view it as native to Asia and North America as well (Welsh 1974). The current range of reed canarygrass extends throughout the world. It is found primarily in northern latitudes. Some populations of reed canarygrass may be native to Alaska. Four hot springs of interior Alaska may harbor native forms: Big Windy, Kanuti, Kilo, and Manley Hot Springs (these locations are denoted by black dots on the map).



Distribution of reed canarygrass in Alaska

Management

Mechanical control methods may be feasible, but they are labor intensive and require a long-term time investment. No herbicides are selective enough to be used in wetlands without risking the injury of native

species. Plants reestablish quickly from seeds after control methods are used. No biological control methods are known that are feasible for use in natural areas.

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