slender hairgrass
Deschampsia elongata (Hook.) Munro

Synonyms: *Aira aciphylla* Franch., *A. aciphylla* var. *pumila* Franch., *A. elongata* Hook., *A. vaseyana* Rydb., *Deschampsia aciphylla* (Franch.) Speg., *D. aciphylla* var. *pumila* (Franch.) Macloskie, *D. ciliata* (Vasey ex Beal) Rydb., *D. elongata* var. *ciliata* Vasey ex Beal, *D. elongata* var. *tenuis* Vasey ex Beal, *Deyeuxia schaffneri* E. Fourn., *Dichanthium fecundum* S. T. Blake
Other common names: none
Family: Poaceae

Invasiveness Rank: **35** 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

Slender hairgrass is a tufted, biennial to short-lived perennial grass that grows 25 to 80 cm tall from fibrous roots. Stems are numerous, slender, and slightly rough. Leaves are mostly basal. Basal leaves are threadlike, 2 to 30 cm long and rarely more than 1.5 mm wide. Stem leaves are flat or rolled inwards and 1 to 1.5 mm wide. Ligules are entire but usually split, short-hairy, pointed, and 2.5 to 9 mm long. Panicles are narrow, pale green to purple-tinted, erect or nodding, 5 to 30 cm long, and 5 to 15 mm wide with erect to ascending branches. Spikelets are narrowly v-shaped and 3 to 6.7 mm long. Glumes are three-nerved, equaling or exceeding the florets, narrowly lanceolate, and 3.1 to 5.5 mm long. Lemmas are 1.7 to 4.3 mm long with 1.5 to 5.5 mm long awns. Awns are attached slightly below or slightly above the middle of the lemma and exceed the florets by 1 to 2.5 mm (Hultén 1968, Cody 1996, Barkworth 2007, Klinkenberg 2010).

Similar species: Many other *Deschampsia* species are known to grow in Alaska. Unlike slender hairgrass, annual hairgrass (*Deschampsia danthonioides*) has distinctly bent awns, ligules that are 2 to 3 mm long, and few basal leaves. Slender hairgrass can be distinguished from other *Deschampsia* species by the presence of awns that are roughly twice as long as the florets and glumes that equal or exceed florets. Unlike *Vahlodea* species, *Deschampsia* species have primarily basal leaves and hairy spikelet axes that extend more than 0.5 mm beyond the base of the farthest floret in the spikelet. *Trisetum* species can be distinguished from *Deschampsia* species by the presence of awns that are attached at or above the midpoint of the lemmas and more pointed, two-lobed lemmas (Hultén 1968, Cody 1996, Barkworth 2007).

Tufts of *Deschampsia elongata* (Hook.) Munro. Photo by M. Lavin.

Ecological Impact

Impact on community composition, structure, and interactions: Slender hairgrass forms dense tufts (Esser 1994, Barkworth 2007) and may increase the density of graminoid layers and reduce the sizes of native plant populations in moist, disturbed areas. However, this species does not grow extensively enough to significantly displace surrounding vegetation; 90% of infestations recorded in Alaska had 1% cover (AKEPIC 2011). Prior to maturity, slender hairgrass provides good forage for grazing animals. It provides habitat for waterfowl, shorebirds, and other wildlife (Darris and

Tracey 2006). The impacts of slender hairgrass on associated trophic levels are largely undocumented.

Impact on ecosystem processes: Slender hairgrass often establishes in secondary successional environments and on disturbed, moist ground, but populations are short-lived. This species likely has relatively minor impacts to soil moisture and nutrients and minor impacts on successional processes as it is a species primarily restricted to low competition, disturbed substrates (Darris and Tracey 2006)..

Panicles of *Deschampsia elongata* (Hook.) Munro. Photo by M. Lavin.

Biology and Invasive Potential

Reproductive potential: Slender hairgrass reproduces sexually by seeds and vegetatively by tillering (Esser 1994). The number of seeds produced per plant has not been quantifies, but is expected to be capable of producing hundreds of seeds per plant based on floret numbers (Carlson pers. obs.).

Role of disturbance in establishment: In Alaska and Yukon, slender hairgrass grows in moist areas in inhabited places, disturbed sites, roadsides, mined areas, and logged areas (Hultén 1968, Cody 1996, AKEPIC 2011). It has not been documented establishing in naturally disturbed or vegetated areas in Alaska (AKEPIC 2011).

Potential for long-distance dispersal: Because seeds are very small and have a mass of roughly 0.2 mg (Darris and Tracey 2006), they are likely transported short distances by wind.

Potential to be spread by human activity: All infestations in Alaska occur in areas of high human traffic. Slender hairgrass is most common along roads, especially in southeast Alaska (AKEPIC 2011), suggesting that seeds are a possible contaminant in revegetation seed mixes imported from the Pacific Northwest (Graziano pers. obs.).

Germination requirements: Seeds do not have dormancy and germinate in fall or spring (Darris and Tracey 2006).

Growth requirements: Slender hairgrass grows in a wide variety of habitats. It often grows in moist soil in open or shaded areas, but it also occurs in wetlands and dry areas (Esser 1994).

Congeneric weeds: Annual hairgrass (*Deschampsia danthonioides*) is native to the western U.S. (Barkworth 2007). Populations were introduced to Yukon in the late 19th and early 20th centuries but have not persisted (Cody 1996). Introduced populations were recorded in Alaska in 1968, but they also do not appear to have persisted (Hultén 1968, AKEPIC 2011, UAM 2011). Tufted hairgrass (*D. cespitosa*), which has native populations in Alaska, is known to occur as a non-native species in Svalbard, where it is potentially invasive (NOBANIS 2011).

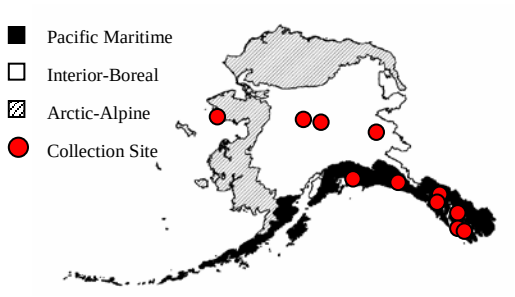
Legal Listings

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

Distribution and Abundance

In North America, slender hairgrass grows in open forests, stream banks, shorelines, clearings, meadows, grasslands, marshes, and floodplains (Esser 1994, Klinkenberg 2010). Its ability to grow in wetlands and riparian communities in its native range (Esser 1994, USDA 1997, Klinkenberg 2010) suggests that it has the potential to invade wetland and riparian communities in Alaska. Slender hairgrass is sown for erosion control and revegetation in areas where it is native, and seeds are available commercially in California and Oregon (Darris and Tracey 2006). While this species is grown deliberately, it is only grown in its native range (Barkworth et al. 2007). Seeds are a potential contaminant in revegetation seed mixes imported from the Pacific Northwest (Graziano pers. obs.).

Native and current distribution: Slender hairgrass is native to western North America and Chile (Barkworth 2007) but is considered introduced in Alaska, Colorado, Maine, Nunavut, and Yukon (Hultén 1968, Cody 1996, Cody et al. 2003, Barkworth 2007). It has been documented from all three ecogeographic regions of Alaska (Hultén 1968, AKEPIC 2010, UAM 2010).



Distribution of slender hairgrass in Alaska

Management

In British Columbia, slender hairgrass seeded on previously disturbed sites in a mixture of native grasses did not persist after one to several years of growth (Vaartnou 2004). Populations of slender hairgrass established in burned areas in Montana during the 7th year postfire, but only persisted for one or two years (Esser 2004). It is possible that some populations will naturally decline after several years of growth. While control measures have not been investigated, it is likely that pulling, digging, or cutting infestations for several growing seasons will effectively control this species, as grazed populations do not persist unless grazing is deferred every other year during flowering and seed set (Darris and Tracey 2006).

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