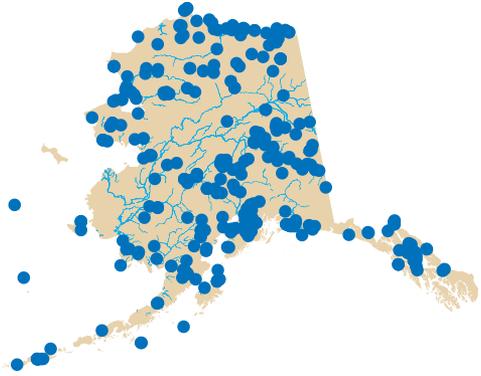


Kentucky Bluegrass

Poa pratensis L.

Synonyms

Poa agassizensis Boivin & D. Love, *Poa angustifolia* L., *Poa pratensis* L. ssp. *agassizensis* (Boivin & D. Love) Taylor & MacBryde, *Poa pratensis* L. ssp. *angustifolia* (L.) Lej., *Poa pratensis* L. var. *angustifolia* (L.) Gaudin, *Poa pratensis* L. var. *domestica* Laestad., *Poa pratensis* L. var. *gelida* (Roemer & J.A. Schultes) Bocher, *Poa pratensis* L. var. *iantha* Wahlenb.



XID Services photo by Richard Old

Description

Kentucky bluegrass is a strongly rhizomatous, mat-forming perennial grass that ranges from 3 inches to 3 feet tall. Its culms are slender and slightly flattened.

Leaf blades are flat to folded and smooth, with a double mid-rib. Leaf tips are prow-shaped as in most *Poa* species. Sheaths are rounded to somewhat keeled, partially closed, and smooth. The inflorescence is a broadly pyramidal compact panicle, and spikelets are coarse and large.

Similar Species

Kentucky bluegrass can be separated from other Alaskan *Poa* species by a combination of traits. It has large anthers, about 1/16 of an inch long, and a tuft of long, cobweb-like hairs at the base of the lemma but not between the keel and marginal nerve. It has normal glumes (short, broad, and rounded), is rhizomatous and mat-forming with flat leaves, and produces a compact panicle with 3 or more branches in the lowest whorl.

Ecological Impact

Kentucky bluegrass is known to compete with native species, which can reduce species diversity and alter plant community composition (Wisconsin DNR 2003a, Rutledge and McLendon 1996, Sather 1996). It can be an important element in the diets of elk, mule deer, and big-horn sheep, and the leaves and seeds are eaten by numerous species of small mammals and songbirds as well as rabbits, wild turkeys, and grouse. Grasslands dominated by Kentucky bluegrass provide habitat for species of small mammals and birds (Uchytel 1993). It is a host for a number of pest insects and diseases (Butterfield et al. 1996). In Alaska, this species is rarely found in undisturbed sites. Kentucky bluegrass may retard or cause long-term alterations to successional patterns (Butterfield et al. 1996), although it does not appear to seriously hamper succession in Alaska.



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Biology and Invasive Potential

Kentucky bluegrass is reproductively aggressive, spreading from both seed and rhizomes. It can produce 200 seeds per panicle in the first year, and a maximum of 560 seeds per square meter has been reported from a pasture in the Netherlands (Sather 1996). Rhizomes can extend the horizontal growth of the plant as much as 18 square feet in 2 years. Kentucky bluegrass readily establishes by seed on disturbed sites. It is commonly planted as a lawn and pasture grass, and over 100 cultivars have been developed (Butterfield et al. 1996). It has been used in Alaska, Colorado, and Wisconsin for soil stabilization along highway roadsides (FEIS 1996). Kentucky bluegrass germinates in the fall, and freshly harvested seeds require a cold treatment at 41° to 59°F for 10–14 days for germination. This species can germinate from depths as great as 42 inches within the first

4 years after burial (Sather 1996). Kentucky bluegrass is adapted to fine and medium textured soils with pH levels ranging from 5.0 to 8.4. It is shade-intolerant, withstands the winter temperatures of interior Alaska, and requires 90 frost-free days. It has a relatively high nutrient requirement. Optimum temperatures for growth are between 61° and 90°F, and optimum precipitation ranges from 20–50 inches per year (GRIN 2004). Kentucky bluegrass is listed as an invasive weed in Nebraska and Wisconsin.

Distribution and Abundance

Kentucky bluegrass is found in meadows, open woodlands, and prairies outside of Alaska and in disturbed sites throughout the world. In the western United States it frequently occurs as an understory dominant in aspen, ponderosa pine, sagebrush, and riparian habitats (Uchytel 1993). Kentucky bluegrass is generally considered to be exotic to North America, although some botanists argue that populations in remote mountain meadows of the western United States may be native (Gleason and Cronquist 1963). It has naturalized in all states and in Canada from coast to coast and has been introduced into South America, New Zealand, and Australia. Kentucky bluegrass has been collected at many sites from all across Alaska (ALA 2004, Hultén 1968).

Management

Kentucky bluegrass does not generally grow in pure stands except when planted as a turf grass. Its rhizomatous habit permits it to penetrate areas between plants. Eradication of the grass may not be feasible, since practices that will damage it generally harm co-occurring species (Sather 1996). Herbicide application and burning may be useful. The only realistic management goals may be to reduce vigor



U.S. Geological Survey photo by Forest and Kim Starr

Family: Poaceae

Kentucky Bluegrass

and contain its spread (Butterfield et al. 1996, Uchytel 1993).

Notes

Kentucky bluegrass, along with orchard grass, is responsible for the majority of hay fever attacks in the summer in North America. It originally came from Eurasia and northern Africa.