false brome

Brachypodium sylvaticum (Huds.) Beauv.

Synonyms: *Festuca sylvatica* Huds.
Other common names: slender false brome
Family: Poaceae

Invasiveness Rank: **70** 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

False brome is a tufted, perennial grass that grows from 46 to 76 cm tall. It is not rhizomatous, but it tends to form large clumps. Culms are hollow and soft-hairy at the nodes and sometimes also over the lower internodes. Leaves lack auricles and are 6 to 12 mm wide, flat, soft-hairy, and open-sheathed at the base. Ligules are membranous and more or less shredded in appearance. Flowers are arranged in spikelets on very short pedicels. Awns are strait and 12 to 19 mm long (Hitchcock and Cronquist 1973).

Brachypodium sylvaticum (Huds.) Beauv.

Similar species: False brome can be distinguished from most other grasses by its hairy leaf margins and lower stems and its perennial bright green color. It can be distinguished from *Bromus* species by the presence of leaf sheaths that are open to the base and spikelets that have very short pedicels. Unlike false brome, perennial *Bromus* species have sheaths closed for more than ¼ of their length and spikelets on long pedicels (Cal-IPC 2005, Kaye 2001).

Ecological Impact

Impact on community composition, structure, and interactions: False brome can become dominant in the understories of forests, forming nearly monospecific stands which appear to outcompete and completely exclude native forbs, grasses, and tree seedlings. False brome may be unpalatable to most wildlife. It reduces habitat quality for mammals, native insects, birds, and aquatic species. Dense patches may inhibit the establishment of riparian trees that are important sources of shade and structure to stream communities (Kaye 2001, Tu 2002).

Impact on ecosystem processes: False brome has the potential to change fire regimes and alter riparian and stream conditions (Kaye 2001, Tu 2002).

Biology and Invasive Potential

Reproductive potential: False brome reproduces rapidly from seeds and can resprout from stem and root fragments. Seeds are only viable in the soil for one year (Tu 2002, Kaye pers. comm.).

Role of disturbance in establishment: False brome likely requires disturbance to establish initially, but it can readily penetrate undisturbed forests once it establishes an initial foothold (Kaye 2001).

Potential for long-distance dispersal: Seeds can be dispersed by wildlife (Kaye 2001).

Potential to be spread by human activity: Seeds of false brome are dispersed on vehicles, boots, clothes, and forestry equipment. They may first disperse along roadsides and then move into undisturbed areas and clear-cuts (Kaye 2001). False brome is occasionally cultivated as an ornamental plant (Hitchcock and Cronquist 1973).

Germination requirements: False brome has been observed germinating in completely vegetated areas (Kaye 2001).

Growth requirements: In its native range, false brome is found in areas with mean annual precipitation from 62 to 85 cm and mean annual temperatures from 6°C to 7.5°C (Novak and Prach 2003).

Congeneric weeds: Purple false brome (*Brachypodium distachyon*) is listed as an invasive plant in California (USDA 2006).

Legal Listings

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

Distribution and abundance

In its native range, false brome is most commonly found in forests and woodlands but may grow in open habitats as well (Gubanov et al. 1995). False brome is well-established in closed-canopy coniferous forests near Corvallis, Oregon. It has been quickly increasing in cover and range and spreading into riparian forests, forest edges, and upland prairies in full sunlight.

Native and current distribution: False brome is native to North Africa, northern and Mediterranean Europe, and Asia (Hitchcock and Cronquist 1973). It has been documented as a part of early successional grassland communities in Japan (Werger et al. 2002). False brome has the potential to spread throughout low elevation forests in Washington, California, and British Columbia (Kaye 2001). False brome has not been documented from Alaska (Hultén 1968, AKEPIC 2010, UAM 2010).

Management

Removal of the entire plant by digging is effective for small infestations but is extremely time and labor intensive. Repeated mowing, grazing, or burning may eliminate seed production. Herbicide applications are currently the most effective control technique known for false brome. Herbicides can be applied late in the growing season after most other species are dormant (Kaye 2001, Tu 2002).

References:

AKEPIC database. Alaska Exotic Plant Information Clearinghouse Database. 2010. Available: http://akweeds.uaa.alaska.edu/

Cal-IPC - California Invasive Plant Council. 2005. *Brachypodium sylvaticum* alert. Available: http://groups.ucanr.org/ceppc/(February 2, 2005].

Gubanov, I.A., K.B. Kiseleva, B.C. Novikov, B.N. Tihomirov. 1995. Flora of vascular plants of Center European Russia. Moscow. Argus. 558 pp.

Hitchcock, C.L. and A. Cronquist. 1973. Flora of the Pacific Northwest. An illustrated manual. University of Washington Press, Seattle and London. P. 623.

Hultén, E. 1968. Flora of Alaska and Neighboring Territories. Stanford University Press, Stanford, CA. 1008 p.

Invaders Database System. 2010. University of Montana. Missoula, MT. http://invader.dbs.umt.edu/

Kaye, T. 2001. *Brachypodium sylvaticum* (Poaceae) in the Pacific Northwest. Botanical Electronic News. Available: http://www.ou.edu/cas/botany-micro/ben/ben277.html [February 1, 2005].

Novak, J. and K. Prach. 2003. Vegetation succession in basalt quarries: pattern on a landscape scale. Applied Vegetation Science 6: 111-116.

Tu, M. 2002. *Brachypodium sylvaticum* (Huds.) P. Beauv. (Slender false-brome, false-brome). TNC Invasive Species Initiative page. Available: http://tncweeds.ucdavis.edu/alert/alrtbrac.html [February 1, 2005].

UAM. 2010. University of Alaska Museum, University of Alaska Fairbanks. Available: http://arctos.database.museum/home.cfm

USDA, NRCS. 2006. The PLANTS Database, Version 3.5 (http://plants.usda.gov). Data compiled from various sources by Mark W. Skinner. National Plant Data Center, Baton Rouge, LA 70874-4490 USA.

Werger, M.J.A., T. Hirose, H.J. During, G.W. Heil, K. Hikosaka, T. Ito, U.G. Nachinshonhor, D. Nagamatsu, K. Shibasaki, S. Takatsuki, J.W. van Rheenen, and N.P.R. Anten. 2002. Light partitioning among species and species replacement in early successional grasslands. Journal of Vegetation Science 13: 615-626