

Invasive Plant Alert

False-brome

(*Brachypodium sylvaticum*)

False-brome Working Group

A partnership of: USDA Forest Service, USDI Bureau of Land Management, Oregon Department of Agriculture, US Army Corps of Engineers, OSU College of Forestry, Institute for Applied Ecology, Starker Forests Inc., The Nature Conservancy, Native Plant Society of Oregon

revised January 2003

False-brome invading habitats in the Pacific Northwest

False-brome, or slender false-brome (*Brachypodium sylvaticum* (Huds.) Beauv.), is an invasive grass species that is rapidly expanding in the Pacific Northwest. This exotic perennial is native to Europe, Asia and North Africa, but is invading habitats in western Oregon, and possibly elsewhere in our region, at an alarming rate. It is capable of completely dominating understory and open habitats to the exclusion of most other native species. The earliest record of the species in North America is a 1939 collection from near Eugene in Lane County, Oregon. By 1966, the species grew in at least two large colonies in the Corvallis-Albany area of Benton County, Oregon, where it was well established (Chambers 1966, Madroño 18:250-251). Currently, it is officially known only from Oregon, where it occupies habitat in and around the Willamette Valley, coastal forest, and as far south as Josephine County (a few miles from the California border). The species seems likely to spread rapidly to California, Washington, and British Columbia.



False-brome (*Brachypodium sylvaticum*).

Identification

False-brome can be distinguished from most other grasses by its hairy leaf margins and lower stems, broad (4-10 mm) lax leaves, and a long-lasting bright green color (leaves often remain green through fall and at least part of winter). It differs from native perennial bromes (*Bromus* species) in having sheaths open to the base, flowers borne in a true spike, and spikelets with no or only short stalks. The flower spikes droop noticeably. In contrast, the perennial bromes in this region have sheaths closed >1/4 of their length, their flowers are in more open, branched panicles, and their spikelets are generally strongly stalked. Although spikelets droop on one native, Columbia brome (*B. vulgaris*), the spikelets are clearly stalked.



Leaf margins of false-brome are hairy (left) and the flowers are borne on drooping spikes (center and right).

In the Willamette Valley and surrounding foothills the species may occur with native perennial grasses such as Columbia brome (*Bromus vulgaris*), bearded fescue (*Festuca subulata*), and oniongrass (*Melica subulata*) in forest understories, and blue wildrye (*Elymus glaucus*), California brome (*Bromus carinatus*), California oat-grass (*Danthonia californica*), and California fescue (*Festuca californica*) in open areas such as upland prairies and along forest edges. False-brome does not appear to be rhizomatous, but forms large clumps that tend to coalesce, and it reproduces rapidly from seed.

Impact

The species has an exceptionally broad ecological amplitude, occupying forest floor and open environments such as pastures and prairies at a variety of aspects and elevations. Populations are known from riparian forests as well as upland hardwood and conifer forests under patchy and closed canopies at elevations of 200-3500 feet. Vigorous populations also occupy forest edges and upland prairies in full sun. When invading an area, it may first disperse along roadsides, then move out into undisturbed areas or forest clearcuts. The palatability of this grass for wildlife appears to be very low. It may inhibit tree seedling establishment and displace threatened and endangered species, such as Kincaid's lupine (host plant for the endangered Fender's blue butterfly).



False-brome can become the dominant plant and nearly eliminate native species on forest floors beneath a closed canopy (left) and in completely open habitats, such as pastures and prairies (right).

One characteristic of false-brome that appears to make it successful in the Pacific Northwest is its ability to tolerate a wide range of habitats, particularly with regard to light availability. Most of the invasive plants in our region tend to favor either open conditions, shade, or edges. False-brome can successfully dominate in all of these conditions to the near-complete exclusion of native herbaceous plants.

Dense growth of false-brome may alter fire regimes, and, especially where the species builds up a heavy layer of thatch, may increase the risk and rate of spread of wildfire. The species itself appears to be fire tolerant, resprouting within two weeks of a burn.

False-brome becomes a serious pest after forest harvest and may inhibit tree seedling establishment. It may also invade pastures and reduce forage quality for livestock. When the species dominates the vegetation, it may have negative effects on small and large mammals, native insects, lizards and snakes, and even song birds. Efforts to restore fish habitat may be impaired when dense patches of false-brome are present. This grass may reduce establishment of planted riparian trees that provide shade and structure to streams.

Control

Control of false-brome should focus first on prevention of spread through cleaning of machinery used in forest management; boots, clothes and equipment of forest workers and recreationists, and removal of infestations along roadsides. Seeds from roadside patches disperse on passing vehicles, people, and wildlife.

Where the species is already established, herbicides (e.g., glyphosate/Roundup) are an effective control method in some environments, but non-chemical methods are urgently needed. Mowing and burning alone appear to be ineffective for controlling the species. Hand removal may work in small patches, but care must be taken to remove all root fragments.

Additional information on false-brome is available on the internet at these sites:

- ▶ tncweeds.ucdavis.edu/alert/alrtbrac.html
- ▶ www.ou.edu/cas/botany-micro/ben/ben277.html
- ▶ www.appliedeco.org/reports.html



Application of herbicide (glyphosate) with a backpack sprayer may be an effective means to control small infestations of false-brome.



Super-heated foam applied with a Waipuna machine is an experimental method for controlling false-brome on roadsides.

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