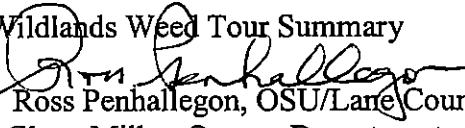




Lane County Extension Service
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W. 5a

Lane County Wildlands Weed Tour Summary

Presented By:  Ross Penhallegon, OSU/Lane County Extension Service
Glenn Miller, Oregon Department of Agriculture, Weed Control

The OSU/Lane County Extension Service in conjunction with the Oregon Department of Agriculture has sponsored two weed tours in the last two years, one on noxious weeds and the other on "wildland" weeds. The objective of the tours is to inform the general public and public agency employees about noxious and invasive weeds that are moving into the area. The tours involved many local agency organizations.

The four stops on the Wildlands Weed tour held May 13, 2005 were:

1. Fern ridge Dam - looked at the control of Reed Canary grass by the Army Corp of Engineers. Their work focused on converting large scale, mono-culture, reed canarygrass stands to diverse native marsh communities utilizing tillage, water level manipulation and spot treatment of herbicides. 34 people participated.
2. Mt. Pisgah, Buford Park - looked at the control of Himalayan blackberry. Jason Blazer showed us his amazing success converting blackberry infested riparian habitat into diverse native vegetation utilizing mowing techniques and seeding only. 31 people participated.
3. Elijah Bristow State Park - looked at Japanese knotweed control. We hiked to infestations and examined results of 2004 injection and foliar treatments. The hike and discussion highlighted the successful Lost Creek knotweed control project initiated by Jodi Lemmer of the East Lane SWCD and the work of the staff at Elijah Bristow State Park reclaiming degraded parkland to a more natural condition. 35 people participated.
4. Lowell - looked at False brome near Fall Creek Dam. We examined an infestation in a mixed forest environment. This site provided an excellent opportunity to identify the species and discuss impacts, plus control and prevention programs that can be effective for brome control. 23 people participated.

There were representatives from Oregon State University, Jackson County Extension, SWCD- Calapooya, City of Salem, City of Eugene, BLM-Eugene, ODA Weed Control, Siuslaw Watershed, East Lane SWCD, Lane County Public Works, Detroit Ranger District, and Polk County SWCD.

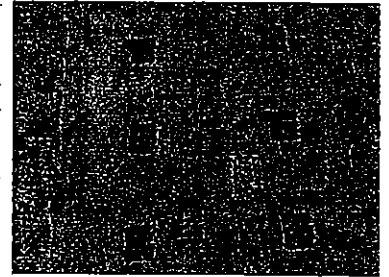
S:\Ross\Weeds\LC Wildlands Weed Tour Summary

Agriculture, 4-H Youth, Family & Community Development, Forestry, and Extension Sea Grant Programs.
Oregon State University, United States Department of Agriculture, and Lane County cooperating.
The Extension Service offers its programs and materials equally to all people.

WEED TOUR 2005 REED CANARY GRASS MANAGEMENT AT FERN RIDGE RESERVOIR

Mandy Tu and the Nature Conservancy Experiments

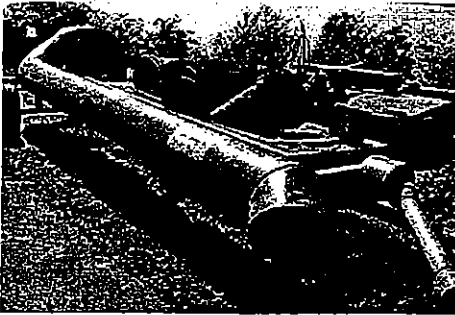
A rigorously designed multi-factor experiment led by Dr. Mandy Tu examined combinations of mowing, burning, shade cloth, and glyphosate. Mowing and burning increased tiller number. Certain mowing and glyphosate combinations were very effective. Shade cloth treatments were also effective (technical frustrations may confront large-scale shade cloth treatments). The fire lines disked for this effort exhibited good reed canary grass (RCG) control and high native wetland species diversity. This provided inspiration for the large-scale work within the dike system.



Previous experience

A fire that burned through the rhizome layer resulted in control of RCG for many years. Windrow features created by blading RCG thatch in the 1980s are still visible (see map).

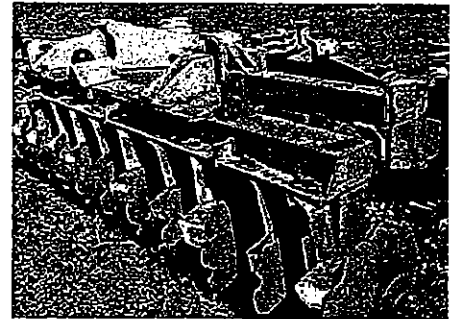
Execution



We treated over 350 acres of nearly pure RCG between 2002 and 2005.

A submersible PTO pump aided in drying the cells. This enabled mowing and diskage to begin early in the season. Pumping also helped maintain water levels during the growing season.

Heavy thatch and rhizomes require heavy equipment, for



example this 5-ton wildland disk acquired on surplus and ODFW's 500hp John Deere, as well as contracted tractor time. Subsequent work

was achieved with standard farm equipment owned and operated by both the Corps and ODFW.

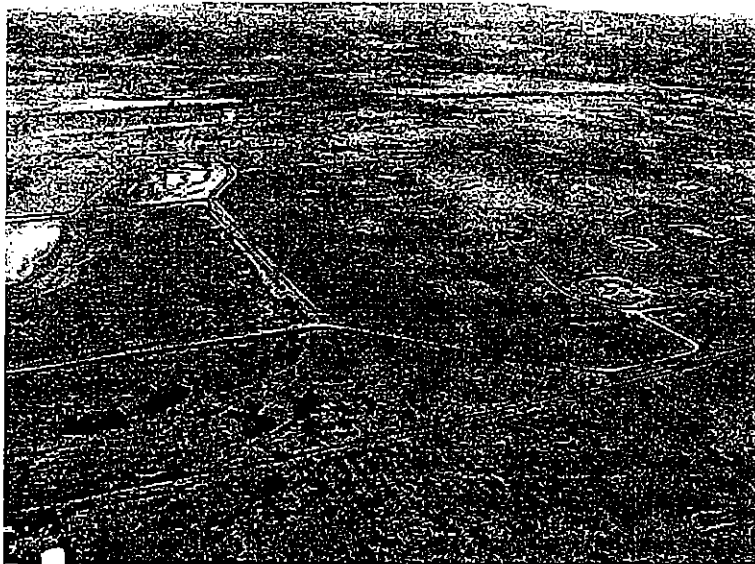
Water level was maintained during 2004 except in Pond 4.

This southerly view illustrates (l to r) the 2002 diskage effort in Pond 4 and Cell 2, and the extent of RCG infestation in Cell 2 (see map). Note also the triangle, treated by mowing and glyphosate in 2004.

Future efforts

Water levels will be maintained to the extent possible during 2005, although lake levels will not allow pumping.

Further diskage efforts are planned outside the cell system: although some suggest that control



requires 18" of water to be held on site for the growing season, our experience indicates that lasting control (on the scale of decades) may be achieved with less.

These efforts are a good investment for wildlife and native plants.

Cell 1
105 acres
2002 disk
2003 disk
2004 flood

Royal Ave. "triangle"
9 acres
2004 mow + glyphosate

You parked here

Pond 4
40 acres
2002 disk
2004 drawdown

Cell 2
213 acres
2003 disk
2004 flood


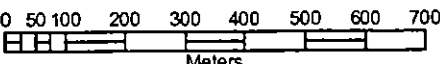
Windrow feature

Pump site

ODFW pumphouse

Fem Ridge
Reed Canary Grass Management

N

0 50 100 200 300 400 500 600 700
Meters

1 inch equals 1,000 feet

US Army Corps of Engineers
Fem Ridge Reservoir
26275 Clear Lake Road, Junction City OR 97448
541-688-8147

**Buford Park Riparian Restoration Project
Lane County Wildlands Weed Tour 2005**

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Camas Educational Network www.camasnet.org
City of Eugene P&OS: Hendricks Park
www.ci.eugene.or.us/PARKS/hendricks/
Friends of Buford Park & Mt. Pisgah www.bufordpark.org
Middle Fork Willamette Watershed Council www.mfwwc.org

Control Exotic Weeds

A key strategy to achieve the *South Meadow Management Plan's* goal to "Restore the ecological integrity of the floodplain" is to:
"enhance...forest habitats by removing noxious weed species..."

Since 1999, Friends of Buford Park & Mt. Pisgah has controlled exotic on over 90 floodplain acres. The map "**Noxious Species Control Priorities**" identifies priority areas for exotic control in 2005-2007. Weed species targeted for control include:

Armenian blackberry	Scot's broom	Purple loosestrife
Spotted knapweed	Canada thistle	False brome
Purple loosestrife	English ivy (under control)	
Slender-leaved thistle		

Objective 3.1 Aggressively and proactively control weeds before, during and after excavation on 10.5 acres. Focus on 2003 and 2006 excavation areas and areas adjacent to or upstream of graded areas.

Channel grading completed in 2003 exposed about six (8) acres of soil and another six (6) acres of created upland. Phase II excavation will create an additional eight (10.5) acres of exposed soil, including backwater areas where water-borne weeds could colonize the site. Weeds are generally excellent colonizers in

disturbed soils. As part of Phase I implementation, we seeded and planted these areas with grasses, shrubs and trees (consistent with our target ecotype planting plan). *A critical project Objective will be to aggressively and proactively control invasive weeds control effort before, during and after earth moving.*

Weed control will involve not only site preparation and follow-up treatment in Phase II excavation zones, but also continued control actions on 2003 excavation zones. These efforts involve significant volunteer contributions. However, volunteers alone can not be depended on to accomplish these time-critical tasks, thus significant funding for seasonal work crews are a critical budget item. Fortunately, when major effort is invested in the first two years, subsequent weed control costs are much lower.

FBP has eight years of weed control experience on this site and in other habitats on the park. Seven methods identified below are used for different circumstances. At these two floodplain sites, we have effectively used repetitive mowing using a tractor mounted flail mower (3 to 5 times per year) to control heavy blackberry cover. On steep channel banks where tractor operation is unsafe, seasonal crews use our two heavy duty, powered walk-behind mowers with 53" sickle cutter bars or use gas-powered brush cutters (heavy duty "weed whackers"). The same equipment are used for vegetation management (mowing) around the young trees to create mulch, conserve moisture and reduce competition from grasses and field weeds.

Objective 3.2 Utilize proven site specific methods to control and demonstrate effectiveness of innovative, non-herbicide weed control treatments for target species.

The following methods of invasive species control may be utilized. Prescriptions outlined are consistent with the "Oregon Aquatic Habitat Restoration and Enhancement Guide." Where feasible, we will demonstrate the effectiveness of innovative, non-

herbicide weed control methods, such as corn gluten and industrial strength vinegar. Exotic control methods are described in more detail in the *South Meadow Management Plan* (pages 23-25).

1) Bradley Method: Remove exotics, and allow remaining native plants to recolonize areas cleared of exotics)

2) Repetitive mowing followed by root crown removal: (This method is primarily used for dense blackberry stands). Native plants that are released are allowed to flower and set seed, followed by more mowing prior to blackberry seed maturation.

3) Till, Solarize (using clear plastic sheets) and revegetate . As part of this technique, we plan to test corn gluten as a benign, pre-emergent weed block on areas cleared of exotics.

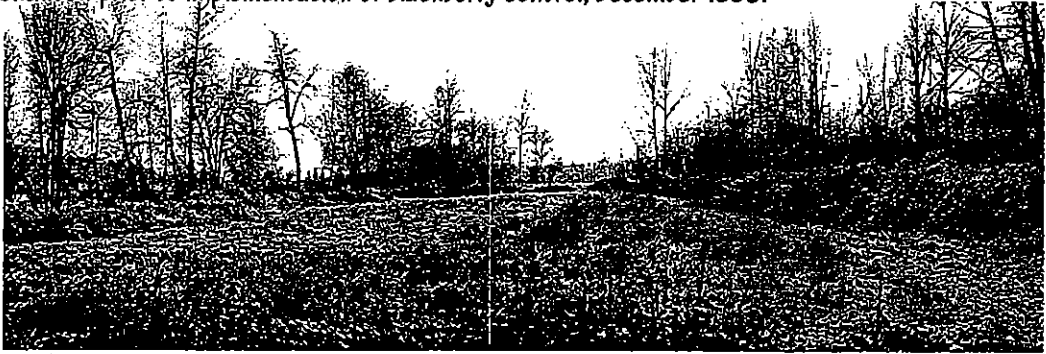
4) Mulching (for areas less than 100 sq. ft.). This method is used for disturbed areas around trees plantings.

5) Smothering with black nursery fabric (for areas less than 100 sq. ft.).

6) Aggressive clearing: Use a small track-hoe or bulldozer, followed by brush rake to remove roots balls, then native seeding and plantings in areas of soil disturbance. Considered for large areas of very dense exotic infestations, and as part of site preparation for areas of fill mounds.

7) Chemical Application (method of last resort, used extremely conservatively). To date, chemical herbicides have not been used on the South Meadow Restoration project.

Pasture condition prior to implementation of blackberry control, December 1999.



Pasture condition following first round of blackberry control, February 2000.



Winter 2004-05



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

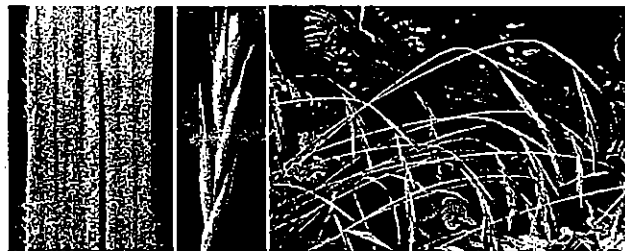
False-brome, or slender false-brome (*Brachypodium sylvaticum* (Huds.) Beauv.), is an invasive grass species that is rapidly expanding in the Pacific Northwest. This exotic perennial is native to Europe, Asia and North Africa, but is invading habitats in western Oregon, and possibly elsewhere in our 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.

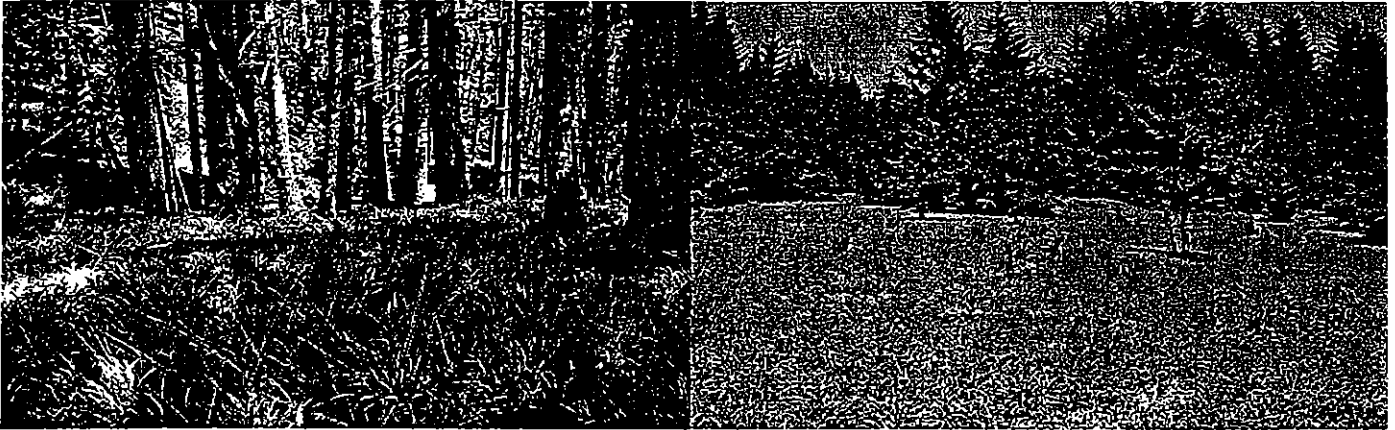


Leaf margins of false-brome are hairy (left) and the flowers are borne on drooping spikes (center and right).

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/alertbrac.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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