

Invasive Weeds in Forest Land

Himalayan Blackberry Rubus armeniacus (discolor) Evergreen Blackberry Rubus Iacinatus

imalayan blackberry, also known as Armenian blackberry, is a widespread invasive species in western Oregon and also grows in some eastern

Oregon riparian zones (Figure 5, next page). Commonly found in riparian areas, it also grows along roadsides and fence corridors and in open woodlands, logged areas, and other disturbed sites. It grows best on deep, fertile soils but can colonize



Figure 1.—Typical blackberry domination in the understory of a riparian area.

a wide variety of sites if soil moisture is adequate. Himalayan blackberry tends to dominate sites, displacing and shading out native species and significantly reducing plant diversity (Figure 1). Growth is best in full sun, but blackberry plants can survive in part shade.

Evergreen or cutleaf blackberry is another nonnative Rubus species (Figure 2). Similar in most respects to Himalayan blackberry, it is less invasive and consequently less abundant. Both species are difficult to control due to their extensive root system which allows plants to resprout vigorously after being cut back.

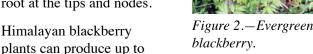
Description

Himalayan blackberry is a semi-evergreen shrub that can grow nearly 10 feet high. Stems (canes) are biennial. First-year canes develop from buds at or below the ground



surface and bear only leaves. Second-year canes arise from first-year canes and bear both leaves and flowers. Himalayan blackberry resprouts vigorously from rhizomes and root crowns (Figure 3). Canes also can root at the tips and nodes.

13,000 seeds per square



meter, and seeds can remain viable in the soil for several years. Leaves are alternate, palmately compound, and oval with serrate edges (Figure 4). Plants bear white flowers and black fruits. Canes (stems) are ribbed and have thorns. Evergreen blackberry is similar in growth habits but has compound leaves that are deeply serrated (Figure 2).

Management options

Biological control

The blackberry leaf rust fungus (Phragmidium violaceum) has been used for decades to control native blackberry plants in Australia and New Zealand. It was discovered in 2005 on the Oregon coast and has since spread to all western Oregon counties except Jackson and Josephine. The rust infects the leaves of both Himalayan and evergreen blackberry, causing partial to complete defoliation. Tip rooting is also reduced. However, the plants are not killed outright. Some individual plants and plant populations appear to be more resistant to the rust



Figure 3 (far left).— New canes emerge from rhizomes (underground creeping stems). Figure 4 (at left).— Himalayan blackberry leaves. Note palmately compound leaf and ribbed stem.

than others. The rust provides a window of opportunity to restore desirable native vegetation. Control should be focused on the most rust-resistant plants, so they don't spread at the expense of more susceptible individuals. Contact the Oregon Department of Agriculture for more information.

Chemical control

Note: Before you apply herbicide on forest land, you must file a "Notification of Operations" with the Oregon Department of Forestry at least 15 days in advance.

The following information about herbicides is only a brief summary; consult your local Extension agent or Oregon Department of Agriculture representative for specific recommendations for your situation. Read and follow the herbicide label carefully. Before spraying over or around seedlings, ensure the chemicals pose no hazard to the seedlings, or protect the seedlings with a stovepipe or other shield.

Herbicides suitable for Himalayan blackberry control include triclopyr, glyphosate, and metsulfuron. All are foliar-active chemicals in which uptake is through leaves and stems. Applications in late summer through early fall more effectively reduce resprouting than early or midseason treatments, which may burn back only the tops of the plants.

Metsulfuron is labeled for control of Himalayan blackberry during site preparation on forest lands.

Triclopyr is labeled for site preparation and release except on pines. On nonsusceptible conifers, make triclopyr release treatments when conifer buds have hardened off. If using the ester formulation of triclopyr, you must allow increased buffer zones along some salmon-bearing streams; consult the Oregon Department of Agriculture

Use pesticides safely!

- Wear protective clothing and safety devices as recommended on the label. Bathe or shower after each use.
- Read the pesticide label—even if you've used the pesticide before. Follow closely the instructions on the label (and any other directions you have).
- Be cautious when you apply pesticides. Know your legal responsibility as a pesticide applicator.
 You may be liable for injury or damage resulting from pesticide use.

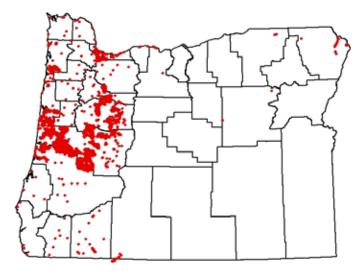


Figure 5.—Himalayan blackberry distribution in Oregon. Map: Weedmapper.

for the latest information. The amine formulation of triclopyr does not have the same stream buffer restrictions and is less volatile.

Several glyphosate formulations are labeled for both site preparation and release, and some are labeled for aquatic or riparian use.

Any herbicide treatment program should rotate among chemicals to prevent developing herbicide-resistant strains of the weed.

For details on chemical control, refer to the current edition of the *PNW Weed Management Handbook* and to *Herbicide-resistant Weeds and Their Management*, PNW 437. Both are available from OSU Extension http://extension.oregonstate.edu/catalog/

Mechanical control

Mowing or cutting Himalayan blackberry reduces cover in the short term but usually is not an effective control strategy. In fact, cutting back Himalayan blackberry plants appears to induce branching and to increase the formation of suckers from lateral roots. Multiple annual mowings, repeated over several years, may provide some degree of long-term control.

Hand grubbing roots and root crowns is extremely labor intensive but can be effective if done thoroughly. This approach usually is suitable only for relatively small areas.

Removing roots and root crowns with a bulldozer, backhoe, or other mechanical device can likewise be

effective, though it usually leaves some roots, which resprout. Mechanical removal also frequently disturbs the soil, which can lead to invasion of the site by other weeds.

Grazing

Goats will browse leaves and succulent blackberry canes. Like mowing or slashing, grazing provides short-term reductions in cover.

For more information

Oregon Department of Agriculture, Plant Division, Noxious Weed Control.

http://oregon.gov/ODA/PLANT/WEEDS/profile_himalayanblackberry.shtml

Weedmapper, a collaborative project of Oregon Department of Agriculture, Oregon State University, U.S. Bureau of Land Management, and U.S. Forest Service. http://www.weedmapper.org/

Managing Himalayan blackberry in western Oregon riparian areas, EM 8894. Bennett, M. 2006. OSU Extension Service.

http://extension.oregonstate.edu/catalog/pdf/em/em8894.pdf

Controlling Himalayan Blackberry (Rubus armeniacus [R. discolor, R. procerus]) in the Pacific Northwest. Soll, J. 2004. The Nature Conservancy. http://tncweeds.ucdavis.edu/moredocs/rubarm01.pdf.

Wild Blackberries, UC DANR Publication 7434. DiTomaso, J.M. 1997. University of California Pest Management Guidelines.

http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7434.html

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