Columbia yellowcress
(*Rorippa columbiae*)

OREGON DEPARTMENT OF AGRICULTURE

ENDANGERED

Flower (left) and habit (right) of Columbia yellowcress. Photos by ODA staff. If downloading images from this website, please credit the photographer.

Family

Brassicaceae

Taxonomic notes

Synonyms: *Nasturtium sinuatum* var. *columbiae*, *Rorippa sinuata* var. *pubesens*, *N. columbiae*, *Radicula columbiae*, *Rorippa calycina* var. *columbiae*

Plant description

Columbia yellowcress is an herbaceous perennial, arising from slender roots or rhizomes and covered in fine pubescence or papillose. The stems are somewhat erect, decumbent, or prostrate, from 1-40 cm long and branching repeatedly. Leaves oblanceolate to oblong with sinuate to pinnatifid entire to dentate margins, sometimes with irregular laciniate lobes. Lower leaves often petioled, 4-7 cm long, can be sessile or clasping, and upper leaves, 2.4-5.2 mm long, more often sessile or clasping than petioled. Infloresences are spreading to ascending, 4-8 mm long, elongated racemes with flower pedicels mostly appressed, forming terminally and in the axils. Flowers contain four yellow petals, oblanceolate to spoon-shaped, pedicellate, 2.7-4.2 mm long and 0.7-1.7 mm wide, and longer than the sepals. Sepals are ascending, oblong and pubescent, 2.0-3.5 mm long, persistent long after anthesis, and slightly saccate at base. Fruits are slightly compressed silicles that are ovate to oblong, turgid and pubescent. The pedicellate, 2-valved fruits are 3-7 mm long and 1.5-3 mm wide. When dry, the fruit dehisces and the persistent placentae and septum remain. Fruits generally produce between 20-40 ovoid-spheric seeds that are tan-orange and 0.7-0.9 mm long.

Distinguishing characteristics

Rorippa columbiae can co-occur with *R. curvisiliqua* (curvepod yellowcress) and *R. palustris* (marsh

yellowcress). *Rorippa curvisiliqua* has a similar ascending to prostrate growth form but differs in having elongated pods that are 6-15 mm long and visible on the plant from May through October. *Rorippa palustris* differs in growing taller (40-190 cm) and erect.

When to survey

Surveys should occur when plants are in flower starting in late summer (August) in the Columbia River Gorge, and late spring/early summer (June/July) in southern Oregon.

Habitat

Rorippa columbiae is associated with moist habitats that experience periodic inundation, including shorelines of lakes and playas, banks of rivers, gravel bars, streams, creeks, marshes, mudflats and swales. It can also occur in anthropogenic wetlands including roadsides, drainage and irrigation ditches, farm ponds, and low-lying fields.

Range

Rorippa columbiae ranges from southern Washington to northern California, with population complexes in the Columbia River Gorge and southern Oregon/northern California.

Oregon counties

Multnomah, Jackson, Klamath, Lake; presumed extirpated from Umatilla, Crook, Baker, Harney

Federal status

None

Threats

As a species that occupies seasonally wet habitat, water management and any associated hydrological alterations are a significant threat to *R. columbiae.* Constructed dams and other water controls have altered water flow in the Columbia River and have likely had a major impact on the persistence of *R. columbiae*, among other plants. Another major threat facing *Rorippa columbiae* is livestock or other wildlife, either through direct impacts (e.g., herbivory, trampling of plants and habitat, uprooting plants) or through indirect impacts (e.g., erosion or channel downcutting and introduction of weeds associated with cattle movement). Animals are drawn to the riparian zones, shores of lakes, and depression ponds where *R. columbiae* is typically found. In particular, hoof tracks have been noted within *R. columbiae* populations. Invasive species threaten all *R. columbiae* sites; common invasives include *Alopecurus pratensis, Phalaris arundinacea, Elymus repens, Bromus tectorum, Poa pratensis,* and *Agrostis stolonifera.* Woody vegetation encroachment and associated shading is another threat in at least two sites. Natural pathogens (viral or fungal), ants, and other pests have been noted. Off-road vehicle use has likely destroyed individuals or patches of plants and impacted recruitment. Additional recreation-related activities that threaten *R. columbiae* include beachfront foot traffic and boating. Small population size is another concern as it can reduce genetic diversity and reproductive success. Climate change also has the potential to decrease survivability of the species.

Conservation planning

In early 2024, ODA and Institute for Applied Ecology began a Working Group with land managing agencies and other concerned groups on how to better coordinate management and recovery for this species across Washington, Oregon, and California.

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