

-State Species Abstract-  
-Wyoming Natural Diversity Database-

*RORIPPA CALYCINA*  
PERSISTENT SEPAL YELLOWCRESS  
BRASSICACEAE

Status:

US Fish & Wildlife Service: None (Former C2 candidate for listing under the Endangered Species Act.

Agency Status: WY BLM Sensitive.

Heritage Rank:

Global: G3 State: S3

Range Context: Regional Endemic/Core

Wyoming Contribution Rank: High

Description: Persistent sepal yellowcress is a rhizomatous perennial herb with stems 10-40 cm tall. The stems and foliage are pubescent throughout with stiff, unbranched hairs. Stem leaves are pinnately divided or wavy-lobed, sessile, and 2.5-5 cm long. The flowers are borne in terminal and axillary inflorescences and have 4 yellow petals 3-5 mm long and 4 sepals that persist in fruit. Fruits are ovoid to nearly globose, 2-4 mm long, and conspicuously pubescent with unbranched hairs that are broadest at the base. Styles in fruit are 1-2 mm long and glabrous (Stuckey 1972; Hitchcock et al. 1964; Clark and Dorn 1981; Dorn 2001; Rollins 1993; Fertig et al. 1994; Fertig and Welp 1998).

Similar Species: *Rorippa sinuata* has elongate, glabrous fruits over 5 mm long, deciduous sepals, and round, glassy, ball-like hairs on the leaves. *R. curvipes* often has white petals, finely hairy sepals, deeply pinnate leaves and glabrous to sparsely hairy fruits and leaves. All other Wyoming species of *Rorippa* are taprooted annuals or biennials with longer, more erect stems and fruits that are either round or narrowly elongate. Seedlings of *Ambrosia tomentosa* have wider



Above: *Rorippa calycina* by Walter Fertig.

leaves with whitish undersides. Seedlings of annual *Potentilla* species have 3-5 round-lobed leaflets (Fertig and Welp 1998).

Flowering/Fruiting Period: Flowers from late May to August, although blooming may extend into October under favorable circumstances.

Distribution: Originally a regional endemic of south-central Montana, western North Dakota, and central Wyoming with a disjunct population on the Arctic coast of Canada's Northwest Territories (Mulligan and Porsild 1966). Currently only known to be extant and persisting in Wyoming, where it is known from the North Platte River drainage, and Bighorn, Great Divide, Green River, and Wind River basins in Albany, Big Horn, Carbon, Fremont, Park, Sweetwater, and Washakie counties (Fertig and Welp 1998).

Habitat: Found primarily along moist sandy to muddy banks of streams, stock ponds, and man-made reservoirs near the high-water line at 3660-6800 feet. Also present in high plain swales that evaporate, and along creeks (Heidel 2007). Reservoir populations are

often in semi-disturbed or recently flooded openings in small inlets or bays with scattered clumps of *Hordeum jubatum*, *Poa secunda*, *Elymus smithii* and a variety of native or exotic early successional forbs, occasionally on grassy shores or in openings amid *Salix exigua* or *Tamarix chinensis* thickets (Fertig and Welp 1998, Heidel and Fertig 2000).



Habitat of *Rorippa calycina* on mudflats of Bighorn Canyon NRA. Photo by Walter Fertig.

Occurrences in Wyoming: Known from 28 occurrences in Wyoming, all of which have been observed since 1979. Total population consists of more than 90 subpopulations, some of which were formerly recognized as separate occurrences.

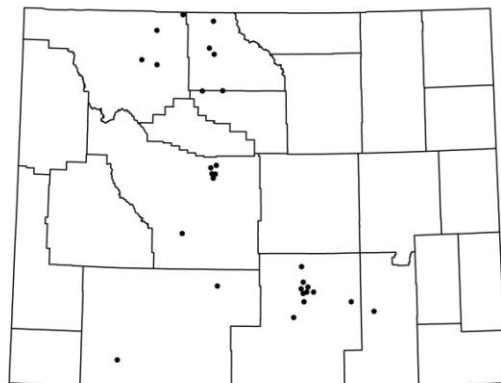
Abundance: Fertig and Welp (1998) conservatively estimated the total state population at 15,000-25,000 plants based on surveys of 27 subpopulations in 1997.

Trends: Long-term trend data are not available for most populations. Individual colonies appear to vary in size and area from year to year in response to flooding levels.

Protection status: Eleven populations are on protected lands managed by The Nature Conservancy (Red Canyon Ranch), US Fish and Wildlife Service (Pathfinder National Wildlife Refuge), BLM Red Canyon ACEC (Rawlins District), and Wyoming state parks (Boysen, Buffalo Bill, and Seminoe). All other known populations are on public or private lands managed for multiple use.

Threats: The primary threat comes from changes in water management that reduce the periodicity of flooding. Other threats include competition from exotic plants, herbicide spraying, trampling by livestock, recreational activities, and coal mining.

Managed Areas: Occurs on lands managed by Ashley National Forest (Flaming Gorge National Recreation Area), Bighorn Canyon National Recreation Area, Pathfinder National Wildlife Refuge, and the BLM Cody, Lander, Rawlins, and Worland Field Offices. Also present on Wyoming state park lands at Boysen, Buffalo Bill, and Seminoe Reservoirs.



Wyoming distribution of *Rorippa calycina*.

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of Wyoming.

Author: Walter Fertig

Updated: by Joy Handley and Bonnie Heidel  
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