

-State Species Abstract-
-Wyoming Natural Diversity Database-

AGROSTIS ROSSIAE
ROSS BENTGRASS
Family: Poaceae

Status:

US Fish & Wildlife Service: Petitioned in 2007 (Former C2 candidate for listing under the Endangered Species Act).

Agency Status: None.

Heritage Rank:

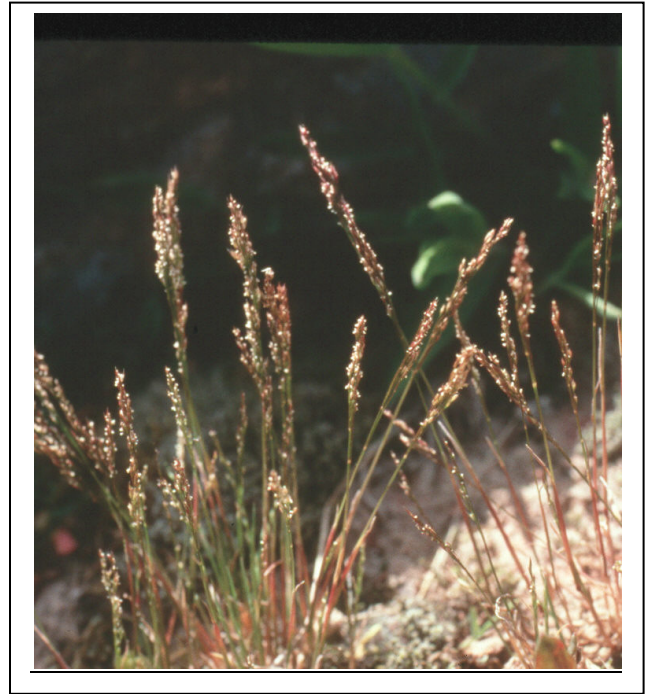
Global: G1 State: S1

Wyoming Contribution Rank: Very high
(State endemic)

Description: Ross bentgrass is an annual graminoid with tufted culms 5-15 cm high. The leaf blades (located mostly near the base of the culm) are 1.2-5 cm long, 0.5-2 mm wide, and have slightly inflated sheaths. Spikelets are one-flowered and arranged in a narrow, dense panicle 2-6 cm long. Branches of the panicle are scabrous, purple, and lack spikelets at the base. Florets consist of an awnless lemma approximately 1.5 mm long and a vestigial palea (Clark and Dorn 1979; Fertig et al. 1994, Harvey 2007).

Identification Comments: Recognizable based on panicle characteristics. Presence in thermal areas is not sufficient to distinguish this from *A. scabra*, which can be found in the same habitat.

Similar Species: *Agrostis variabilis* is a perennial with panicle branches bearing spikelets nearly to the base. *A. scabra* has loosely spreading panicle branches at maturity. The latter is present as an annual in geyser basins of Yellowstone National Park, and separate taxonomic research is warranted (Tercek et al. 2003, Harvey 2007).



Above: *Agrostis rossiae* by Jennifer Whipple.

Below: *A. rossiae* by Jane Dorn.



Flowering/Fruiting Period: April-June.

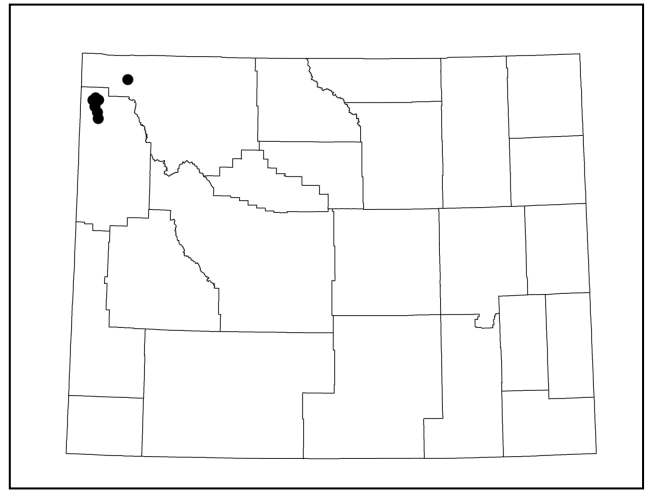
Distribution: State endemic restricted to thermal areas on the Yellowstone Plateau (Teton County).

Habitat: Thermally-warm siliceous sinter (geyserite) deposits bordering active geysers and hot springs at an elevation of 7250-7400 feet. Common associated species include *Conyza canadensis*, *Gnaphalium stramineum*, *Plantago elongata*, *Panicum acuminatum*, *Agrostis scabra*, *Mimulus guttatus*, and *Heterotheca depressa*.

Management Considerations: According to Jennifer Whipple (NPS Botanist), populations in Yellowstone National Park may be transitory depending on changes in thermal activity within its habitat. One colony in the Midway Geyser Basin has apparently disappeared following a change in soil temperature in the mid-1980s. High levels of



Above: *Agrostis rossiae* habitat, Lower Geyser Basin, Yellowstone National Park, by Jennifer Whipple.



Wyoming distribution of *Agrostis rossiae*.

park visitor activity may also have impacts on populations, either through trampling of habitat or introduction of competing plant species. In the late 1970s and early 1980s interest in developing geothermal energy outside the Park was considered a potential threat.

Occurrences in Wyoming: Known from 8 occurrences (many consisting of numerous, somewhat ephemeral subpopulations), all within a relatively small area of Yellowstone National Park.

Abundance: Surveys by J. Whipple and J. McGrath in 1995 suggest that the total population is 5000-7500 individuals. The thermal habitats occupied by this species are somewhat ephemeral, and population numbers and locations may fluctuate greatly.

Trends: Populations are somewhat ephemeral, expanding and contracting in response to creation or loss of habitat associated with thermal activities.

Protection status: All known occurrences are within Yellowstone National Park.

Threats: Threatened by recreational activity in its habitat, invasion and displacement by

Agrostis scabra, and natural fluctuations in habitat availability due to changes in thermal activity.

Managed Areas: Occurs in Yellowstone National Park.

References:

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