

SPECIES EVALUATION

*Ptilagrostis porteri*, Priority 2. *Ptilagrostis porteri* (Rydberg) W. A. Weber (PTPO). Porter feathergrass, Porter's false needlegrass. CNHP G3G5T2 / S2, Track A FS: R2. -- G3G5T2 N2. CO S2. GMUG-Taylor River-Cebolla, PSICC-Leadville, S. Park, S. Platte, WR-Dillon; POACEAE

Criteria	Rank	Confidence	Rationale	Sources of Information
1 Distribution within R2	<b>B</b>	<b>L</b>	Patchy distribution; but the terminology in the ranking description does not apply, hence the low confidence. Ranked S2 in Colorado, the only state where it occurs. Andy Kratz' summary table showing this species' occurrence on the Gunnison Ranger District is incorrect, and its existence on the Leadville District is unconfirmed. It hasn't been seen there since 1873, and the location of the site is not known to be on the Forest.	Herbarium specimens at COLO RM NY, Johnston and Hendzel 1982, von Ahlefeldt 1989, Weber and Wittmann 2001ab, Johnston and others 1981, Pollock 2001.
2 Distribution outside R2	<b>A</b>	<b>H</b>	Restricted to Colorado and to R2.	Herbarium specimens at COLO RM NY, Johnston and Hendzel 1982, von Ahlefeldt 1989, Weber and Wittmann 2001ab, Johnston and others 1981, Pollock 2001.
3 Dispersal Capability	<b>B</b>	<b>M</b>	The fruit are hard and have a plumose awn, and can presumably be transported by animals or wind.	My observations.
4 Abundance in R2	<b>B</b>	<b>L</b>	Species is uncommon, but "demographic stochasticity" does not apply to plant species, hence the low confidence. There are thirty recorded occurrences, of which 22 are all or partly on National Forest System Lands. 26 populations have been counted to date (see graphs, last page). The population size ranges from 6 to 380,000 individuals, and averages over 15,000 individuals. There are probably 10-15 more sites yet to be discovered, which means that there may be 50 occurrences, with a total of 750,000 individuals or more.	CNHP records, my observations, my population monitoring, PSICC personnel monitoring reports, von Ahlefeldt 1989.
5 Population Trend in R2	<b>B</b>	<b>H</b>	A number of the populations have been counted several times. Unfortunately, standard protocols were not used for counting, but even considering that, there is a lot of variation from year to year, even at sites we know to be stable and without disturbance. At some sites, populations decline somewhat, only to recover in a future year; at other sites, populations increase somewhat, then decline in apparently cyclic fashion. This is apparently normal for plant populations, especially such as <i>Ptilagrostis</i> plants that are very difficult to identify in vegetative state: the variation in population numbers may mostly reflect the variation in proportion of the plants that flower in a given year. The population numbers seem to be relative stable, considering normal variation in weather patterns.	CNHP records, my observations, my population monitoring, PSICC personnel monitoring reports, von Ahlefeldt 1989.
6 Habitat Trend in R2	<b>B</b>	<b>H</b>	In short- to medium-height willow carrs, where <i>Deschampsia cespitosa</i> (tufted hairgrass) is codominant (Johnston and Hendzel 1982). Seems to be more abundant on peat hummocks in calcareous fens in northern South Park. Sometimes <i>Ptilagrostis</i> occurs with shrubby cinquefoil, <i>Pentaphylloides floribunda</i> , but <i>Ptilagrostis</i> does not seem to prefer much shade (von Ahlefeldt 1989). The habitats on the National Forest are steadily improving in quality.	Johnston and Hendzel 1982, Johnston and others 1981, von Ahlefeldt 1989, my observations, my monitoring reports.

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7 Habitat Vulnerability or Modification	B	H	The sites where <i>Ptilagrostis porteri</i> grows on the Pike National Forest are very sensitive to human use and livestock grazing, as is expected given the cold, wetland habitat. Just one vehicle pass, sustained hiking across these wetlands, or livestock use that is too intense or that continues too long in this habitat, all can cause de-watering of the wetlands or physical damage such as hummocking. At the same time, the Pike and San Isabel National Forests have made significant progress in bringing disturbance factors (especially grazing) to within tolerable levels to maintain or improve the populations of <i>Ptilagrostis</i> and their habitats. Several of the largest populations are within wilderness areas on the National Forest or protected areas on private lands.	Johnston and Hendzel 1982, Johnston and others 1981, von Ahlefeldt 1989, my observations, my monitoring reports.
8 Life History and Demographics	D	H	Details of life history and demographics are insufficiently known to make this rating.	

National Forests in the Rocky Mountain Region where species is KNOWN (K) or LIKELY (L)\* to occur:

\*. Likely is defined as more likely to occur than not occur on the National Forest or Grassland. This generally can be thought of as having a 50% chance or greater of appearing on NFS lands.

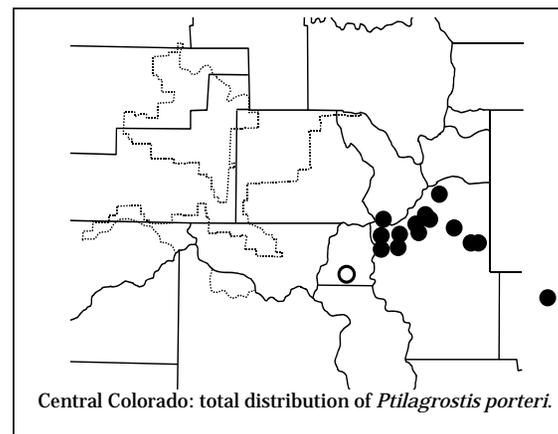
COLORADO NF/NG	K	L	NEBRASKA NF/NG	K	L	WYOMING NF/NG	K	L
Arapaho-Roosevelt NF			Samuel R. McKelvie NF			Shoshone NF		
White River NF	K		Halsey NF			Bighorn NF		
Routt NF			Nebraska NF			Black Hills NF		
Grand Mesa Uncompahgre Gunnison NF			Ogalala NG			Medicine Bow NF		
San Juan NF			SOUTH DAKOTA NF/NG			Thunder Basin NG		
Rio Grande NF			Black Hills NF			KANSAS NF/NG		
Pike-San Isabel NF	K		Buffalo Gap NG			Cimarron NG		
Comanche NG			Fl. Pierre NG					
Pawnee NG								

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**Taxonomy.** *Ptilagrostis porteri* was first collected in 1862 by C. C. Parry, and by E. Hall and J. P. Harbour, somewhere in central Colorado. It was collected again by Vasey in 1868 and Wolf again in 1873. These collections were all identified by T. C. Porter as *Stipa mongolica*, a species now known to be restricted to Siberia (Porter and Coulter 1874). P. A. Rydberg in 1905 recognized that it was a new species, and so named it *Stipa porteri* for the first person to describe it (Thomas C. Porter). The species was transferred to the Asiatic genus *Ptilagrostis* by W. A. Weber in 1966.

This is accepted as a species, *Ptilagrostis porteri* (Rydberg) W. A. Weber, by most Rocky Mountain botanists. A few prefer using the dubious taxonomy *Ptilagrostis mongholica* Grisebach var. *porteri* (Rydberg) Barkworth.

**Discussion.** *Ptilagrostis porteri* is a restricted endemic, in somewhat vulnerable habitats. At the same time, populations can be large to very large. *Ptilagrostis porteri* seems to have some viability concerns. Conservation of this species would be considerably aided by an improved inventory of wetlands, especially fens, on National Forest System Lands. This inventory should include a complete, accurate species list and preliminary ecological studies on some of the key species or species of concern.



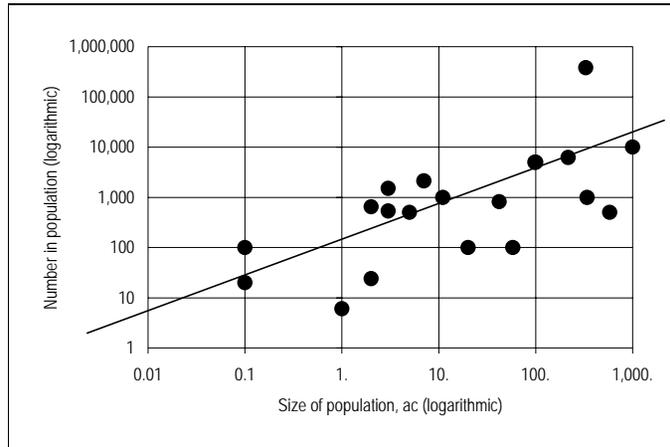
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### References

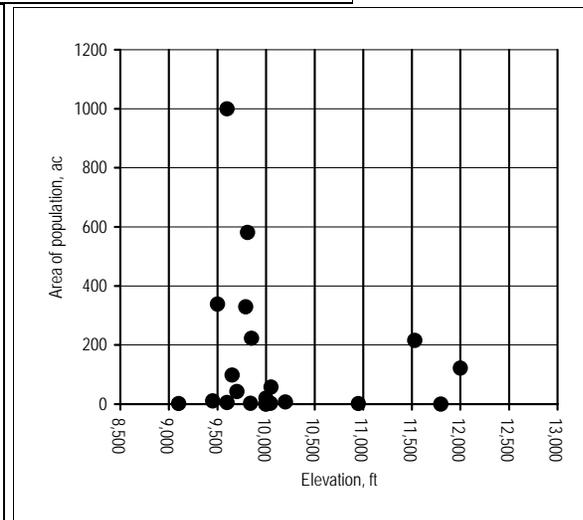
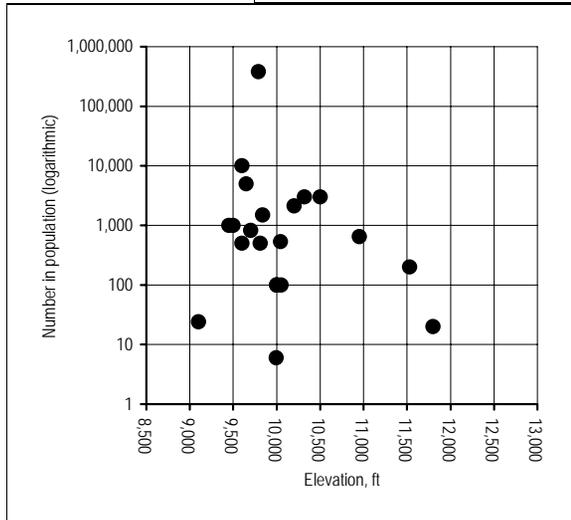
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*Ptilagrostis porteri* populations – Summarized April 25, 2002 by Barry C. Johnston



$$n = 10^{2.048 + 0.747 \log s}$$



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