

SPECIES EVALUATION

Phippsia algida, Priority 1. *Phippsia algida* (C. J. Phipps) R. Brown (PHAL). icegrass, snow grass. CNHP G5 / S2, Track A G5 N?. CO S2, WY S1. WY Disjunct, 1 SNF, PSICC-S. Park, South Platte, ARP-Clear Creek, WR-Dillon

Criteria	Rank	Confidence	Rationale	Sources of Information
1 Distribution within R2	B	L	Patchy distribution; but the terminology in the ranking description does not apply, hence the low confidence. Ranked S1 in Wyoming, S2 in Colorado, and S2 in Montana. Apparently not found (yet) in Utah or New Mexico.	Specimens at COLO and RM, Weber and Wittmann 2001ab, Dorn 2001, Markow and Fertig 2000, MTNHP 2002.
2 Distribution outside R2	C	H	Widespread on the Arctic coasts of Alaska, Canada, and Siberia; disjunct in northern Wyoming and adjacent Montana, and disjunct in central Colorado.	Hultén 1968, specimens at COLO and RM, Weber and Wittmann 2001ab, Dorn 2001, Markow and Fertig 2000, MTNHP 2002.
3 Dispersal Capability	B	M	Apparently dispersal is somewhat limited, but the situation in the Rocky Mountains is undoubtedly different from the high Arctic. "Evidently a dormant seed bank survives dry seasons" (Weber and Wittmann 2001ab). Species sometimes is an annual	Grulke 1995, Weber and Wittman 2001ab.
4 Abundance in R2	B	M	Five to six occurrences in Wyoming, about twelve in Colorado, three to five in Montana. Still an uncommon species in R2. Given the small size of these plants and their difficult-to-assess habitat, I expect a number of sites remain to be discovered in the Rocky Mountains. Populations in Wyoming are in "colonies of ca. 30 plants in areas of less than 0.1 acre" (Markow and Fertig 2000).	Markow and Fertig 2000, CNHP records, specimens at COLO and RM.
5 Population Trend in R2	D	H	Unknown population trend. No repeated counts on any populations.	
6 Habitat Trend in R2	B	L	"Wet, rocky places at high elevation, often in meltwater of receding snowbanks" (Markow and Fertig 2000). "Cold gravels of snow-melt streamlets fed by snowfields of glacial cirques" (Weber and Wittmann 2001ab). These areas have probably been fairly stable, except where trails or other routes cross these sites. On the other hand, the last few years have been difficult to find any <i>Phippsia</i> , due to the lack of water from low-precipitation winters and droughty springs. Also, no one has really monitored <i>Phippsia</i> sites.	Markow and Fertig 2000, Weber and Wittmann 2001ab, my observations.
7 Habitat Vulnerability or Modification	B	L	These habitats would apparently be vulnerable to recreational trail use, off-road vehicle use, or sheep grazing. However, we have no information on the effects of such use on <i>Phippsia</i> plants; in the Arctic, <i>Phippsia</i> is a ruderal plant invading disturbed sites.	Grulke and Bliss 1988, my observations.
8 Life History and Demographics	D	M	Not known from the Rocky Mountains; uncertain how much to infer from studies on the Arctic coasts (Grulke and Bliss 1988, Grulke 1995).	

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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		K		Samuel R. McKelvie NF				Shoshone NF		K	
White River NF		K		Halsey NF				Bighorn NF			
Routt NF				Nebraska NF				Black Hills NF			
Grand Mesa Uncompahgre Gunnison NF				Ogala 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				Ft. Pierre NG							
Pawnee NG											

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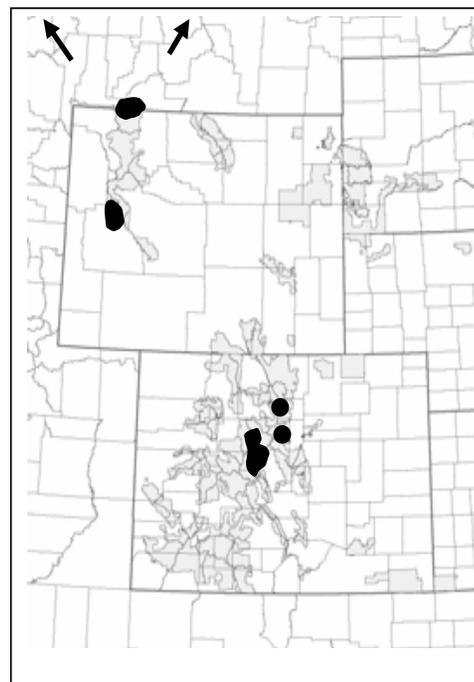
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Taxonomy. All Rocky Mountain botanists accept this as a species, *Phippsia algida*.

Discussion. These plants are small and difficult to inventory; there are probably many more sites awaiting discovery. Since the plants often act as annuals, and yet dependent on cold standing water, they may not appear every year or every season. This makes inventory and monitoring difficult. We do not have much population data on *Phippsia algida*, and responses to disturbances are unknown. Under these conditions, it is difficult to assess its viability status.

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SPECIES EVALUATION
REGION 2 SENSITIVE SPECIES EVALUATION FORM

Species: <i>Phippsia algida</i> / Ice Grass, Snow Grass			
Criteria	Rank	Rationale	Literature Citations
1 Distribution within R2	AD	Ice Grass is a circumpolar species that is disjunct in Region 2. It occurs on the Beartooth Plateau in Park County, Wyoming, on the Shoshone National Forest. It has also been reported from the Wind River Range in Fremont County by Scott (1997) on the Shoshone National Forest. In Colorado, it occurs on the Arapaho-Roosevelt, White River, and Pike-San Isabel National Forest. Therefore, additional information is necessary in order to determine its status in Region 2. This species is found in cold wet, rocky places at high elevations, often in a meltwater zone of receding snowbanks and along streams at 10,100 to 13,000 feet. Its alpine habitat is patchy on the landscape. Confidence in Rank High	<ul style="list-style-type: none"> • Dorn 2001 • Fertig 1997, 1998, 2000 • Fertig and Bynum 1994 • Hallsten et al. 1987 • Johnson 1962 • Markow and Fertig 2000 • Scott 1997 • University of Wyoming 1998 • USDA Forest Service 2001 • Welp et al. 2000
2 Distribution outside R2	B	It is a circumboreal species. In western North America it is found south to the Beartooth Plateau of Montana and adjoining Wyoming, as well as in Colorado. In Wyoming, it is also known from at least one station outside Region 2 in the Wind River Range in Sublette County. Confidence in Rank High	<ul style="list-style-type: none"> • Clark et al. 1989 • Colorado Native Plant Society 1997 • Fertig and Jones 1994 • Markow and Fertig 2000 • Lesica and Shelly 1991 • Scott 1997 • Spackman et al. 1997
3 Dispersal Capability	D	Dispersal vectors are unknown. Confidence in Rank High	<ul style="list-style-type: none"> • -
4 Abundance in R2	AD	Ice Grass is known from at least 3 occurrences in Wyoming, all of which have been discovered or relocated since 1984 (most recently in 1999). One occurrence is on the Shoshone National Forest. There are also 4 collection stations reported in Scott (1997) along the Continental Divide on the Wind River Range that may be in or outside of Region 2 boundaries. Populations are typically small and restricted to specialized microhabitats. Several populations surveyed on the Beartooth Plateau in 1996 consisted of colonies of about 30 plants in areas of less than 0.1 acre. This species is ranked "S1" in Wyoming and "S2" in Colorado. Confidence in Rank Medium	<ul style="list-style-type: none"> • Fertig 1997, 1998, 2000 • Fertig and Bynum 1994 • Markow and Fertig 2000 • NatureServe 2002 • University of Wyoming 1998 • USDA Forest Service 2001 • Welp et al. 2000 • WYNDD 2002
5 Population Trend in R2	D	No trend data are available. This species may benefit from moderate grazing activity (particularly from the increase in nitrogen from animal wastes), but it is not known what impacts long-term sheep grazing has had in the Beartooth Range. Confidence in Rank High	<ul style="list-style-type: none"> • Markow and Fertig 2000 • WYNDD 2002
6 Habitat Trend in R2	D	Not known. Confidence in Rank High	<ul style="list-style-type: none"> • -
7 Habitat Vulnerability or Modification	BD	Ice Grass may be threatened by grazing, trampling, and habitat loss. It occurs in the Bridger Wilderness on the Bridger-Teton National Forest and the proposed Twin Lakes Research Natural Area of Shoshone National Forest, as well as on other lands managed for multiple use by the Shoshone National Forest. Confidence in Rank LOW	<ul style="list-style-type: none"> • Fertig 1997, 1998, 2000 • Fertig and Bynum 1994 • Fertig and Jones 1994 • Markow and Fertig 2000 • Welp et al. 2000

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Species: <i>Phippsia algida</i> / Ice Grass, Snow Grass			
Criteria	Rank	Rationale	Literature Citations
8 Life History and Demographics	D	Ice Grass is a low-growing, tufted, perennial graminoid. Flowering and fruiting occur from July through September. Additional information on the species, including life history stages, population structure, longevity, mortality, and seed biology, are not available. Confidence in Rank High	<ul style="list-style-type: none"> • Hallsten et al. 1987 • Markow and Fertig 2000 • Scott 1997 • University of Wyoming 1998
Initial Evaluator(s): Joy Handley, Bonnie Heidel and Scott Laursen			Date: April 22, 2002

National Forests in the Rocky Mountain Region where species is KNOWN (K) or LIKELY(L)¹ to occur:

<u>Colorado NF/NG</u>	<u>Kansas NF/NG</u>		<u>Nebraska NF/NG</u>		<u>South Dakota NF/NG</u>		<u>Wyoming NF/NG</u>	
	Known	Likely	Known	Likely	Known	Likely	Known	Likely
Arapaho-Roosevelt NF	X							
White River NF	X							
Routt NF								
Grand Mesa, Uncompahgre, Gunnison NF								
San Juan NF								
Rio Grande NF								
Pike-San Isabel NF	X							
Comanche NG								

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