

## R6 SENSITIVE VASCULAR PLANT PROFILE

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**Date Prepared:** June, 2002

**Species Common Name:** Warner Mountain bedstraw

**Species Scientific Name:** *Galium serpticum* ssp. *warnerense* Dempst and Ehrend

**Suspected or Documented Occurrence on USFS Region 6 National Forests:**

Fremont National Forest: Documented

**Description:**

Plants 5-32 cm tall from a woody base; middle internodes 1-(2)-3.6 cm long, 1.4-(2.1)-3.2 times as long as leaves; herbage microscopically and sparsely puberulent throughout, the measured hairs 45-(89)-120 um; leaves lanceolate or oblanceolate to elliptical or obovate, the subapical outline convex, the obtuse or acute apices often sharply reflexed in plants of lower altitudes; longest leaves 6-(10.5)-15 mm, length/breadth short and sparse; epidermal cells slightly to much embossed (Rittenhouse, 1991).

**Field Characteristics:** The field characteristics for this species are the whorled leaves, angled stems, long hairs on the fruits, inferior ovaries and being dioecious. The herbage is a dull green and feels rough to the touch.

**Look Alikes:** Other bedstraw species look similar but do not have the somewhat woody base, and long hairs on the fruits.

**Habitat and Distribution:**

**Habitat:** Habitat for the Warner Mountain bedstraw consists of rocky scree areas and talus slopes at elevations ranging from 5,000 to 8,400 feet. Plants have been observed growing at the base of rock outcrops, among rocks, and in road cuts.

**Distribution:** This species occurs throughout eastern Oregon and Washington, Nevada, and Idaho. This species consists of many subspecies, each of these based on geographical distribution.

The range of the ssp *warnerense* occurs from the north Warner and central Warner Mountains of south central Oregon into extreme northeastern California. Populations also occur east of the Warner Mountains around Hart Mountain National Wildlife Refuge, and north of the Warner Mountains on and west of Abert Rim.

Warner Mountain bedstraw occurs only in the Warner Mountains on the Lakeview Ranger District of the Fremont National Forest. Populations have been located in the high Warner's around Drake Peak and at lower elevations at the mouth of Crooked Creek Canyon. At this time, all but one of the populations occurs in the north Warner

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mountains. The populations are centered in the Drake to Crook Peak area and in the west side of the Warners.

### Abundance:

#### Crook Peak:

Population covered approximately 3 acres when surveyed August 14, 1996. The plants were found on all aspects around the top of Crook Peak in the Warner Mountains. The elevation range was 7,750-7,800 feet and the slope was about 25 percent. There were approximately 50 clumps found growing among rocks about 20-50 feet below Crook Peak. Most of the plants were on the southeast face. At this time, the plants were in flower and fruit. The plants were growing in rocky soil. Associated species include *Silene douglasii*, *Monardella*, and *Phlox musciodes*.

#### Twelvemile Peak:

Population covered approximately 20 acres when observed on July 13, 1989. Twelvemile Peak is located in the north Warner Mountains. The elevation was 8,000 feet. The site is located below steep cliffs on the south and west slopes approximately 150 feet below the summit. The plants were found in sheltered nooks below rocks and boulders. They were also found under rabbitbrush, *Artemisia arbuscula*, and *Saxifraga* sp. There were two separate populations. The first population was located along the south ridge. This population was the largest. The second was located on the upper west slope. The site was mostly in the rockfall zone below steep cliffs that surround the summit of Twelvemile Creek. The species was present in an alpine cushion plant community in gravelly soils. There was active grazing in the area, but there was no impact on the plants.

#### Twelvemile Peak:

Population covered approximately 1 acre when surveyed on July 7, 1996. There was an additional population found on the SE flank of the northern peak at a max elevation of 8,065 feet. The slope on the SE aspect was 15 percent. The previous populations were found on the southern peak. Twenty-five individual clumps were found on a small bench or slightly sloped rocky ground. Most of the plants were found near or in cracks between rocks. Associated species include *Holodiscus dumosus*, *Artemisia tridentata* var. *vasseyana*, and *Arenaria aculeate*.

#### McDowell Peak:

Population covered approximately 20 acres when surveyed on July 24, 1996. Approximately 200 clumps were observed in 3 subpopulations. There were three populations located on the flanks of the peaks, 50 feet below the summit. The elevation ranged between 7,540 to 7,620 feet. On the SE aspect, the slope was about 15 percent. The peak is actually a long ridge with plants found close to the SE end, NE end, and directly west of the highest point on the ridge. There may be more in nearby areas. There were approximately 200 clumps of *Galium* found in flower and fruit. Some plants were beginning to dry out. Plants

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were found growing among the rocks, but were rooted in the soil. The terrain was fairly level on the benches.

### Drake Peak:

Population covered approximately 2 acres when surveyed July 11, 1989.

A small population existed on the NE ridge, about 400 meters from the top of the peak. The elevation is about 8,200 feet. The plants were found predominately on an east aspect. The surveyors located three clumps, but more may have been nearby. The plants were found flowering in sheltered rock crevices among boulders. Associated species include *Eriogonum umbellatum*, *Erigeron compositum*, *Festuca idahoensis* and *Poa sandbergii*. The site was an exposed ridgeline. The community consisted of *Pinus albicaulis* and *Purshia tridentata*. This site is private, owned by Fitzgerald.

### Drake Peak:

Population covered approximately 2 acres when surveyed on July 11, 1989.

The plants were found on the west slope of Drake peak within one hundred feet of the top. Most of the plants were found growing in sheltered rock crevices. The site is exposed at the top of the peak with stunted *Artemisia arbuscula*, *Purshia tridentata* and *Poa sandbergii* community. There were five small clumps found, however more are likely. Associated species include *Phlox*, *Ribes*, *Antennaria*, *Eriogonum*, *Compositum* and *Eriophyllum lanatum*.

1997, August 2<sup>nd</sup>. Lois Kemp. Elevation 6,000 feet, Aspect: W (260°)

Ten clumps of the species was widely scattered on a rocky slope near and down-slope of a long band of rock. It was found growing in fine soil between rocks or rooted beneath over-hanging rocks. None were found on the face of the long band of rock where it was assumed they would be located. In this area, the *Galium* apparently occurred on rocky slopes in the shelter of rocks, rather on the rock itself. The bulk of the 1000+ clumps population that had been reported most likely would have been on the slope below where Lois Kemp searched. One hundred percent of the plants found were fruiting. The plants received partial shade from nearby trees and shrubs. Note: The leaf tips reflexed in live plants. Associated species included *Chrysothamnus nauseosus* var. *albicaulis*, *Artemisia tridentata*, *Purshia tridentata*, *Chaenactis douglasii* var. *achilleaefolia*, and *Eriogonum nudum*. The near by species were *Pinus ponderosa*, *Cerocarpus ledifolius*, and *Juniper occidentalis*.

1997, August 3<sup>rd</sup>. Lois Kemp. Elevation 6,700 feet, Aspect: SW (240°)

Two clumps were found on the rocky slope below the cliffs, growing in soil between rocks. Both clumps were fruiting. Note: Tip of leaf reflexed in live plants. Associated species: *Chrysothamnus nauseosus* var. *albicaulis*, *Artemisia tridentata*, *Chaenactis douglasii* var. *achilleaefolia*, *Eriophyllum lanatum* var. *lanatum*, *Silene douglasii* var. *douglasii*, and *Mentzelia dispersa*. Near by there was *Pinus ponderosa*, *Cerocarpus ledifolius*, and *Juniperus occidentalis*.

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1997, August 4<sup>th</sup>. Lois Kemp. Elevation 7,000 feet, Aspect: SE (190-210°)  
Lois Kemp found 100s of clumps in four subpopulations near the quarry at the end of FS Rd. 215.

Subpopulation 1: (210°) The clumps were found east of the quarry on a rocky road cut. The clumps varied in size from 3 foot by 3 foot or more, to individual, small plants. There were numerous seedlings. One hundred percent of the mature plants were in fruit or had bloomed. No *Galium* was seen on the open slope above the road cut. Associated species include *Chaenactis douglasii* var. *achillaeafolia*, *Eriophyllum lanatum* var. *lanatum*, *Monardella odoratissima*, *Eriogonum* sp., *Artemisia tridentata*, and *Chrysothamnus nauseosus* var. *albicaulis*.

Subpopulation 2: (210°) There were hundreds of clumps found in the open, rocky slope below the road cut. The plants were growing in the shelter of rocks. Only one plant was seen growing in a rock crevice of a cliff. Associated species include *Chaenactis douglasii* var. *achillaeafolia*, *Eriophyllum lanatum* var. *lanatum*, *Monardella odoratissima*, *Eriogonum* sp., *Artemisia tridentata*, and *Chrysothamnus nauseosus* var. *albicaulis*.

Subpopulation 3: (190°) Hundreds of clumps were found to the west, past the quarry and beyond a shrub covered talus slope. The plants occurred in scattered patches on a rocky, open, dry slope growing in the shelter of rocks. The population continued up-slope to the base of a short cliff below the ridgetop. It was not determined how far down-slope or how far west the population extends. One hundred percent of the plants were in fruit or had bloomed. Associated species include *Castilleja* spp., *Eriophyllum lanatum* var. *lanatum*, *Penstemon speciosus*, *Balsamorhiza sagittata*, *Chrysothamnus nauseosus* var. *albicaulis*, and *Artemisia tridentata*.

Subpopulation 4: About one hundred clumps on an atypical habitat on the ridgetop west of the quarry. The *Galium* are in a flat, approximately 30 foot by 30 foot opening in *Pinus ponderosa* and *Cercocarpus ledifolius* forest. The rocks in the opening are flat, rather than like the angular rocks on slopes where *Galium* occurs. Vegetation is sparse, and the associated species somewhat different than was seen at the other sites. All of the plants had bloomed, but none had produced fruits. Lois Kemp was unable to determine whether plants that bloomed and had not produced fruits were female or male plants. Note: the leaf tip relaxed in live plants. Associated species include *Phlox*, *Sidalcea*, *Eriogonum*, and *Artemisia tridentata*.

Summary: (Rittenhouse, 1991)

Description	Size (Clumps)
1.) Crane Mtn Front	50
2.) Above Loftus Creek	5,000

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3.) NE of Salt Creek	37
4.) SW of Warner Viewpoint	50
5.) Drake Peak	8
6.) End of FSR103	5,000
7.) Mile east of Rehart Ranch	14
8.) Above Gunkel Ranch	1,000
9.) Slopes above Loftus Cr.	10,000
10.) Abert Rim	12
11.) Crook Peak	2,000
12.) South Rim Crooked Cr.	1,000
13.) McDowell Peak	25
14.) Twelvemile Peak	100
15.) End of FSR 216	500
16.) North of Light Peak	500
17.) North Rim Crooked Cr.	200

### **Phenology:**

This species begins to flower in July till early August. Once this species begins flowering, it is identifiable till early September.

### **Habitat Associations:**

Associated species for *Galium serpticum* ssp. *warnerense* include *Leptodactylon pungens*, *Eriogonum umbellatum*, *Eriogonum striatum*, *Phacelia hastata*, *Sedum lanceolatum*, *Holodiscus dumosus*, *Phlox diffusa*, *Phoenicaulis cheiranthoides*, *Haplopappus acaulis*, *Chrysothamnus* spp., *Monardella odoritissima*, and *Dimeresia howellii*.

### **Threats/Potential Impacts of Management Activities:**

**Timber Harvest:** About half of the known locations for this species are on the high peaks in the northern Warner Mountains (Vander Schaaf, 1996). The occurrences on the high peaks are well protected since they are above potential timber harvest and grazing impact areas. Other occurrences within the area have been subjected to timber harvest in the past and receive occasional grazing as well. Since there are a number of populations present, Vander Schaaf feels it would be acceptable to allow a timber harvest project to occur where a population is present to allow continued monitoring.

**Grazing:** Some of the population resides in areas where grazing occurs. However, these areas are of only moderate forage values. (Vander Schaaf, 1996). The direct effect of grazing has not been determined at this time.

### **Mechanisms Providing for Species Conservation and Protection:**

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The development of a conservation strategy should be included as a budget item to commence fiscal year 2003. Implementation will depend upon actual allocation of budgeted dollars.

**Prepared By:** Robert Wooley and Jeannette Wilson; Silver Lake Ranger District

### **References:**

Rittenhouse, Bruce. 1991, November 13. Status Report for *Galium serpticum* ssp *warnereuse* on Lakeview Ranger District, Fremont National Forest.

Vander Schaaf, Dick. 1996. Warner Mountains Botanical Inventory, Fremont National Forest. The Nature Conservancy.

### **Photograph**

