

IDAHO RARE PLANT OBSERVATION REPORT

Fill out the form by tabbing through and completing the fields. Some fields contain check boxes and drop-down menus. If you do not have information for the field, leave it blank. Use F1 for help in any shaded field. E-mail completed form to scooke@idfg.state.id.us or send to Botany Information Manager, Idaho Conservation Data Center, Idaho Department of Fish and Game, PO Box 25, Boise, ID 83707.

Species: Lewisia sacajaweana

Date of Observation: 15 July 2012

Company: American CuMo Mining Corporation, John R. Moeller Ph.D. JMoeller@Forsgren.com

Address: 415 S. 4th Street, Boise, ID 83702

Phone: (208) 863 7343

Observer(s): Conservation Seeding and Restoration, Inc. Allison Dubenezic, Leslie Meyer

County: Valley

Quad: _____

Township: _____ Range: _____ 1/4 of _____ 1/4 of Section _____

Township: _____ Range: _____ 1/4 of _____ 1/4 of Section _____

GPS Information: Enter **either** UTM**s** or latitude/longitude coordinates from GPS, as well as datum, way points (optional) and accuracy information in the table below. **If you did not take GPS readings, please leave this table blank.**

Have your GPS Coordinates been differentially corrected? Yes No Unsure

Do you have this report location digitized already? Yes No

If yes, you may send shape-files in lieu of a paper map. Did you submit shape-files with this form? Yes No.

If yes, list projection of shape-files:

Please give the parameters if the projection is not standard:

Datum	Way Point	UTM Northing	UTM Easting	Latitude	Longitude	Accuracy
Datum	WP#					+/-
Datum	WP#					+/-

If you have more coordinates, please list them under Additional Comments.

Minimum Elevation: _____ ft.

Maximum Elevation: _____ ft.

Stand # or other identification #: _____

Directions (be specific):

From Warm Lake Road (NF-22), turn left at the sign for Gold Fork Lookout, approximately 12 miles east of Highway 55. Veer left at the camping area and take NF 411A for 3.8 mi (a steady uphill climb, unpaved but good condition) to where it becomes NF-497 (just stay straight). Follow this road another 4.4 miles, passing a camping area on the right, to a junction with the Needles Route Pack Trail and Gold Fork Lookout (8.2 mi total). Park here and hike on the Needles Pack Trail to the east. The trail crosses a primitive campground and small stream, then enters an open area with large rock outcroppings at 2.25 mi. from the parking area. The population begins here and continues along the trail for 0.25 mi.

An alternate route is to hike the Big Creek Summit Trail (Trail #150) from Warm Lake Road, just west of Big Creek Summit (trail condition unknown since this wasn't attempted). Take this trail 3.0 mi, turn right when it joins the Needles Pack Trail, and continue for 2 more miles to the rocky, open area as described above.

Is this a new location? Yes No Unsure? Give occurrence # if known: _____

Mapping Instructions: If submitting paper maps, complete A - C. If submitting shape-files complete parts B and C.

A) Please attach a photocopy of the appropriate part of the USGS 7.5 minute quad (or comparable map) and delineate the population and all subpopulations (if present) on the map using the guidelines listed below. **Label subpopulations if you have population and/or habitat information for them.**

* If the population/subpopulation area is < 12.5 meters (40 ft.) in diameter, place a single point on the map marking its location. If necessary, indicate these point locations with an arrow so they are easier to see.

* If the population/subpopulation area is >12.5 meters (40 ft.) in diameter, draw a polygon on the map marking its location.

* If the population/subpopulation follows the boundary of a trail, lake, stream, road, etc., draw the boundary on the edge of this feature. Where needed, add notes on where boundary lines are.

B) How accurately do you feel you mapped or digitized the population compared to its actual location on the ground? Use the guidelines to determine how many meters (m) or miles on the ground correspond to millimeters (mm.) or inches (in.) on a 1:24,000 scale map.

Within 25 m (0 - 1 mm. on map) Custom:

C) I sent a hard-copy map via U.S. mail. Other:

Population Information - Please fill in this section with the information for the **entire population**. If subpopulations exist and you have information for them, complete the subpopulation information forms on the last page.

Total # of individuals in the population(s) is 3000 Actual Estimated

What was counted? Genets Ramets N/A (non-vascular etc.) Unknown

Phenology: 11% seedling 77% non-reproductive 12% reproductive _____ % dormant _____ % unknown

The size of the population area is _____

Population vigor is excellent good fair poor

Do you feel you mapped the full extent of the population? Yes No Unsure

Is there more potential habitat in the area that hasn't been surveyed? Yes No Unsure

The survey was: very thorough somewhat thorough cursory incidental observation

Additional population comments:

This observation consists of three subpopulations. Subpopulations 1 and 2 occur below Gold Fork Rock summit. These two subpopulations encompass a ¼ mile length. Middle subpopulation 1 is first encountered along the trail once the stream is crossed and occurs for 300 meters. Subpopulation 2 (northern) occurs 10 meters beyond Subpopulation 1 and is found for approximately 150 meters along the trail.

Phenology and density were captured within a 1m² plot frame that was used in three separate areas of the site (8 frames were used per area, with 2 frames used in each cardinal direction). The BBCH growth scale was applied to each individual plant within the frame. Two surveyed areas lie in subpopulation 1, one on the east side of the trail (0-17 percent slope, SE aspect) and one on the west of the trail (10 to 50 percent slope, W aspect). The third area surveyed for phenology lies within subpopulation 2, on the east side of the trail (20 to 50 percent slope, S aspect).

Density for subpopulation 1 (Middle) varied from 0 to 57 plants per 1m² (average 8.37 plants per 1m²). Density for subpopulation 2 (Northern) varied from 0 to 13 plants per 1m² (average 3.25 plants per 1m²).

A separate, subpopulation 3(Southern) was discovered after leaving the known site and hiking the Needles Route Pack Trail. This subpopulation was found approx. 1/3 mile SW of the known population area. Ten plants were growing in the middle of the trail (amongst Carex/Juncus) and one plant was growing 2 feet N of the trail.

Habitat Description – Please fill in this section with information for the **entire population**, using ranges where appropriate. If subpopulations exist and there is specific habitat information or threats that need noting, use the forms on page 4. Please avoid abbreviations if possible, thanks!

General habitat description:

The population lies in an opening just E of a heavily forested area (PICO, PIEN, ABLA). A small stream within the forested area borders the population to the W and S. An extensive outcropping of granitic rock borders the population to the E. This open area contains a mosaic of scattered PICO, ABLA, and PIAL (from seedling size up to 12" DBH). Needle litter from the trees is light to heavy. Vegetation cover is very sparse, with *Polygonum phytolaccifolium*, *Carex geyeri*, and *Luzula hitchcockii* being the most evident species. As the trail heads uphill to the N, the tree canopy gradually closes in and suitable habitat diminishes (it soon re-enters an area with more rock outcroppings).

Aspect: SE to W

Slope: 0 to 57 percent

Substrate/soil: course rocky, granitic

Light regime: filtered sun to full sun exposure

Community type: *Abies lasiocarpa/Vaccinium scoparium* (*Pinus albicaulis* phase)

Associated Species include:

Pinus contorta, *Pinus albicaulis*, *Polygonum phytolaccifolium*, *Luzula hitchcockii*, *Carex geyeri*, *Poa wheeleri*, *Allium simillimum*, *Claytonia lanceolata*, *Leptosiphon nuttallii*, *Arenaria aculeata*

Look-alike species that are present:

Claytonia lanceolata is present within the population. Two other *Lewisia* species were observed along Road FS 497 and Needles Route Pack Trail en route to the site (*Lewisia nevadensis* and *Lewisia triphylla*). *Cistanthe umbellata*, en route to site along Needles Route Pack Trail, looks amazingly like *Lewisia sacajawean*a in a vegetative state (rosette of leaves).

Comment on threats to the population and its immediate habitat including level and imminency of threat if known.

Include factors such as land use, disturbance, disease or predation, invasive weeds, etc:

The Needles Route Pack Trail (#150) is open to motorcycle use. This trail runs S-N through the population, but impact is minimal. No tracks were observed off trail, and plants are growing in the trail itself in places. Areas within the population appears to have burned a while back (charred trunks and standing dead trees are present), yet fire disturbance is minimal since vegetation cover currently appears to be too sparse to carry a ground-level fire.

CONDITION is an integrated measure of the quality of biotic and abiotic factors, structures, and processes **within** the occurrence, and the degree to which they affect the continued existence of the occurrence. Condition has the following components: reproduction and health for species, ecological processes, species composition and biological structure, and abiotic/chemical factors.

Briefly comment on the **CONDITION** of the occurrence:

The population appears to be thriving in this area. Plants are healthy and variable in phenology and size (11 percent of the surveyed plants were seedlings, 12 percent were in a reproductive stage according to the BBCH growth scale, and many

large individuals were observed (up to 4 inches diameter). No plants were observed in flower (possibly due to a heavy rain the night before and overcast skies on the day of observation).

Overall **condition** is: A (excellent)

LANDSCAPE CONTEXT is an integrated measure of the quality of biotic and abiotic factors, structures, and processes **surrounding** the occurrence, and the degree to which they affect the continued existence of the EO. Components of Landscape Context are: landscape structure and extent, including genetic connectivity, and condition of the surrounding landscape.

Briefly comment on the LANDSCAPE in the area surrounding the population. Include factors such as current and past land use (farmland, residential area etc.), disturbance factors, and fragmentation:

The population is scattered throughout this rocky, open site. The population is bordered by unsuitable habitat in all four directions (creek, heavy canopy cover, and bedrock), therefore the population cannot easily expand beyond these limiting boundaries. Canopy cover is open in most areas, but closes a bit to the N. Litter cover in this area is more substantial, yet plants were still found in moderate litter cover. If canopy cover/litter cover continues to increase here, it may eventually exclude the plant in some areas.

Overall **landscape** is: A (excellent)

Land Owner/Managers (forest/ranger district/BLM/ or private land owner if known): Boise National Forest (Cascade RD)

Owner Comments: _____

Management, Monitoring, and Research Needs (include any steps that you think should be taken to protect the population):

The trail through the population is 3 to 3.5 feet in width. Motorcycle tracks are evident in the trail. Users appear to have been respectful of the trail boundaries and have not ventured into the open, rocky area.

Collector/Collection #: _____

Herbarium: _____

Photo Attached? Yes No

Other knowledgeable individuals: _____

Additional Comments (anything you think is important that did not fit in any other space on the form):

Eleven (11) plants were found along the Needles Route Pack Trail, approx. 1/3 mile below the known population area. This was named Subpopulation 3 (Southern).

Subpopulation Information

Subpopulation # 1

Subpopulation area: Middle

The total # of individuals in subpopulation is 2,500 Actual Estimated

Population vigor is excellent good fair poor

Habitat information: The Needles Trail crosses a stream and enters an open area with large rock outcroppings. Pinus contorta and Abies lasiocarpa are widely scattered in the area (a burned area has left standing, dead trees), with very low

vegetation cover (*Polygonum phytolaccifolium*). Plants are densely clustered at times, and widely scattered in other areas. Most plants occur within 30' of the trail on both sides.

Threats to this subpopulation: Off trail hiker, horse, and motorcycle traffic.

Subpopulation Information

Subpopulation # 2

Subpopulation area: North

The total # of individuals in subpopulation is 500 Actual Estimated

Population vigor is excellent good fair poor

Habitat information: The two subpopulations don't have a very distinct break (there isn't much gap in presence of plants), aside from a change in topography and tree canopy/litter cover. Subpopulation 2 is on a slope of 17-57 percent (S aspect), tree canopy cover is moderate, and needle litter cover is moderate to heavy. *Pinus albicaulis* is more abundant here.

Threats to this subpopulation: Off trail hiker, horse, and motorcycle traffic.

Subpopulation Information

Subpopulation # 3

Subpopulation area: Southern (disjunct)

The total # of individuals in subpopulation is 11 Actual Estimated

Population vigor is excellent good fair poor

Habitat information: This small pocket of plants was observed in the middle of the trail about 1/3 mi S of the main site. Ten plants were growing in the trail within a 1m span (in patches of *Carex*, *Juncus*, and litter), while one plant was found nearby, 0.5 m off the trail to the N. ABLA/PICO present a moderate canopy cover, with rocky, open outcroppings occurring to the N. This area could provide potential habitat for this population. No plants were observed in flower.

Threats to this subpopulation: On-trail use by hikers, horses, motorcycles, and ATVs (the trail is wider here than at the main site). However, trail use may have played a role in dispersing seeds to this location in the first place (ground squirrel corridor, dispersal on tires, shoes, etc), enabling the Gold Fork Rock population to expand beyond the enclosure imposed by creek, forest, and rock.



Figure 1. *Cistanthe umbellata* on Needles Pack Trail, 15 Jul 2012



Figure 2. LESA in BBCH growth stage 51 (multiple flower buds), heavy litter cover, subpopulation 2, 15 Jul 2012



Figure 3. LESA habitat, Gold Fork Rock, subpopulation 1, S aspect, 15 Jul 2012



Figure 4. LESA habitat, Gold Fork Rock, subpopulation 2, view to E, 15 July 2012



Figure 5. LESA growing in Needles Route Pack Trail, Gold Fork Rock, view to E, 15 Jul 2012



Figure 6. LESA in BBCH growth stages 11, 15, 19, next to *Pinus contorta*, Gold Fork Rock, subpopulation 2, 15 July 2012

subpopulation 1

45 total

E side of trail

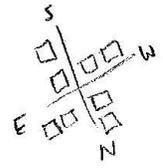
0-17% slope SE aspect

Task E. 2012 LESA phenology plots

Location: LESA 4 Date: 15 July 12 Time: 8:49 Personnel: AD/LM

Temp: 50-60°F Cloud Cover: 50-60% Wind: light air Precip: none

Habitat: open PICO/ABLA canopy w/ low veg. cover, rocky outcroppings



	tally	1 ^{S1}	2 ^{S2}	3 ^{W1} number of plants	4 ^{W2}	5 ^{N1}	6 ^{N2}
BBCH growth scale							
10 - first appearance of leaves							
11 - first leaves unfolded							
19 - full vegetative development	□	•	□	□	•	•	
51 - flower buds visible							
55 - first individual flowers visible (still closed)	••	•	•				
59 - first flower petals visible	•			•			
60 - first flowers open sporadically							
61 - beginning of flowering: 10% of flowers open							
63 - 30% of flowers open							
65 - full flowering: 50% of flowers open, first petals may have fallen							
67 - flowering finishing: majority of petals fallen or dry							
69 - end of flower: fruit set visible							
71 - fruits begin to develop							
79 - nearly all fruits have reached final size							
81 - beginning of ripening of fruit							
89 - fully ripe							
97 - dormant							
15	••			•	□		
SUB-TOTAL	13	2	11	17	1	1	

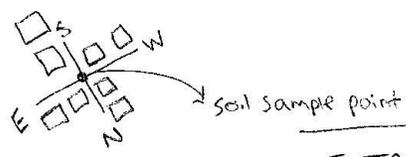


Figure 7. Phenology/Density Data for Subpopulation 1, E side of Needles Pack Trail

