

**CHECKLIST OF VASCULAR PLANTS  
CRATERS OF THE MOON NATIONAL MONUMENT AND PRESERVE (CRMO)  
ARCO, IDAHO, USA**

**Prepared by Steve J. Popovich<sup>1</sup> October 15, 2006**

**Names.** Scientific names are arranged alphabetically by family, genus, and species, and are grouped by ferns and fern allies, gymnosperms, and angiosperms. Locally accepted names are in **bold**; synonyms are in *italics* and are indented below the accepted names. An “×” indicates a hybrid; a “≡” indicates a homotypic synonym (a name based on the same type specimen); an “=” indicates a heterotypic synonym (a name based on a different type specimen); a not-equal-to sign (≠) preceding a synonym means the name is not truly synonymous. Nomenclature and synonymy do not follow a single source, but rather represent taxonomic preferences for the region compiled by the author from many sources. The author has reviewed all pertinent references for this Park Unit containing plant names, and all encountered synonyms have been included. Common (vernacular) names generally follow the most locally accepted from among those in the USDA-NRCS PLANTS database; common names vary greatly among individuals and regions.

**Ranks.** Intraspecific taxonomic ranks accepted are: ssp. = subspecies; var. = variety; forma = form.

**Occurrences.** All plant taxa are verified to be present by one or more vouchers unless an assignment of *encroaching*, *suspected*, *unconfirmed*, or *false report* is indicated. For the latter two assignments, a probability of presence is given. Species that have been seeded in this Park Unit are identified by an asterisk (\*) following their names.

**Abundance and Nativity.** Abundance and nativity refer to *within the Park Unit only* (i.e., within CRMO), and are listed after the locally accepted plant name. Plants may be native to Idaho or North America but not to the Park Unit itself, or may be rare within the Park Unit but common elsewhere. It is sometimes difficult to ascertain local nativity even though the plant may be native regionally.

**Status.** Noteworthy plants tracked by the Idaho Conservation Data Center (ICDC) have their rarity status indicated. Plants listed as noxious or of concern by the State of Idaho are denoted by the words NOXIOUS or WEED SPECIES OF CONCERN, respectively.

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**Notes.** Notes of interest for the scientist and/or layperson appear at the bottom of a plant record or at the beginning of a family.

**Floristics.** The total number of taxa (including subspecies, varieties, and forms) known to be present in this Park Unit is 661; they occur in 67 families. The greatest numbers of plants occur in the Asteraceae family (109 taxa), followed by the Poaceae family (72 taxa) and the Fabaceae family (46 taxa). In addition, there are 132 taxa *encroaching, suspected, or unconfirmed*, and include members in two additional families (Cannabaceae and Santalaceae). There are 23 taxa falsely reported. The numbers of taxa known to be present in each family are listed below in parentheses; the numbers of taxa *encroaching, suspected, or unconfirmed* are in brackets.

Aceraceae (1)	Crassulaceae (1)	Lamiaceae (4) [2]	Rhamnaceae (1)
Amaranthaceae (3)	Cupressaceae (2) [1]	Lemnaceae (2)	Rosaceae (20) [5]
Apiaceae (17) [1]	Cuscutaceae (1)	Liliaceae (17) [8]	Rubiaceae (3) [3]
Apocynaceae (3)	Cyperaceae (15) [5]	Linaceae (1)	Salicaceae (8) [1]
Asclepiadaceae (3)	Dryopteridaceae (4) [1]	Loasaceae (3) [1]	Santalaceae (0) [1]
Asteraceae (109) [33]	Elaeagnaceae (1)	Malvaceae (4)	Saxifragaceae (7)
Betulaceae (2)	Equisetaceae (3)	Oleaceae (2)	Scrophulariaceae (39) [6]
Boraginaceae (25) [5]	Euphorbiaceae (4)	Onagraceae (23) [2]	Solanaceae (3)
Brassicaceae (46) [4]	Fabaceae (46) [6]	Orchidaceae (4)	Typhaceae (2)
Cactaceae (1) [3]	Fumariaceae (1)	Orobanchaceae (3)	Ulmaceae (1)
Campanulaceae (3)	Gentianaceae (1)	Pinaceae (3)	Urticaceae (2)
Cannabaceae (0) [1]	Geraniaceae (2)	Plantaginaceae (1)	Valerianaceae (2)
Caprifoliaceae (2)	Grossulariaceae (3) [1]	Poaceae (72) [23]	Verbenaceae (1)
Caryophyllaceae (9) [2]	Hydrangeaceae (1)	Polemoniaceae (25) [1]	Violaceae (5)
Chenopodiaceae (11) [6]	Hydrophyllaceae (9) [2]	Polygonaceae (36) [7]	Viscaceae (1) [1]
Clusiaceae (1) [1]	Iridaceae (3)	Portulacaceae (6)	
Convolvulaceae (1)	Juncaceae (5) [1]	Primulaceae (1)	
Cornaceae (1)	Juncaginaceae (1)	Ranunculaceae (18)	

**Additional Information.** For complete information of any record, including all supporting vouchers, references, and notes on nativity, abundance, cultivation, degree of weediness, management and exploitation concerns, habitat descriptions, and specimen verification accountability, see the Park Unit's **NPSpecies electronic vascular plant database** and associated **User's Guide** available on the World Wide Web. Please report observations of any plant tracked by the Idaho Conservation Data Center or of any noxious weed to Park Service staff. The area's wonderful flora should be enjoyed and photographed, but collection of any plant materials in a National Park is prohibited without a permit. **A revised checklist incorporating 2006 field season survey results is scheduled to be completed in spring 2007.** The 2007 checklist will be the final list produced under this NPSpecies plant inventory project.

## CRATERS OF THE MOON VASCULAR PLANT CHECKLIST

### FERNS and FERN ALLIES

#### DRYOPTERIDACEAE – WOODFERN FAMILY (traditionally under Polypodiaceae)

Fern species of this Park Unit are most often found on hot, dry lava flows, a seemingly inhospitable environment. They are able to persist because they occur in deep, sheltered cracks and lava tube openings, where the air is cooler and water is available at the rooting zone.

<b>Cystopteris fragilis</b>	Uncommon, native	<b>brittle bladderfern</b>
<i>Filix fragilis</i>		
<b>Dryopteris filix-mas</b>	Uncommon, native	<b>male woodfern</b>
<b>Polystichum scopulinum</b>	Rare, native	<b>mountain hollyfern</b>
<b>Woodsia oregana</b>	Native	<b>Oregon or Western cliff fern</b>
UNCONFIRMED: The reference citation(s) has no supporting voucher specimen. Reports are perhaps mis-identifications of <i>Woodsia scopulina</i> . Probability of presence in this Park Unit of <i>W. oregana</i> is low.		
<b>Woodsia scopulina</b>	Rare, native	<b>Rocky Mountain cliff fern</b>

#### EQUISETACEAE – HORSETAIL FAMILY

Scouringrushes are so named because the high silicate content allowed pioneers to use them for effectively cleaning cooking ware.

<b>Equisetum hyemale ssp. affine</b>	Rare, native	<b>field horsetail or scouringrush</b>
<i>Equisetum hyemale var. affine</i>		
<b>Equisetum laevigatum</b>	Rare, native	<b>smooth horsetail or scouringrush</b>
<b>Equisetum variegatum</b>	Rare, native	<b>variegated horsetail or scouringrush</b>

### GYMNOSPERMS

#### CUPRESSACEAE – CYPRESS FAMILY

Junipers are largely restricted to lava flows in this Park Unit, but sparingly occur in the foothills as well.

<b>Juniperus occidentalis</b>	Park Unit nativity unknown	<b>Western juniper</b>
UNCONFIRMED: The reference citation(s) has no supporting voucher specimen. This is likely a mis-identification of one of the other junipers. Probability of presence in this Park Unit of <i>J. occidentalis</i> is low (out of range).		
<b>Juniperus osteosperma</b>	Uncommon, native	<b>Utah juniper</b>
Less common than <i>Juniperus scopulorum</i> , and possibly restricted to the Wapi and Craters lava flows in this Park Unit.		

**Juniperus scopulorum** Common, native

**Rocky Mountain juniper**

Occasional on lava flows in the north and becoming increasingly common southward, where it can be locally abundant.

## PINACEAE – PINE FAMILY

**Pinus contorta var. latifolia** Rare, Park Unit nativity unknown

**lodgepole pine**

Apparently restricted to the Headquarters' backyard (as a highway screen) and the Crystal Ice Cave historic development site, both where probably planted. It is unlikely that naturally-occurring trees are present in this Park Unit; the area is a bit too low in elevation.

**Pinus flexilis** Common, native

**limber pine**

A species generally occurring in forests or ridgelines at greater elevations in Idaho, it is also at home on lava flows and cinder cones, to where it is largely restricted in this Park Unit. It has five needles per fascicle, and its branches are limber enough to be bent into a "U" without breaking! The limber pine at CRMO are characteristically odd-shaped, twisted, and bent due to a combination of harsh environmental conditions and infestations of dwarf mistletoe (*Arceuthobium cyanocarpum*). White pine blister rust (*Cronartium ribicola*), a non-native branch parasite infecting five-needled pines, has devastated limber pine stands in central Idaho in recent years, and was discovered in June 2006 in the foothills of this Park Unit by Steve Popovich and Paige Wolken (CRMO Vegetation Ecologist). White pine blister rust has alternate hosts, including *Ribes* species and *Castilleja miniata*, plants found in CRMO. It remains to be seen if blister rust will significantly impact local limber pine.

**Pseudotsuga menziesii var. glauca** Uncommon, native

**Douglas-fir**

*Pseudotsuga taxifolia*

Douglas-fir is neither a true fir nor a true hemlock (*Pseudo tsuga* means "false hemlock"), although its needles are somewhat soft and fir-like. The genus is monotypic, and the bracts of this tree's cones resembling a mouse's rear legs and protruding tail are characteristic. It is generally restricted in this Park Unit to stands on lava cones and on northerly or easterly slopes in the foothills. The trees around the Headquarters may be a hardy planted strain brought in from elsewhere and not native to this Park Unit.

## ANGIOSPERMS

### ACERACEAE – MAPLE FAMILY

**Acer glabrum var. glabrum** Uncommon, native

**Rocky Mountain maple**

This shrub-like maple native to the West has the leaves but not the grandeur of its cousins in eastern North America.

### AMARANTHACEAE – PIGWEED FAMILY

**Amaranthus albus** Uncommon, native

**white pigweed**

*Amaranthus blitoides*

*Amaranthus graecizans*

**Amaranthus californicus** Uncommon, native

**California pigweed**

**Amaranthus retroflexus** Uncommon, non-native

**redroot pigweed**

**APIACEAE/UMBELLIFERAE – CARROT or PARSLEY FAMILY**

- Angelica pinnata** Uncommon, native **smalleaf angelica**
- Cymopterus acaulis var. acaulis** Uncommon, native **plains springparsley**
- Cymopterus glaucus** Uncommon, native **waxy springparsley**
- Cymopterus longipes** Uncommon, native **longstalk springparsley**
- Cymopterus petraeus** Unknown, native **rock springparsley**
- Cymopterus terebinthinus var. petraeus*
- Pteryxia petraea*
- Sherel Goodrich (Ashley National Forest) has proposed (Great Basin Naturalist 46:86, 1986) that this taxon be placed at varietal status as *Cymopterus terebinthinus var. petraeus*, but Popovich believes it to be clearly differentiated from *Cymopterus terebinthinus*, at least with occurrences in this Park Unit, and prefers the species assignment.
- Cymopterus terebinthinus var. foeniculaceus** Common, native **turpentine wavewing or desert parsley**
- Pteryxia terebinthina var. foeniculacea*
- The most commonly observed desert parsley on lava fields and cinder cones of the Visitor Center’s loop road drive.
- Heracleum lanatum** Uncommon, native **cow parsnip**
- Heracleum maximum*
- Heracleum sphondylium var. lanatum*
- Some people find the leaves and stems of this plant irritating to the skin, similar to effects from stinging nettle (Urticaceae: *Urtica dioica*).
- Lomatium dissectum var. eatonii** Common, native **desert parsley; fernleaf biscuitroot**
- Lomatium dissectum var. eatonii* cannot always be meaningfully segregated from var. *mutifidum* and may best be treated as subsumed by the latter.
- Lomatium dissectum var. multifidum** Common, native **carrotleaf biscuitroot**
- Lomatium foeniculaceum var. macdougalii** Common, native **desert or Macdougals biscuitroot**
- Lomatium macdougalii*
- Lomatium gormanii** Park Unit nativity unknown **Gorman’s biscuitroot**
- FALSE REPORT:** Specimen Wunner 602 (CRMO catalog number 1659), which supports one or more references, annotated to *Orogenia linearifolia*; Elzinga reference annotated to *Cymopterus glaucus* [see naturebib reference bibkey 590194 and Elzinga 4350 (CRMO catalog number 2509)].
- Probability of presence in this Park Unit of *L. gormanii* is low (out of range).
- Lomatium grayi** Native **Gray’s biscuitroot**
- UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of *L. grayi* is medium.
- Lomatium nudicaule** Rare, native **coinleaf or pestle biscuitroot**
- Encountered in two locations in June 2006 (Popovich 8373 and 8412; not yet cataloged in CRMO database) along the northern and northwestern boundaries, but perhaps to be expected elsewhere in suitable habitat. The unusually-shaped bluish leaves and overall look of this plant make it the most distinctive regional species in the genus. The Lewis & Clark Expedition noted that Native Americans used the tops in soup.

- Lomatium triternatum ssp. platycarpum** Common, native **Great Basin desert parsley**  
*Lomatium triternatum var. platycarpum*
- Lomatium triternatum ssp. triternatum var. triternatum** Common, native **nineleaf biscuitroot**  
*Lomatium triternatum ssp. triternatum*  
*Lomatium triternatum var. triternatum*
- Orogenia linearifolia** Uncommon, native **Indian potato; pepper-and-salt; turkey peas**  
 Seldom collected but regularly observed, this early spring blooming perennial herb can be locally abundant in good growing seasons, especially in swales and weak drainageways. The tuberous edible storage-roots are globose in plants found in this Park Unit, while its cousin *O. fusiformis*, which is believed to be rare in Idaho, has more fusiform (linear) roots.
- Osmorhiza chilensis** Uncommon, native **mountain sweetroot; sweetcicely**  
*Osmorhiza berteroi*
- Osmorhiza occidentalis** Uncommon, native **Western sweetroot**
- Perideridia gairdneri** Uncommon, native **yampa**  
 The rhizomes of this plant often found in aspen stands and foothill meadows were an important food source for Native Americans and pioneers.

#### APOCYNACEAE – DOGBANE FAMILY

- Apocynum androsaemifolium** Uncommon, native **spreading dogbane**
- Apocynum cannabinum** Uncommon, native **hemp dogbane**
- Apocynum medium** Uncommon, native **intermediate dogbane**  
*Apocynum ×floribundum*

#### ASCLEPIADACEAE – MILKWEED FAMILY

- Asclepias fascicularis** Rare, native **narrowleaf milkweed**
- Asclepias speciosa** Uncommon, native **showy milkweed**
- Asclepias subverticillata** Rare, native **whorled milkweed**

#### ASTERACEAE/COMPOSITAE – ASTER or SUNFLOWER FAMILY

- Achillea millefolium ssp. lanulosa var. lanulosa\*?** Common, native **Western yarrow**  
*Achillea lanulosa*  
*Achillea lanulosa var. lanulosa*  
 A notoriously difficult species, Park Unit plants belong to, as here defined, a loose group of Cordilleran tetraploids with three-dimensional leaves (see *Intermountain Flora*, Vol. 5, 1994), which are believed to be native. The variety *alpicola* with brownish flower bracts is known to occur near Blizzard

Mountain, and should be expected in the highest elevations of the North Unit. Although sometimes seeded for rangeland rehabilitation in BLM-administered areas, all occurrences of this plant in this Park Unit are probably native.

**Acroptilon repens** Non-native **NOXIOUS**

**Russian knapweed**

*Centaurea repens*

**UNCONFIRMED:** Field observation only – no voucher specimen. Reliably observed by P. Wolken and treated along HWY 20/26/93 and in Paddelford Flat.

**Agoseris sp.** Park Unit nativity unknown

**agoseris**

*Troximon* sp. (old reference citation)

No voucher specimen. The reference only states the genus, using the older name *Troximon*. The chance of this being an undocumented *Agoseris* species is small.

**Agoseris aurantiaca var. aurantiaca** Common, native

**orange agoseris**

*Agoseris gracilens*

**Agoseris glauca var. dasycephala** Common, native

**pale agoseris**

**Agoseris glauca var. laciniata** Common, native

**false agoseris**

**Agoseris grandiflora** Native

**bigflower agoseris**

**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of *A. grandiflora* is medium.

**Agoseris heterophylla var. heterophylla** Rare, native

**annual agoseris**

Southcentral Idaho's only annual *Agoseris* species, and rare in this Park Unit. It seems locally to prefer weak drainageways and playa edge meadows.

**Agoseris retrorsa** Native

**spearleaf agoseris**

**UNCONFIRMED:** Specimen Wunner 696 (CRMO catalog number not assigned) is missing; and **false report:** specimen Urban s.n. (CRMO catalog number 1047), which supports one or more references, annotated to *Agoseris glauca var. laciniata*. Probability of presence in this Park Unit of *A. retrorsa* is low (out of range).

**Ambrosia acanthicarpa** Uncommon, native

**sand bursage**

**Ambrosia tomentosa** Non-native **NOXIOUS**

**skeletonleaf bursage**

**FALSE REPORT:** Specimens Blackburn 552 (CRMO catalog number 3373) and 573 (CRMO catalog number 3394), cited in her 2002 herbarium collections and road log report, are *Ambrosia acanthicarpa*. Probability of presence in this Park Unit of *A. tomentosa* is medium. It is native to the Great Plains but is believed to be introduced in Idaho.

**Anaphalis margaritacea** Rare, native

**pearly everlasting**

**Ancistrocarphus filagineus** Native

**hooded neststraw**

*Stylocline filaginea*

**SUSPECTED:** Rare but perhaps more common than perceived, this small annual plant with distinctive hooked inner bracts is easily overlooked. It has been collected (E. Thiel s.n.-23; CRMO catalog number 4151) a few air-miles from the westcentral boundary, and is probably present in CRMO.

<b>Antennaria arcuata</b> Native <b>ICDC:GLOBAL PRIORITY 2</b>	<b>arching pussytoes</b>
<b>SUSPECTED:</b> This globally rare white-woolly pussytoes, limited in occurrence only to a few States in the Western U.S., perennates by arching leafy bracteate stolons. It is superceded in rarity only by <i>Phacelia inconspicua</i> (Hydrophyllaceae). Several thousand plants are known to occur immediately adjacent to this Park Unit on private property in a meadow abutting the northwestern boundary (Idaho Conservation Data Center Element Occurrence 001), but surveys by Atwood and Wolken in July 2006 revealed that apparently no plants or suitable habitat exist within CRMO (so probability of presence in this Park Unit is low), and removal from this checklist may be warranted. Pussytoes get their name from the soft flower heads resembling to some the toes of a cat.	
<b>Antennaria corymbosa</b> Uncommon, native	<b>flattop pussytoes</b>
<b>Antennaria dimorpha</b> Common, native	<b>low pussytoes</b>
Along with <i>Antennaria microphylla</i> , the most common of the pussytoes in this Park Unit; a relatively small, matted, distinctive plant.	
<b>Antennaria microphylla</b> Common, native	<b>smalleaf pussytoes</b>
A common pussytoes in the Intermountain West and in this Park Unit.	
<b>Antennaria rosea</b> Common, native	<b>rosy pussytoes</b>
<i>Antennaria rosea</i> , an apomictic polyploid, is placed under <i>A. microphylla</i> by many authors, while others maintain that the name <i>A. microphylla</i> applies only to sexual diploid plants.	
<b>Antennaria stenophylla</b> Native	<b>narrowleaf pussytoes</b>
<b>UNCONFIRMED:</b> The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of <i>A. stenophylla</i> is low.	
<b>Anthemis cotula</b> Rare, non-native	<b>mayweed chamomile</b>
<b>Arctium minus</b> Uncommon, non-native	<b>burdock</b>
<b>Arnica chamissonis</b> Uncommon, native	<b>Chamisso's arnica</b>
<b>Arnica cordifolia</b> Common, native	<b>heartleaf arnica</b>
<b>Arnica longifolia</b> Uncommon, native	<b>longleaf arnica</b>
<b>Arnica mollis</b> Uncommon, native	<b>wooly arnica</b>
<b>Arnica sororia</b> Uncommon, native	<b>twin arnica</b>
<b>Artemisia arbuscula</b> Common, native	<b>low sagebrush</b>
<i>Artemisia arbuscula ssp. arbuscula</i>	
This small sagebrush is locally abundant in shallow-soil or less productive sites, and at upper elevations of the foothills. Its communities in this Park Unit, noteworthy as exemplary ecological reference areas, have been nominated as a National Natural Landmark (Rust 2004: <i>National Natural Landmark Evaluation, Craters of the Moon National Monument and Preserve, Columbia Plateau Natural Region, Low Sagebrush Theme, Low Sagebrush/Idaho Fescue Subtheme</i> ).	
<b>Artemisia cana</b> Native	<b>silver sagebrush</b>
<b>UNCONFIRMED:</b> Reliable Popovich field observation only – no voucher specimen. Generally restricted to heavier soils that pond or those more slowly draining than <i>Artemisia tridentata</i> sites; scattered here and there throughout the Park Unit.	
<b>Artemisia dracunculus</b> Common, native	<b>green sagewort; wild tarragon</b>



**Artemisia longiloba** Rare, native **early sagebrush**

*Artemisia arbuscula ssp. longiloba*

*Artemisia arbuscula var. longiloba*

Documented in summer 2006 in two locations (Popovich 8375, Wolken number not reviewed; not yet cataloged in CRMO database) and apparently restricted to a few kipukas (e.g., Brass Cap Kipuka, Carey Kipuka) and a few other areas in the north half of this Park Unit. This plant is common on heavy soil drainageways in Macon Flat of the Camas Prairie west of CRMO.

**Artemisia ludoviciana ssp. ludoviciana var. incompta** Uncommon, native **Louisiana sagewort**

*Artemisia ludoviciana ssp. incompta*

**Artemisia ludoviciana ssp. ludoviciana var. latiloba** Uncommon, native **Louisiana sagewort**

*Artemisia ludoviciana var. latiloba*

**Artemisia ludoviciana ssp. ludoviciana var. ludoviciana** Uncommon, native **Louisiana sagewort**

**Artemisia nova** Native **black sagebrush**

*Artemisia arbuscula ssp. nova*

*Artemisia arbuscula var. nova*

**UNCONFIRMED:** N. Duane Atwood labels list this taxon as an associated species for some of his CRMO collections from the foothills. This plant is to be expected in the North Unit on less favorable sites than *Artemisia tridentata*. It tends to bloom later than its cousins, and its somewhat greener leaves beset with small glandular swellings seen under 10× magnification easily distinguish this from its ally *Artemisia arbuscula*, the only other small sagebrush in the Park Unit's foothills. Popovich has observed this species at Pine Mountain north of Timber Butte Spring west of this Park Unit. It is reported from buttes and west foothills of the INEEL (Anderson et al, 1996: *Plant Communities, Ethnoecology, and Flora of the Idaho National Engineering Laboratory*). Probability of presence in this Park Unit of *A. nova* is high in the foothills.

**Artemisia tridentata var. tridentata\*** Uncommon, native **basin big sagebrush**

*Artemisia tridentata ssp. tridentata*

Many prefer the subspecific, not varietal, rank. This taller big sagebrush is not as common as its close ally *Artemisia tridentata var. wyomingensis*, and is more restricted in this Park Unit to deeper, moister soils and sometimes in cracks of lava blisters. Like its ally *A. tridentata var. wyomingensis*, this sagebrush has been lost over much of its range from fires and weedy invasions, but perhaps moreover from conversion of the deeper soil sites to agriculture. Skeletons of a mature stand burned in the extreme southeast periphery of Laidlaw Park in the mid-1990's contained basal stems with as many as 80 or more rings, considered fairly old for big sagebrush in Idaho. Most material in this Park Unit is native, but some BLM-administered areas have been seeded for wildfire or rangeland rehabilitation. *Artemisia tridentata* is the State Flower of Nevada.

**Artemisia tridentata var. vaseyana\*** Abundant, native **mountain big sagebrush**

*Artemisia tridentata ssp. vaseyana*

*Artemisia vaseyana*

Many prefer the subspecific, not varietal, rank; others elevate this entity to the species level. References to *Artemisia tridentata* apply to this taxon if implying the big sagebrush of lava flows and the foothills, where it is often abundant. The inflorescences of var. *vaseyana* often appear level and flat-topped, resembling the candles on a cake, which can help distinguish it from its allies *A. tridentata var. tridentata* and var. *wyomingensis*, whose inflorescences appear more distributed throughout the plant. All *Artemisia* species in this Park Unit are aromatic, but *A. tridentata var. vaseyana* may

have the most distinctive camphor-like odor. Most material in this Park Unit is native and represents mature, healthy communities, but some BLM-administered areas may have been seeded for wildfire or rangeland rehabilitation.

**Artemisia tridentata var. wyomingensis\*** Common, native

**Wyoming big sagebrush**

*Artemisia tridentata ssp. wyomingensis*

Many prefer the subspecific, not varietal, rank. References to *Artemisia tridentata* apply to this taxon if implying the big sagebrush of the Snake River Plain, not the foothills. Formerly abundant, this sagebrush has been lost over much of its range in southern Idaho due to repeated wildfires, grass seedings, and invasion by the aggressive non-native annual grass *Bromus tectorum*. Some of the largest remaining mature unburned stands in southcentral Idaho occur in this Park Unit, in which plants can be abundant locally, and are important as ecological reference areas. Most material in this Park Unit is native, but this plant is widely used in wildfire and range rehabilitation, and some BLM-administered areas have been seeded for these purposes. Amazingly, this common plant escaped collection through the years until fall 2006 (not yet accessioned)!

**Artemisia tripartita** Common, native

**threetip sagebrush**

*Artemisia tripartita var. rupicola*

This sagebrush often occurs on heavier soils or more alkaline sites than *Artemisia tridentata*. Typically uncommon in the Intermountain West, it is the dominant shrub occurring in uniform stands throughout large portions of this Park Unit, including western and southern BLM-administered areas, Laidlaw Park, and many kipukas. Threetip sagebrush is able to vigorously resprout after fire, which highlights the importance of this species in post-fire recovery of functional native plant communities. It is unknown if repeatedly-burned areas formerly exhibiting both *Artemisia tripartita* and *A. tridentata* have seen a shift of dominance toward *A. tripartita*. It may hybridize with *Artemisia tridentata*.

**Aster campestris** Native

**meadow aster**

**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of *A. campestris* is medium.

**Aster chilensis ssp. adscendens** Uncommon, native

**Western aster**

**Aster eatonii** Uncommon, native

**Eaton's aster**

*Symphyotrichum eatonii*

**Aster perelegans** Common, native

**elegant aster**

*Eucephalus elegans*

**Aster scopulorum** Uncommon, native

**cat's tongue (local) or lava aster**

*Ionactis alpina*

Often occurring in sparsely vegetated sites, the surfaces of this plant's leaves feel like a cat's tongue, promoting the local name "cat's tongue" aster.

**Aster spathulatus** Native

**Western mountain aster**

*Aster ascendens var. fremontii*

*Symphyotrichum spathulatum var. fremontii*

*Aster occidentalis*

*Symphyotrichum spathulatum var. spathulatum*

**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen: specimen Wunner 962 (CRMO catalog number not assigned) is missing. Probability of presence in this Park Unit of *A. spathulatus* is low. Material in this geographic area could be assigned to *A. spathulatus* var. *spathulatus*: see discussion in *Intermountain Flora* (Vol. 5, 1994).

- Balsamorhiza hookeri** Native **Hooker's balsamroot**  
**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of *B. hookeri* is medium in the foothills and kipukas like Carey and Brass Cap.
- Balsamorhiza sagittata** Common, native **arrowleaf balsamroot**
- Brickellia grandiflora** Rare, native **tasselflower brickellia**  
*Brickellia grandiflora* var. *minor*  
*Coleosanthus grandiflorus*
- Canadanthus modestus** Park Unit nativity unknown **giant mountain aster**  
*Aster modestus*  
**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of *C. modestus* is low.
- Carduus nutans** Rare, non-native **NOXIOUS** **musk thistle**
- Centaurea diffusa** Uncommon, non-native **NOXIOUS** **diffuse knapweed**  
*Centaurea biebersteinii*
- Centaurea maculosa** Uncommon, non-native **NOXIOUS** **spotted knapweed**
- Centaurea solstitialis** Non-native **NOXIOUS** **yellow starthistle**  
**ENCROACHING:** Known to occur near this Park Unit, and with unverified reports from near the southern peripheries, this plant is to be expected.
- Chaenactis douglasii** Common, native **dusty maiden**  
Material from this Park Unit does not lend itself to meaningful infraspecific segregation.
- Chondrilla juncea** Rare, non-native **NOXIOUS** **rush skeletonweed**  
This plant is among the most rapidly invading noxious weeds within and around the Park Unit. Each plant can produce up to 20,000 windward seeds. Initial survey efforts have documented scattered spotty infestations on virtually any substrate in all geographic areas within CRMO. Heavier infestations have been mapped on BLM-administered areas in the western and central portions of the Park Unit. Survey and control efforts are of high priority with this species.
- Chrysopsis villosa** var. **hispida** Rare, native **bristly hairy goldenaster**  
*Heterotheca villosa* var. *hispida*  
*Chrysopsis hispida*  
*Heterotheca villosa* var. *minor*
- Chrysothamnus nauseosus** var. **oreophilus** Common, native **rubber rabbitbrush**  
*Chrysothamnus nauseosus* var. *artus*  
*Ericameria nauseosa* var. *oreophila*

<b>Chrysothamnus nauseosus var. speciosus</b>	Common, native	<b>rubber rabbitbrush</b>
<i>Chrysothamnus nauseosus var. albicaulis</i>		
<i>Chrysothamnus nauseosus var. glabratus</i>		
<i>Ericameria nauseosa var. glabrata</i>		
<i>Chrysothamnus nauseosus var. graveolens</i>		
<i>Chrysothamnus graveolens</i>		
<i>Ericameria nauseosa var. speciosa</i>		
<b>Chrysothamnus viscidiflorus var. lanceolatus</b>	Common, native	<b>Douglas's or green rabbitbrush</b>
<b>Chrysothamnus viscidiflorus var. puberulus</b>	Common, native	<b>Douglas's or green rabbitbrush</b>
<b>Chrysothamnus viscidiflorus var. viscidiflorus</b>	Common, native	<b>Douglas's or green rabbitbrush</b>
<b>Cichorium intybus</b>	Rare, non-native	<b>chicory</b>
Confirmed in June 2006 along the northwest boundary (Popovich 8372; not yet cataloged in CRMO database).		
<b>Cirsium arvense</b>	Uncommon, non-native	<b>Canada thistle</b>
<b>Cirsium canescens</b>	Park Unit nativity unknown	<b>prairie thistle</b>
<b>FALSE REPORT:</b> Specimen Horning s. n. (CRMO catalog number 1064), which supports one or more references, annotated to <i>Cirsium canovirens</i> .		
Probability of presence in this Park Unit of <i>C. canescens</i> has not been assessed.		
<b>Cirsium canovirens</b>	Common, native	<b>graygreen thistle</b>
<b>Cirsium eatonii</b>	Park Unit nativity unknown	<b>Eaton's thistle</b>
<i>Cirsium hookerianum</i>		
<b>UNCONFIRMED:</b> The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of <i>C. eatonii</i> is medium.		
<b>Cirsium flodmanii</b>	Park Unit nativity unknown	<b>Flodman's thistle</b>
<b>UNCONFIRMED:</b> The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of <i>C. flodmanii</i> is low.		
<b>Cirsium orthe</b>	Park Unit nativity unknown	<b>unknown</b>
<b>UNCONFIRMED:</b> The reference citation(s) has no supporting voucher specimen. This name, cited in an old reference, appears to be an invalid combination of genus and specific epithet (i.e., an invalid species name). The intended taxon is not known.		
<b>Cirsium subniveum</b>	Uncommon, native	<b>gray thistle</b>
<b>Cirsium undulatum</b>	Park Unit nativity unknown	<b>wavyleaf thistle</b>
<b>UNCONFIRMED:</b> The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of <i>C. undulatum</i> is medium.		
<b>Cirsium utahense</b>	Uncommon, native	<b>New Mexico thistle</b>
<i>Cirsium neomexicanum var. utahense</i>		
<b>Cirsium vulgare</b>	Rare, non-native	<b>bull thistle</b>
<b>Crepis acuminata</b>	Common, native	<b>tapertip hawksbeard</b>
<b>Crepis atribarba</b>	Common, native	<b>slender hawksbeard</b>

<b>Crepis modocensis</b> Common, native	<b>Modoc hawksbeard</b>
<b>Crepis occidentalis</b> Rare, native	<b>Western hawksbeard</b>
<b>Erigeron aphanactis var. aphanactis</b> Uncommon, native	<b>rayless shaggy fleabane or daisy</b>
The yellow heads of this plant are usually rayless, and in being so draw some attention.	
<b>Erigeron bloomeri</b> Uncommon, native	<b>scabland fleabane or daisy</b>
<b>Erigeron canus</b> Park Unit nativity unknown	<b>hoary fleabane or daisy</b>
UNCONFIRMED: The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of <i>E. canus</i> is high.	
<b>Erigeron chrysopsidis var. austiniae</b> Uncommon, native	<b>sagebrush fleabane or daisy</b>
<b>Erigeron compositus var. discoideus</b> Native	<b>cutleaf fleabane or daisy</b>
<i>Erigeron trifidus</i>	
UNCONFIRMED: The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of <i>E. compositus</i> var. <i>discoideus</i> is medium.	
<b>Erigeron compositus var. glabratus</b> Uncommon, native	<b>cutleaf fleabane or daisy</b>
<b>Erigeron corymbosus</b> Uncommon, native	<b>longleaf fleabane or daisy</b>
<b>Erigeron divergens var. divergens</b> Uncommon, native	<b>spreading fleabane or daisy</b>
<b>Erigeron glabellus</b> Uncommon, native	<b>smooth fleabane or daisy</b>
<b>Erigeron lonchophyllus</b> Uncommon, native	<b>shortray fleabane or daisy</b>
<b>Erigeron nanus</b> Park Unit nativity unknown	<b>dwarf fleabane or daisy</b>
UNCONFIRMED: The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of <i>E. nanus</i> is low.	
<b>Erigeron pumilus ssp. concinnoides var. concinnus</b> Common, native	<b>Navajo fleabane or daisy</b>
<b>Erigeron pumilus ssp. intermedius var. euintermedius</b> Native	<b>shaggy fleabane or daisy</b>
UNCONFIRMED: The reference citation(s) has no supporting voucher specimen. The authors of <i>Intermountain Flora</i> (Vol. 5, 1994) state that this variety is "wholly absent from se. Idaho." Probability of presence in this Park Unit of <i>E. pumilus</i> ssp. <i>intermedius</i> var. <i>euintermedius</i> is low (out of range).	
<b>Erigeron pumilus ssp. intermedius var. gracilior</b> Common, native	<b>shaggy fleabane or daisy</b>
<i>Erigeron pumilus</i> var. <i>gracilior</i>	
<b>Erigeron speciosus var. macranthus</b> Common, native	<b>aspen fleabane or daisy</b>
<b>Eriophyllum lanatum var. integrifolium</b> Common, native	<b>wholeleaf eriophyllum; woolly yellow daisy</b>
<b>Eupatorium occidentale</b> Rare, native	<b>Western eupatorium</b>
<i>Ageratina occidentalis</i>	
<b>Filago californica</b> Uncommon, native	<b>California cottonrose</b>
<b>Gaillardia aristata</b> Rare, non-native	<b>gaillardia</b>
A beautifully flowered plant occurring as a non-persistent seed mix or waif along HWY 20/26/93, and not native to this Park Unit.	
<b>Gnaphalium palustre</b> Uncommon, native	<b>cudweed</b>

<b>Grindelia squarrosa var. quasiperennis</b>	Uncommon, native	<b>curlycup gumweed</b>
<b>Grindelia squarrosa var. serrulata</b>	Uncommon, native	<b>curlycup gumweed</b>
<b>Grindelia squarrosa var. squarrosa</b>	Uncommon, non-native	<b>curlycup gumweed</b>
<b>Gutierrezia sarothrae</b>	Uncommon, native	<b>broom snakeweed</b>
Most common on lava and hot, dry range sites in the southern third of this Park Unit, this plant can be differentiated from <i>Chrysothamnus</i> (rabbitbrush) by its generally smaller stature and presence of small ray flowers, which are lacking in <i>Chrysothamnus</i> .		
<b>Haplopappus acaulis</b>	Uncommon, native	<b>stemless mock goldenweed</b>
Infraspecific assignments for Park Unit material are not meaningful.		
<b>Haplopappus nanus</b>	Common, native	<b>dwarf goldenbush</b>
<i>Aplopappus nanus</i>		
<i>Ericameria nana</i>		
Generally restricted to lava flows, where it can be locally co-dominant. Harsh environmental conditions at CRMO can cause these sub-shrubs to appear stunted, sometimes resembling small “bonsai” trees.		
<b>Haplopappus resinosa</b>	Park Unit nativity unknown	<b>Columbian goldenbush</b>
<i>Ericameria resinosa</i>		
UNCONFIRMED: The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of <i>H. resinosa</i> is low. The reference may be referring to <i>Haplopappus nanus</i> .		
<b>Haplopappus stenophyllus</b>	Uncommon, native	<b>linearleaf goldenbush</b>
<i>Stenotus stenophyllus</i>		
<b>Haplopappus suffruticosus</b>	Park Unit nativity unknown	<b>bighead goldenbush</b>
<i>Ericameria suffruticosa</i>		
UNCONFIRMED: The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of <i>H. suffruticosus</i> is low.		
<b>Helianthella uniflora</b>	Uncommon, native	<b>oneflower helianthella</b>
<i>Helianthella uniflora var. uniflora</i>		
<b>Helianthus annuus</b>	Uncommon, native	<b>annual sunflower</b>
This showy and well-known plant is the State Flower of Kansas. Within the Park Unit, plants often occur in recently disturbed areas, and along roadsides and adjacent agricultural fields.		
<b>Helianthus petiolaris</b>	Uncommon, native	<b>prairie sunflower</b>
<b>Hieracium cynoglossoides</b>	Common, native	<b>hound’s tongue hawkweed</b>
<i>Hieracium albertinum</i>		
This Park Unit has not yet documented the occurrence of non-native invasive hawkweeds. Native hawkweeds can often, with some difficulty, be distinguished from non-native species by their typically leafy-branched stems, umbelliform inflorescences, and lack of stolons.		
<b>Hieracium gracile</b>	Uncommon, native	<b>slender hawkweed</b>
<i>Hieracium triste</i>		

<b>Hieracium scouleri var. griseum</b>	Common, native	<b>woolly hawkweed</b>
<b>Iva axillaris</b>	Uncommon, native	<b>poverty weed</b>
<b>Iva xanthifolia</b>	Rare, native	<b>giant sumpweed</b>
<b>Lactuca serriola</b>	Common, non-native	<b>prickly lettuce</b>
Frequently a co-dominant native the first few years following wildfire, this naturalized annual plant is distinguished by milky sap and a leaf's prickly midrib on the underside.		
<b>Layia glandulosa var. glandulosa</b>	Uncommon, native	<b>white tidytips</b>
<i>Layia glandulosa ssp. glandulosa</i>		
One of the more showy small annuals of sandy habitats in this Park Unit.		
<b>Lygodesmia spinosa</b>	Uncommon, native	<b>spiny skeletonplant; thorny wire-lettuce</b>
<i>Stephanomeria spinosa</i>		
A uniquely pale and unfriendly looking plant typically found in small clusters growing in open pockets of cindery soils.		
<b>Machaeranthera canescens var. sessiliflora</b>	Common, native	<b>purple aster; hoary tansyaster</b>
<i>Aster canescens</i>		
<i>Machaeranthera pulverulenta</i>		
This plant is often confused by well-meaning observers for weedy non-native <i>Centaurea maculosa</i> (spotted knapweed). This native aster is easily distinguished when in flower from knapweed by the presence of its yellow center (disk flowers). Some material in this Park Unit is intermediate to <i>Machaeranthera canescens var. canescens</i> , and infraspecific assignments may not be meaningful.		
<b>Madia glomerata</b>	Uncommon, native	<b>cluster tarweed</b>
<b>Madia gracilis</b>	Uncommon, native	<b>slender tarweed</b>
<b>Matricaria maritima ssp. inodora</b>	Non-native	<b>German chamomile; scentless mayweed</b>
<i>Matricaria inodora</i>		
<i>Tripleurospermum inodorum</i>		
<i>Matricaria perforata</i>		
<i>Tripleurospermum perforata</i>		
UNCONFIRMED: The reference citation(s) has no supporting voucher specimen: specimen Wunner 1051 (CRMO catalog number not assigned) is missing. Probability of presence in this Park Unit of <i>M. maritima ssp. inodora</i> is medium.		
<b>Microseris nutans</b>	Uncommon, native	<b>nodding microseris</b>
<b>Microseris troximoides</b>	Native	<b>weevil prairie dandelion</b>
UNCONFIRMED: The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of <i>M. troximoides</i> is high.		
<b>Onopordum acanthium</b>	Non-native <b>NOXIOUS</b>	<b>Scotch thistle</b>
UNCONFIRMED: Field observation only – no voucher specimen. Reliably observed by P. Wolken and J. Apel along the NE edge of the Park Unit and in Paddelford Flat, and actively managed.		

**Pyrrocoma carthamoides var. cusickii** Native **largeflower goldenweed**

*Haplopappus carthamoides var. cusickii*

**SUSPECTED:** This composite is common near the Park Unit and probably occurs within its boundaries in areas north of HWY 20/26/93. The related variety *howellii*, rare in Idaho, is tracked by the Idaho Conservation Data Center, but it is not suspected to occur in this Park Unit. *Pyrrocoma carthamoides* is smaller than its rare cousin, *P. insecticruris*, which is also suspected to occur in CRMO.

**Pyrrocoma insecticruris** Native **ICDC:GLOBAL PRIORITY 3 IDAHO ENDEMIC** **bugleg or wholeleaf goldenweed**

*Haplopappus insecticruris*

**SUSPECTED:** Searched for but not documented within this Park Unit, this plant is known to occur nearby to the west (Upper Fish Creek) and may occur in appropriate habitat in areas north of HWY 20/26/93. Much studied by Popovich (Popovich 2001: *Review of Survey Efforts and Observations of the Ecology, Distribution, and Abundance of Pyrrocoma insecticruris (Asteraceae), an Idaho Endemic Plant*), this globally rare native perennial sunflower-like herb is endemic to southcentral Idaho, occurring in the Camas Prairie and Wood River Valley east to Fish Creek near the northwest boundary of this Park Unit. Once considered a Candidate for listing as Threatened or Endangered under the Endangered Species Act, its viability appears secure, with perhaps 30,000 plants at roughly 130 known sites, and it seems tolerant of disturbance and livestock use. To those unfamiliar with the species, *Pyrrocoma insecticruris* can be difficult to tell apart from its smaller allies *Pyrrocoma carthamoides* and *Pyrrocoma uniflora* (both occurring nearby and suspected in CRMO), and *Pyrrocoma lanceolata* (occurring to the northwest in the Stanley Basin and not suspected in CRMO). Popovich and Dr. Gregory Brown [Rocky Mountain Herbarium (RM), University of Wyoming, Laramie] are finishing a 10-year project to expand the species description and furnish a key to resolve identification issues. The following character suites may aid in identification: Mature achenes glabrous, heads 1-several, rays few, inconspicuous, pale yellow, 3-5(7)mm long, one or more phyllary bracts often leafy, plants 10-30cm tall, of ephemerally-wet weak drainageways of rocky, hot, dry sites or with depauperate vegetation → *P. carthamoides*; Mature achenes evidently hairy, heads usually solitary (up to 4/stem), phyllaries not leafy, rays many, bright or deep yellow, conspicuous, 6-12mm long, leaf margins only somewhat scarios with lignified thickness, woolly hair often present at leaf bases, leaf edges often hairy, or naked, often with a few large teeth, not beset with small teeth, plants small and slender, often of alkaline-tending flats/sites → *P. uniflora*; As with *P. uniflora*, with **mature achenes evidently hairy**, but **heads usually many** (rarely 1-several on depauperate plants), **bright or deep yellow showy rays** (6)9-16(18)mm long, leaves with obviously scarios margins with lignified thickness, **leaf edges beset with small teeth** seen under 14× magnification and usually **easily felt with the fingertip**, often also with larger teeth or serrates, leaf bases not at all to somewhat hairy, plants often robust, 20 to 80cm tall, leaves to 30cm long (including petiole) and to 3-5cm wide, mostly in **grass-herb dominated drainageways**, but also in spring seepage, saddles, swales, flats, meadows (Hill City Cemetery, Soldier Creek Preserve), disturbed areas (roadside rights-of-way, abandoned railroad lines, stock corrals), or rarely in meadows into edges of sagebrush-bunchgrass or aspen-conifer woodland → *P. insecticruris*.

**Pyrrocoma uniflora var. uniflora** Native **singlehead goldenweed**

*Haplopappus uniflorus var. uniflorus*

**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen: specimen Wunner 844 (CRMO catalog number not assigned) is missing. N. Duane Atwood made a collection abutting but apparently not within this Park Unit (Atwood 28689; CRMO catalog number 3249). Probability of presence in this Park Unit of *P. uniflora var. uniflora* is low due to a presumed lack of suitable habitat.

**Rudbeckia occidentalis** (no vars preferred) Rare, native **Western coneflower**

*Rudbeckia occidentalis var. occidentalis*

Varietal distinction is not preferred. A related species, *Rudbeckia hirta* (black-eyed Susan), is the State Flower of Maryland.



<b>Senecio canus</b> Common, native <i>Packera cana</i> <i>Senecio howellii</i>	<b>woolly groundsel or ragwort</b>
<b>Senecio integerrimus var. exaltatus</b> Common, native	<b>Columbia groundsel or ragwort</b>
<b>Senecio multilobatus</b> Park Unit nativity unknown <i>Packera multilobata</i> <i>Senecio uintahensis</i> UNCONFIRMED: The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of <i>S. multilobatus</i> is high.	<b>lobeleaf groundsel or ragwort</b>
<b>Senecio serra var. serra</b> Common, native	<b>tall groundsel or ragwort</b>
<b>Senecio sphaerocephalus</b> Native <i>Senecio altus</i> UNCONFIRMED: The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of <i>S. sphaerocephalus</i> is medium.	<b>marsh groundsel or ragwort</b>
<b>Senecio streptanthifolius</b> Uncommon, native <i>Senecio cymbalarioides</i> <i>Packera streptanthifolia</i>	<b>cleftleaf groundsel or ragwort</b>
<b>Solidago canadensis var. salebrosa</b> Uncommon, native	<b>Canada goldenrod</b>
<b>Solidago gigantea</b> Native <i>Solidago gigantea var. serotina</i> (CRMO material, if present; the utility of varietal segregation is questionable) UNCONFIRMED: Specimen Wunner 1201 (CRMO catalog number not assigned), which supports one or more references, is missing; and <b>false report</b> : specimen Urban s. n. (CRMO catalog number 1093), which supports one or more references, annotated to <i>Solidago canadensis var. salebrosa</i> . Probability of presence in this Park Unit of <i>S. gigantea</i> is medium. This plant is the State Flower of Nebraska.	<b>giant goldenrod</b>
<b>Sonchus arvensis</b> Non-native <b>NOXIOUS</b> <b>FALSE REPORT</b> : Unreliable park staff field observation only – no voucher specimen. Popovich was told that the field identification may not be reliable and "To my recent knowledge, this was a false report" (Paige Wolken, email correspondence with Steve Popovich, 21 July 2005). Probability of presence in this Park Unit of <i>S. arvensis</i> is medium.	<b>field or perennial sowthistle</b>
<b>Sonchus asper</b> Rare, non-native	<b>spiny sowthistle</b>
<b>Stephanomeria tenuifolia var. myrioclada</b> Common, native <i>Ptiloria tenuifolia</i> <i>Stephanomeria minor var. myrioclada</i> Frequently observed on more barren lava fields. Intraspecific assignments are not always meaningful with material from this Park Unit, and some material may fit var. <i>tenuifolia</i> .	<b>narrowleaf wirelettuce</b>
<b>Stylocline psilocarphoides</b> Uncommon, native	<b>baretwig neststraw</b>

- Tanacetum vulgare** Rare, non-native **tansy**  
 Very common along irrigation ditches west of this Park Unit.
- Taraxacum officinale** Uncommon, non-native **dandelion**
- Tetradymia canescens** Uncommon, native **gray horsebrush**
- Townsendia florifera** Uncommon, native **showy townsendia**
- Tragopogon dubius** Common, non-native **goat's beard; salsify**
- Wyethia amplexicaulis** Rare, native **mule's ears**  
 Encountered in one location in June 2006 (Popovich 8410; not yet cataloged in CRMO database) along the northern boundary, but perhaps to be expected elsewhere in suitable habitat. The large deep yellow flowers and broad leaves make this plant difficult to miss. Its white-flowered cousin, *Wyethia mollis* (white or woolly mule's ears), occurs nearby but perhaps not within this Park Unit.
- Xanthium strumarium var. canadense** Native **cocklebur**  
*Xanthium strumarium* (CRMO references apply to *Xanthium strumarium var. canadense*)  
**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen: specimen Wunner 1013 (CRMO catalog number not assigned) is missing. Probability of presence in this Park Unit of *X. strumarium var. canadense* is medium in weedy riparian areas.

#### BETULACEAE – BIRCH FAMILY

- Alnus incana ssp. rugosa var. occidentalis** Common, native **thinleaf alder**
- Betula glandulosa** Park Unit nativity unknown **bog or resin birch**  
**FALSE REPORT:** Specimens Wunner 651 (CRMO catalog numbers 987 and 988), which support one or more references, annotated to *Betula occidentalis*. Probability of presence in this Park Unit of *B. glandulosa* is low (out of range and/or no suitable habitat).
- Betula occidentalis** Rare, non-native **water or Western birch**  
 Three trees are present around the Monument Headquarters. Wunner (1967) states that these plants were “introduced from the Lost River [Idaho] floodplain,” but they are probably not native to this Park Unit.

#### BORAGINACEAE – BORAGE FAMILY

- Amsinckia menziesii** Uncommon, native **Menzies's fiddleneck**
- Amsinckia retrorsa** Uncommon, native **fiddleneck**  
 This entity is closely related to, and may be better accommodated under, *Amsinckia menziesii*.
- Amsinckia tessellata** Common, native **bristly fiddleneck**
- Asperugo procumbens** Uncommon, non-native **catchweed**
- Cryptantha affinis** Uncommon, native **quill cryptantha**
- Cryptantha ambigua** Native **basin cryptantha**  
**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of *C. ambigua* is medium.
- Cryptantha celosioides** Uncommon, native **buttecandle**

<b>Cryptantha circumscissa</b> Common, native	<b>cushion cryptantha</b>
<b>Cryptantha fendleri</b> Uncommon, native	<b>Fendler's cryptantha</b>
<b>Cryptantha gracilis</b> Uncommon, native	<b>narrowstem cryptantha</b>
<b>Cryptantha humilis</b> Uncommon, native	<b>roundspike cryptantha</b>
<i>Cryptantha nana</i>	
<i>Oreocarya dolosa</i>	
<b>Cryptantha interrupta</b> Uncommon, native	<b>Elko cryptantha</b>
<b>Cryptantha rostellata</b> Uncommon, native	<b>weakstem cryptantha</b>
<i>Cryptantha flaccida</i>	
<b>Cryptantha sericea</b> Park Unit nativity unknown	<b>silky cryptantha</b>
<i>Oreocarya sericea</i>	
<b>FALSE REPORT:</b> Specimen Anonymous s. n. (CRMO catalog number 136), which supports one or more references, annotated to <i>Cryptantha speculifera</i> . Probability of presence in this Park Unit of <i>C. sericea</i> is low (out of range and/or no suitable habitat).	
<b>Cryptantha spiculifera</b> Common, native	<b>Snake River cryptantha</b>
<b>Cryptantha torreyana</b> Common, native	<b>Torrey's cryptantha</b>
<i>Cryptantha flexulosa</i>	
<b>Cryptantha watsonii</b> Park Unit nativity unknown	<b>Watson's cryptantha</b>
<b>UNCONFIRMED:</b> The reference citation(s) has no supporting voucher specimen. Some CRMO <i>Cryptantha</i> collections approach morphology of this taxon. The authors of <i>Intermountain Flora</i> (Vol. 4, 1984) state that <i>C. watsonii</i> is "apparently wanting from the Snake River Plains," but it is reported from Big Southern Butte east of CRMO (Anderson et al, 1996: <i>Plant Communities, Ethnoecology, and Flora of the Idaho National Engineering Laboratory</i> ). Probability of presence in this Park Unit of <i>C. watsonii</i> is medium.	
<b>Hackelia floribunda</b> Common, native	<b>manyflower stickseed</b>
<b>Hackelia micrantha</b> Common, native	<b>meadow stickseed</b>
<b>Hackelia patens</b> Common, native	<b>spotted stickseed</b>
<b>Lappula occidentalis var. occidentalis</b> Common, Park Unit nativity unknown	<b>Western stickseed</b>
<i>Lappula occidentalis var. cupulata</i>	
<i>Lappula redowskii var. cupulata</i> of American authors	
<i>Lappula redowskii var. occidentalis</i> of American authors	
<i>Lappula redowskii var. redowskii</i> of American authors	
This plant is native to the Great Plains region, but it is unknown if it is native to this Park Unit.	
<b>Lappula squarrosa</b> Non-native	<b>bristly sheepbur or stickseed</b>
<i>Lappula echinata</i>	
<b>UNCONFIRMED:</b> The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of <i>L. squarrosa</i> is low.	

<b>Lithospermum arvense</b> Rare, non-native <i>Buglossoides arvensis</i>	<b>corn gromwell</b>
<b>Lithospermum ruderale</b> Uncommon, native <i>Lithospermum pilosum</i>	<b>Western stoneseed; gromwell; puccoon</b>
<b>Mertensia campanulata</b> Park Unit nativity unknown <b>IDAHO ENDEMIC</b> UNCONFIRMED: The reference citation(s) has no supporting voucher specimen: specimen Wunner 641 (CRMO catalog number not assigned) is missing. This is probably a misidentification of another <i>Mertensia</i> species, and the probability of presence in this Park Unit of <i>M. campanulata</i> is low (out of range: endemic to more northern Idaho).	<b>Idaho bluebells</b>
<b>Mertensia ciliata</b> Uncommon, native	<b>fringed bluebells</b>
<b>Mertensia longiflora</b> Uncommon, native	<b>longflower bluebells</b>
<b>Mertensia oblongifolia</b> Common, native	<b>oblongleaf bluebells</b>
<b>Pectocarya penicillata</b> Uncommon, native	<b>shortleaf combseed</b>
<b>Pectocarya setosa</b> Native UNCONFIRMED: Reliable Popovich field observation only – no voucher specimen. Observed once in the mid-1990's in the Peavey Well area and not collected because it was at the time a BLM "species of concern." The spreading-setose calyx sets this plant off as a distinctive species.	<b>bristly combseed</b>
<b>Plagiobothrys scouleri var. penicillatus</b> Common, native <i>Plagiobothrys scouleri var. hispidulus</i>	<b>popcorn flower</b>

#### BRASSICACEAE/CRUCIFERAE – MUSTARD FAMILY

<b>Alyssum desertorum</b> Common, non-native	<b>desert alyssum</b>
<b>Arabidopsis salsuginea</b> Park Unit nativity unknown FALSE REPORT: Specimen Wunner 653 (CRMO catalog number 1105), which supports one or more references, annotated to <i>Arabis microphylla</i> . Probability of presence in this Park Unit of <i>Arabidopsis salsuginea</i> has not been assessed.	<b>saltwater rockcress</b>
<b>Arabis cobrensis</b> Uncommon, native The <i>Arabis</i> species in this Park Unit can be accommodated under the genus <i>Boechea</i> , and will be recognized as such in the <i>Flora of North America</i> .	<b>gray rockcress</b>
<b>Arabis divaricarpa</b> Uncommon, native	<b>spreading rockcress</b>
<b>Arabis glabra</b> Uncommon, native	<b>tower rockcress</b>
<b>Arabis holboellii var. pendulocarpa</b> Uncommon, native	<b>dropseed or Holboell's rockcress</b>
<b>Arabis holboellii var. pinetorum</b> Uncommon, native	<b>Holboell's rockcress</b>
<b>Arabis holboellii var. retrofracta</b> Uncommon, native	<b>Holboell's rockcress</b>
<b>Arabis holboellii var. secunda</b> Uncommon, native <i>Arabis holboellii var. secunda</i> perhaps cannot always be meaningfully segregated from the highly variable var. <i>retrofracta</i> and may best be treated as subsumed by the latter. However, N. Duane Atwood feels this Park Unit's collected material fits var. <i>secunda</i> . <i>Vascular Plants of Wyoming</i> (Dorn,	<b>Holboell's rockcress</b>

1988) retains them as separate varieties, but *A Utah Flora* (Welsch et al, 1993) and *Cruciferae of North America* (Rollins, 1999) no longer differentiate var. *secunda* from var. *retrofracta*.

<b>Arabis lemmonii var. lemmonii</b> Uncommon, native	<b>Lemmon's rockcress</b>
<b>Arabis lignifera</b> Uncommon, native	<b>desert rockcress</b>
<b>Arabis lyallii</b> Native	<b>Lyall's rockcress</b>
<b>FALSE REPORT:</b> Specimen Elzinga 4514 (CRMO catalog number 2369), which supports one or more references, annotated to <i>Arabis cobrensis</i> . Probability of presence in this Park Unit of <i>A. lyallii</i> is low (out of range and/or no suitable habitat).	
<b>Arabis microphylla</b> Uncommon, native	<b>littleleaf rockcress</b>
<b>Arabis perennans</b> Uncommon, native	<b>perennial rockcress</b>
<b>Arabis puberula</b> Park Unit nativity unknown	<b>silver rockcress</b>
<b>FALSE REPORT:</b> Specimen Jorgensen s. n. (CRMO catalog number 2467), which supports one or more references, annotated to <i>Arabis divaricarpa</i> . Probability of presence in this Park Unit of <i>A. puberula</i> is low (out of range).	
<b>Arabis sparsiflora var. sparsiflora</b> Uncommon, native	<b>sicklepod rockcress</b>
<b>Arabis sparsiflora var. subvillosa</b> Uncommon, native	<b>hairystem rockcress</b>
<i>Arabis perelegans</i>	
<b>Arabis suffrutescens</b> Uncommon, native	<b>woody rockcress</b>
<b>Barbarea orthoceras</b> Rare, native	<b>American yellowrocket</b>
<b>Berteroa incana</b> Non-native	<b>hoary false alyssum</b>
<b>ENCROACHING:</b> Known to occur nearby (Wood River Valley and in the foothills north of Fairfield), and to be expected in the northern portions of this Park Unit, especially along roadways.	
<b>Camelina microcarpa</b> Uncommon, non-native	<b>littleseed falseflax</b>
<b>Capsella bursa-pastoris</b> Uncommon, non-native	<b>shepherd's purse</b>
<b>Cardaria draba</b> Non-native <b>NOXIOUS</b>	<b>whitetop</b>
<b>ENCROACHING:</b> This plant has been observed in road ditches and agriculture fields within two miles of this Park Unit. It has been notably increasing throughout the surrounding area during the last two years and is to be expected, especially along the Carey interface.	
<b>Chorispora tenella</b> Uncommon, non-native	<b>blue or purple mustard</b>
This early blooming non-native annual herb gives off a distinctive malodorous waft when fields warm under spring sun. Mature seed pods are "thorny."	
<b>Descurainia californica</b> Uncommon, native	<b>Sierra tansymustard</b>
<b>Descurainia pinnata var. filipes</b> Uncommon, native	<b>Western tansymustard</b>
<b>Descurainia pinnata var. nelsonii</b> Uncommon, native	<b>Nelson's tansymustard</b>
<b>Descurainia richardsonii var. sonnei</b> Uncommon, native	<b>mountain tansymustard</b>
<b>Descurainia richardsonii var. viscosa</b> Uncommon, native	<b>mountain tansymustard</b>
<b>Descurainia sophia</b> Uncommon, non-native	<b>flaxweed tansymustard</b>
<b>Draba densifolia</b> Uncommon, native	<b>denseleaf draba</b>

<b>Draba douglasii</b> Uncommon, native <i>Cusickiella douglasii</i>	alkali false whitlowgrass
<b>Draba paysonii var. treleasii</b> Uncommon, native	Trelease's draba
<b>Draba verna</b> Common, non-native Infraspecific assignments for this taxon are generally not considered meaningful.	spring whitlowgrass
<b>Erysimum asperum</b> Uncommon, native	Western wallflower
<b>Erysimum cheiranthoides</b> Rare, non-native	treacle or wormseed wallflower
<b>Erysimum occidentale</b> Uncommon, native	pale wallflower
<b>Isatis tinctoria</b> Non-native <b>NOXIOUS</b> ENCROACHING: This plant is known to occur south and west of this Park Unit, and is to be expected.	Dyer's woad
<b>Lepidium densiflorum</b> Uncommon, native	pepperweed
<b>Lepidium lasiocarpum</b> Uncommon, native	hairypod pepperweed
<b>Lepidium perfoliatum</b> Common, non-native	claspingleaf pepperweed
<b>Lepidium virginicum</b> Uncommon, native <i>Lepidium virginicum var. pubescens</i>	hairy pepperweed
<b>Lesquerella occidentalis var. diversifolia</b> Rare, native	King's Western bladderpod
<b>Lesquerella occidentalis var. occidentalis</b> Uncommon, native <i>Lesquerella occidentalis ssp. occidentalis</i>	Western bladderpod
<b>Malcolmia africana</b> Non-native ENCROACHING: Observed in the 1990's and summer, 2002, along southern Park Unit peripheries, and to be expected.	African malcomia
<b>Nasturtium officinale</b> Uncommon, native <i>Rorippa nasturtium-aquaticum</i> <i>Intermountain Flora</i> (Vol. 2B, 2005) states that the common name "nasturtium" refers to species in the genus <i>Tropaeolum</i> (Tropaeolaceae).	watercress
<b>Phoenicaulis cheiranthoides</b> Rare, native <i>Phoenicaulis menziesii</i>	daggerpod
<b>Polyctenium fremontii var. fremontii</b> Uncommon, native <i>Smelowskia fremontii</i>	Fremont's combleaf; Smelowskia
<b>Rorippa curvipes var. curvipes</b> Uncommon, native	bluntleaf yellowcress
<b>Schoenocrambe linifolia</b> Rare, native	flaxleaf plainsmustard
<b>Sisymbrium altissimum</b> Common, non-native Along with <i>Lactuca serriola</i> (Asteraceae), another co-dominant weedy annual following wildfire or disturbance in southern Idaho.	tumblemustard
<b>Sisymbrium loeselii</b> Rare, non-native	small tumbleweed mustard

- Thelypodium sagittatum** Native **arrow thelypody**  
**FALSE REPORT:** Specimens Wunner 757 (CRMO catalog number 1130) and Urban s. n. (CRMO catalog number 1131), which support one or more references, annotated to *Arabis glabra*. Probability of presence in this Park Unit of *T. sagittatum* is low (out of range and/or no suitable habitat).
- Thlaspi arvense** Common, non-native **pennycress**

#### CACTACEAE – CACTUS FAMILY

- Coryphantha sp.** Native **nipple cactus**  
**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. This plant was surveyed for but not found in June 2006. There is suitable habitat along the extreme north-northwest boundary north of Blizzard Road, and the author has observed plants just north of this Park Unit. If encountered, barrel cactii should never be collected from the wild. Probability of presence in this Park Unit of *Coryphantha* is medium.
- Opuntia erinacea** Native **grizzlybear pricklypear**  
*Opuntia xanthostemma*  
**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. Some consider this conspecific with *Opuntia polyacantha*. Probability of presence in this Park Unit of *O. erinacea* is medium.
- Opuntia polyacantha var. polyacantha** Uncommon, native **hairspine pricklypear**  
A highly variable species. The large flowers are striking, and can be lemon yellow, salmon, orange, pink, red, or pink-purple.
- Pediocactus simpsonii** Native **ICDC:STATE MONITOR** **Simpson's hedgehog cactus**  
**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. This plant was surveyed for but not found in June 2006. There is suitable habitat along the extreme north-northwest boundary north of Blizzard Road. Probability of presence in this Park Unit of *P. simpsonii* is low.

#### CAMPANULACEAE – BELLFLOWER FAMILY

- Campanula rotundifolia** Rare, non-native **bellflower; harebell**  
Found only in the Headquarters' work area, where apparently planted (K. Urban s.n.; CRMO catalog number 1020).
- Downingia bacigalupii** Rare, native **ICDC:STATE SENSITIVE** **Bacigalupi's downingia**  
Encountered only at Lava Lake, where it appears intermittently.
- Porterella carnosula** Rare, native **fleshy porterella**  
Encountered only at Lava Lake, where it appears intermittently.

#### CANNABACEAE – HEMP FAMILY

- Cannabis sativa** Non-native **marijuana**  
**SUSPECTED:** This plant is not known to occur in this Park Unit, but it may occur in small amounts at boundary peripheries where there is adequate water and access. Marijuana is a **CONTROLLED SUBSTANCE**, and is not to be approached or collected; rather, report possible sightings to a Law Enforcement Officer.

#### CAPRIFOLIACEAE – HONEYSUCKLE FAMILY

**Sambucus cerulea** Rare, native  
**Symphoricarpos oreophilus var. utahensis** Common, native  
*Symphoricarpos oreophilus* (CRMO references)

**elderberry**  
**Utah snowberry**

#### CARYOPHYLLACEAE – PINK FAMILY

**Arenaria congesta var. congesta** Uncommon, native

**ballhead sandwort**  
**prickly sandwort**

**Arenaria fendleri var. aculeata** Uncommon, native

*Arenaria aculeata*

**Arenaria franklinii var. franklinii** Uncommon, native

**Franklin's sandwort**

**Arenaria kingii var. glabrescens** Uncommon, native

**King's compact sandwort**

**Arenaria nuttallii** Park Unit nativity unknown

**brittle sandwort**

UNCONFIRMED: The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of *A. nuttallii* is medium.

**Cerastium glomeratum** Non-native

**sticky chickweed**

*Cerastium viscosum*

UNCONFIRMED: The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of *C. glomeratum* is low.

**Cerastium nutans** Uncommon, native

**longstem chickweed**

**Lychnis alba** Rare, non-native

**bladder campion**

**Silene douglasii** Uncommon, native

**Douglas's campion**

*Silene douglasii var. douglasii*

Material from this Park Unit does not lend itself to meaningful infraspecific segregation.

**Silene menziesii** Uncommon, native

**Menzies's campion**

**Stellaria longipes** Rare, native

**longstalk starwort**

#### CHENOPODIACEAE – GOOSEFOOT FAMILY

**Atriplex canescens var. canescens\*** Native

**fourwing saltbush**

UNCONFIRMED: Reliable Popovich field observation only – no voucher specimen. Sparingly observed in seeded and unseeded areas in the south half of this Park Unit. Also observed by P. Wolken in Paddelford Flat and along BLM-administered areas of the SE edge of the Wapi Flow. Collected (but not yet accessioned) by A. Rowland in 2006. This plant often exhibits poor retention in the community over time as it is quickly browsed away by domestic sheep. Most material in this Park Unit is native, but some BLM-administered areas have been seeded for wildfire or rangeland rehabilitation.

**Atriplex confertifolia** Native

**shadscale**

UNCONFIRMED: The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of *A. confertifolia* is high along the eastern peripheries.

**Chenopodium album** Uncommon, non-native

**lamb's quarters**



<b>Chenopodium botrys</b> Non-native	<b>Jerusalem Oak goosefoot</b>
UNCONFIRMED: The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of <i>C. botrys</i> is medium in disturbed areas of the foothills.	
<b>Chenopodium chenopodioides</b> Uncommon, native	<b>battered or low goosefoot</b>
<b>Chenopodium fremontii var. fremontii</b> Uncommon, native	<b>Fremont's goosefoot</b>
<b>Chenopodium humile</b> Rare, non-native	<b>marshland goosefoot</b>
<i>Chenopodium rubrum</i>	
<b>Chenopodium leptophyllum var. leptophyllum</b> Common, native	<b>narrowleaf goosefoot</b>
<b>Chenopodium leptophyllum var. subglabrum</b> Common, native	<b>smooth goosefoot</b>
<b>Chenopodium murale</b> Non-native	<b>nettleleaf goosefoot</b>
UNCONFIRMED: The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of <i>C. murale</i> is medium.	
<b>Eurotia lanata*</b> Native	<b>winterfat</b>
<i>Ceratoides lanata</i>	
<i>Krascheninnikovia lanata</i>	
UNCONFIRMED: The reference citation(s) has no supporting voucher specimen; reliable Popovich field observation only – no voucher specimen. Sparingly observed in seeded and unseeded areas in the NE boundary and south half of this Park Unit. This plant, like fourwing saltbush, often exhibits poor retention in the community over time as it is quickly browsed away by domestic sheep. Material in this Park Unit may be native, but some BLM-administered areas have been seeded for wildfire or rangeland rehabilitation.	
<b>Grayia spinosa</b> Rare, native	<b>spiny hopsage</b>
<i>Atriplex spinosa</i>	
<b>Halogeton glomeratus</b> Non-native	<b>halogeton</b>
UNCONFIRMED: Reliable Popovich field observation only – no voucher specimen. Observed along the NE and S edges of this Park Unit, but perhaps also occurring in hot, dry areas of the southern third. Once believed to be potentially problematic, this plant does not readily invade or persist in CRMO.	
<b>Kochia prostrata*</b> Uncommon, non-native	<b>forage kochia</b>
Sometimes seeded for rangeland rehabilitation; it remains to be seen if this non-native sub-shrub could unwantingly spread into native communities.	
<b>Kochia scoparia</b> Common, non-native	<b>kochia</b>
<b>Monolepis nuttalliana</b> Rare, native	<b>povertyweed</b>
<b>Salsola pestifer</b> Uncommon, non-native	<b>Russian thistle</b>
<i>Salsola iberica</i>	
<i>Salsola kali</i>	
<i>Salsola kali var. tenuifolia</i>	

*Salsola tragus*

This annual plant is well-known as a “tumbleweed” in Cowboy folklore but is actually not native to North America, having arrived and increased concomitantly with pioneers and cattle drives. Like tumbledustards, its skeletons can blow in strong winds and stack deeply along fencelines.

**CLUSIACEAE/HYPERICACEAE – ST. JOHNSWORT FAMILY**

**Hypericum perforatum** Non-native

**St. John’s wort**

**UNCONFIRMED:** Carol Blackburn (subcontractor to Popovich) reported a reliable field observation in summer 2006 (collection not yet verified) of this aggressive weedy plant, supposedly being actively treated, in one location along the Carey interface, but the Park Service has not yet confirmed this.

**Hypericum scouleri** Rare, native

**Scouler’s St. John’s wort**

≠*Hypericum formosum* misapplied

A locally rare native *Hypericum*, and not aggressive like its non-native ally *H. perforatum* (St. John’s wort).

**CONVOLVULACEAE – MORNINGGLORY FAMILY**

**Convolvulus arvensis** Rare, non-native **NOXIOUS**

**field bindweed or morning glory**

**CORNACEAE – DOGWOOD FAMILY**

**Cornus sericea var. sericea** Rare, native

**redosier dogwood**

*Cornus stolonifera var. stolonifera*

Sometimes collected locally outside this Park Unit for its red stems used in floral ornamentals or as wicker ware.

**CRASSULACEAE – STONECROP FAMILY**

**Sedum lanceolatum** Uncommon, native

**lanceleaf stonecrop**

≠*Sedum stenopetalum* misapplied

One of the few succulent plants in this Park Unit that is not in the cactus family (Cactaceae).

**CUSCUTACEAE – DODDER FAMILY**

**Cuscuta sp. (specimens sterile)** Rare, Park Unit nativity unknown

**dodder**

Rootless and essentially leafless achlorophyllous orangish parasites closely related to Convolvulaceae and found sprawling on other plants, dodders are often inconspicuous until good growing conditions, when they suddenly appear, as in the summers of 1993 and 2006. There are perhaps several species in this Park Unit, but fruit needed for positive identification are often absent. Dodder seems locally to prefer playa edges. Many but not all species in southern Idaho are native to the New World. It is said that this plant was a natural toilet paper used by pioneers.

## CYPERACEAE – SEDGE FAMILY

<b>Carex aquatilis</b>	Uncommon, native	<b>water sedge</b>
<b>Carex aurea</b>	Rare, native	<b>golden sedge</b>
	The golden orange color and rounded shape of the mature fruit of this locally rare small riparian sedge are unmistakable in the field.	
<b>Carex douglasii</b>	Common, native	<b>Douglas's sedge</b>
<b>Carex filifolia</b>	Uncommon, native	<b>threadleaf sedge</b>
<b>Carex hoodii</b>	Uncommon, native	<b>Hood's sedge</b>
<b>Carex lanuginosa</b>	Uncommon, native	<b>woolly sedge</b>
	<i>Carex pellita</i>	
<b>Carex microptera</b>	Uncommon, native	<b>smallwing sedge</b>
<b>Carex nebrascensis</b>	Native	<b>Nebraska sedge</b>
	<b>UNCONFIRMED:</b> The reference citation(s) has no supporting voucher specimen. The blue glaucous leaves of this common <i>Carex</i> are often said to be diagnostic, but other sedge species also have blue waxy leaves. Probability of presence in this Park Unit of <i>C. nebrascensis</i> is high.	
<b>Carex pachystachya</b>	Uncommon, native	<b>thickhead sedge</b>
<b>Carex petasata</b>	Uncommon, native	<b>Liddon's sedge</b>
<b>Carex praegracilis</b>	Uncommon, native	<b>slim sedge</b>
<b>Carex praticola</b>	Uncommon, native	<b>meadow sedge</b>
<b>Carex scoparia</b>	Native	<b>broom sedge</b>
	<b>FALSE REPORT:</b> Specimens Wunner 759 (CRMO catalog numbers 927 and 928), which supports one or more references, annotated to <i>Carex praticola</i> , and supporting specimen Urban s.n. (CRMO catalog number 929), which supports one or more references, annotated to <i>Carex douglasii</i> . Probability of presence in this Park Unit of <i>C. scoparia</i> is medium.	
<b>Carex siccata</b>	Native	<b>dryspike sedge</b>
	<b>UNCONFIRMED:</b> The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of <i>C. siccata</i> is medium.	
<b>Carex simulata</b>	Native	<b>Analogne sedge</b>
	<b>UNCONFIRMED:</b> The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of <i>C. simulata</i> is medium.	
<b>Carex vallicola</b>	Uncommon, native	<b>valley sedge</b>
<b>Eleocharis palustris</b>	Uncommon, native	<b>creeping spikerush; spikesedge</b>
<b>Eleocharis rostellata</b>	Native	<b>beaked spikerush</b>
	<b>UNCONFIRMED:</b> The reference citation(s) has no supporting voucher specimen; reliable Moseley field observation only – no voucher specimen. The conspicuous long, stout, ascending or nearly vertical aerial rhizomes of this locally rare spikerush make it rather unusual and immediately identifiable. It is apparently restricted to a small patch in the geothermal area at the head of Huff Creek (Idaho Conservation Data Center Thermal Springs Aquatic Community Occurrence Number 74; Robert Moseley, pers. comms. with Steve Popovich, 1994; Moseley 1995: <i>The Ecology of Geothermal Springs in South-Central Idaho</i> ).	
<b>Scirpus acutus</b>	Rare, native	<b>hardstem bulrush</b>

**Scirpus americanus** Rare, native

*Schoenoplectus americanus*

**chairmaker bulrush**

**Scirpus validus** Native

*Schoenoplectus tabernaemontani*

**softstem bulrush**

**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of *S. validus* is low.

#### ELAEAGNACEAE – OLEASTER FAMILY

**Elaeagnus angustifolia** Rare, non-native

**Russian olive**

Planted by some as an ornamental and considered by others as a nuisance tree, this non-native species is rare in this Park Unit and known only from one or two trees in the Carey interface area.

#### EUPHORBIACEAE – SPURGE FAMILY

**Chamaesyce glyptosperma** Rare, native

*Euphorbia glyptosperma*

**ribseed sandmat**

**Chamaesyce ocellata var. arenicola** Rare, native

*Euphorbia ocellata var. arenicola*

**Contura Creek sandwort**

**Euphorbia albomarginata** Rare, native

*Chamaesyce albomarginata*

**whitemargin sandwort**

**Euphorbia esula** Rare, non-native **NOXIOUS**

**leafy spurge**

This noxious weed is primarily located along the western edges of this Park Unit. It reproduces by seed and via an extensive spreading root system, and it thus difficult to control. The Park Service and BLM consider this a high management priority. The milky sap of this plant can burn the skin and eyes, and should not be touched.

#### FABACEAE/LEGUMINOSAE – LEGUME or PEA FAMILY

**Astragalus agrestis** Uncommon, native

*Astragalus dasyglottis*

**field milkvetch**

**Astragalus atratus var. inseptus** Native **ICDC:STATE MONITOR IDAHO ENDEMIC** **Camas or mourning (local) milkvetch**

*Astragalus atratus* (CRMO references apply to *Astragalus atratus var. inseptus*)

**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. A wiry prostrate milkvetch with reddish-mottled thin green fruit generally restricted to heavy soil sites, this plant endemic to adjacent areas west and south of CRMO is expected in this Park Unit along the lower-elevation western peripheries, especially at Brass Cap Kipuka. It is possible that other varieties occur in the northeastern boundaries. This plant has been well inventoried across its range by Popovich. The geographic common name refers to the Camas Prairie, Idaho, west of this Park Unit, where the plant's type site is located. Variety *inseptus* passes, perhaps imperceptibly, into variety *owyheensis* in and near Hagerman Fossil Beds National

Monument southwest of Craters of the Moon. Probability of presence in this Park Unit of *A. atratus* var. *inseptus* is medium in Brass Cap Kipuka and similar habitats.

- Astragalus calycosus var. calycosus** Rare, native **Torrey's milkvetch**  
One of the Park Unit's smaller, more delicate *Astragalii*, often found near playa edges.
- Astragalus canadensis var. brevidens** Uncommon, native **shorttooth Canada milkvetch**
- Astragalus cibarius** Common, native **browse milkvetch**
- Astragalus convallarius var. convallarius** Uncommon, native **lesser rushy milkvetch**  
The wiry erect-ascending habit of this locally rare milkvetch make it an interesting plant.
- Astragalus curvicarpus** Rare, native **curvepod milkvetch**
- Astragalus filipes** Common, native **basalt milkvetch**  
*Astragalus stenophyllus*  
A very common *Astragalus*, and often showing strong regrowth following wildfire.
- Astragalus geyeri var. geyeri** Native **Geyer's milkvetch**  
**UNCONFIRMED:** Reliable Popovich field observation only – no voucher specimen. Slender and erect, the only annual milkvetch in this Park Unit has been observed only at Round Knoll Kipuka in the late 1990's, but this fairly distinctive plant probably occurs elsewhere.
- Astragalus iodanthus** Uncommon, native **Humboldt River milkvetch**
- Astragalus lentiginosus var. lentiginosus** Common, native **speckledpod milkvetch**  
*Astragalus lentiginosus* has many varieties, two of which are represented in this Park Unit. They are perhaps the most abundant *Astragalii* in CRMO.  
Like *Astragalus filipes*, they often show strong regrowth following wildfire.
- Astragalus lentiginosus var. salinus** Common, native **salty loco milkvetch**
- Astragalus malacus** Rare, native **shaggy milkvetch**
- Astragalus miser var. tenuifolius** Rare, native **timber milkvetch**
- Astragalus obscurus** Rare, native **arcane milkvetch**
- Astragalus oniciformis** Uncommon, native **ICDC:GLOBAL PRIORITY 2 IDAHO ENDEMIC** **Picabo milkvetch**  
A globally rare species much studied by Popovich and endemic to this Park Unit and nearby private and BLM-administered land in Idaho (Moseley and Popovich 1995: *The Conservation Status of Picabo Milkvetch (Astragalus Oniciformis Barneby)*), Picabo milkvetch can appear nearly extirpated in lean years and locally abundant in favorable years. It can increase its sprawling habit 3-fold in size in good growing conditions and after wildfire. Several rare pollinators that may need to nest in lava flows have been observed on this species (Popovich and Pyke 1997: *In Greenlee (ed.), Proceedings, First Conference on Effects on Rare and Endangered Species and Habitats, Coeur d'Alene, Idaho, November 13-16, 1995*) which could possibly have implications in noting that many populations occur near lava flows. The few sites east of the Great Rift lava flows do not appear genetically different from those west of the flows, giving no evidence of formerly-speculated historic genetic isolation [Alexander, Liston and Popovich 2004: *Genetic Diversity of the Narrow Endemic Astragalus Oniciformis Fabaceae, American J. Botany* 91(12): 2004-2012]. This milkvetch prefers sandy soils of the Snake River Plain, and seems to tolerate non-native *Agropyron cristatum sensu amplo* bunchgrass seedings, invasion by the aggressive non-native annual grass *Bromus tectorum*, and substantial livestock grazing. Once considered a Candidate for listing as Threatened or Endangered under the Endangered Species Act, its viability seems secure in the short-term, but monitoring should continue to observe long-term population trends, pollinator

interactions, and continued habitat alteration. The common name refers to the town of Picabo, Idaho, just west of this Park Unit, where the species' type site is located.

- Astragalus purshii var. glareosus** Common, native **woollypod milkvetch**  
The white-woolly fuzziness of mature fruit of all *Astragalus purshii* varieties is conspicuous. The related endemic variety *ophiogenes* is a rare plant tracked by the Idaho Conservation Data Center, and occurs in stony-sandy hot soils of the Snake River Trench and perhaps within Hagerman Fossil Beds National Monument to the west of CRMO. It has reddish, more hirsute pods on often more erect stems. There is a remote possibility that it may occur in sandy soils along the extreme southern periphery of this Park Unit.
- Astragalus purshii var. purshii** Uncommon, native **woollypod milkvetch**  
**Astragalus scopulorum** Park Unit nativity unknown **Rocky Mountain milkvetch**  
UNCONFIRMED: The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of *A. scopulorum* is low.
- Astragalus terminalis** Rare, native **railhead milkvetch**  
**Astragalus whitneyi var. confuses** Rare, native **balloonpod or conelike milkvetch**  
The lustrous golden pods of overmature fruit are remarkable.
- Caragana arborescens** Rare, non-native **Siberian peashrub**  
A non-native ornamental shrub known only from the Crystal Ice Cave historic development site, where undoubtedly planted.
- Glycyrrhiza lepidota** Rare, native **wild licorice**  
**Lotus tenuis** Rare, non-native **narrowleaf bird's foot trefoil**  
**Lupinus arbustus** Common, native **spurred lupine**  
Other species of *Lupinus*, *L. subcarnosus/texensis* (bluebonnets), are the State Flower of Texas.
- Lupinus argenteus var. argenteus** Common, native **silvery lupine**  
*Lupinus tenellus*
- Lupinus argenteus var. heteranthus** Common, native **silvery lupine**  
Placed under *Lupinus caudatus* by some
- Lupinus argenteus var. holosericeus** Common, native **holo lupine**  
**Lupinus argenteus var. parviflorus** Uncommon, native **lodgepole lupine**  
*Lupinus parviflorus*
- Lupinus argenteus var. utahensis** Uncommon, native **silvery lupine**  
Placed under *Lupinus caudatus* by some
- Lupinus caudatus** Uncommon, native **tailcup lupine**  
**Lupinus lepidus var. sellulus** Native **prairie lupine**  
*Lupinus sellulus var. sellulus*  
UNCONFIRMED: The only specimen (Atwood 28279; CRMO catalog number 3632) was collected in rather out-of-place habitat, and its identification should be re-examined. Variety *sellulus* is known to occur in stony ephemerally-moist soils in Macon Flat of the Camas Prairie west of this Park Unit. Probability of presence in this Park Unit of *L. lepidus var. sellulus* is low (possible in a few microsites of suitable habitat north of HWY 20/26/93).

<b>Lupinus leucophyllus</b> Common, native	<b>velvet lupine</b>
<b>Lupinus polyphyllus var. burkei</b> Uncommon, native <i>Lupinus burkei</i>	<b>largeleaf lupine</b>
<b>Lupinus polyphyllus var. humicola</b> Uncommon, native	<b>largeleaf lupine</b>
<b>Lupinus polyphyllus var. prunophilus</b> Uncommon, native <i>Lupinus wyethi</i> (CRMO reference may apply to <i>L. polyphyllus var. humicola</i> ; no relectotypification)	<b>Wyeth's lupine</b>
<b>Lupinus sericeus</b> Common, native	<b>silky lupine</b>
<b>Medicago falcata</b> Rare, non-native	<b>yellow alfalfa</b>
<b>Medicago lupulina</b> Rare, non-native	<b>black medic</b>
<b>Medicago sativa*</b> Uncommon, non-native Often used in Emergency Fire Rehabilitation, this crop species has been seeded in BLM-administered areas as a nitrogen fixer, and usually falls out of the community in a few years due to insufficient moisture. Cultivars used locally include 'spreader' and 'Ladak.'	<b>alfalfa</b>
<b>Melilotus alba*</b> Rare, non-native Formerly sometimes seeded as a highway roadside mix, but also appearing as waif.	<b>white sweetclover</b>
<b>Melilotus officinalis*</b> Uncommon, non-native Formerly widely seeded as a highway roadside mix, but also appearing as waif.	<b>yellow sweetclover</b>
<b>Onobrychis viciifolia*</b> Uncommon, non-native Often used in Emergency Fire Rehabilitation, this species has been seeded in BLM-administered areas. Cultivars used locally include 'Eski.'	<b>sainfoin</b>
<b>Oxytropis lagopus var. lagopus</b> Rare, native A handsome locoweed of the greater-elevation foothills, the fuzzy fruit to some resembling a hare's foot. Curiously, lower-elevation locoweeds are expected but have not been documented in CRMO.	<b>hare's foot locoweed</b>
<b>Psoraleidium lanceolatum</b> Uncommon, native <i>Psoralea lanceolata</i> Restricted to sandy soils in the southern portion of this Park Unit, where it can be locally abundant.	<b>dune scurfpea</b>
<b>Trifolium cyathiferum</b> Rare, native	<b>cup clover</b>
<b>Trifolium gymnocarpon</b> Native <b>UNCONFIRMED:</b> The reference citation(s) has no supporting voucher specimen. A collection with insufficient plant parts for identification from June 2006 north of HWY 20/26/93 (Popovich 8376; not yet cataloged in the CRMO database) may be this plant. Probability of presence in this Park Unit of <i>T. gymnocarpon</i> is high at Brass Cap Kipuka and a few microsites along and north of HWY 20/26/93.	<b>hollyleaf clover</b>
<b>Trifolium hybridum</b> Uncommon, non-native	<b>alsike clover</b>
<b>Trifolium pratense</b> Non-native <b>UNCONFIRMED:</b> The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of <i>T. pratense</i> is medium. This plant is the State Flower of Vermont. Interestingly, it is not native to North America, being naturalized from Europe.	<b>red clover</b>
<b>Trifolium repens</b> Uncommon, non-native	<b>Dutch clover</b>

**Trifolium variegatum** Rare, native whitetip clover  
**Trifolium wormskioldii var. wormskioldii** Rare, native cow clover

#### FUMARIACEAE – FUMITORY FAMILY

**Dicentra uniflora** Rare, native **dicentra; steer's head; wild bleedingheart (local)**  
This locally rare, beautiful small native bleeding heart is easily overlooked, being low to the ground and blooming in spring before most wildflower enthusiasts are in the field. Collected only in the foothills north of HWY 20/26/93, but to be expected elsewhere in the north half of this Park Unit.

#### GENTIANACEAE – GENTIAN FAMILY

**Gentiana affinis** Rare, native **pleated gentian**  
Collected only once (Popovich 6423; CRMO catalog number 2668) from the North Unit; this should be looked for elsewhere.

#### GERANIACEAE – GERANIUM FAMILY

**Erodium cicutarium** Uncommon, non-native **filaree; stork's bill**  
The mature fruit of this plant are aptly named "stork's bill."  
**Geranium viscosissimum var. incisum** Common, native **sticky purple geranium**  
*Geranium viscosissimum var. nervosum*  
A native geranium up to about 1 meter tall and beautiful in its own right, with delicate pinkish flowers, but not as showy as its horticultural cousins.

#### GROSSULARIACEAE – CURRANT OR GOOSEBERRY FAMILY

**Ribes aureum** Uncommon, native **golden currant**  
**Ribes cereum var. inebrians** Common, native **sqaw or wax current**  
*Ribes cereum var. pedicellare*  
*Ribes inebrians*  
**Ribes hudsonianum var. petiolare** Rare, native **Western black currant**  
**Ribes viscosissimum** Native **sticky currant**  
**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of *R. viscosissimum* is low.

#### HYDRANGEACEAE – HYDRANGAEA FAMILY

**Philadelphus lewisii** Common, native **Lewis's mock orange; syringa**  
Restricted to lava fields, the showy snow-white fragrant flowers contrasted against the black tones of stark lava make this 1-2 meter tall shrub a strikingly beautiful plant. For good reason, this is the State Flower of Idaho.



## HYDROPHYLLACEAE – WATERLEAF FAMILY

- Hesperochiron pumilus** Uncommon, native **dwarf hesperochiron**  
*Hesperochiron* sp. (reference likely applies to *H. pumilus*, not *H. californicus*)  
Locally rare and an early spring bloomer in vernal moist swales, this native perennial herb is often noted as having flowers similar in appearance to cultivated strawberries. Its cousin *Hesperochiron californicus* of southwest Idaho probably does not occur in this Park Unit, although the morphological distinction between these species can be blurred.
- Hydrophyllum capitatum var. capitatum** Common, native **ballhead waterleaf**  
**Nama densum** Rare, native **mat nama**  
**Nemophila breviflora** Uncommon, native **basin nemophila**  
A rather unusual annual hydrophyll usually found in aspen stands, its numbers can vary widely from one growing season to the next.
- Phacelia glandulifera** Uncommon, native **sticky phacelia**  
*Phacelia ivesiana* var. *glandulifera*
- Phacelia hastata var. alpina** Common, native **silverleaf phacelia; scorpionweed (local)**  
Material from this Park Unit can without undue difficulty be segregated from var. *hastata* into var. *alpina*, but some submit that var. *alpina* might be better left accommodated under var. *hastata*.
- Phacelia hastata var. hastata** Common, native **silverleaf phacelia; scorpionweed (local)**  
*Phacelia leucophylla*
- Phacelia heterophylla var. heterophylla** Common, native **varileaf phacelia**  
**Phacelia incana** Native **hoary phacelia**  
**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. Reported from Pratt Butte (Robert Moseley and Chris Murphy, pers. comms. with Steve Popovich, 1999), this annual plant can have a yellowish flower, unusual for regional phacelias. Probability of presence in this Park Unit of *P. incana* is medium.
- Phacelia inconspicua** Rare, native **ICDC:GLOBAL PRIORITY 1** **obscure phacelia**  
A truly inconspicuous plant, this small annual herb is the most globally rare vascular plant occurring in this Park Unit, with only a handful of sites known worldwide limited to occurrence in a few States in the Western U.S. Within CRMO, it is known to occur only at Pratt Butte (Idaho Conservation Data Center Element Occurrences 002) and a few localized sites in the North Unit (Idaho Conservation Data Center Element Occurrences 006 and possibly 005; Popovich 2001: *Phacelia Inconspicua* Resurvey, Spring, 2001, *Craters of the Moon National Monument*). The site on the boundary of the North Unit and possibly wholly outside of CRMO (EO 005) was first documented by N. Duane Atwood as exhibiting 1,000-10,000 plants, but in recent years has only contained at most 71, with estimates to 200 (Popovich 2001). The reason for apparent decline over time is unclear: normal fluctuation of above ground expression, habitat alteration due to canopy closure over time or time since recent wildfire (a fire may have burned the occupied area causing a release of plants sometime before Atwood's visit), and cattle use in the area have all been postulated. Additional inventories for this plant should be conducted from the north Laidlaw Park and Pratt Butte areas northward, especially in the foothills north of Highway 20/26/93. Site EO 005 was cursorily visited in June 2006 by Atwood, Popovich and Wolken, and exhibited at least 50 plants, some present farther uphill on the hillsides northwest from the aspen stand than observed since the original report.
- Phacelia linearis** Native **linearleaf phacelia**  
**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of *P. linearis* is medium.

### IRIDACEAE – IRIS FAMILY

- Iris missouriensis** Rare, native **Western blueflag; Rocky Mountain or wild iris**  
This Park Unit's native plant holds true to the beauty known of irises. Iris is the State Cultivated Flower of Tennessee.
- Sisyrinchium demissum** Rare, native **dwarf blue-eyed grass**  
**Sisyrinchium idahoense** Rare, native **Idaho blue-eyed grass**

### JUNCACEAE – RUSH FAMILY

- Juncus arcticus** Uncommon, native **arctic rush**  
**Juncus balticus** Native **Baltic rush**  
**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. Interestingly, this common interruptedly circumboreal species has not been collected from within this Park Unit. Probability of presence in this Park Unit of *J. balticus* is high.
- Juncus bufonius** Uncommon, native **toad rush**  
**Juncus ensifolius** Uncommon, native **swordleaf rush**  
**Juncus tenuis** Uncommon, native **slender rush**  
**Juncus triglumis** Uncommon, native **threehulled rush**

### JUNCAGINACEAE – ARROWGRASS FAMILY

- Triglochin maritimum** Rare, native **arrowgrass**  
An interesting plant of alkaline meadows, and sometimes causally mistaken as a member of the grass family (Poaceae).

### LAMIACEAE/LABIATAE – MINT FAMILY

- Agastache urticifolia** Common, native **horsemint; nettleleaf giant hyssop**  
**Marrubium vulgare** Rare, non-native **horehound**  
**Mentha arvensis var. glabrata** Rare, native **field or wild mint**  
*Mentha arvensis var. canadensis*
- Monardella odoratissima** Native **mountain monardella**  
**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of *M. odoratissima* is medium.
- Salvia aethiopsis** Non-native **WEED SPECIES OF CONCERN** **Mediterranean sage**  
**ENCROACHING:** Known to occur nearby (and with an unconfirmed observation in 2003 and perhaps since then eradicated at Huff Creek Corrals about 0.5 mile west of the Park Unit), this plant is to be expected.
- Scutellaria antirrhinoides** Uncommon, native **nose skullcap**

## LEMNACEAE – DUCKWEED FAMILY

**Lemna minor** Rare, native  
**Lemna minuta** Rare, native

**lesser duckweed**  
**least duckweed**

## LILIACEAE – LILY FAMILY

(some place *Allium* in Alliaceae, *Calochortus* in Calochortaceae)

**Allium aaseae** Presumably non-native **ICDC:GLOBAL PRIORITY 3 IDAHO ENDEMIC** **Aaseae's onion; south Idaho onion**

**UNCONFIRMED:** A globally rare endemic species restricted to the foothills in and near Boise, Idaho. The only collection from this Park Unit should be re-verified by an expert as to correct identification. Reports refer to specimen R. J. Davis 97, originally determined as *Allium anceps* by Ray J. Davis, annotated to *Allium aaseae* by Marion Ownbey in 1947. Ownbey annotation label reads: "*Allium aaseae*, not typical." Upon inspection (!RM, 8 AUG 2003), Steve Popovich was unable to confirm or deny identification of the specimen. This record and/or its original identification as *Allium anceps* may become a **FALSE REPORT** once re-annotated. Probability of presence in this Park Unit of *A. aaseae* is low (out of range).

**Allium acuminatum** Common, native

**tapertip onion**

**Allium anceps** Native **ICDC:STATE PRIORITY 2**

**twinleaf onion**

**UNCONFIRMED:** A globally rare species restricted to Western U.S. States. Reports refer to INHP Element Occurrence 004 for *Allium anceps*, based upon the original identification of specimen Davis 97 (!RM) as discussed under *Allium aaseae* above. This record and/or *Allium aaseae* may become a **FALSE REPORT** once re-annotated. *Allium anceps* is known to occur just east of the southeast peripheries of CRMO, and the probability of presence in this Park Unit of *A. anceps* is low along the southeast peripheries.

**Allium brandegeei** Uncommon, native

**Brandegee's onion**

**Allium cernuum** Native

**nodding onion**

**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of *A. cernuum* is low.

**Allium geyeri var. geyeri** Uncommon, native

**Geyer's onion**

**Allium nevadense var. nevadense** Uncommon, native

**Nevada onion; pig's tail onion (local)**

The leaves often form a coiled tip upon maturity, reminiscent to some of a pig's tail.

**Allium parvum** Native

**small onion**

**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of *A. parvum* is low.

**Allium simillimum** Native

**simil onion**

**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of *A. simillimum* is medium.

**Allium textile** Uncommon, native

**textile onion**

**Allium tolmiei var. tolmiei** Native

**Tolmie's onion**

**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen; also, specimen Wunner 634 (CRMO catalog number not assigned) is missing; and **false report:** Specimen Griffith s.n. (CRMO catalog number 967), which supports one or more references, annotated to *A. brandegeei*. Probability of presence in this Park Unit of *A. tolmiei var. tolmiei* is medium.

**Calochortus bruneanus** Common, native

**Bruneau mariposa lily**

<b>Calochortus eurycarpus</b>	Common, native	<b>bigpod mariposa lily</b>
<b>Calochortus macrocarpus</b>	Uncommon, native	<b>greenband or sagebrush mariposa lily</b>
<b>Calochortus nitidus</b>	Park Unit nativity unknown	<b>broadfruit mariposa lily</b>
	UNCONFIRMED: The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of <i>C. nitidus</i> is low.	
<b>Calochortus nuttallii</b>	Uncommon, native	<b>sego lily</b>
	All sego lilies in this Park Unit have remarkable flowers. This species is the State Flower of Utah.	
<b>Camassia quamash</b>	Native	<b>camas</b>
	UNCONFIRMED: Encountered in June 2006 at the inlet to Lava Lake (Popovich 8387; not yet cataloged in CRMO database) and in 2002 in a meadow abutting the northwestern boundary (Atwood 28688; CRMO catalog number 3248); both sites may be just outside the Park Unit's boundary. Native Americans harvested for food the abundant camas root found in the Camas Prairie west of this Park Unit. Lewis & Clark of the expedition by that name both made extensive journal entries about this plant, including cooking methods. Describing the plant's beauty, Lewis wrote "the quawmash is now in blume and from the colour of its bloom at a short distance it resembles lakes of fine clear water, so complete is this despection that on first sight I could have swoarn it was water." The Lewis & Clark Expedition described at least 85 plant species never before reported to science in the United States. Probability of presence in this Park Unit of <i>C. quamash</i> is medium.	
<b>Fritillaria atropurpurea</b>	Common, native	<b>leopard or spotted lily</b>
	This lily with nodding chocolate mottled flowers exhibiting a malodorous smell has an unmistakable six-pointed star-like blocky fruit.	
<b>Fritillaria lanceolata</b>	Non-native	<b>checker lily</b>
	FALSE REPORT: No supporting vouchers. References must surely apply to mis-identifications of <i>Fritillaria atropurpurea</i> . Probability of presence in this Park Unit is remote (out of range: a plant of the Pacific Northwest). A reference specimen collected from Olympic National Park (Popovich 7164) resides in the CRMO working herbarium (CRMO catalog number 2611).	
<b>Fritillaria pudica</b>	Common, native	<b>yellow fritillary; yellowbells</b>
	The striking delicate yellow pendulous flowers make this one of the most beautiful early spring blooming plants of the Snake River Plain, and among the author's favorites.	
<b>Smilacina racemosa</b>	Uncommon, native	<b>feathery false lily of the valley</b>
	<i>Maianthemum racemosum</i>	
<b>Smilacina stellata</b>	Uncommon, native	<b>false Solomon's seal</b>
	<i>Maianthemum stellatum</i>	
<b>Veratrum californicum</b>	Uncommon, native	<b>California false hellebore</b>
	<i>Veratrum californicum</i> var. <i>californicum</i> (CRMO material)	
	<i>Veratrum tenuipetalum</i> (some maintain this is a separate species restricted to Colorado and Wyoming)	
	This plant can be poisonous to livestock, and its dominance often indicates heavy grazing.	
<b>Zigadenus elegans</b>	Common, native	<b>mountain deathcamas</b>
	Like larkspur (Ranunculaceae: <i>Delphinium</i> ), species of <i>Zigadenus</i> are poisonous to livestock.	
<b>Zigadenus paniculatus</b>	Common, native	<b>foothill deathcamas</b>
<b>Zigadenus venenosus</b>	Common, native	<b>meadow deathcamas</b>

## LINACEAE – FLAX FAMILY

**Linum perenne\*** Uncommon, non-native

**blue flax**

≠*Linum lewisii* misapplied to ‘Appar’ blue flax

*Linum perenne* ssp. *lewisii* misapplied to ‘Appar’ blue flax

Often used in Emergency Fire Rehabilitation in southern Idaho, this species with beautiful blue delicate flowers has been seeded in BLM-administered areas. Cultivars used locally include only ‘Appar’ to date. ‘Appar’ blue flax (*Linum perenne*) is a release selected for vigor, beauty, and competitiveness from seed originally collected in the Black Hills region of South Dakota. Released in 1980 as native flax (*Linum lewisii*, Lewis’s flax), it was later determined to be a naturalized introduced species of Eurasian origins. Flax is native to supalpine meadows to the northwest of this Park Unit in the Sawtooth Mountains, but all material in CRMO is likely the result of ‘Appar’ seedings or waif, and is therefore non-native. Native Lewis’s flax was once placed under *Linum perenne*, but is now recognized as distinct from Eurasian material based on reproductive differences. *Linum perenne* is a short-lived (5-7 years) perennial, often only weakly if at all persistent over time in local seedings. In a drought year a few years following seeding, plants in BLM fire rehabilitation study plots near CRMO (EFR “WSA II”) experienced underground root herbivory by burrowing rodents of almost all plants, resulting in near complete mortality. The following year, only meager recruitment from seed in the seedbank was witnessed. It is not weedy.

## LOASACEAE – BLAZINGSTAR FAMILY

**Mentzelia albicaulis** Common, native

**whitestem blazingstar or stickleaf**

**Mentzelia densa** Non-native

**Royal Gorge blazingstar**

**FALSE REPORT:** No supporting vouchers. References likely refer to mis-identifications of another *Mentzelia* species occurring in this Park Unit.

Probability of presence in this Park Unit of *M. densa* is remote (out of range: Colorado endemic).

**Mentzelia dispersa** Uncommon, native

**scattered blazingstar**

*Acrolasia dispersa*

**Mentzelia laevicaulis** Uncommon, native

**smoothstem blazingstar**

*Nuttallia acuminata*

All blazing star species in this Park Unit have beautiful yellow flowers, but this one is the most showy. The flowers are most readily observed in the morning or evening, and are particularly striking against the dark cinders of lava gardens.

**Mentzelia multiflora** Non-native

**Adonis or desert blazingstar**

**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. The old CRMO reference is presumed to refer to *Mentzelia laevicaulis* (= *Nuttallia acuminata*) because the first name cited takes precedence: "*Nuttallia acuminata* (*Mentzelia multiflora*)." Probability of presence in this Park Unit of *M. multiflora* is low (out of range).

## MALVACEAE – MALLOW FAMILY

**Liamna rivularis** Rare, native

**streambank wild hollyhock**

The soft lavender (rarely white) hue of the flower of this native plant is sometimes remarked, and somewhat resembles familiar garden hollyhocks.

**Malva neglecta** Uncommon, non-native

**cheeseweed; mallow**

**Sidalcea oregana var. oregana** Uncommon, native **Oregon checkerbloom**  
**Sphaeralcea munroana**\*? Common, native **Munroe's globemallow**  
 Although sometimes seeded for range rehabilitation in BLM-administered areas, all occurrences of this plant in this Park Unit are probably native.

**OLEACEAE – OLIVE FAMILY**

**Fraxinus sp.** (specimen inadequate to determine species) Rare, non-native **ash**  
 Encountered only once, in the Carey interface. Ashes often occur as volunteers along riparian corridors.  
**Syringa sp.** (specimen inadequate to determine species) Rare, non-native **lilac**  
 A few shrubs have been planted in the residence housing backyards; they are probably common lilac (*S. vulgaris*).

**ONAGRACEAE – EVENING PRIMROSE FAMILY**

**Camissonia andina** Common, native **Blackfoot River evening-primrose**  
*Oenothera andina*  
**Camissonia breviflora** Rare, native **fewflower evening-primrose**  
*Oenothera breviflora*  
**Camissonia minor** Uncommon, native **small evening-primrose**  
*Oenothera minor*  
**Camissonia parvula** Rare, native **Lewis River suncup or evening-primrose**  
*Oenothera parvula*  
**Camissonia subacaulis** Native **diffuseflower evening-primrose**  
*Oenothera heterantha*  
*Oenothera subacaulis*  
**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen: specimen Wunner 780 (CRMO catalog number not assigned) is missing. Probability of presence in this Park Unit of *C. subacaulis* is medium.  
**Camissonia tanacetifolia** Uncommon, native **tansyleaf evening-primrose**  
*Oenothera tanacetifolia*  
**Circaea alpina** Rare, native **alpine circaea**  
 A native rhizomatous perennial herb with a somewhat strange habit, it is often not immediately recognized as being in the Onagraceae family without examination of the small, notched, white-petaled flowers.  
**Clarkia rhomboidea** Rare, native **broadleaf clarkia**  
 Named after William Clark of the Lewis & Clark Expedition, this herb has beautiful regal flowers.

<b>Epilobium alpinum</b> Native	<b>pimpernel willowherb</b>
<i>Epilobium anagallidifolium</i>	
UNCONFIRMED: The reference citation(s) has no supporting voucher specimen: specimen Wunner 945 (CRMO catalog number not assigned) is missing. Probability of presence in this Park Unit of <i>E. alpinum</i> is medium.	
<b>Epilobium angustifolium</b> Rare, native	<b>fireweed</b>
<i>Chamerion angustifolium</i>	
Sparingly present in the foothills and in lava crevices or even on hot, dry lava as occurs at Lava Lake (Popovich 8382; not yet cataloged in CRMO database). Common in the nearby Sawtooth Mountains, this plant has showy deep pink flowers, and is able to re-establish well following disturbance.	
<b>Epilobium brachycarpum</b> Uncommon, native	<b>autumn willowherb</b>
<i>Epilobium paniculatum</i> var. <i>paniculatum</i>	
<b>Epilobium ciliatum</b> var. <b>ciliatum</b> Uncommon, native	<b>fringed willowherb</b>
<b>Epilobium ciliatum</b> var. <b>glandulosum</b> Uncommon, native	<b>fringed willowherb</b>
<i>Epilobium glandulosum</i> var. <i>glandulosum</i>	
<b>Epilobium densiflorum</b> Rare, native	<b>denseflower willowherb</b>
<i>Boisduvalia densiflora</i>	
<b>Epilobium halleanum</b> Uncommon, native	<b>glandular willowherb</b>
<b>Epilobium pygmaeum</b> Rare, native	<b>smooth willowherb</b>
<i>Boisduvalia pygmaea</i>	
<b>Gayophytum decipiens</b> Uncommon, native	<b>deceptive groundsmoke</b>
Many <i>Gayophytum</i> species appear abundantly the first few growing seasons following wildfire, more so than <i>Allium acuminatum</i> and <i>Lithophragma</i> species, which can also be much expressed after fire.	
<b>Gayophytum diffusum</b> var. <b>strictipes</b> Common, native	<b>spreading groundsmoke</b>
<i>Gayophytum diffusum</i> ssp. <i>parviflorum</i>	
<i>Gayophytum lasiospermum</i>	
<i>Gayophytum nuttallii</i> (sensu numerous authors and applied here, but lectotypification dictates synonymy with <i>G. humile</i> )	
<b>Gayophytum humile</b> Uncommon, native	<b>dwarf groundsmoke</b>
<b>Gayophytum racemosum</b> Uncommon, native	<b>blackfoot groundsmoke</b>
<b>Gayophytum ramosissimum</b> Common, native	<b>muchbranched groundsmoke</b>
<b>Oenothera caespitosa</b> var. <b>caespitosa</b> Uncommon, native	<b>tufted evening-primrose</b>
<i>Oenothera caespitosa</i> has often-remarked beautiful showy white flowers that quickly wither and fade pinkish. Material from this Park Unit does not always lend itself to meaningful infraspecific segregation.	
<b>Oenothera caespitosa</b> var. <b>marginata</b> Common, native	<b>tufted evening-primrose</b>

**Oenothera elata** Rare, native **Hooker's evening-primrose**  
*Oenothera elata* var. *hirsutissima* (CRMO material)  
*Oenothera hookeri* var. *hirsutissima* (CRMO material)  
As per *Intermountain Flora* (Vol. 3A, 1997), material from this Park Unit may belong to *Oenothera hookeri* var. *hirsutissima*, also called *Oenothera elata* var. *hirsutissima*, if recognizing infraspecific assignments.

**Oenothera pallida ssp. pallida var. pallida** Uncommon, native **pale evening-primrose**  
*Oenothera pallida* ssp. *pallida*  
*Oenothera pallida* var. *pallida*  
A relatively more shrubby evening-primrose of sandy habitats along the southern edge of this Park Unit.

### ORCHIDACEAE – ORCHID FAMILY

Orchids of this Park Unit are small-flowered and delicate. Orchids should be admired but never collected.

**Corallorrhiza maculata** Rare, native **spotted coralroot**  
Rare and occurring in forests in the North Unit.

**Corallorrhiza striata** Rare, native **striped coralroot**  
Rare and occurring in forests in the North Unit.

**Habenaria dilatata var. dilatata** Rare, native **tall white northern bog orchid**  
*Limnorchis dilatata* var. *dilatata*  
*Platanthera dilatata* var. *dilatata*

Rare and occurring in seeps in the North Unit. This plant reportedly has an intense, spicy odor, which has gone unnoticed by the author.

**Habenaria hyperborea** Rare, native **northern bog orchid**  
*Limnorchis hyperborea*  
*Platanthera hyperborea*  
Rare and occurring in seeps in the North Unit.

### OROBANCHACEAE – BROOMRAPE FAMILY

Broomrapes are small annual or perennial root parasites that lack chlorophyll, hence one of their common names, “cancer root,” and are never abundant. When observed, their interesting habit and pale fleshy stems usually draw attention. The flower shapes remind one of penstemons or *Gratiola* (Schrophulariaceae). They are often found in communities exhibiting sagebrush (*Artemisia*).

**Orobanche corymbosa** Rare, native **flat-top broomrape**  
≠*Orobanche californica* of Intermountain authors, misapplied  
*Orobanche californica* var. *corymbosa*



**Orobanche fasciculata** Rare, native

**clustered broomrape**

The most common broomrape in this Park Unit, it typically has purplish stems and flowers, while an occasional all-yellow individual is sometimes observed (but see comment under *Orobanche fasciculata forma lutea* below). Its cousin *O. pinorum*, rare in Idaho, does not occur in this Park Unit.

**Orobanche fasciculata forma lutea** Rare, native

**clustered broomrape**

*Orobanche fasciculata* var. *lutea*

This form with all yellowish stems and flowers has been collected by the author within the remote Purple Butte Kipuka (Popovich 7700; CRMO catalog number 2590), in which the entire population is yellow, suggesting a perhaps not inconsequential isolation of expression of a recessive genetic trait.

Therefore, recognition of form *lutea* in this Park Unit is retained.

### PLANTAGINACEAE – PLANTAIN FAMILY

**Plantago patagonica** Uncommon, native

**woolly Indianwheat**

### POACEAE/GRAMINEAE – GRASS FAMILY

Treatment by Michael Curto (Herbarium OBI) and Steve J. Popovich

*Poa* presentation reviewed by Robert J. Soreng (Smithsonian Institution)

Grass taxonomy is exceedingly complex, and is currently undergoing substantial reorganization. *Poa* (bluegrass) species and members of the tribe Triticeae (e.g., *Agropyron*, wheatgrass, and *Elymus*, wildrye) are particularly challenging, and it is interesting to note that the breeding systems of *Poa* are among the most complex of any plant genus in the world. In addition to listing all synonyms appearing in all Park Unit literature references, we have attempted to include, without overwhelming the causal reader, other synonyms that may be useful when encountering grass names applicable to this locale.

**Agropyron cristatum sensu amplo\*** Common, non-native

**crested wheatgrass (broad sense)**

≠*Agropyron cristatum sensu stricto* misapplied to Idaho's seeded material

CRESTED WHEATGRASS

≠*Agropyron desertorum* misapplied to Idaho's seeded material

DESERT WHEATGRASS

≠*Agropyron fragile* misapplied to Idaho's seeded material

SIBERIAN WHEATGRASS

≠*Agropyron pectiniforme* misapplied to Idaho's seeded material

FAIRWAY CRESTED WHEATGRASS

*Agropyron pectinatum*

≠*Agropyron sibiricum* misapplied to Idaho's seeded material

SIBERIAN WHEATGRASS

*Agropyron fragile ssp. sibiricum*

These introduced non-native hybrid cultivars are not assignable to any of the more narrowly defined Eurasian taxa of the Crested Wheat complex. Although Park Unit material collected thus far is typically assigned to *Agropyron desertorum* (Fischer ex Link) J.A. Schultes in J.A. et J.H. Schultes, Mantissa 2:412. 1824, this cultivar does not match the morphology of the wild entity known by that name. Similarly, we feel it is most appropriate to subsume all local variants of the complex into *A. cristatum sensu amplo*, as they often cannot be meaningfully assigned to a narrower taxon. True *A. cristatum sensu stricto* is not seen in Idaho in the field. Hybrid material from this Park Unit used in past and present BLM Emergency Wildfire Rehabilitation (EFR) and rangeland improvement efforts, as well as highway roadside seedings, has passed under the names *A. cristatum*, *A. desertorum*, *A. fragile*, *A. pectiniforme*, and *A. sibiricum*, and in their extremes these entities do contain taxonomic, morphological, and important ecological amplitude and rehabilitation seeding suitability differences. Cultivars used locally include 'P-27,' 'Fairway,' 'Hycrest,' 'Nordan,' and

Craters of the Moon Vascular Plant Checklist Prepared by Steve J. Popovich October 2006

recently 'Ephraim,' which can be somewhat rhizomatous in sandy soils. The *A. cristatum* complex is by far the most common non-native perennial grass occurring in this Park Unit, and many thousands of acres have been seeded in areas administered by the BLM, resulting in vast *A. cristatum sensu amplo* monocultures, or in stands codominant with *Poa secunda sensu stricto* (= *P. sandbergii*), now lacking much of their former rich native biological diversity. For non-native grasses, it is surpassed in abundance in this Park Unit only by the highly invasive annual *Bromus tectorum*.

- Agrostis exarata** Uncommon, native **spike bentgrass**  
*Agrostis exarata* var. *minor*
- Agrostis scabra** Uncommon, native **rough bentgrass**
- Alopecurus aequalis** Rare, native **short-awn meadow-foxtail**
- Aristida purpurea** Rare, native **purple or red threeawn**  
*Aristida longiseta*  
*Aristida purpurea* var. *longiseta* (CRMO material, in part)  
*Aristida purpurea* var. *robusta* (CRMO material, in part)  
Infraspecific assignments for Park Unit material are not meaningful.
- Avena fatua** Non-native **wild oats**  
**UNCONFIRMED:** Reliable Popovich field observation only – no voucher specimen. Observed only once or twice, in disturbed areas and roadsides in the north half of CRMO; perhaps also to be expected in fallow fields. This plant is more common to the west, in the Wood River Valley.
- Avena sativa**\*? Non-native **cereal or domestic oats**  
**UNCONFIRMED:** Reliable Popovich field observation only – no voucher specimen. Observed only a few times in wildfire rehabilitation seedings in BLM-administered areas within CRMO. Cereal oats are sometimes used as non-persistent nurse crops in Emergency Fire Rehabilitation by the BLM. It is possible that oats have been seeded in some BLM-administered areas, but they also sometimes appear as fire rehabilitation or agricultural field seed or straw contaminant.
- Bromus biebersteinii** Non-native **Bieberstein's brome; meadow brome (misapplied)**  
**FALSE REPORT:** Park Unit material collected thus far in this Park Unit is *Bromus riparius*, but the USDA-NRCS inappropriately assigns such material to *Bromus biebersteinii*. Probability of presence in this Park Unit of *B. biebersteinii* is low (material probably not yet appearing as waif or seeded in this part of southern Idaho).
- Bromus inermis**\*? Uncommon, non-native **smooth brome**  
A non-native somewhat invasive perennial grass sometimes still used as a roadside seed mix in southern Idaho, it is unknown but unlikely that areas outside of the State-administered highway right-of-way have been seeded in the past. It is possible that plants within the right-of-way were not seeded, and have appeared as waif.
- Bromus japonicus** Non-native **Japanese brome**  
**UNCONFIRMED:** Reliable Popovich field observation only – no voucher specimen. Seldom observed on hot, dry sites, foothill slopes, and along roadways. This non-native annual grass is not as problematic or abundant in this Park Unit as is *Bromus tectorum* or *B. squarrosus*.
- Bromus marginatus**\*? Uncommon, native **Mountain brome**  
*Bromus marginatus* is subsumed by some as part of a highly polymorphic taxon, *Bromus carinatus sensu amplo*, or even broader *Bromus luzonensis sensu amplo*, a name unfamiliar to American botanists, but with nomenclatural priority. Material in this Park Unit is probably native, but some BLM-

administered foothills areas may have been seeded for wildfire or rangeland rehabilitation. Cultivars used locally include ‘Bromar,’ the cultivars ‘Manchar’ and ‘Garnet’ also may have been tried.

- Bromus riparius** Rare, non-native **meadow brome**  
Although seeded in southern Idaho, material in this Park Unit has probably been introduced as waif.
- Bromus secalinus** Rare, non-native **chess**
- Bromus squarrosus** Common, non-native **corn brome**  
This non-native annual grass is often mis-identified locally as *Bromus japonicus*. Although common, and more frequently found on sites with heavier soils, *B. squarrosus* is not as abundant in this Park Unit as is *B. tectorum*.
- Bromus tectorum** Abundant, non-native **cheatgrass; downy brome**  
This highly aggressive and weedy annual plant is by far the most common non-native vascular plant occurring in this Park Unit. Many thousands of acres have been converted to its dominance due to repeated wildfires and livestock grazing. Thousands of acres have been seeded in areas administered by the BLM to the non-native perennial grass *Agropyron cristatum sensu amplo* in an attempt to check the spread of *Bromus tectorum*. This has resulted in vast monocultures, or stands of *A. cristatum sensu amplo* codominant with *Poa secunda sensu stricto* (= *P. sandbergii*), which, as with areas dominated by *B. tectorum*, now lack much of their former rich native biological diversity. The common name Junegrass, used locally by a few old-timers, sometimes refers to this plant, although the name is most readily associated with the perennial native grass *Koeleria macrantha*.
- Calamagrostis koelerioides sensu stricto** Native to North America but not CRMO **tufted pinegrass**  
**FALSE REPORT:** Specimen Wunner 951 (CRMO catalog number 948), which supports one or more references, annotated to *Calamagrostis rubescens*, to which CRMO material applies (see comment under that taxon). Probability of presence in this Park Unit of *Calamagrostis koelerioides sensu stricto* is remote (out of range: material in the strict sense occurs in the Pacific Northwest).
- Calamagrostis rubescens** Uncommon, native **pinegrass**  
*Calamagrostis koelerioides* (CRMO material, see comment below)  
Some material in this Park Unit exhibits morphology sometimes mistaken for *Calamagrostis koelerioides* in that only basal innovation sheath collars have the characteristic hairs used to separate *C. koelerioides* from *C. rubescens*. Confusion has long existed over whether *C. koelerioides* differs from *C. rubescens*. For this Park Unit checklist, *C. koelerioides* is considered a synonym under *C. rubescens*.
- Catabrosa aquatica** Rare, native **brookgrass**  
An uncommon riparian grass of notable occurrence in this Park Unit, and encountered only once (Atwood 28614; CRMO catalog number 3172).
- Cinna latifolia** Rare, native **drooping woodreed**  
An uncommon riparian grass of notable occurrence in this Park Unit, and encountered only once (Popovich 8199, 8237; CRMO catalog numbers 3976 and 3990, respectively).
- Dactylis glomerata\*?** Rare, non-native **orchard grass**  
Sometimes used for rehabilitation in southern Idaho, it has probably not been seeded in this Park Unit and is more likely waif. Cultivars used locally include ‘Paiute.’
- Danthonia unispicata** Rare, native **onespike oatgrass**  
Documented in June 2006 in lava cracks (Wolken 1191; not yet cataloged in CRMO database), and to be occasionally expected elsewhere in rocky drainageways with shallow, heavy soils. The long-pilose sheaths are diagnostic even in vegetative material.
- Deschampsia danthonioides** Rare, native **annual hairgrass**

**Deschampsia elongata** Rare, native

×**Elyhordeum macounii** Native

×*Agrohordeum macounii*

**UNCONFIRMED:** Reliable Popovich field observation only – no voucher specimen. This is a hybrid of *Elymus trachycaulus sensu amplo* × *Hordeum brachyantherum sensu amplo*. Somewhat distinctive morphologically, and observed once or twice in swales of the North Unit containing probable *Hordeum brachyantherum* with *Elymus trachycaulus* nearby.

**Elymus** ×**aristatus** Native

×*Elylymus aristatus*

×*Elysitanion aristatum*

**UNCONFIRMED:** Reliable Popovich field observation only – no voucher specimen. This is a hybrid of *Elymus elymoides* (= *Sitanion hystrix*) *sensu amplo* × *Elymus cinereus* (≡ *Leymus cinereus*) *sensu amplo*. Somewhat distinctive morphologically, and sparingly observed in swales of this Park Unit usually containing both *Elymus elymoides* and *Elymus cinereus*.

**Elymus brevifolius** Rare, native

*Elymus elymoides ssp. brevifolium*

*Sitanion hystrix var. brevifolium*

*Sitanion brevifolium*

*Sitanion longifolium*

This taxon has been treated as a subspecies or variety of *Elymus elymoides* or *Sitanion hystrix*, but is distinct morphologically and ecologically. Within CRMO, it is a locally rare grass of mesic-tending swales.

**Elymus cinereus\*** Common, native

≠*Elymus condensatus* misapplied to Idaho material; California only

*Leymus condensatus*

*Leymus cinereus*

Most material in this Park Unit is native, but some BLM-administered areas have been seeded for wildfire or rangeland rehabilitation.

Cultivars used locally include ‘Magnar’ and ‘Trailhead.’

**Elymus elongatus ssp. ponticus\*** Non-native

≠*Agropyron elongatum* misapplied

*Elymus elongatus var. ponticus*

*Elytrigia pontica*

*Thinopyrum ponticum*

**UNCONFIRMED:** Reliable Popovich field observation only – no voucher specimen. Often used in Emergency Fire Rehabilitation, this species has been seeded in BLM-administered areas. Cultivars used locally include ‘Alkar.’ *Agropyron/Elymus/Elytrigia/Lophopyrum/Thinopyrum elongatum* is a small diploid (2n = 2x = 14; x = 7) Mediterranean species not known to have been established in the western United States. References to "*Agropyron elongatum*" apply to the much larger decaploid (2n = 10x = 70; x = 7) species from Asia Minor to Iran variously assigned to *Agropyron*, *Elymus*,

**slender hairgrass**

**Macoun’s wildrye**

**purple wildrye**

**squirreltail**

**basin wildrye**

**tall wheatgrass**

*Elytrigia*, *Lophopyrum*, or *Thinopyrum*. The decaploid is probably better treated as a separate species than as a subspecies of *Elymus elongatus*, but no combination exists in *Elymus* at the species rank. Tall wheatgrass has been rarely observed in seedings within CRMO.

**Elymus elymoides\*** Common, native

**bottlebrush squirreltail**

*Sitanion hystrix*

*Sitanion hystrix* var. *californicum* (CRMO material, in part: rare in CRMO)

*Sitanion californicum*

*Sitanion rigidum*

*Sitanion hystrix* var. *hystrix* (CRMO material, in part: common in CRMO)

*Sitanion cinereum*

Infraspecific assignments for most Western American material, including this Park Unit, may hold in herbaria, but are often not meaningful in the field. However, we do separate material corresponding to *Elymus (Sitanion) brevifolius*. *Elymus elymoides* is an important early- or mid-seral native bunchgrass across this Park Unit, and is able to tolerate more disturbance than many other native bunchgrasses. Most material in this Park Unit is native, but some BLM-administered areas have been seeded for wildfire or rangeland rehabilitation.

**Elymus flavescens** Rare, native

**yellow wildrye**

*Leymus flavescens*

A locally rare, strongly rhizomatous grass of sandy blowouts that seldom seems to produce inflorescences in this Park Unit.

**Elymus glaucus** Uncommon, native

**blue wildrye**

**Elymus ×hansenii** Native

**Hansen's squirreltail**

×*Elysitanion hansenii*

*Sitanion hansenii*

**UNCONFIRMED:** Reliable Popovich field observation only – no voucher specimen. This taxon represents all hybrids *Elymus elymoides* (= *Sitanion hystrix*) *sensu amplo* × *Elymus glaucus sensu amplo*. Somewhat distinctive morphologically, and sparingly observed in aspen stands of the North Unit containing *Elymus glaucus*, usually with *Elymus elymoides* in nearby open hillsides.

**Elymus hispidus\*** Rare, non-native

**intermediate wheatgrass; pubescent wheatgrass**

*Agropyron intermedium* var. *intermedium* (CRMO material, in part: the glabrous lemma race) INTERMEDIATE W.G.

*Agropyron intermedium*

*Elytrigia intermedia* ssp. *intermedia*

*Elytrigia intermedia*

*Thinopyrum intermedium*

*Agropyron intermedium* var. *trichophorum* (CRMO material, in part: the hirsute lemma race) PUBESCENT W.G.

*Agropyron trichophorum*

*Elytrigia intermedia* ssp. *trichophora*

*Elytrigia trichophora*

*Thinopyrum trichophorum*

Infraspecific assignments of plant material based upon lemma hairiness are best treated as races, although there is some distinction in ecological amplitude and rangeland rehabilitation suitability between the two. Often used in Emergency Fire Rehabilitation, this species has been seeded in BLM-administered areas. Cultivars used locally include 'Luna' and 'Oahe;' 'Reliant,' 'Tegmar' and 'Topar' may have been tried.

**Elymus junceus\*** Non-native

**Russian wildye**

*Psathyrostachys juncea*

**UNCONFIRMED:** Reliable Popovich field observation only – no voucher specimen. Sometimes used in Emergency Fire Rehabilitation, this species has been seeded in BLM-administered areas. Cultivars used locally include 'Bozoisky-Select.' Observed infrequently along the seeded roadway westcentral Park Unit boundary near "The Blowout" and the seeded roadway southwest boundary in the area between Baker Cave and Bear Trap Cave.

**Elymus lanceolatus\*** Common, native

**streambank wheatgrass; thickspike wheatgrass**

*Agropyron dasystachyum* var. *dasystachyum* (CRMO material, in part: the scabrous-villous lemma, dry site race)

*Agropyron dasystachyum*

THICKSPIKE W.G.

*Agropyron dasystachyum* var. *riparum* (CRMO material, in part: the glabrous-scaberulous lemma, mesic site race)

*Agropyron riparium*

STREAMBANK W.G.

Infraspecific assignments of plant material based upon lemma hairiness are best treated as races, although there is a distinction in ecological amplitude and rangeland rehabilitation suitability between the two. Most material in this Park Unit is native, but it is often used in Emergency Fire Rehabilitation, and this species has been seeded in BLM-administered areas. Cultivars used locally include 'Critana,' 'Sodar,' and 'Thickspike.'

**Elymus repens** Uncommon, non-native

**quackgrass**

*Agropyron repens*

*Elytrigia repens*

This aggressive non-native rhizomatous species has not been seeded in this Park Unit, but is regularly encountered as a weed of lawns or riparian areas.

**Elymus ×saundersii** Native

**Saunders's wheatgrass**

*Agropyron saundersii*

×*Agrositanion saundersii*

**UNCONFIRMED:** Reliable Popovich field observation only – no voucher specimen. This taxon represents all hybrids *Elymus elymoides* (= *Sitanion hystrix*) *sensu amplo* × *Elymus trachycaulus sensu amplo*. Somewhat distinctive morphologically, and sparingly observed in the North Unit on dry, open hillsides, usually with both *Elymus elymoides* and *Elymus trachycaulus* present in the vicinity.

**Elymus ×saxicolus** Native

**rock wheatgrass**

*Agropyron saxicola*

×*Agrositanion saxicola*

×*Pseudelymus saxicola*

**UNCONFIRMED:** Reliable Popovich field observation only – no voucher specimen. This taxon represents all hybrids *Elymus elymoides* (= *Sitanion hystrix*) *sensu amplo* × *Elymus spicatus sensu amplo* (≡ *Pseudoroegneria spicata sensu amplo*). Some of these hybrids produce seed, but viability has not been tested. This entity is distinctive morphologically. It is the most common of the native Triticeae hybrids in CRMO, and is regularly observed in small numbers scattered throughout the Park Unit where its parents usually also occur.

**Elymus smithii\*** Uncommon, native

*Agropyron smithii*

*Pascopyrum smithii*

Most material in this Park Unit is native, but some BLM-administered areas have been seeded for wildfire or rangeland rehabilitation. Cultivars used locally include 'Ariba' and 'Rosana.'

**Western wheatgrass**

**Elymus spicatus\*** Common, native

*Agropyrum spicatum*

*Agropyron spicatum* var. *inerme* (CRMO material, in part: the awnless phase)

*Agropyron inerme*

*Agropyron spicatum* var. *spicatum* (CRMO material, in part: the awned phase)

*Agropyron vaseyi*

*Elytrigia spicata*

*Pseudoroegneria spicata*

In this Park Unit, plants are awned or awnless, with wholly confluent intermediate forms, although there is a distinction in ecological amplitude and rangeland rehabilitation suitability between the extremes. The awnless phase (*Agropyron spicatum* var. *inerme*) commonly occurs at higher elevations, where cooler and wetter, generally north of an east-west line running from Carey to the north half of Laidlaw Park to Pratt Butte, while the awned phase (*Agropyron spicatum* var. *spicatum*) occurs throughout the Park Unit and is most common at the lower elevations found south of the above line, except where extirpated by grazing, rangeland conversion, or repeated disturbance. The awnless phase has at least two distinct races - one with very large spikelets, very long spike rachis internodes, and well-developed rhizomes, that represents material assigned to the cultivar 'Whitmar,' collected near Colton, Whitman County, Washington, which is regularly used in wildfire rehabilitation in BLM-administered areas of this Park Unit ("Whitmar beardless bluebunch wheatgrass"). The 'Whitmar' type was formerly common on swales of the Palouse Prairie on deeper, wetter soils. *Elymus spicatus* is an important native bunchgrass now much reduced over a majority of its former range at lower elevations, but is among the most common grass species occurring in the foothills of this Park Unit. Often used in wildfire or rangeland rehabilitation, this species has been seeded in BLM-administered areas. Cultivars used locally in addition to 'Whitmar' include 'Goldar.' A hybrid between alien quackgrass and off-site bluebunch wheatgrass has been developed (*Elymus repens* × *Elymus spicatus*, also called *Elymus hofmannii*, variety 'Newhy'), but hopefully it will not be used in this Park Unit.

“BEARDLESS” BLUEBUNCH W.G.

**bluebunch wheatgrass**

**Elymus subsecundus** Common, native

*Agropyron trachycaulum* var. *unilaterale*

*Elymus trachycaulus* ssp. *subsecundus*

**bearded wheatgrass**

**Elymus trachycaulus ssp. trachycaulus\*?** Uncommon, native

*Agropyron trachycaulum* var. *andinum*

*Agropyron trachycaulum* var. *trachycaulum*

*Agropyron pauciflorum*

Most material in this Park Unit is native, but this species has perhaps been seeded in BLM-administered areas of the foothills for wildfire or rangeland rehabilitation. Cultivars used locally include 'Pryor' and possibly 'Revenue' and 'San Luis.'

**slender wheatgrass**

**Elymus wawawaiensis\*** Rare, non-native **Snake River wheatgrass; bluebunch wheatgrass (misapplied)**  
*Elymus wawawaiensis* is often incorrectly identified taxonomically as *Elymus spicatus* (bluebunch wheatgrass), but it differs in having narrow glumes and shorter rachis internodes. The cultivar 'Secar,' from the Hell's Canyon area, is regularly seeded for wildfire rehabilitation in BLM-administered areas of this Park Unit, and has a different ecological amplitude and more pronounced awns than true *Elymus spicatus* native to CRMO.

**Eremopyrum triticeum** Non-native **annual wheatgrass**  
*Agropyron triticeum*

**UNCONFIRMED:** Reliable Popovich field observation only – no voucher specimen. Observed only along the extreme southern and southwest boundaries of CRMO, but to be expected elsewhere. To the novice the small annual *Eremopyrum triticeum* may resemble a miniature *Agropyron cristatum sensu amplo* (crested wheatgrass) or even the weedy non-native annual *Taeniatherum* (= *Elymus*) *caput-medusae* (medusa head), but the latter has much longer awns and is distinctly different. This Park Unit probably lacks the clay soils locally supporting *Taeniatherum caput-medusae*, which is known to occur further west.

**Festuca brachyphylla misapplied** Non-native **alpine fescue**

**UNCONFIRMED:** This name is sometimes casually used in CRMO for seeded non-native lawn material probably best accommodated under *Festuca rubra* in the broadest sense. It may also be a misapplied synonym for non-native *Festuca trachyphylla*; taxonomy of material in this Park Unit best corresponding to *F. trachyphylla* is unresolved. Probability of presence in this Park Unit of true native *Festuca brachyphylla* is remote (out of range: known from high elevation Pioneer Mountains); probability of non-native *F. rubra sensu amplo* is medium in watered lawn areas.

**Festuca bromoides** Non-native **brome or foxtail fescue**  
*Vulpia bromoides*

**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. Report probably applies to a mis-identification of immature *Festuca pacifica*. Probability of presence in this Park Unit of *F. bromoides* is low (uncommon in this part of Idaho, but could occur in agricultural areas where moist).

**Festuca idahoensis\*<sup>2</sup>** Common, native **Idaho fescue**

An important native bunchgrass in north Laidlaw Park and the foothills, where it can be abundant; however, population declines have been observed and attributed to a combination of drought and invasive non-native flora. Most material in this Park Unit is native, but this species has perhaps been seeded in BLM-administered areas in Laidlaw Park or the foothills for wildfire or rangeland rehabilitation.

**Festuca octoflora** Rare, native **sixweeks fescue**  
*Vulpia octoflora*

Common across the Snake River Plain but apparently uncommon in this Park Unit. *Festuca pacifica*, a common native annual in CRMO, is often locally mis-identified as *F. octoflora*, but the distinction in morphology is easily observed.

**Festuca ovina sensu stricto\*<sup>2</sup>** Non-native to North America **sheep fescue**  
*Festuca ovina* var. *ovina*

**UNCONFIRMED:** Probability of presence in this Park Unit of true *Festuca ovina* (non-native material) is medium; it has possibly been seeded in the past by BLM wildfire rehabilitation efforts and reportedly was seeded in the CRMO Visitor Center (VC) lawn areas in the past ["*Festuca ovina* was purchased and seeded in VC yard areas - sold to RM as 'native' seed, but most often classified as 'non-native.'"] (Paige Wolken, email correspondence with Steve Popovich, 21 July 2005)], but it is unknown if the taxon is/was persistent or if the material seeded actually corresponded to true non-native *F. ovina*. *Festuca ovina*, in the strict sense, refers to European material. As used in CRMO, this may be a misapplied synonym for *F. trachyphylla sensu stricto*; taxonomy of material in this Park Unit best corresponding to *F. trachyphylla* is unresolved. Cultivars used locally include 'Covar.'



- Festuca pacifica** Common, native **Pacific fescue**  
*Vulpia microstachys* var. *pauciflora* (CRMO material)  
*Vulpia pacifica*  
 By far the most common native annual grass in this Park Unit. Other races of the *Festuca microstachys* complex, such as *F. arida*, are likely present in CRMO, but to date none have been found.
- Festuca saximontana** Native to North America but probably not CRMO **Rocky Mountain fescue**  
*Festuca brachyphylla* ssp. *saximontana*  
*Festuca ovina* ssp. *saximontana*  
 ≠*Festuca trachyphylla* misapplied (non-native to North America)  
**FALSE REPORT:** No supporting voucher. Sometimes erroneously stated as seeded, probability of presence in this Park Unit of true *Festuca saximontana* is remote (out of range: known from high-elevation Pioneer Mountains). The name has been misapplied to non-native material in this Park Unit that belongs to *Festuca trachyphylla*.
- Festuca scabrella sensu stricto** Native to North America but probably not to CRMO **rough fescue**  
 ≠*Festuca altaica sensu amplo* misapplied (non-native to North America)  
*Festuca altaica* var. *scabrella*  
*Festuca campestris*  
**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. References probably apply to mis-identifications of another *Festuca*, or perhaps all apply to collection Wunner 791 (CRMO catalog number 955), annotated to *Poa ampla* (which would make this record a **false report**). Probability of presence in this Park Unit of *F. scabrella* is remote (out of range: known from Williams Creek SW of Salmon, Lemhi County).
- Festuca trachyphylla sensu stricto**\*? Rare, non-native to North America **hard fescue**  
 Name used here for non-native material present in this Park Unit that appears to be the hexaploid Hard Fescue. The taxonomy of Hard Fescue seeded in North America remains unresolved. It is unknown if this species was seeded in this Park Unit or if it appears as waif.
- Glyceria elata** Native **tall mannagrass**  
**FALSE REPORT:** Specimen Wunner 913 (CRMO catalog number 956), which supports one or more references, annotated to *Glyceria striata*. Probability of presence in this Park Unit of *G. elata* is low (uncommon in this part of Idaho).
- Glyceria grandis sensu stricto** Native **reed mannagrass**  
**FALSE REPORT:** Specimen Elzinga 4574 (CRMO catalog number 2515), which supports one or more references, annotated to *Torreyochloa pallida*. Probability of presence in this Park Unit of *G. grandis* is low (uncommon in this part of Idaho).
- Glyceria striata** Uncommon, native **fowl mannagrass**
- Hordeum brachyantherum** Uncommon, native **meadow barley**
- Hordeum jubatum** Uncommon, native **foxtail barley**
- Hordeum vulgare**\*? Non-native **cereal or domestic barley**  
**UNCONFIRMED:** Reliable Popovich field observation only – no voucher specimen. Cereal barley is sometimes used as a non-persistent nurse crop in Emergency Fire Rehabilitation by the BLM, and it has been rarely observed in a few such seedings within the CRMO boundary. It is possible that cereal barley has been seeded in some BLM-administered areas, but it also sometimes appears as fire rehabilitation seed or straw contaminant.

- Koeleria macrantha\*** Common, native **junegrass**  
*Koeleria cristata* of authors  
*Koeleria nitida*  
*Koeleria pyramidata* misapplied  
The name *Koeleria macrantha* is the most appropriate from among the synonyms. Most material in this Park Unit is native, but some BLM-administered areas have been seeded for wildfire or rangeland rehabilitation.
- Leucopoa kingii** Rare, native **spike fescue**  
*Hesperochloa kingii*
- Melica bulbosa** Common, native **bulbous oniongrass**  
*Melica bella*
- Melica fugax** Park Unit nativity unknown **little oniongrass**  
**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. Reference is probably a mis-identification of *Melica bulbosa*.  
Probability of presence in this Park Unit is remote (out of range: known from Salmon River drainage, Custer County).
- Muhlenbergia richardsonis** Uncommon, native **mat muhly**  
This small, delicate-appearing grass occurs as ringed mats. It is sparingly observed in ephemeral drainageways and meadows, playa edges, at Lava Lake, and along Champagne Creek.
- Phalaris arundinacea** Rare, native **reed canary grass**
- Phleum pratense\*?** Rare, non-native **timothy**  
Seeded as a pasture grass, it is likely that presence in this Park Unit is due to invasion, but it could have been seeded historically in private inholdings.
- Poa ampla** (see entry under **Poa secunda complex**)
- Poa bulbosa\*?** Uncommon, non-native **bulbous bluegrass**  
This interesting non-native perennial grass produces small foliaceous bulblets instead of normal spikelets, which are “miniature” plants, ready to grow immediately as clones of the adult upon dropping to the ground and rooting, a reproductive strategy rare among grasses. The culms have bulbous bases as well, which store fructans. This plant was seeded historically by the BLM in southern Idaho, but presence in CRMO is probably due to invasion. It is palatable to sheep before it cures our early in the growing season.
- Poa canbyi** (see entry under **Poa secunda complex**)
- Poa cusickii** Native **Cusick’s bluegrass**  
**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. References could apply to mis-identifications of other *Poa*, but probability of presence in this Park Unit for *Poa cusickii ssp. pallida* is high in the foothills. Probability for *Poa cusickii ssp. cusickii* is low (out of range: known from Pioneer Mountains, Salmon, Lost River, and Lemhi Ranges, Idaho, but mostly from the Pacific Northwest).
- Poa fendleriana sensu amplo** Rare, native **Fendler’s bluegrass; mutton grass**  
*Poa fendleriana sensu stricto*  
*Poa fendleriana ssp. longiligula*

*Poa longiligula* (CRMO material thusfar collected)

No more than a single collection from this Park Unit (Atwood 28239; CRMO catalog number 3922) reinforces that this native bunchgrass is apparently curiously lacking in this part of Idaho, and should be further collected.

**Poa gracillima** (see entry under **Poa secunda complex**)

**Poa juncifolia** (see entry under **Poa secunda complex**)

**Poa nevadensis** (see entry under **Poa secunda complex**)

**Poa palustris** Uncommon, non-native

**fowl or woodland bluegrass**

Some may apply *Poa nemoralis sensu amplo* to Park Unit material, but Soreng maintains that the two entities are separate.

**Poa pratensis sensu amplo\*** Common, non-native

**Kentucky bluegrass**

This Park Unit's material can be reliably accommodated under *Poa pratensis sensu amplo*. Short-habit material collected on roadside hot, dry lava flows and in cracks of parking lots could be accommodated under *Poa agassizensis*, a race considered native to North America by some; however, these plants are likely alien. Seeded in the Headquarters' lawns. All *Poa pratensis sensu amplo* cultivars available from seed vendors should be considered alien to North America.

**Poa sandbergii** (= *Poa secunda sensu stricto*; see entry under **Poa secunda complex**)

**Poa scabrella** (see entry under **Poa secunda complex**)

**Poa secunda complex**

**secund bluegrass**

A.S. Hitchcock in the *Manual of the Grasses of the United States* (1935, 1950) recognized eight separate species of the *Poa secunda* complex: **i**) *Poa ampla*, **ii**) *Poa canbyi*, **iii**) *Poa curtifolia*, **iv**) *Poa gracillima*, **v**) *Poa juncifolia*, **vi**) *Poa nevadensis*, **vii**) *Poa secunda sensu stricto* (= *Poa sandbergii*; including *Poa incurva*), and **viii**) *Poa scabrella*. C.L. Hitchcock in *Vascular Plants of the Pacific Northwest* (1969) treated the *Poa secunda* complex in two ways: **1**) the overt recognition of six species [**i**) *Poa curtifolia*, **ii**) *Poa gracillima* (with var. *gracillima* and var. *multnomae*), **iii**) *Poa juncifolia* (including *Poa ampla*), **iv**) *Poa nevadensis*, **v**) *Poa secunda sensu stricto* (= *Poa sandbergii*; including *Poa incurva*), and **vi**) *Poa scabrella* (including *Poa canbyi*)]; and **2**) a discussion of how all nine entities could be treated as separate species, with a key to separate them. C.L. Hitchcock in the *Flora of the Pacific Northwest* (1973) followed the *Vascular Plants of the Pacific Northwest* (1969), except for overt recognition of *Poa incurva* as a separate species. A.H. and N.H. Holmgren in the *Intermountain Flora* (1977) recognized seven separate species of the *Poa secunda* complex [**i**) *Poa ampla*, **ii**) *Poa canbyi*, **iii**) *Poa gracillima*, **iv**) *Poa juncifolia*, **v**) *Poa nevadensis*, **vi**) *Poa secunda sensu stricto* (= *Poa sandbergii*; including *Poa incurva*), and **vii**) *Poa scabrella*], as *Poa curtifolia* does not occur within the Intermountain Region. The Holmgrens argued for separation of *Poa canbyi* from both *Poa scabrella* and from *Poa secunda sensu stricto* (= *Poa sandbergii*; including *Poa incurva*), and for the morphological and ecological separation of *Poa ampla* from *Poa juncifolia*. Marsh [*American Midland Naturalist* 47(1): 202-250. 1952] was the first to treat all species listed above under a highly variable *Poa secunda sensu amplo*, but he acknowledged that the segregate species were usually consistently separable to those familiar with the range of variation. Based on a morphological analysis of field and greenhouse material, Kellogg [*J. Arnold Arboretum* 66: 201-242. 1985] concurred with the lumping by Marsh, but still segregated *Poa curtifolia* as distinct. Soreng [*Phytologia* 71(5): 401. 1991] felt that Marsh and Kellogg went a bit too far in lumping the formerly recognized eight species into one, choosing instead to recognize two subspecies: *Poa secunda ssp. juncifolia* (*Poa ampla*, *Poa juncifolia*, *Poa nevadensis*) with glabrous to scabrous lemmas, and *Poa secunda ssp. secunda* (*Poa canbyi*, *Poa gracillima*, *Poa incurva*, *Poa scabrella*, and *Poa secunda sensu stricto* (= *Poa sandbergii*) with hairy lemmas. While this distinction is fairly easy to employ in a morphological key, it does not provide adequate recognition of the ecological segregation among taxa, such as between *Poa ampla* and *Poa nevadensis*, which is important for the success of land management revegetation projects. In practice, *Poa ampla*, *Poa juncifolia*, and *Poa nevadensis* are readily separable from each other and from *Poa secunda sensu stricto* (= *Poa sandbergii*) based on morphology and ecology. Identification problems arise with consistent separation of

*Poa canbyi*, *Poa gracillima*, *Poa incurva*, and *Poa scabrella* from *Poa secunda sensu stricto* (= *Poa sandbergii*). Thus, the recognition of two subspecies is unsatisfactory in that the lumping under *Poa secunda ssp. secunda* is understandable, but the lumping under *Poa secunda ssp. juncifolia* of readily distinguishable *Poa ampla*, *Poa juncifolia*, and *Poa nevadensis* obscures the ecological differences.

A simplified hierarchy of the taxonomic entities applicable to this Park Unit can be represented as follows:

- Poa secunda sensu amplo → Subsuming all segregate species into one large “broad sense” *Poa secunda* complex
  - Poa secunda ssp. juncifolia → Dividing *Poa secunda sensu amplo* into two major subspecies: *P. secunda ssp. juncifolia* and *ssp. secunda*
    - Poa ampla → Dividing *Poa secunda sensu amplo* into seven separate species: *P. ampla*, *P. juncifolia*, *P. nevadensis*, etc.
    - Poa juncifolia
    - Poa nevadensis
  - Poa secunda ssp. secunda
    - Poa canbyi
    - Poa gracillima
    - Poa scabrella
    - Poa secunda sensu stricto (applies to North and South American material)
      - Poa sandbergii (applies to North American material only) → Recognizing North American material as distinct

For land management purposes, this CRMO checklist treats the *Poa secunda* complex as seven separate specific taxa: **i) *Poa ampla***, **ii) *Poa canbyi***, **iii) *Poa gracillima***, **iv) *Poa juncifolia***, **v) *Poa nevadensis***, **vi) *Poa secunda sensu stricto* (= *Poa sandbergii*)**, and **vii) *Poa scabrella***, but acknowledges arguments for lumping the entire complex under *Poa secunda sensu amplo* (“broad-sense” *Poa secunda*). *Poa secunda sensu amplo* has been seeded in this Park Unit as discussed under each species entry below. When purchasing “*Poa secunda*” seed, the buyer should know the ecological differences among the varieties.

### ***Poa secunda* complex present in this Park Unit**

***Poa ampla*\*** Uncommon, native

**big bluegrass**

Sometimes included under *Poa secunda sensu amplo* or treated as *Poa secunda ssp. juncifolia*

*Poa ampla* is reliably segregated from *Poa secunda sensu stricto* (= *Poa sandbergii*) or from *Poa secunda ssp. secunda*, and from *Poa juncifolia* and *Poa nevadensis*, based on morphology and ecology. Most material in this Park Unit is native, but the *Poa ampla* cultivar ‘Sherman’ has been seeded in BLM-administered areas for wildfire or rangeland rehabilitation. It is derived from collections made near Moro, Sherman County, Oregon. *Poa ampla* is actively growing during the summer months.

***Poa canbyi*\*?** Rare, native

**Canby’s bluegrass**

Sometimes included under *Poa secunda sensu amplo* or treated as *Poa secunda ssp. secunda*

*Poa canbyi* is reliably segregated from *Poa ampla*, *Poa juncifolia*, and *Poa nevadensis*. Identification problems arise with consistent separation of *Poa canbyi* from immature *Poa gracillima*, *Poa incurva*, *Poa scabrella* or *Poa secunda sensu stricto* (= *Poa sandbergii*). Most material in this Park Unit is native, but the *Poa canbyi* cultivar ‘Canbar’ may have been seeded in BLM-administered areas for wildfire or rangeland rehabilitation, and is derived from collections made in the Blue Mountains of Oregon. *Poa canbyi* is actively growing during the summer months.

**Poa gracillima** Park Unit nativity unknown

**Pacific bluegrass**

Sometimes included under *Poa secunda sensu amplo* or treated as *Poa secunda ssp. secunda*

**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. Reference probably applies to a mis-identification of another *Poa*. Probability of presence in this Park Unit is remote (out of range: known from the Sawtooth Mountains). Mature *Poa gracillima* is typically reliably segregated from *Poa secunda sensu stricto* (= *Poa sandbergii*), but identification problems arise with consistent separation of immature *Poa gracillima* from *Poa canbyi* or *Poa scabrella*. Without specimens it is not known if material reported from this Park Unit is *Poa gracillima*. *Poa gracillima* is actively growing during the summer months.

**Poa juncifolia** Uncommon, native

**alkali bluegrass**

Sometimes included under *Poa secunda sensu amplo* or treated as *Poa secunda ssp. juncifolia*

*Poa juncifolia* is reliably segregated from *Poa secunda sensu stricto* (= *Poa sandbergii*) or from *Poa secunda ssp. secunda*, and from *Poa ampla* and *Poa nevadensis*, based on morphology and ecology. *Poa juncifolia* is actively growing during the summer months.

**Poa nevadensis** Uncommon, native

**Nevada bluegrass**

Sometimes included under *Poa secunda sensu amplo* or treated as *Poa secunda ssp. juncifolia*

*Poa nevadensis* is reliably segregated from *Poa secunda sensu stricto* (= *Poa sandbergii*) or from *Poa secunda ssp. secunda*, and from *Poa ampla* and *Poa juncifolia*, based on morphology and ecology. *Poa nevadensis* is actively growing during the summer months.

**Poa scabrella\*?** Rare, native

**pine bluegrass**

Sometimes included under *Poa secunda sensu amplo* or treated as *Poa secunda ssp. secunda*

*Poa scabrella* is reliably segregated from *Poa ampla*, *Poa juncifolia*, and *Poa nevadensis*. Identification problems arise with consistent separation of *Poa scabrella* from immature *Poa canbyi*, *Poa gracillima*, *Poa incurva*, or *Poa secunda sensu stricto* (= *Poa sandbergii*). Most material in this Park Unit is native, but commercially available seed of *Poa scabrella* may have been seeded in BLM-administered areas for wildfire or rangeland rehabilitation, and is mostly from Oregon and Washington. *Poa scabrella*, like *Poa secunda sensu stricto* (= *Poa sandbergii*), is actively growing during the springtime and dormant during the summer months.

**Poa secunda sensu stricto\*?** Abundant, native

**Sandberg's bluegrass**

Sometimes included under *Poa secunda sensu amplo* or treated as *Poa secunda ssp. secunda*

*Poa sandbergii* [Holotype: US. USA: Idaho: near Lewiston, 1892, *J.H. Sandberg 164*]

The *Manual of the Grasses of the United States* (1935, 1950) treated *Poa sandbergii* as a synonym of *Poa secunda sensu stricto* [Holotype: PR. "In Cordilleris Chilensibus (Chile), 1790, *T. Haenke s.n.*]. St John [*American J. Botany* 28(1): 78-81. 1941; *Flora of Southeastern Washington and Adjacent Idaho* (1937, 1956, 1963)] argued for distinguishing North American material from South America's Chilean populations as *Poa sandbergii*. Treatments in *Vascular Plants of the Pacific Northwest* (1969) and *Intermountain Flora* (1977) followed St John in using *Poa sandbergii*. Arnow [*Systematic Botany* 6: 412-421. 1981] provided a strong argument for treating all North and South American populations as an amphitropical species under *Poa secunda sensu stricto*. Local and Park Unit use of the name *Poa sandbergii* should only apply to the lower elevation, relatively short,

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vernally active plants fitting *Poa secunda sensu stricto*, although it is often loosely and improperly applied to *Poa secunda sensu amplo*. *Poa secunda sensu stricto* (= *Poa sandbergii*) is by far the most common, often locally abundant, native grass species occurring in this Park Unit, although it may be less abundant than *Elymus spicatus* and *Festuca idahoensis* in the foothills. This relatively small *Poa* bunchgrass is ecologically important because it is abundant and actively growing during the springtime, and because it is apparently able to tolerate disturbances such as repeated wildfire and substantial livestock grazing better than most other perennial native bunchgrass species. Most or all material in this Park Unit is native. Seed used in this Park Unit for wildfire or rangeland rehabilitation has passed under the names *Poa secunda* and *Poa sandbergii*, but whether or not it truly corresponded to *Poa secunda sensu stricto* (= *Poa sandbergii*) is unknown.

**Poa wheeleri** Uncommon, native

*Poa nervosa* var. *wheeleri*

**Wheeler's bluegrass**

**Polypogon monspeliensis** Uncommon, non-native

**rabbit's foot grass**

**Secale cereale**\*? Non-native

**cereal or domestic rye**

**UNCONFIRMED:** Reliable Popovich field observation only – no voucher specimen. Cereal rye is sometimes used as a non-persistent nurse crop in Emergency Fire Rehabilitation by the BLM, and it has been rarely observed in a few such seedings within the CRMO boundary. It is possible that cereal rye has been seeded in some BLM-administered areas, but it also sometimes appears as fire rehabilitation seed or straw contaminant.

**Sphenopholis obtusata** Rare, native

**prairie wedgegrass**

An uncommon riparian grass of notable occurrence in this Park Unit, and encountered only once (Atwood 28466; CRMO catalog number 3787).

**Sporobolus cryptandrus**\* Uncommon, native

**sand dropseed**

Most material in this Park Unit is native, but this species has been seeded in BLM-administered areas for Emergency Fire Rehabilitation.

**Stipa ×bloomeri** Uncommon, native

**Bloomer's ricegrass**

*Achnatherum ×bloomeri*

*Oryzopsis bloomeri*

×*Stiporyzopsis bloomeri*

This is a hybrid complex of *Stipa hymenoides* (≡ *Oryzopsis hymenoides*) and several other *Stipa* species, and is regularly observed in CRMO.

**Stipa comata** var. **comata**\* Common, native

**needleandthread**

*Hesperostipa comata* var. *comata*

*Stipa comata* is particularly abundant in sandy loam soils of south Laidlaw Park. Most material in this Park Unit is native, but this species has been seeded in BLM-administered areas for Emergency Fire Rehabilitation.

**Stipa comata** var. **intermedia** Unknown, native

**needleandthread**

*Hesperostipa comata* var. *intermedia*

**Stipa hymenoides**\* Common, native

**Indian ricegrass**

*Achnatherum hymenoides*

*Eriocoma hymenoides*

*Oryzopsis hymenoides*

Most material in this Park Unit is native, but this species has been seeded in BLM-administered areas for Emergency Fire Rehabilitation. Cultivars used locally include 'Nezpar.' *Stipa hymenoides* is often seen clustered around anthills.

- Stipa lemmonii ssp. lemmonii** Park Unit nativity unknown **Lemmon's needlegrass**  
*Achnatherum lemmonii ssp. lemmonii*  
**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. Reference probably applies to a mis-identification of a more common *Stipa*. Probability of presence in this Park Unit of this taxon is remote (out of range: known from high elevations of Albion Mountains).
- Stipa nelsonii ssp. dorei** Rare, native **Dore's needlegrass**  
*Achnatherum nelsonii ssp. dorei*  
*Stipa columbiana* rejected name  
 ≠*Stipa occidentalis* var. *minor*: C.L. Hitchcock in *Vascular Plants of the Pacific Northwest* (1955-1969) and *Flora of the Pacific Northwest* (1973) used *Stipa occidentalis* var. *minor* for plants conforming to *Stipa nelsonii ssp. dorei*, and, while his concept was correct, the name *Stipa occidentalis* var. *minor* belongs to *Stipa lettermanii*.
- Stipa nelsonii ssp. nelsonii var. longiaristata** Common, native **longawn Nelson's needlegrass**  
*Achnatherum nelsonii ssp. longiaristatum*
- Stipa nelsonii ssp. nelsonii var. nelsonii** Uncommon, native **Nelson's or Williams's needlegrass**  
*Achnatherum nelsonii ssp. nelsonii*  
*Stipa columbiana* var. *nelsonii*  
*Stipa occidentalis* var. *nelsonii*  
*Stipa williamsii*
- Stipa nevadensis** Park Unit nativity unknown **Nevada needlegrass**  
*Achnatherum nevadense*  
**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. References could be attributing to mis-identifications of *Stipa occidentalis* var. *californica*. This taxon is probably a fertile hybrid of *Stipa lettermanii* (≡*Achnatherum lettermanii*) × *Stipa occidentalis* var. *pubescens* (≡*Achnatherum occidentale* ssp. *pubescens*). Probability of presence in this Park Unit is low (out of range: known from 20 miles north of Ketchum, Custer County; Lemhi Range, Lemhi County).
- Stipa occidentalis var. californica** Rare, native **California needlegrass**  
*Achnatherum occidentale* ssp. *californicum*  
*Stipa californica*
- Stipa occidentalis var. pubescens** Uncommon, native **Elmer's or Western needlegrass**  
*Achnatherum occidentale* ssp. *pubescens*  
*Stipa elmeri*
- Stipa pinetorum** Rare, native **pine needlegrass**  
*Achnatherum pinetorum*  
 An uncommon grass of the foothills, and of notable occurrence in this Park Unit. Apparently replaced by *Stipa webberi* at lower elevations and on lava flows. Observed only once by Popovich in the same locales as the only collections (Elzinga 4526, Wunner 1203, Wunner 1203b; CRMO catalog numbers 2496, 963, and 964, respectively), and mostly restricted to the highest ridgelines of the North Unit.

**Stipa richardsonii** Park Unit nativity unknown **Richardson's needlegrass**

*Achnatherum richardsonii*

**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. Reference probably applies to a mis-identification of a more common *Stipa*. Probability of presence in this Park Unit of this taxon is remote (out of range: known from the Salmon River drainage, Lemhi County).

**Stipa thurberiana\*** Uncommon, native **Thurber's needlegrass**

*Achnatherum thurberianum*

Most material in this Park Unit is native, but this species has been seeded in BLM-administered areas for wildfire or rangeland rehabilitation.

**Stipa webberi** Rare, native **Webber's needlegrass**

*Achnatherum webberi*

*Oryzopsis webberi*

An uncommon grass of the lower elevations and occasionally on lava flows, and of notable occurrence in this Park Unit. Apparently replaced by *Stipa pinetorum* at highest elevations in the foothills. Collected only once (Popovich 7180; CRMO catalog number 2571) but observed by Popovich in at least five places in CRMO, from near the Carey Kipuka trailhead (on lava) south to near Peavey Well and east to near Rattlesnake Butte.

**Torreyochloa pallida** Uncommon, native **pale false mannagrass**

*Glyceria pallida*

*Glyceria pauciflora*

*Puccinellia pallida*

*Puccinellia pauciflora*

*Torreyochloa pallida* var. *pauciflora*

**Triticum aestivum** Rare, non-native **cereal or domestic wheat**

Sometimes appearing as a non-persistent contaminant in Emergency Fire Rehabilitation seedings in BLM-administered areas and in crop fields.

#### POLEMONIACEAE – PHLOX FAMILY

**Collomia linearis** Common, native **slenderleaf collomia**

**Collomia tenella** Common, native **diffuse collomia**

**Collomia tinctoria** Common, native **staining collomia**

**Eriastrum sparsiflorum** var. **wilcoxii** Common, native **Wilcox's woollystar**

**Gilia aggregata** var. **aggregata** Common, native **firecracker or scarlet gilia**

*Ipomopsis aggregata* var. *aggregata*

The flowers of this native herb are exceptionally brightly colored in hues of red; plants are accordingly sometimes called “firecracker” gilia.

**Gilia congesta** var. **congesta** Uncommon, native **ballhead gilia**

*Ipomopsis congesta* var. *congesta*

**Gilia inconspicua** var. **inconspicua** Common, native **shy gilia**

**Gilia inconspicua** var. **sinuata** Uncommon, native **rosy gilia**



- Gilia inconspicua var. tweedyi** Uncommon, native **Tweedy's gilia**
- Gilia leptomeria var. leptomeria** Uncommon, native **sand gilia**
- Gilia leptomeria var. micromeria** Common, native **dainty gilia**
- Gilia tenerrima** Uncommon, native **delicate gilia**
- Gymnosteris nudicaulis** Common, native **largeflower or nakedstem gymnosteris**
- Much studied by Popovich, this small annual herb blooming in May has a disproportionately large and strikingly bright yellow or snow white flower cluster on a wiry, inconspicuous glabrous stem. An occasional pink abortive flower is observed. In hot, dry years the plants can be rare and exceedingly small, only a centimeter tall, with a single flower, when the plant can be confused by the untrained with its smaller-flowered ally, *Gymnosteris parvula*. In good growing seasons and following the nutrient flush of wildfires, this plant can be amazingly abundant, with millions of plants commanding the eye over hundreds of acres, sometimes with over 400 plants per 1/10-meter<sup>2</sup>, and filling the air with strong polemonie fragrance. Robust plants in wildfire ash can be up to 15 cm tall and contain up to several hundred flowers. Once believed to be rare, the plant's viability is presently secure in this Park Unit, where it is generally common in sandy soils, but the ongoing conversion of habitat to non-native *Agropyron cristatum sensu amplo* bunchgrass seedings and invasion of the aggressive non-native annual grass *Bromus tectorum* may be cause for concern in the future. *Gymnosteris nudicaulis* often occurs with the endemic milkvetch *Astragalus oniciformis* (Fabaceae).
- Gymnosteris parvula** Rare, native **smallflower gymnosteris**
- A small, easily overlooked rare spring bloomer with delicate minute whitish flowers, occurring in vernal moist swales; known in CRMO only from north Laidlaw Park and from north of Mule Butte (also observed at Blackbird Reservoir near CRMO), but perhaps more common than perceived.
- Langloisia setosissima** Rare, native **moth langloisia**
- Authors of *Intermountain Flora* (Vol. 4, 1984) maintain that plants on the Snake River Plain, with their corolla lobes usually marked with purple dots (but plants with unmarked corolla lobes are also regularly encountered in CRMO) belong to *Langloisia punctata*, but with flower size closer to *L. setosissima*. *Langloisia punctata* has been relegated to infraspecific rank under *L. setosissima* (i.e., *L. setosissima var. punctata*) and the distinction between the two taxa seems inconsequential for this locale.
- Leptodactylon pungens var. pungens** Common, native **prickly phlox**
- Gilia pungens*  
*Leptodactylon patens*  
*Leptodactylon pungens var. hookeri*  
 Retention of infraspecific assignments is of questionable utility.
- Leptodactylon watsonii** Uncommon, native **Watson's prickly phlox**
- Restricted to lava flows in this Park Unit, this somewhat flowing-appearing prostrate phlox looks a bit different from typical *L. watsonii*. The several specimens should be re-examined by an authority as to proper identification.
- Linanthus harknessii** Uncommon, native **Harkness's flaxflower; threeseed linanthus**
- Linanthus septentrionalis** Uncommon, native **northern linanthus**

- Microsteris gracilis** Common, native **slender phlox**  
*Microsteris gracilis* var. *gracilis* Native  
**FALSE REPORT:** Specimen Wunner 605 (CRMO catalog number 1678), which supports one or more references, annotated to *Microsteris gracilis* var. *humilior*. Plants in this Park Unit can be accommodated under var. *humilior*, but varietal distinctions are probably not meaningful. Probability of presence in this Park Unit of material corresponding to var. *gracilis* is medium.  
*Microsteris gracilis* var. *humilior* (CRMO material)  
 A common native spring annual.
- Navarretia breweri** Common, native **Brewer's navarretia**  
**Navarretia intertexta** Common, native **needleleaf navarretia**  
**Navarretia minima** Native **least navarretia**  
**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of *N. minima* is low.
- Phlox aculeata** Common, native **sagebrush or Snake River Plains phlox**  
 The observer may find this plant forming loose basal mats difficult to distinguish from low morphs of the usually more erect *Phlox longifolia*, and hybridization could be occurring locally. Hybridization with *Phlox hoodii* may be occurring in Boise. Treating *P. aculeata* as conspecific with *P. longifolia* has been discussed (*Intermountain Flora*, Vol. 4, 1984).
- Phlox hoodii** var. **canescens** Common, native **Hood's phlox**  
**Phlox longifolia** Common, native **longleaf phlox**  
*Phlox longifolia* var. *longifolia*  
 Material from this Park Unit does not lend itself to meaningful infraspecific segregation. This area supports compact forms of *Phlox longifolia*, which may be hybridizing with *Phlox aculeata*.

#### POLYGONACEAE – BUCKWHEAT or KNOTWEED FAMILY

- Chorizanthe brevicornu** Rare, native **sagebrush chorizanthe**  
**Chorizanthe watsonii** Common, native **Watson's chorizanthe**  
**Eriogonum baileyi** var. **baileyi** Uncommon, native **Bailey's buckwheat**  
**Eriogonum caespitosum** Uncommon, native **mat buckwheat**  
*Eriogonum caespitosum* var. *acaule*  
*Eriogonum acaule*  
 Material from this Park Unit may not lend itself to meaningful infraspecific segregation.
- Eriogonum capistratum** var. **capistratum** Native **hidden buckwheat**  
**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. The reference may have been referring to variety *grimesii*, the varietal name of which was not yet published at the time of the observation. Probability of presence in this Park Unit of *E. capistratum* var. *capistratum* is low.
- Eriogonum capistratum** var. **grimesii** Rare, native **Grimes's buckwheat**  
 The related variety *welshii*, a rare Idaho endemic, is found nearby to the north of this Park Unit, but is not anticipated to occur within it.

<b>Eriogonum cernuum</b>	Common, native	<b>nodding buckwheat</b>
<b>Eriogonum chrysops</b>	Unknown, native	<b>bitterroot buckwheat</b>
<b>Eriogonum compositum</b>	Park Unit nativity unknown	<b>arrowleaf buckwheat</b>
	UNCONFIRMED: The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of <i>E. compositum</i> is low.	
<b>Eriogonum douglasii var. douglasii</b>	Native	<b>Douglas's buckwheat</b>
	UNCONFIRMED: The reference citation(s) has no supporting voucher specimen. The only specimen (Popovich 7720; CRMO catalog number 2607), collected from the remote Coyote Butte Kipuka, should be re-examined because this taxon is out of range in southern Idaho. Probability of presence in this Park Unit of <i>E. douglasii var. douglasii</i> is low.	
<b>Eriogonum effusum</b>	Park Unit nativity unknown	<b>spreading buckwheat</b>
	UNCONFIRMED: The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of <i>E. effusum</i> is low.	
<b>Eriogonum elatum</b>	Rare, native	<b>alpine golden buckwheat</b>
<b>Eriogonum flavum</b>	Native	<b>yellow buckwheat</b>
	UNCONFIRMED: The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of <i>E. flavum</i> is low.	
<b>Eriogonum heracleoides var. heracleoides</b>	Common, native	<b>parsnipflower or Wyeth's buckwheat</b>
<b>Eriogonum heracleoides var. minus</b>	Common, native	<b>parsnipflower or Wyeth's buckwheat</b>
	<i>Flora of the Pacific Northwest</i> (1973) differentiates var. <i>minor</i> , but whether segregation from var. <i>heracleoides</i> is currently viewed to be meaningful awaits resolution pending <i>Intermountain Flora</i> treatment of Polygonaceae by James Reveal. <i>Eriogonum heracleoides</i> may hybridize with <i>E. umbellatum</i> , and taxonomy of buckwheats in CRMO can be confusing.	
<b>Eriogonum mancum</b>	Native	<b>imperfect buckwheat</b>
	UNCONFIRMED: The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of <i>E. mancum</i> is low.	
<b>Eriogonum microthecum var. foliosum</b>	Uncommon, native	<b>Simpson's buckwheat</b>
	<i>Eriogonum microthecum var. simpsonii</i>	
<b>Eriogonum microthecum var. laxiflorum</b>	Common, native	<b>slender buckwheat</b>
	This plant can appear as light-flowered carpets in late summer on vegetated lava fields.	
<b>Eriogonum nidularium</b>	Rare, native	<b>bird's nest buckwheat</b>
	A buckwheat with a peculiar congested habit, and rare in this Park Unit.	
<b>Eriogonum ovalifolium var. depressum</b>	Common, native	<b>cushion or dwarf buckwheat</b>
	<i>Eriogonum depressum</i> This matted perennial buckwheat is often a dominant component of the Park Unit's cinder gardens.	
<b>Eriogonum ovalifolium var. orthocaulon</b>	Common, native	<b>cushion or dwarf buckwheat</b>
	<i>Eriogonum ovalifolium var. celsum</i> Most prefer to view var. <i>orthocaulon</i> (=var. <i>celsum</i> in <i>Flora of the Pacific Northwest</i> , 1973) as a synonym of var. <i>purpureum</i> (=var. <i>ovalifolium</i> in <i>Flora of the Pacific Northwest</i> , 1973), but whether segregation from var. <i>purpureum</i> or retention of name <i>orthocaulon</i> is currently viewed to be meaningful awaits resolution pending <i>Intermountain Flora</i> treatment of Polygonaceae by James Reveal.	
<b>Eriogonum ovalifolium var. ovalifolium</b>	Common, native	<b>cushion or dwarf buckwheat</b>

<b>Eriogonum ovalifolium var. purpureum</b>	Uncommon, native	<b>cushion or dwarf buckwheat</b>
<b>Eriogonum sphaerocephalum var. sphaerocephalum</b>	Uncommon, native	<b>rock buckwheat</b>
<b>Eriogonum thymoides</b>	Rare, native	<b>thyme-leaf buckwheat</b>
Encountered in one location in June 2006 (Popovich 8374; not yet cataloged in CRMO database) in a stony, sparsely-vegetated site of a rocky saddle just north of HWY 20/26/93, but perhaps to be expected elsewhere in suitable habitat. This reddish plant with fluffy white fruit is the most distinctive of the shrubby <i>Eriogonum</i> species in CRMO. The plant is locally common on the Camas Prairie west of this Park Unit and at Little Wood Reservoir.		
<b>Eriogonum umbellatum var. deserticum</b>	Rare, native	<b>sulphur-flower buckwheat</b>
<b>Eriogonum umbellatum var. dichrocephalum</b>	Common, native	<b>sulphur-flower buckwheat</b>
<b>Eriogonum umbellatum var. majus</b>	Common, native	<b>sulphur-flower buckwheat</b>
<i>Eriogonum umbellatum var. aridum</i>		
<i>Eriogonum aridum</i>		
<b>Eriogonum umbellatum var. subalpinum</b>	Common, native	<b>sulphur-flower buckwheat</b>
<i>Eriogonum subalpinum</i>		
Most prefer to view var. <i>subalpinum</i> as a synonym of var. <i>majus</i> , but whether segregation from var. <i>majus</i> or retention of name <i>subalpinum</i> is currently viewed to be meaningful awaits resolution pending <i>Intermountain Flora</i> treatment of Polygonaceae by James Reveal. Reveal has indicated that var. <i>subalpinum</i> is a synonym of var. <i>majus</i> in <i>A Utah Flora</i> (edition of 2003).		
<b>Eriogonum umbellatum var. umbellatum</b>	Common, native	<b>sulphur-flower buckwheat</b>
<b>Eriogonum verrucosum</b>	Uncommon, native	<b>graceful buckwheat</b>
<b>Eriogonum vimineum var. vimineum</b>	Common, native	<b>wickerstem buckwheat</b>
This annual buckwheat with delicate flowers is common in the Park Unit's cinder gardens.		
<b>Oxytheca dendroidea</b>	Rare, native	<b>narrowleaf oxytheca</b>
The spinulose tips of the involucre lobes make this locally rare annual herb of sandy habitats an interesting buckwheat ally.		
<b>Polygonum amphibium</b>	Rare, native	<b>water knotweed</b>
<b>Polygonum aviculare</b>	Uncommon, non-native	<b>prostrate knotweed</b>
<b>Polygonum douglasii var. douglasii</b>	Common, native	<b>Douglas's knotweed</b>
<b>Polygonum douglasii var. johnstonii</b>	Native	<b>Johnston's knotweed</b>
<i>Polygonum triandrum</i>		
<b>UNCONFIRMED:</b> The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of <i>P. douglasii</i> var. <i>johnstonii</i> is low.		
<b>Polygonum kelloggii</b>	Uncommon, native	<b>Kellogg's knotweed</b>
<b>Polygonum lapathifolium</b>	Rare, native	<b>curlytop knotweed or smartweed</b>
<b>Rumex crispus</b>	Uncommon, non-native	<b>curly or sour dock</b>
<b>Rumex paucifolius</b>	Rare, native	<b>meadow dock; mountain sorrel</b>

- Rumex salicifolius ssp. triangulivalvis var. montigenitus** Rare, native **California dock**  
*Rumex salicifolius var. denticulatus*  
*Rumex salicifolius var. montigenitus*
- Rumex salicifolius ssp. triangulivalvis var. triangulivalvis** Rare, native **Mexican dock**  
*Rumex salicifolius var. mexicanus*  
*Rumex salicifolius ssp. triangulivalvis*  
*Rumex salicifolius var. triangulivalvis*

#### PORTULACACEAE – PURSLANE FAMILY

- Calyptridium roseum** Rare, native **rosy pussypaws**  
*Cistanthe rosea*
- Lewisia rediviva** Uncommon, native **bitterroot**  
 Named after Captain Meriwether Lewis of the Lewis & Clark Expedition, this plant with succulent-like leaves produces handsome showy pink or white flowers low to the ground while growing in seemingly inhospitable, often barren or rocky areas. The plant can be abundant on cinder gardens in June. It is the State Flower of Montana.
- Montia chamissoi** Rare, native **water miner's lettuce**
- Montia dichotoma** Rare, native **dwarf miner's lettuce**
- Montia perfoliata** Rare, native **miner's lettuce**
- Portulaca oleracea** Rare, non-native **purslane**

#### PRIMULACEAE – PRIMROSE FAMILY

- Primula cusickiana var. cusickiana sensu amplo** Rare, native **Cusick's primrose**  
*Primula brodheadiae* (subsumed under *P. cusickiana sensu amplo*) (CRMO material) **BRODHEAD'S PRIMROSE**  
 Long suspected in this Park Unit and previously reported from Brass Cap Kipuka, this entity was collected in spring 2006 at Tom Cat Hill (Wolken 1179; not yet cataloged in CRMO database) and confirmed (via an undeniable photograph!) at Brass Cap Kipuka. Brass Cap Kipuka has heavy-soil affinity sagebrush communities typically found to the west of this Park Unit in the Macon Flat (of the Camas Prairie) and Wedge Butte areas, and has been nominated as a Research Natural Area (Idaho Conservation Data Center 1983: *Research Natural Area Recommendation for Brass Cap Kipuka, Bureau of Land Management, Shoshone District, Idaho*). In Popovich's opinion, morphology of plants corresponding to the entity *P. brodheadiae* is distinctive from *P. cusickiana var. cusickiana sensu stricto*, and because such plants are also geographically segregated, apparently occurring only in southcentral Idaho, recognition of maintaining the entity *P. brodheadiae* could be argued.
- Primula wilcoxiana* (subsumed under *P. cusickiana sensu amplo*) Non-native **WILCOX'S PRIMROSE**  
**FALSE REPORT:** An observation in Brass Cap Kipuka, which supports a field book reference, applies to *Primula brodheadiae*, now subsumed under *Primula cusickiana sensu amplo*. Probability of presence in this Park Unit of the morphological entity corresponding to *P. wilcoxiana* is low (out of range: Boise foothills).

**RANUNCULACEAE – BUTTERCUP or CROW'S FOOT FAMILY**

<b>Actaea rubra</b> Uncommon, native	<b>red baneberry</b>
Beautifully red in color, the berry of this plant is perhaps the most poisonous in this Park Unit, and should never be eaten.	
<b>Aquilegia formosa</b> Uncommon, native	<b>Western columbine</b>
Yellow and red in color, this flower is smaller and has shorter spurs than its more showy blue-and-white-flowered cousin, <i>Aquilegia caerulea</i> (Rocky Mountain or Colorado columbine), which is the State Flower of Colorado.	
<b>Clematis ligusticifolia</b> Rare, native	<b>virgin's bower; Western white clematis</b>
Encountered in two locations in summer 2006 (Popovich 8394, Wolken number not reviewed; not yet cataloged in CRMO database) along the northwestern boundaries, and reported to occur in a kipuka elsewhere (Lovejoy 1980: <i>Patterns in the Distribution of Plants and Animals on Lava Flows and Kipukas in Southeastern Idaho</i> ). The only climbing vine in this Park Unit, it typically overtops its host plants.	
<b>Delphinium andersonii var. andersonii</b> Common, native	<b>Anderson's larkspur</b>
<i>Delphinium andersonii ssp. andersonii</i>	
<i>Delphinium megacarpum</i>	
Like death camas (Liliaceae: <i>Zigadenus</i> ), this and the other <i>Delphinium</i> species in this Park Unit are toxic to livestock.	
<b>Delphinium andersonii var. scaposum</b> Uncommon, native	<b>tall mountain larkspur</b>
<i>Delphinium scaposum</i>	
<b>Delphinium nuttallianum var. nuttallianum</b> Common, native	<b>Nuttall's larkspur</b>
<i>Delphinium nelsonii</i>	
<b>Delphinium occidentale</b> Uncommon, native	<b>Western larkspur</b>
<b>Myosurus aristatus</b> Rare, native	<b>bristle mousetail</b>
<b>Ranunculus andersonii</b> Rare, native	<b>Anderson's buttercup</b>
An early spring bloomer and often overlooked, this plant is sometimes in pale white flower while surrounded by snow.	
<b>Ranunculus aquatilis</b> Rare, native	<b>water buttercup; whitewater crowfoot</b>
<b>Ranunculus cymbalaria</b> Rare, native	<b>alkali buttercup</b>
<b>Ranunculus glaberrimus</b> Common, native	<b>sagebrush buttercup</b>
<i>Ranunculus glaberrimus var. ellipticus</i> (CRMO material)	
This Park Unit's commonest native buttercup, and an early spring bloomer. Intraspecific assignments may not be meaningful, but most material from CRMO is reasonably accommodated under <i>var. ellipticus</i> .	
<b>Ranunculus macounii var. macounii</b> Rare, native	<b>Macoun's buttercup</b>
<b>Ranunculus sceleratus var. multifidus</b> Rare, native	<b>blister buttercup</b>

- Ranunculus testiculatus** Common, non-native **bur buttercup**  
*Ceratocephala testiculata*  
 The mature fruit of this invasive annual herb have deceptively harmless-looking sharp tips that can easily puncture skin. This plant may be actively spreading in the southern third of this Park Unit, and is abundant in dryer areas of the Snake River Plain further west.
- Ranunculus uncinatus var. uncinatus** Rare, native **woodland buttercup**  
**Thalictrum fendleri** Rare, native **Fendler's buttercup**  
 Generally restricted to aspen stands.
- Thalictrum occidentale** Uncommon, native **Western meadowrue**

#### RHAMNACEAE – BUCKTHORN FAMILY

- Ceanothus velutinus** Uncommon, native **snowbrush**  
 A plant of the foothills vigorously returning after wildfire. Stands of skeletons or half-dead plants of this shrub are occasionally encountered. Some say this reflects the stand's decadence from lack of fire, while others say it reflects freeze at snow line, and that the plant has an affinity for areas of late snow retention. Most agree the fragrance of this plant's sticky leaves and small white flowers to be either cinnamon-like or slightly sickly sweet.

#### ROSACEAE – ROSE FAMILY

- Amelanchier alnifolia** Uncommon, native **Western serviceberry**  
*Amelanchier alnifolia var. alnifolia*  
 Serviceberries were included in Mountain Men's pemmican and provided a source of vitamins.
- Amelanchier utahensis var. utahensis** Uncommon, native **Utah serviceberry**  
*Amelanchier alnifolia var. utahensis*
- Cercocarpus ledifolius** Native **curlleaf mountain-mahogany**  
**UNCONFIRMED:** No supporting voucher specimen. An unexpected and supposedly reliable field observation by a National Vegetation Mapping Program survey crew on lava in the north end of the Wapi Flow during summer 2006 may be this plant (Paige Wolken, email correspondence with Steve Popovich, 26 August 2006). Probability of presence in this Park Unit of *C. ledifolius* is believed to be low, but it is known to occur in foothills northeast of this Park Unit.
- Chamaebatiaria millefolium** Common, native **fernbush**  
 One of the hallmark plants of lava flows in this Park Unit, this species is reportedly capable of strong water-holding capacity, allowing it to reduce water loss on harsh sites.
- Geum macrophyllum var. perincisum** Uncommon, native **largeleaf avens**  
**Geum triflorum** Uncommon, native **prairiesmoke**
- Holodiscus discolor** Park Unit nativity unknown **creambush oceanspray**  
**UNCONFIRMED:** Wunner (1967) states that this is "Introduced and local at H.Q. [headquarters] area," but the reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of *H. discolor* is low unless planted in the Headquarters' area and still persistent.

- Holodiscus dumosus var. dumosus** Common, native **spirea**  
*Holodiscus dumosus* is consistently observed growing in large cracks of pahoehoe (ropy) lava flows.
- Holodiscus dumosus var. glabrescens** Uncommon, native **oceanspray**  
*Sericotheca glabrescens*
- Petrophyton caespitosum** Native **tufted rockmat**  
**UNCONFIRMED:** Reliable Popovich field observation only – no voucher specimen. An unmistakable mat plant of rocky, often limestone sites in the foothills, but not easily recognized as being in the rose family; collected only once by Popovich and discarded prior to accessioning, and to be expected.
- Potentilla arguta var. convallaria** Unknown, native **cream cinquefoil**  
*Drymocallis convallaria*  
*Potentilla convallaria*
- Potentilla biennis** Uncommon, native **biennial cinquefoil**
- Potentilla diversifolia var. diversifolia** Uncommon, native **varileaf cinquefoil**
- Potentilla glandulosa var. nevadensis** Uncommon, native **Nevada cinquefoil**
- Potentilla glandulosa var. pseudorupestris** Common, native **gland (local) or sticky cinquefoil**  
*Drymocallis pseudorupestris*  
*Potentilla glandulosa var. glandulosa*  
*Potentilla glandulosa var. intermedia*  
*Potentilla pseudorupestris*  
Often one of the most dominant herbs on lava flows.
- Potentilla gracilis var. elmeri** Unknown, native **combleaf cinquefoil**
- Potentilla gracilis var. fastigiata** Native **slender cinquefoil**  
*Potentilla dichroa*  
**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of *P. gracilis var. fastigiata* is low.
- Potentilla gracilis var. flabelliformis** Unknown, native **slender cinquefoil**
- Potentilla gracilis var. pulcherrima** Uncommon, native **beautiful cinquefoil**  
*Potentilla pulcherrima*
- Potentilla rivalis** Native **brook cinquefoil**  
**FALSE REPORT:** Specimen Buchanan s. n. (CRMO catalog number 1618), which supports one or more references, annotated to *Potentilla biennis*. Probability of presence in this Park Unit of this taxon is medium. Reference citation appears mis-spelled as *Potentilla rivularis*.
- Prunus virginiana var. melanocarpa** Common, native **chokecherry**  
*Prunus melanocarpa*  
Chokecherries in the locale have a bitter taste unless sweetened by cold frosts, but are attractive to birds regardless!



- Purshia tridentata** Common, native **bitterbrush**  
*Purshia tridentata* is an important winter browse for wildlife. This perennial native shrub has decreased significantly in recent years in southern Idaho due to a combination of factors, including large and repeated wildfires. Notable stands are found in this Park Unit; for example, on vegetated cinder cones, at the trailhead to Carey Kipuka, and at the top of Laidlaw Butte. Lava flows across which wildfire will not carry are becoming increasingly important refugia for bitterbrush.
- Rosa woodsii var. ultramontana** Rare, native **Wood's rose**  
 The only "rose" species thusfar encountered or expected in this Park Unit. Plants in the genus *Rosa* are State Flowers of Georgia, Iowa, New York, and North Dakota.
- Rubus idaeus** Native **Western red raspberry**  
**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen: specimen Wunner 9961 (erroneous number? – perhaps 961?) (CRMO catalog number not assigned) is missing. Probability of presence in this Park Unit of *R. idaeus* is medium.
- Rubus parviflorus var. parviflorus** Rare, native **thimbleberry**  
**Sanguisorba minor\*** Uncommon, non-native **small burnet**  
 Often used in Emergency Fire Rehabilitation, this species has been seeded in BLM-administered areas. Cultivars used locally include 'Delar.'

#### RUBIACEAE – MADDER FAMILY

- Galium aparine var. echinospermum** Uncommon, native **sticky bedstraw**  
**Galium bifolium** Uncommon, native **twinleaf bedstraw**  
**Galium boreale** Native **northern bedstraw**  
**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen: specimen Wunner 1057 (CRMO catalog number not assigned) is missing. Probability of presence in this Park Unit of *G. boreale* is high.
- Galium multiflorum var. multiflorum** Uncommon, native **shrubby bedstraw**  
 The conspicuous whitish bristles of the fruit of this plant make it easy to distinguish from its allies.
- Galium trifidum** Native **threepetal bedstraw**  
**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of *G. trifidum* is medium.
- Galium triflorum** Native **sweet bedstraw**  
**UNCONFIRMED:** The reference citation(s) (appears mis-spelled as *Galium trifolium*) has no supporting voucher specimen: specimen Wunner 1200 (CRMO catalog number not assigned) is missing. Probability of presence in this Park Unit of *G. triflorum* is medium.

#### SALICACEAE – WILLOW FAMILY

- Populus acuminata** Rare, Park Unit nativity unknown **lanceleaf cottonwood**  
*Populus ×acuminata*
- Populus angustifolia** Rare, Park Unit nativity unknown **narrowleaf cottonwood**

**Populus tremuloides** Uncommon, native **quaking aspen**  
Across the Western U.S., communities exhibiting *Populus tremuloides* have recently experienced declines of this deciduous tree, well known for its showy change of leaf colors in the fall. The reasons for declines of this important Western resource are currently unknown, and scientists are convening to determine needs for proactive management.

**Populus trichocarpa** Rare, Park Unit nativity unknown **balsam poplar; black cottonwood**  
*Populus balsamifera ssp. trichocarpa*

**Salix boothii** Rare, native **Booth's willow**

**Salix exigua ssp. exigua** Rare, native **Coyote or sandbar willow**

**Salix geyeriana** Native **Geyer's willow**

**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of *S. geyeriana* is medium.

**Salix lasiandra var. caudata** Rare, native **longleaf or whiplash willow**

*Salix lucida var. caudata*

**Salix scouleriana** Uncommon, native **Scouler's willow**

While most willows in this Park Unit occur in riparian-influenced areas, this tall shrub or small tree prefers upland open forests. It is an indicator of early- to mid-seral forest communities, increasing after initial disturbance and decreasing over time with canopy closure, and its skeletons are often observed in Douglas-fir stands that have become well-established.

#### SANTALACEAE – SANDALWOOD FAMILY

The well-known exotic sandalwoods (*Santalum album* and related species) belong to this family.

**Comandra umbellata var. pallida** Native **comandra**

*Comandra* sp. (CRMO reference is presumed to refer to *Comandra umbellata*)

**UNCONFIRMED:** The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of *C. umbellata* is high, and it is regularly observed in surrounding areas. This plant may be parasitic.

#### SAXIFRAGACEAE – SAXIFRAGE FAMILY

**Heuchera cylindrica** Uncommon, native **roundleaf alumroot**

*Heuchera ovalifolia*

**Heuchera grossulariifolia** Park Unit nativity unknown **gooseberryleaf alumroot**

**FALSE REPORT:** Specimen Elzinga 4554 (CRMO catalog number 2381), which supports one or more references, annotated to *Heuchera cylindrica*.

Probability of presence in this Park Unit of *H. grossulariifolia* is low (out of range and/or no suitable habitat).

**Heuchera parvifolia** Uncommon, native **littleleaf alumroot**

**Lithophragma glabrum** Common, native **smooth woodlandstar**

*Lithophragma bulbiferum* (subsumed under *L. glabrum*) (CRMO material, in part) **BULBOUS WOODLANDSTAR**

One of the most common spring blooming plants in this Park Unit and locally abundant in good growing conditions. This plant often has reddish bulbils in the leaf axils; such plants were formerly recognized as *L. bulbiferum*.

Craters of the Moon Vascular Plant Checklist Prepared by Steve J. Popovich October 2006

<b>Lithophragma parviflorum</b>	Uncommon, native	<b>smallflower woodlandstar</b>
<b>Lithophragma tenellum</b>	Common, native	<b>slender woodlandstar</b>
	<i>Lithophragma tenella</i> var. <i>tenella</i> (subsumed under <i>L. tenellum</i> ) (CRMO material, in part: common in CRMO)	
	<i>Lithophragma tenellum</i> var. <i>thompsonii</i> (subsumed under <i>L. tenellum</i> ) (CRMO material, in part: rare in CRMO)	
<b>Saxifraga occidentalis</b>	Rare, native	<b>Alberta saxifrage</b>
<b>Saxifraga oregana</b>	Rare, native	<b>box saxifrage</b>

**SCROPHULARIACEAE – FIGWORT FAMILY**  
**(*Castilleja* has been placed recently in Orobanchaceae)**

<b>Castilleja angustifolia</b> var. <b>angustifolia</b>	Uncommon, native	<b>northwestern Indian paintbrush</b>
	This species can have flowers ranging in color from pink to violet, purplish or orange. Another plant in the genus <i>Castilleja</i> , <i>C. linearifolia</i> , is the State Flower of Wyoming. <i>Castilleja</i> species are hemi-parasites, and undoubtedly use <i>Artemisia</i> species (sagebrushes) among other plants as hosts.	
<b>Castilleja applegatei</b> var. <b>pinetorum</b>	Native	<b>pine or wavyleaf Indian paintbrush</b>
	<i>Castilleja applegatei</i> var. <i>fragilis</i>	
	<i>Castilleja pinetorum</i>	
	<b>UNCONFIRMED:</b> The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of <i>C. applegatei</i> var. <i>pinetorum</i> is low.	
<b>Castilleja chromosa</b>	Uncommon, native	<b>desert Indian paintbrush</b>
	<i>Castilleja angustifolia</i> var. <i>dubia</i>	
	The species exhibits bright red to orange-red flowers. It can be difficult to distinguish from <i>Castilleja angustifolia</i> , and could be considered conspecific.	
<b>Castilleja cusickii</b>	Rare, native	<b>Cusick's Indian paintbrush</b>
<b>Castilleja exilis</b>	Native	<b>lesser Indian paintbrush</b>
	<b>UNCONFIRMED:</b> Reliable Moseley field observation only – no voucher specimen. This interesting alkaline-tending riparian plant is an annual, unusual for <i>Castilleja</i> , and the only such paintbrush species in the Intermountain West. It appears restricted in this Park Unit to the geothermal area of Huff Creek (Robert Moseley, Idaho Conservation Data Center, pers. comm. with Steve Popovich, 1996).	
<b>Castilleja flava</b>	Uncommon, native	<b>yellow Indian paintbrush</b>
<b>Castilleja miniata</b>	Common, native	<b>scarlet Indian paintbrush</b>
	<i>Castilleja vreelandii</i>	
<b>Castilleja pallescens</b> var. <b>inverta</b>	Rare, native	<b>pale Indian paintbrush</b>
	<i>Castilleja inverta</i>	
<b>Castilleja pilosa</b> var. <b>longispica</b>	Native	<b>longspike Indian paintbrush</b>
	<i>Castilleja longispica</i>	
	<b>UNCONFIRMED:</b> The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of <i>C. pilosa</i> var. <i>longispica</i> is low.	

- Castilleja rhexiifolia** Rare, native **splitleaf Indian paintbrush**
- Collinsia parviflora** Common, native **blue-eyed Mary**  
 This small-flowered well-known plant is among the most common native annual springtime herbs in the Intermountain West as well as in this Park Unit.
- Cordylanthus capitatus** Uncommon, native **Yakima bird's-beak**  
*Cordylanthus* is a distinctive late summer herb of the sagebrush-steppe.
- Cordylanthus ramosus** Uncommon, native **muchbranched bird's-beak**
- Linaria genistifolia ssp. dalmatica** Non-native **NOXIOUS** **Dalmatian toadflax**  
*Linaria dalmatica ssp. dalmatica*  
**ENCROACHING:** Presumed eradicated from along Big Cottonwood Road where a single plant was observed and actively treated a few years ago by P. Wolken and J. Apel, but encroaching from the west, and to be expected.
- Mimulus floribundus** Rare, native **manyflowered monkeyflower**
- Mimulus guttatus** Uncommon, native **yellow monkeyflower**
- Mimulus lewisii** Rare, native **Lewis's monkeyflower**  
 The largest and most showy of monkey flowers in this Park Unit; it is rare in CRMO but often seen gracing streamsides in the nearby Sawtooth Mountains.
- Mimulus nanus** Common, native **dwarf monkeyflower**  
*Eunanus tolmiei*  
 This spring blooming annual can be large and many-flowered in good growing seasons or following nutrient flush from wildfires. Its striking magenta flowers always command attention. It is a common plant of cinder gardens. Curiously, it is also often observed ringing anthills; a possible inter-relationship may exist. Material in this Park Unit is sometimes mistaken for *Mimulus cusickii*, but the flowers and leaf shapes are different.
- Mimulus pilosus** Rare, native **downy mimetanthe; false monkeyflower**  
*Mimetanthe pilosa*  
 Seemingly quite rare in this part of southern Idaho, and collected only twice (Atwood 28637b, Wunner 991; CRMO catalog numbers 3196 and 1696/1697, respectively). Typically placed in *Mimetanthe*, a monotypic genus, this plant has a somewhat different looking flower, being less bilabiate and exhibiting a shorter corolla length relative to the calyx when compared to the Park Unit's other monkeyflowers. Paul Beardsley (*Mimulus* authority, Herbarium IDS) stated that "I will be writing a paper this summer [2005] that clarifies (hopefully) many of the taxonomic problems in *Mimulus*. My molecular work clearly shows that *Mimetanthe pilosa* is within *Mimulus* and is not a separate group -- so, yes, I think we should start using [the available name] *Mimulus pilosus* to keep the level of confusion to a mimimum" (pers. comm. with Steve Popovich, 27 Jan 2005).
- Mimulus suksdorfii** Common, native **Suksdorf's monkeyflower**  
 An inconspicuous spring blooming monkeyflower whose abundance is more or less determined by good growing seasons; the extremely small yellow flowers beset with red-dotted throats are marvelous nonetheless. This plant can be single-flowered and only 3 mm tall, or many-flowered, branched, and up to 7 cm tall, depending upon growing conditions. Some material in this Park Unit approaches *Mimulus breweri* and *M. rubellus* in morphology.
- Orthocarpus hispidus** Rare, native **hairy owl's-clover**  
 Encountered in one location in June 2006 (Popovich 8428; not yet cataloged in CRMO database) along the northwest boundary, but perhaps to be expected elsewhere in suitable habitat.

- Orthocarpus luteus** Rare, native **yellow owl's-clover**  
 Collected in only one location in June 2006 (Popovich 8402c; not yet cataloged in CRMO database) along the northern boundary, but reportedly occurring elsewhere.
- Penstemon acuminatus var. acuminatus** Rare, native **sharpleaf beardtongue or penstemon**  
 A showy, stout penstemon of sandy areas.
- Penstemon attenuatus var. militaris** Uncommon, native **South Idaho beardtongue or penstemon**
- Penstemon barbatus** Rare, non-native **beardlip beardtongue or penstemon**  
 An exceptionally brightly colored orangish-red flowered penstemon, material in this Park Unit is non-native and introduced as highway roadside seed mix or waif.
- Penstemon cusickii** Rare, native **Cusick's beardtongue or penstemon**
- Penstemon cyananthus var. subglaber** Rare, Park Unit nativity unknown **Wasatch beardtongue or penstemon**
- Penstemon cyaneus** Common, native **blue beardtongue or penstemon**  
 Considered by many to be one of the most beautiful plants in the Park Unit, with virtually surreal blue flowers.
- Penstemon deustus** Common, native **hot-rock or scabland beardtongue or penstemon**  
*Penstemon deustus var. deustus*  
*Penstemon deustus var. pedicellatus*  
*Penstemon deustus var. heterander*  
 The only penstemon in this Park Unit generally restricted to lava flows; hence the names "hot-rock" and "scabland" penstemon. It has dentate leaves, unusual for Idaho penstemons. Specimens from this Park Unit do not fit well into the two varieties mentioned in *Intermountain Flora* (Vol. 4, 1984), with fresh flower upper lips often clearly white as in var. *deustus*, but with corollas and leaves variable between vars. *deustus* and *pedicellatus* as well as between individual plants, most often in overall sizes conforming nearer to var. *pedicellatus*.
- Penstemon eatonii var. eatonii** Rare, non-native **Eaton's or firecracker beardtongue or penstemon**  
*Penstemon eatonii ssp. eatonii*  
 Like *Gilia aggregata* (Polemoniaceae), the vivid red of this penstemon's flowers sometimes give it the common name "firecracker penstemon," and, like *Penstemon barbatus*, material in this Park Unit is non-native and was probably introduced as highway roadside seed mix or waif.
- Penstemon humilis var. humilis** Common, native **low beardtongue or penstemon**
- Penstemon laxus** Park Unit nativity unknown **IDAHO ENDEMIC** **tufted beardtongue or penstemon**  
**FALSE REPORT:** Specimens Wunner 725 (CRMO catalog number 1705) and Wunner 968 (CRMO catalog number 1704), which support one or more references, annotated to *Penstemon humilus var. humilus* and *Penstemon attenuatus var. militaris*, respectively. Probability of presence in this Park Unit of *P. laxus* is low (out of range and/or no suitable habitat).
- Penstemon montanus** Rare, native **IDAHO ENDEMIC: IF CONSIDERED VAR. IDAHOENSIS** **cordroot beardtongue or penstemon**  
 Encountered in only one location in June 2006 (Popovich 8391; not yet cataloged in CRMO database) and previously in 2002 (Atwood 28350; CRMO catalog number 3671) on black cinder near the top of Sunset Cone, but perhaps to be expected elsewhere in suitable habitat of the foothills. An attractive, somewhat shrubby penstemon of foothills with glandular-pubescent serrate leaves similar to *P. deustus*. Some recognize a form found only in Idaho as variety *idahoensis* (Central Idaho beardtongue or penstemon).

- Penstemon palmeri var. eglandulosus** Rare, non-native **scented beardtongue or penstemon**  
*Penstemon palmeri* has showy large whitish flowers and is a tall, robust plant. Material in this Park Unit is non-native and was probably introduced as highway roadside seed mix or waif; appearing here and there along HWY 20/26/93.
- Penstemon palmeri var. palmeri** Rare, non-native **Palmer's beardtongue or penstemon**  
 Material in this Park Unit is non-native and was probably introduced as highway roadside seed mix or waif; appearing here and there along HWY 20/26/93.
- Penstemon perpulcher** Uncommon, native **Minidoka beardtongue or penstemon**  
 The common name refers to the former Minidoka National Forest in Minidoka County, Idaho. The county today contains a portion of CRMO.
- Penstemon procerus** Native **littleflower beardtongue or penstemon**  
 UNCONFIRMED: The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of *P. procerus* is medium.
- Penstemon pumilus** Uncommon, native **IDAHO ENDEMIC** **dwarf or Salmon River beardtongue or penstemon**  
 This penstemon is on the periphery of its range in this Park Unit.
- Penstemon radicosus** Rare, native **matroot beardtongue or penstemon**
- Penstemon speciosus** Park Unit nativity unknown **royal beardtongue or penstemon**  
 UNCONFIRMED: The reference citation(s) has no supporting voucher specimen. Probability of presence in this Park Unit of *P. speciosus* is medium.
- Scrophularia lanceolata** Rare, native **lanceleaf figwort**  
 The small and soft greenish-maroon, hooded-appearing flowers of this plant are rather unusual. A single plant was encountered in June 2006 (Popovich 8433; not yet cataloged in CRMO database) along the northern boundary of this Park Unit, but more plants are to be expected north of HWY 20/26/93. In this part of Idaho it seems to often appear after disturbance such as wildfire.
- Verbascum blattaria** Rare, non-native **moth mullein**  
 Encountered only at a disturbed area at Crystal Ice Cave (Popovich 7888; CRMO catalog number 2900), but to be expected elsewhere.
- Verbascum thapsus** Uncommon, non-native **miner's candle; woolly mullein**
- Veronica americana** Uncommon, native **American speedwell**
- Veronica anagallis-aquatica** Uncommon, native **water speedwell**
- Veronica peregrina** Rare, native **purslane speedwell**

#### SOLANACEAE – POTATO or NIGHTSHADE FAMILY

- Hyoscyamus niger** Rare, non-native **NOXIOUS** **black henbane**  
 Limited to a few scattered sites, typically on roadsides, and immediately controlled using manual or mechanical methods.
- Nicotiana attenuata** Uncommon, native **coyote tobacco**  
 Like *Scrophularia lanceolata* (Scrophulariaceae), this plant with late-season white tubular flowers seems to often appear after disturbance such as wildfire, and it was observed to be abundant the first three growing seasons following the Echo Crater burn (2000).
- Solanum triflorum** Rare, native **cutleaf nightshade**

### TYPHACEAE – CATTAIL FAMILY

**Typha angustifolia** Rare, native

**Typha latifolia** Rare, native

**narrowleaf cattail**

**broadleaf cattail**

### ULMACEAE – ELM FAMILY

**Ulmus pumila** Rare, non-native

Sparingly present in a few riparian areas. A native cousin of southwest Idaho, *Celtis reticulata* (hackberry), probably does not occur in this Park Unit.

**Siberian elm**

### URTICACEAE – NETTLE FAMILY

**Parietaria pensylvanica** Rare, native

A rather delicate native nettle, easily overlooked but probably truly rare in this Park Unit.

**Pennsylvania pellitory**

**Urtica dioica ssp. gracilis var. procera** Uncommon, native

*Urtica dioica ssp. gracilis* (CRMO material)

*Urtica dioica var. procera*

This stinging nettle causes sometimes severe discomfort when touched to the skin of most people.

**stinging nettle**

### VALERIANACEAE – VALERIAN FAMILY

**Valeriana acutiloba var. pubicarpa** Rare, native

**Valeriana occidentalis** Rare, native

**hairyfruit valerian**

**Western valerian**

### VERBENACEAE – VERBENA or VERVAIN FAMILY

**Verbena bracteata** Rare, native

**bigbract verbena; bracted or prostrate vervain**

### VIOLACEAE – VIOLET FAMILY

**Viola beckwithii** Uncommon, native

Often occurring in sparsely vegetated or clayey sites, the handsome springtime purple and white flower of this plant make it the author's favorite Park Unit violet. Plants in the genus *Viola* are State Flowers of Illinois, New Jersey, Rhode Island, and Wisconsin.

**Beckwith's violet**

**Viola nephrophylla** Rare, native

**Viola nuttallii var. major** Uncommon, native

*Viola vallicola var. major*

The authors of *Intermountain Flora* (Vol. 2B, 2005) prefer the name *Viola vallicola*, and state that varieties *major* and *vallicola* perhaps cannot be reliably morphologically or geographically differentiated.

**northern bog violet**

**valley violet**

**Viola nuttallii var. vallicola** Common, native

*Viola vallicola var. vallicola*

**sagebrush violet**

**Viola purpurea var. venosa** Uncommon, native

**goosefoot violet**

#### VISCACEAE – MISTLETOE FAMILY

##### (traditionally under Loranthaceae)

Dwarf mistletoes are dioecious stem parasites of plants in the families Pinaceae (pines) and Cupressaceae (junipers). They are not leafy or green but are somewhat photosynthetic. They often cause the infected tree to produce swollen limbs called “witches’s brooms.” Mature fruit can be projected with force over considerable distances from the plant. Regrettably, the eradication program of mistletoes in the 1960’s brought about the cutting down of many old and ecologically important conifer trees; such a program is discouraged today.

**Arceuthobium cyanocarpum** Uncommon, native

**limber pine dwarf mistletoe**

*Arceuthobium campylopodum forma cyanocarpum*

Parasitic almost entirely on five-needled pines, especially *Pinus flexilis*. Mistletoe infections are extensive on limber pine in this Park Unit, even on trees of the most interior lava fields.

**Arceuthobium douglasii** Native

**Douglas-fir dwarf mistletoe**

**UNCONFIRMED:** Determination is pending of a specimen (Wolken 1133; not yet cataloged in CRMO database) collected in 2003 from a Douglas-fir tree on Silent Cone. Probability of presence in this Park Unit of *A. douglasii* is high. Parasitic mainly on *Pseudotsuga menziesii*.

– END CHECKLIST –