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## TECHNICAL BULLETIN

AN ILLUSTRATED GUIDE TO THE  
SENSITIVE PLANTS OF BOISE DISTRICT  
BUREAU OF LAND MANAGEMENT, 1988

by

Ann DeBolt &

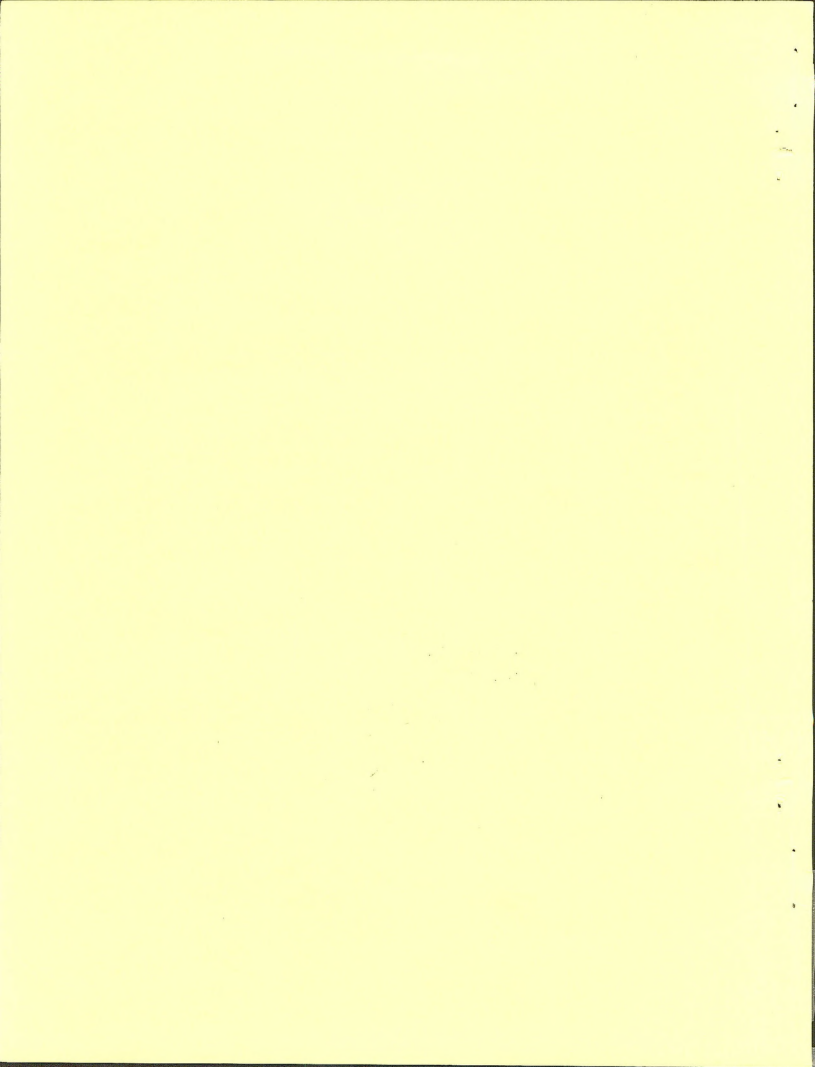
Roger Rosentreter



Technical Bulletin 88-4  
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**BUREAU OF LAND MANAGEMENT**  
**IDAHO STATE OFFICE**  
**3380 Americana Terrace**  
**Boise, Idaho 83706**

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### INTRODUCTION

This collection of information includes all known sensitive plant species in the Boise District. It was compiled for use as a reference and for field personnel, containing line drawings when available.

The plants are arranged in alphabetical order by genera. An index of common names has been included for those unfamiliar with Latin names. Each plant has been placed in one or sometimes two soil and vegetation type categories. This information is also available within the narrative descriptions, but the categories will provide a more rapid way to reference habitat information.

Plant nomenclature follows that of Hitchcock and Cronquist in their Flora of the Pacific Northwest (1973). Illustrations are from various sources, including Flora of the Pacific Northwest, Intermountain Flora, Threatened and Endangered Plants of Nevada, and Threatened and Endangered Vascular Plants of Oregon.

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LIST OF SENSITIVE PLANTS IN THE BOISE DISTRICT

- Allium aseae (Aase's Onion)  
Artemisia packardiae (Packard's Sagebrush)  
Astragalus atratus var. insepatus (Mourning Milk-vetch)  
Astragalus atratus var. owyheensis (Owyhee Mourning Milk-vetch)  
Astragalus camptopus (Murphy Milk-vetch)  
Astragalus mulfordiae (Mulford's Milk-vetch)  
Astragalus sterilis (Barren Milk-vetch)  
Astragalus vallis (Snake Canyon Milk-vetch)  
Astragalus yoder-williamsii (Osgood Mountains Milk-vetch)  
Camassia cusickii (Cusick's Camas)  
Chaenactis cusickii (Cusick's False Yarrow)  
Cryptantha propria (Malheur Cryptantha)  
Cymopterus acaulis var. greeleyorum (Greeley's Parsley)  
Dimersia howellii (Dimersia)  
Eatonella nivea (White Eatonella)  
Epipactis gigantea (Giant Helleborine)  
Erigeron latus (Broad Fleabane)  
Eriogonum salicornoides (Annual Salt Eriogonum)  
Eriogonum shockleyi var. shockleyi (Matted Cowpie Buckwheat)  
Glyptopleura marginata (White Margined Wax Plant)  
Gymnosteris nudicaulis (Large Flowered Gymnosteris)  
Gymnosteris parvula (Small Flowered Gymnosteris)  
Hackelia ophibia (Rattlesnake Stickseed)  
Haplopappus radiatus (Snake River Goldenweed)  
Lepidium davisii (Davis Peppergrass)  
Leptodactylon glabrum (Bruneau River Prickly Phlox)  
Lupinus uncialis (Inch High Lupine)  
Malacothrix glabrata (Desert Dandelion)  
Malacothrix torreyi (Torrey's Malacothrix)  
Mentzelia mollis (Smooth Stickleleaf)  
Mentzelia torreyi var. acerosa (Torrey's Blazing Star)  
Nemacladus rigidus (Rigid Threadstem)  
Pediocactus simpsonii var. robustior (Simpson's Hedgehog Cactus)  
Peraphyllum ramosissimum (Squaw Apple)  
Peteria thompsonae (Spine-Noded Milk-vetch)  
Phacelia lutea var. calva (Yellow Phacelia)  
Phacelia minutissima (Least Phacelia)  
Primula wilcoxiana (Wilcox's Primrose)  
Stipa webberi (Webber's Needlegrass)  
Stylocline filaginea (Hooked Stylocline)  
Texosporium sancti-jacobi (Texas Spored Lichen)  
Trifolium owyheense (Owyhee Clover)



ALPHABETICAL LISTING OF COMMON NAMES

Aase's Onion (*Allium aseae*)  
Annual Salt Eriogonum (*Eriogonum salicornoides*)  
Barren Milk-vetch (*Astragalus sterilis*)  
Broad Fleabane (*Erigeron latus*)  
Bruneau River Prickly Phlox (*Leptodactylon glabrum*)  
Cusick's Camas (*Camassia cusickii*)  
Cusick's False Yarrow (*Chaenactis cusickii*)  
Davis Peppergrass (*Lepidium davisii*)  
Desert Dandelion (*Malacothrix glabrata*)  
Dimersia (*Dimersia howellii*)  
Giant Helleborine (*Epipactis gigantea*)  
Greeley's Parsley (*Cymopterus acaulis* var. *greeleyorum*)  
Hooked Stylocline (*Stylocline filaginea*)  
Inch High Lupine (*Lupinus uncialis*)  
Large Flowered Gymnosteris (*Gymnosteris nudicaulis*)  
Least Phacelia (*Phacelia minutissima*)  
Malheur Cryptantha (*Cryptantha propria*)  
Matted Cowpie Buckwheat (*Eriogonum shockleyi* var. *shockleyi*)  
Mourning Milk-vetch (*Astragalus atratus* var. *inseptus*)  
Mulford's Milk-vetch (*Astragalus mulfordiae*)  
Murphy Milk-vetch (*Astragalus camptopus*)  
Osgood Mountains Milk-vetch (*Astragalus yoder-williamsii*)  
Owyhee Clover (*Trifolium owyheense*)  
Owyhee Mourning Milk-vetch (*Astragalus atratus* var. *owyheensis*)  
Packard's Sagebrush (*Artemisia packardiae*)  
Rattlesnake Stickseed (*Hackelia ophiobia*)  
Rigid Threadstem (*Nemacladus rigidus*)  
Simpson's Hedgehog Cactus (*Pediocactus simpsonii* var. *robustior*)  
Small Flowered Gymnosteris (*Gymnosteris parvula*)  
Smooth Stickleaf (*Mentzelia mollis*)  
Snake Canyon Milk-vetch (*Astragalus vallis*)  
Snake River Goldenweed (*Haplopappus radiatus*)  
Spine-Noded Milk-vetch (*Peteria thompsonae*)  
Squaw Apple (*Peraphyllum ramosissimum*)  
Texas Spored Lichen (*Texosporium sancti-jacobi*)  
Torrey's Blazing Star (*Mentzelia torreyi* var. *acerosa*)  
Torrey's Malacothrix (*Malacothrix torreyi*)  
Webber's Needlegrass (*Stipa webberi*)  
White Eatonella (*Eatonella nivea*)  
White Margined Wax Plant (*Glyptopleura marginata*)  
Wilcox's Primrose (*Primula wilcoxiana*)  
Yellow Phacelia (*Phacelia lutea* var. *calva*)

Plant Distribution by Soil Characteristics

Coarse Sand

Allium aseae  
Astragalus mulfordiae  
Cymopterus acaulis var. greeleyorum

Fine Alluvial Sand

Astragalus camptopus  
Astragalus kentrophyta var. jessiae  
Eatonella nivea  
Gymnosteris nudicaulis  
Gymnosteris parvula  
Malacothrix glabrata  
Malacothrix torreyi  
Mentzelia torreyi var. acerosa

Volcanic Ash

Astragalus sterilis  
Chaenactis cusickii  
Cryptantha propria  
Cymopterus acaulis var. greeleyorum  
Eriogonum salicornoides  
Glyptopleura marginata  
Malacothrix glabrata  
Malacothrix torreyi  
Mentzelia mollis  
Nemacladus rigidus  
Phacelia lutea var. calva  
Trifolium owyheense

Volcanic Cinder

Astragalus yoder-williamsii  
Dimersia howellii  
Eatonella nivea  
Erigeron latus  
Glyptopleura marginata  
Gymnosteris nudicaulis  
Gymnosteris parvula  
Lupinus uncialis  
Mentzelia torreyi var. acerosa  
Nemacladus rigidus  
Peteria thompsonae  
Stylocline filaginea

Rhyolite Cliffs

Artemisia packardiae  
Hackelia ophiobia  
Leptodactylon glabrum

Clay Loam

Astragalus vallisii  
Peraphyllum ramosissimum  
Primula wilcoxiana  
Stipa webberi  
Texosporium sancti-jacobi

Silt Loam

Astragalus yoder-williamsii  
Camassia cusickii  
Haplopappus radiatus

Calcareous Hot/Cold Springs

Epipactis gigantea

Playa or Natric Sites

Lepidium davisii  
Lepidium montanum var.  
papilliferum

Thin Soil over Basalt

Astragalus atratus var.  
inseptus  
Astragalus atratus var.  
owyheensis  
Malacothrix torreyi  
Pediocactus simpsonii var.  
robustior  
Stipa webberi  
Stylocline filaginea

Plant Distribution by Vegetation Types

Sagebrush-Grassland

*Artemisia atratus* var. *inseptus*  
*Cryptantha propria*  
*Dimersia howellii*  
*Gymnosteris nudicaulis*  
*Gymnosteris parvula*  
*Haplopappus radiatus*  
*Peraphyllum ramosissimum*  
*Primula wilcoxiana*  
*Stipa webberi*

Wyoming Big Sage

*Astragalus camptopus*  
*Erigeron latus*  
*Eriogonum salicornoides*  
*Lepidium davisii*  
*Lepidium montanum* var. *papilliferum*  
*Nemacladus rigidus*  
*Trifolium owyheense* (on ash  
surrounded by Wyoming Sage)

Wyoming Sage-Shadscale

*Astragalus camptopus*  
*Astragalus kentrophyta* var. *jessiae*  
*Cymopterus acaulis* var. *greeleyorum*  
*Eatonella nivea*  
*Eriogonum shockleyi* var. *shockleyi*  
*Glyptopleura marginata*  
*Mentzelia mollis*  
*Mentzelia torreyi* var. *acerosa*  
*Nemacladus rigidus*  
*Phacelia lutea* var. *calva*

Salt Desert Shrub

*Astragalus camptopus*  
*Chaenactis cusickii*  
*Eatonella nivea*  
*Eriogonum salicornoides*  
*Lepidium davisii*  
*Malacothrix torreyi*  
*Mentzelia mollis*  
*Mentzelia torreyi* var. *acerosa*  
*Peteria thompsonae*  
*Phacelia lutea* var. *calva*

(These vegetation types are generalizations of where a plant may occur. Some species are not so easily classified, and may occur in several vegetative zones.)

Low Sage

*Astragalus atratus* var. *owyheensis*  
*Astragalus yoder-williamsii*  
*Erigeron latus*  
*Pediocactus simpsonii* var. *robustior*

Mountain Big Sage

*Astragalus yoder-williamsii*  
*Phacelia minutissima*  
*Primula wilcoxiana*

Bitterbrush-Bluebunch Wheatgrass

*Allium aseae*  
*Astragalus mulfordiae*  
*Astragalus sterilis*  
*Astragalus vallis*  
*Camassia cusickii*

Rabbitbrush

*Malacothrix glabrata*  
*Texosporium sancti-jacobi*

Rhyolite Canyons

*Artemisia packardiae*  
*Hackelia ophiobia*  
*Leptodactylon glabrum*

Calcareous Springs (hot or cold)

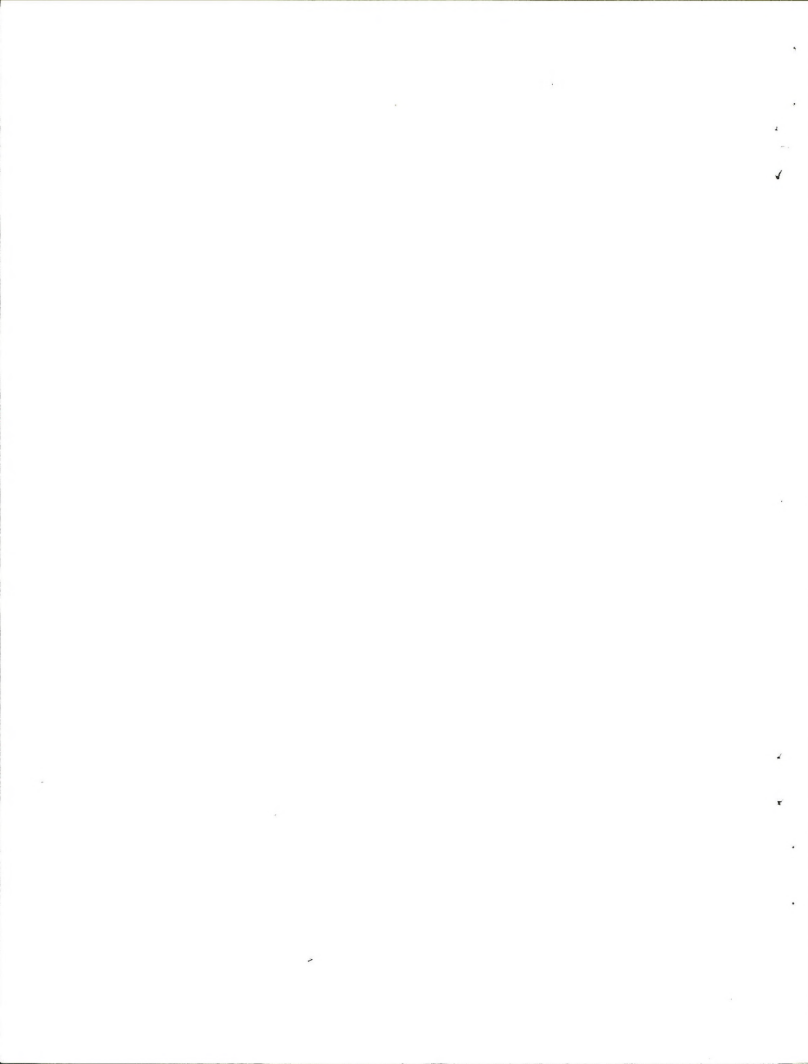
*Epipactis gigantea*

Eriogonum thymoides

*Stipa webberi*

Mountain Brush

*Peraphyllum ramosissimum*



Allium aseae (Aase's Onion)

Family: Liliaceae (Lily)

Status: Federal Category I (C1) recommended for Threatened status

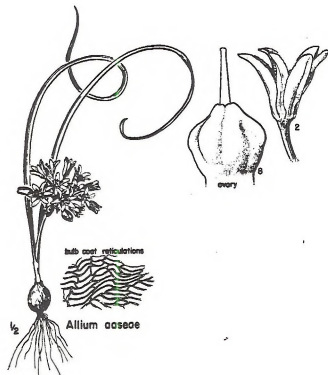
Known Locations: Ada, Boise, Gem Counties, Idaho

T6N, R1W, Sec. 1,2,3,10,11,12 Sand Hollow  
T6N, R1W, Sec. 21,22,23,24, Pearl Mining Claims  
T6N, R1W, Sec. 33,34 Willow Creek  
T6N, R1E, Sec. 24,36  
T6N, R2E, Sec. 28,34 Cartwright Canyon  
T5N, R1E, Sec. 1,4,7,8,9,10,14,15,17 22-28 West of Spring Valley  
T5N, R2E, Sec. 27,34 Dry Creek Valley  
T4N, R1E, Sec. 13 Seamen Gulch  
T4N, R2E, Sec. 6-9, 15,16,17,20,21,23,25,26,34,35,36 Boise Foothills  
T4N, R3E, Sec. 20,21 Hull's Gulch  
T3N, R2E, Sec. 1,2 Cottonwood Creek

Soil Type: Lolilila coarse silica sand

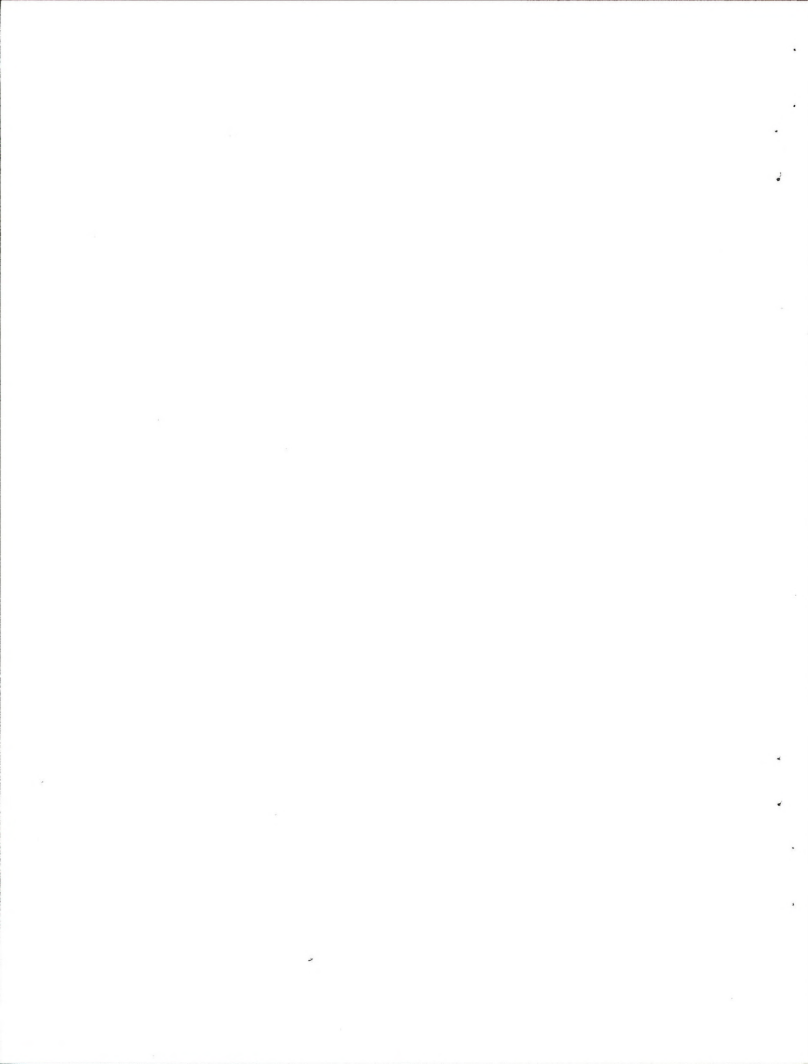
Habitat and Ecology: A small perennial onion growing in coarse sandy soil, often with bitterbrush. Sites are on south, west, and occasionally east-facing slopes in the sagebrush-grassland zone, and are usually found on or near ridgetops. Found from 2,850 feet up to 5,000 feet. Aase's onion blooms from as early as February until mid-May.

Threats: Urbanization, sand mining, off-road vehicles, invasion of annual weedy grasses and other exotics.



Key Characteristics

Two leaves, twice as long as stem  
Flowers deep pink, usually laying  
on the soil surface  
Early bloomer  
Coarse sandy soils



Artemisia packardiae (Packard's Sagebrush)

Family: Asteraceae (Composite)

Status: Review species on the State Sensitive Plant List

Known Locations: Owyhee County, Idaho  
Malheur County, Oregon  
Elko, Humboldt Counties, Nevada

Idaho

T10S, R3W, Sec. 27 Deep Creek off the Owyhee River

T14S, R1W, Sec. 18 The Tules, E Fork Owyhee River

T15S, R4W, Sec. 15

T15S, R4W, near the junction of Red Canyon

Little Jacks Creek RNA

The East Fork of the Owyhee River, from the pipeline crossing to Red Canyon

Cottonwood Creek of Big Jack's drainage

Soil Type: Rhyolitic cliffs, usually of mesic microsites or E or N faces

Habitat and Ecology: A perennial herb with a strong smell, found only on vertical rhyolite cliffs. The plant appears to be restricted to the Owyhee and Humboldt River drainages, but more work on its biology and taxonomy is needed. It is found at elevations from 4,000-5,500 feet. The plant's foliage is dark green, leaves lack surface hairs, and its odor is not sagebrush-like. More collections should be made to determine its range. Blooms May to July.

Threats: None known

Key Characteristics

Restricted to rhyolite cliffs

Leaves sticky and with a

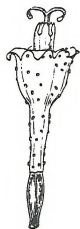
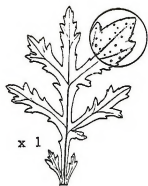
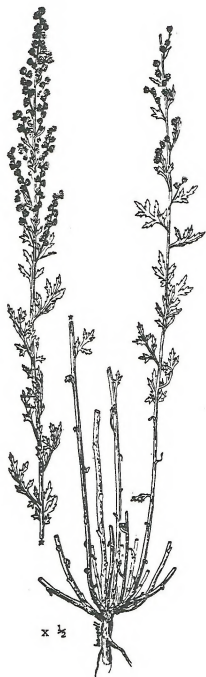
strong odor

Flowers yellow

Plants 20-50 cm tall

Artemisia packardiae

Packard's Sagebrush





Astragalus atratus var. inseptus (Mourning Milk-Vetch)

Family: Fabaceae (Legume)

Status: Federal Category II (C2) recommended for Threatened status

Known Locations: Blaine, Camas, Gooding, Lincoln Counties, Idaho

T1S, R20E, North of Picabo on sage hillsides  
T2S, R16E, Sec. 12 West of Magic Reservoir  
T2S, R18E, Sec. 3 NW, 18 SWNE & NENW & N1/2, 20 SENE  
T3S, R16E, Sec. 6 NENW near junction of Lincoln, Camas, and Gooding  
Counties  
T3S, R20E, Sec. 10 SESW & NWNE, 19 SENE  
T4S, R16E, Sec. 18 Preacher Creek NE of Gooding  
T6S, R13E, Sec. 20 SE South of Bliss  
T3S, R17E, Sec. 27 SE South of Shoshone  
T7S, R13E, Sec. 32 near Buckeye Ranch SW of Hagerman

Soil Type: Thin rocky soil over basalt

Habitat and Ecology: A perennial found on thin soil over basalt that is wet in spring but dry at other seasons. Clumps of this plant blend in well with the surrounding grasses due to the narrow leaves. Often grows with Idaho fescue. + 5,000 feet elevation. Blooms May to June.

Threats: Range improvement programs and grazing

Key to two varieties of Astragalus atratus:

1. Leaflets all very small, narrow, and remote, the terminal one continuous with the rachis or represented by a small dilation of the rachis; pod of papery texture; sagebrush slopes .....var. owyheensis
1. Leaflets more ample and less scattered, the terminal one jointed to the rachis; pod of leathery texture; stony flats where moist in spring .....var. atratus  
(see drawing on next page)

#### Key Characteristics

Flowers white, sometimes faintly lilac-tinged  
Leaflets 9-15, terminal one jointed to the stem  
Pods with leathery texture  
Pods 12-18 mm long & 3-4 mm wide

Astragalus atratus var. owyheensis (Owyhee Mourning Milk-Vetch)

Family: Fabaceae (Legume)

Status: Sensitive on the BLM and State Sensitive Plant Lists

Known Locations: Elmore, Owyhee, Twin Falls Counties, Idaho  
Baker, Malheur Counties, Oregon  
Elko County, Nevada

Idaho

T2S, R9E, Sec. 18 Bennett Mountain area  
T3S, R4W, Sec. 2 14 miles W of Murphy, near Babbington Creek  
T5S, R9E, Sec. 34 two miles W of Glenn's Ferry  
T7S, R13E, Sec. 32 SW of Hagerman, Peter's Gulch area  
T9S, R13E, Sec. 11 Salmon Falls Creek  
T14S, R1E, Sec. 26 SW of Shoo Fly Creek  
T14S, R13E, Sec. 7 E of Devil Creek  
T16S, R9E, Sec. 11 near Murphy Hot Springs  
Bennett Mountain area  
above the "Hot Hole" of the East Bruneau (historic collection)  
Near the dam at Salmon Falls Creek

Soil Type: Gravelly flats and steep slopes on basalt

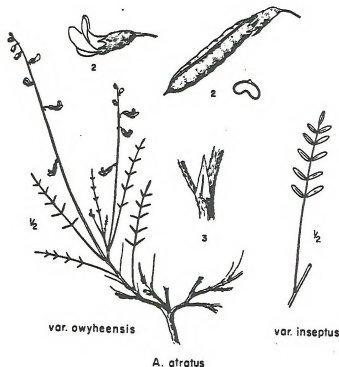
Habitat and Ecology: A perennial with many very slender, often prostrate and creeping to erect stems. Found on steep hillsides and gravelly flats, on basalt, usually taking shelter under and entangled in low sagebrush. From 3,500 to 6,000 feet. Often on bluffs overlooking the Snake River Canyon. Its leaves blend in with the leaves of grass and are not easily noticed. Blooms from May to July

Threats: Range improvement programs, overgrazing, agricultural development

Key Characteristics:

Flowers whitish, purplish-lined  
or -tinged and 8-9 mm long  
Leaflets 7-11, terminal one  
continuous with the stem  
Pod 14-20 mm long & 3-4 mm wide  
Pod of papery texture

(see key on previous page)



Astragalus camptopus (Murphy Milk-Vetch)

Family: Fabaceae (Legume)

Status: Federal Category 3C and Sensitive on the BLM and State Sensitive Plant Lists

Known Locations: Owyhee County, Idaho

T1S, R2W, Sec. 28,29,33,34 S of Melba  
T2S, R2W, Sec. 3,4,23,32 Murphy area  
T2S, R5E, Sec. 20 Squaw Creek  
T3S, R2W, Sec. 10,12 S of Murphy  
T6S, R3E, Sec. 34,22 about 10 miles S of Grandview  
T6S, R5E, Sec. 24 Bruneau  
T7S, R2E, Sec. 14 15 miles SW of Grandview  
T7S, R3E, Sec. 2,3,4,5,7,9 Shoofly Creek area, S of Grandview  
T7S, R5E, Sec. 5,20 NWNW,21,30,31 8-11 miles SW of Bruneau  
T7S, R6E, Sec. 7 S of Bruneau  
T7S, R3W, Sec. 4 Rabbit Creek, 3 miles S of Walter's Ferry  
T8S, R5E, Sec. 6 12 miles S of Bruneau  
T8S, R6E, Sec. 20 6 miles SW of the town of Hot Spring  
Wiese's Bar of Snake River

Soil Type: Arid sandy soil

Habitat and Ecology: A perennial plant endemic to the area between Murphy and Bruneau. It is found only on sandy soils in shadscale-horsebrush-greasewood habitat. Also in the Wyoming big sage-Sandberg bluegrass zone. Found from 2,400-3,200 feet. It often grows in extensive colonies and has been found along roadsides and streambeds. Blooms May and June.

Threats: Increased agriculture, off-road vehicles, and range improvement programs

Key Characteristics

Pods forming more than  
a complete circle  
Flowers bright purple  
Restricted habitat  
Grows in colonies

Astragalus kentrophyta var. jessiae (Thistle Milk-Vetch)

Family: Fabaceae (Legume)

Status: Sensitive on the BLM and State Sensitive Plant Lists

Known Locations: Butte, Owyhee Counties, Idaho  
Sweetwater, Sublette, Fremont Counties, Wyoming  
Malheur County, Oregon

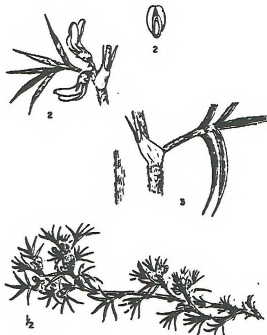
Idaho

T4S, R1W, Sec. 4 West of Fossil Butte, 10 miles E of Murphy  
T4S, R1W, Sec. 23,24 NW of Oreana  
T5S, R3E, Sec. 7 NW of Grand View  
T6S, R6E, Sec. 18 one mile N of Bruneau  
T7S, R5E, Sec. 5,31 SW of Bruneau, six and eleven miles respectively  
T7S, R6E, Sec. 36 eight miles SE of Bruneau  
T8S, R7E, Sec. 6 nine miles SE of Bruneau in Seventy-one Mile Gulch  
T9S, R5E, Sec. 5 Sugar Creek  
INEL (Idaho National Engineering Laboratory)  
Fish fossil beds SE of Walter's Ferry Bridge

Soil Type: Barren, fine alluvial sandy and shale soils

Habitat and Ecology: A perennial found on sandy bluffs, gravelly hilltops, gullied knolls, and dunes or dunelike sandy flats. From 2,450-3,200 feet in elevation along the south affluents of the Snake River in Owyhee County, in the Wyoming big sage zone. On soils subject to severe erosion. Commonly with shadscale and greasewood. In open stands of Utah juniper in Butte County (INEL). Blooms June to August

Threats: Off-road vehicles, agricultural developments, desert land entries



Key Characteristics

Prostrate, loosely matted  
foliage becomes prickly  
with age  
Flowers whitish, sometimes  
faintly pink- or lilac-tinged  
Atypical Astragalus leaf shape

Astragalus mulfordiae (Mulford's Milk-Vetch)

Family: Fabaceae (Legume)

Status: Federal Category I (C1) recommended for Endangered status

Known Locations: Ada, Owyhee, Payette, Washington Counties, Idaho  
Malheur County, Oregon (historic site)

Idaho

T1S, R3W, Sec. 14 Reynolds Creek area  
T2S, R1W, Sec. 6 NW historic record, near Halverson Lake  
T5S, R3E, Sec. 11,22 near Grand View  
T7S, R3E, Sec. 5 Oolytic limestone site, 12 miles S of Grand View  
T7S, R5E, Sec. 20 seven miles SW of Bruneau, apparently extirpated  
T3N, R2E, Sec. 2 SWNE & NW & NESW & center, 12,14 Military Reserve Park  
T4N, R2E, Sec. 15,35 SESE,36 SESW Boise Foothills  
T9N, R5W, Sec. 12 NE historic record, eight miles NE of Payette  
T10N, R5W, Sec. 36 Sand Hollow NE of Payette  
T11N, R4W, Sec. 21 SWNW,28 NWNWNW,32 NWNESW & SENW Rebecca Sand Hill  
T11N, R5W, Sec. 26,29,35 Sagebrush Hill east of Weiser

Soil Type: Deep sandy soil

Habitat and Ecology: A very deep rooted perennial found on south or west-facing sandy slopes of alluvial deposits and dunelike talus in the foothills. Grows in the sagebrush-grassland life zone at the west end of the Snake River Plain from 2,000-3,000 feet. Blooms from May to June.

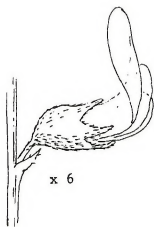
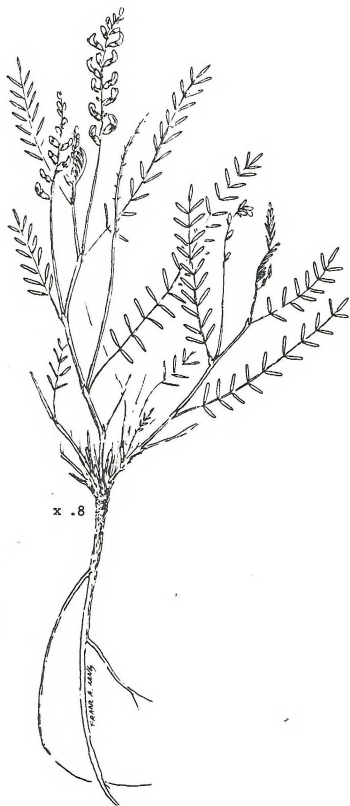
Threats: Urbanization and grazing. It appears to be destroyed by grazing and is now only found in pristine sites.

Key Characteristics

Flowers white, 6-8 mm long  
Leaflets 15-25, scattered  
Pods 10-16 mm long with  
a 3-sided cross-section

Astragalus mulfordiae

Mulford's Milk-Vetch



Astragalus sterilis (Barren Milk-Vetch)

Family: Fabaceae (Legume)

Status: Federal Category II (C2) recommended for Threatened status

Known Locations: Owyhee County, Idaho  
Malheur County, Oregon

Idaho  
T1S, R5W, Sec. 30 NWNE 1/2 mile N of McBride Creek Road, E of Hwy 95  
T2S, R6W, Sec. 11 one mile from OR-ID border, Upper Dry Creek

Soil Type: Barren diatomaceous earth or volcanic ash within the Succor Creek Formation

Habitat and Ecology: A rhizomatous, wiry perennial of ash soils not breaking down into clay. On bluffs and knolls at 4,000-4,300 feet in Idaho. Associated with bitterbrush and Sandberg bluegrass. The plant was relocated in Idaho in 1986 for the first time since 1948. Its fine, wiry appearance and sparse leaves make it difficult to locate. Active mining claims cover the entire area at the Dry Creek site, and the McBride Creek site is mostly within the highway right-of-way. Blooms May and June.

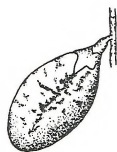
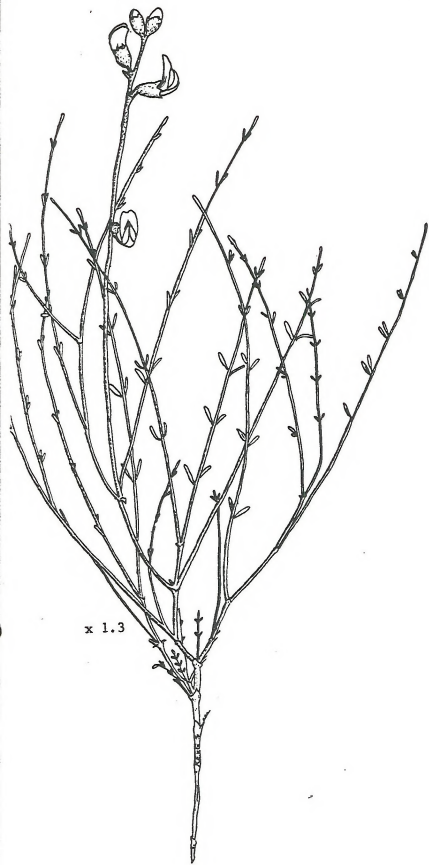
Threats: Mining and off-road vehicles, range improvement projects

Key Characteristics

Pods inflated, papery,  
purple-mottled  
Leaves sparse, stems wiry  
Flowers yellowish  
Plants rhizomatous

Astragalus sterilis

Barren Milk-Vetch



$\times 1.6$



Astragalus vallis (Snake Canyon Milk-Vetch)

Family: Fabaceae (Legume)

Status: Sensitive on the BLM and State Sensitive Plant Lists

Known Locations: Adams, Washington Counties, Idaho  
Baker, Malheur Counties, Oregon

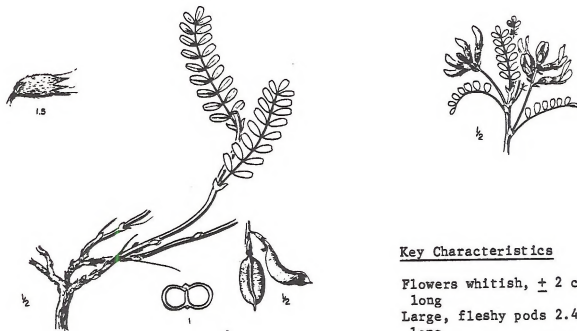
Idaho

T14N, R5W, Sec. ? 4th of July Creek  
T14N, R6W, Sec. 8 Dennett Creek by Brownlee Reservoir  
T14N, R7W, Sec. 23 Sumac Creek by Brownlee Reservoir  
T18N, R4W, Sec. 3 SESW, 4 NESE Summer Creek  
T18N, R4W, Sec. 13, 35 Wildhorse River  
NW of Weiser (historic record)  
In disturbed area by road-cut at airstrip, Hells Canyon Reservoir

Soil Type: Clay loam of basaltic origin

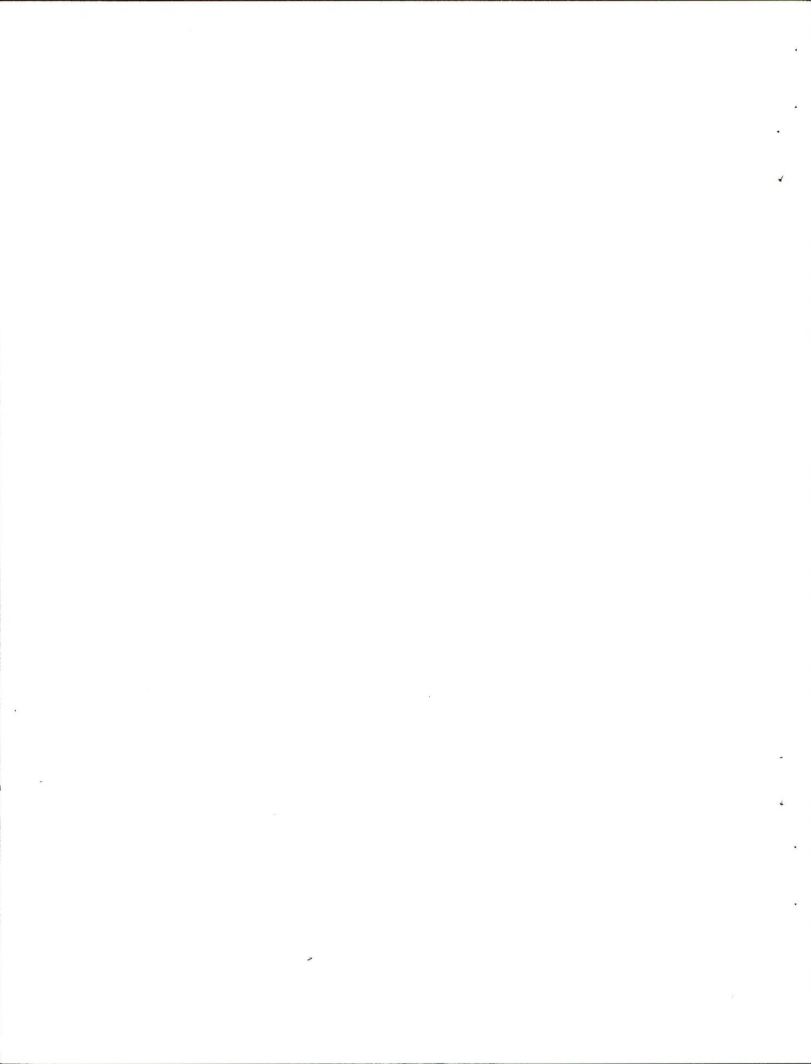
Habitat and Ecology: A low-growing perennial on steep, south-facing hillsides in bitterbrush and bluebunch wheatgrass communities in the Snake River Canyon. Of the few known sites, their presence on range in good condition may indicate that livestock grazing has been responsible for severely reducing the number of populations. Blooms early, from April to June. In 1984, most plants were already in fruit by mid-May.

Threats: Overgrazing and range improvement programs



Key Characteristics

Flowers whitish,  $\pm$  2 cm long  
Large, fleshy pods 2.4-4 cm long  
Pods elevated on thick stipules  
Pods contracted at both ends, and very thick and sturdy



Astragalus yoder-williamsii (Osgood Mountains Milk-Vetch)

Family: Fabaceae (Legume)

Status: Federal Category II (C2) recommended for Threatened status.

Known Locations: Owyhee County, Idaho  
Humboldt County, Nevada (one site)

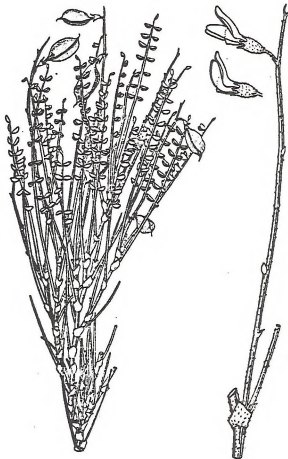
Idaho

T7S, R2W, Sec. 6,7 4 miles N of Triangle  
T8S, R1W, Sec. 36 NW Battle Creek  
T9S, R1W, Sec. 3,8,10 (sites uncertain and unable to be relocated, N of Big Springs Ranch)  
T10S, R3W, Sec. 2,8 NW Hurry Back Creek, Owyhee Mtns.  
T10S, R4W, Sec. 21,23 NW,31 East of Pleasant Valley Creek, Owyhee Mtns.  
T10S, R5W, Sec. 22,36 South of the North Fork Owyhee River  
T11S, R4W, Sec. 11,14 Smith Creek

Soil Type: In Idaho on fine loamy, mixed, frigid Typic Argosoll soils. In Nevada on decomposed granitic gravel

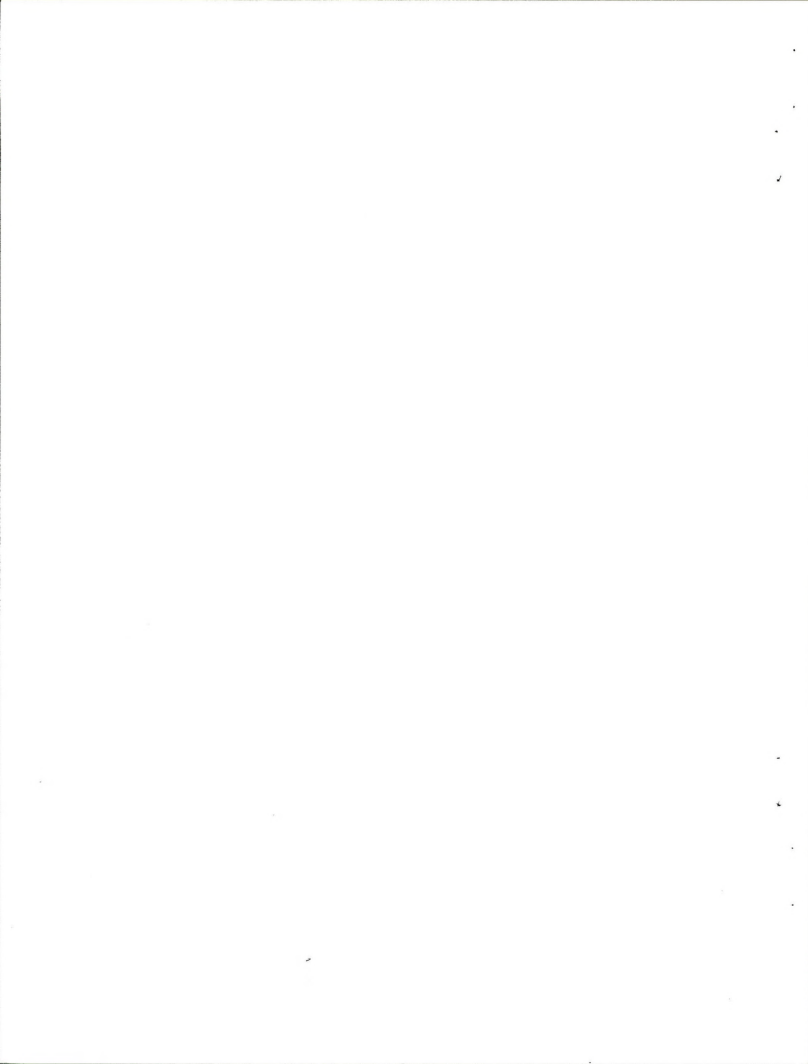
Habitat and Ecology: A dwarf, densely tufted perennial from mixed low sage and lower elevation mountain big sage-rabbitbrush sites. Also found on rhyolitic gravel soils in low sage-Eriogonum habitat. Elevational range is from 5,200 to 6,000 feet. In the field, particularly when dry, its visual appearance is similar to a clump of Idaho fescue. Blooms from May to June

Threats: Off-road vehicle use on the easily erodable soils, mining



Key Characteristics

Flowers whitish,  
4.5-6.2 mm long  
Leaf stalks stiff and  
straight, grass-like  
Leaflets minute  
Pods distinctive, 3-sided,  
small, 4-7 mm long  
Plants dwarf



Camassia cusickii (Cusick's Camas)

Family: Liliaceae (Lily)

Status: Federal Category 3C and Sensitive on the BLM and State Sensitive Plant Lists

Known Locations: Ada, Adams, Gem, Washington Counties  
Baker County, Oregon

Idaho

T2N, R4W, Sec. 22 or 23 about 4 miles SSE of Marsing, probably extirpated  
T8N, R1W, Sec. 13,24 or 25 Squaw Butte (historic record)  
T17N, R5W, Sec. 27 or 28 Warm Springs Creek, Brownlee Reservoir  
T18N, R4W, Sec. 3 SWSW,4 SENE & NESE,9 NWSW & SESW,10 NENE,21 SWNW,33 SWSE  
T19N, R4W, Sec. 17,20 West of Oxbow Dam Spillway  
Snake River, just below Oxbow Dam (1974 historic record)  
One mile N of Oxbow Bridge (historic record, no longer present)

Soil Type: Silt loam of basaltic origin

Habitat and Ecology: Perennial liliaceous plant found on steep, moist slopes and terraces and basaltic cliffs, and in portions of streams with slow-moving water. Within the bitterbrush and bluebunch wheatgrass communities of the Snake River Canyon. Historically found in open meadows in Oregon. Populations found in 1985 were grazed by cattle. Blooms April to July, dependent upon elevation. (If located, dig up the bulb for positive identification.)

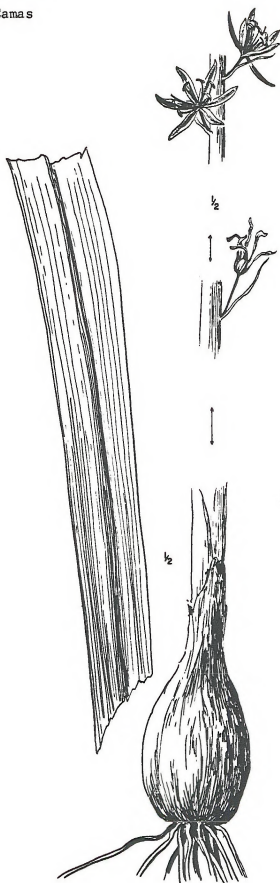
Threats: Livestock grazing

Key Characteristics

A very large blue Camas  
Leaves 10 or more  
Leaves broad, 10-40 mm  
Bulbs clustered, 5-10 cm long  
and ill-smelling

Camassia cusickii

Cusick's Camas



Carex aboriginum (Indian Valley Sedge)

Family: Cyperaceae (Sedge)

Status: Federal Category II (C2) believed to be extinct

Known Locations: Adams County, Idaho

Approximately T14N, R1W, 10 miles E of Cambridge  
Indian Valley, collected on July 12, 1899 (type collection)  
This collection is in the New York Botanical Gardens Herbarium

Soil Type: "Dry gumbo soil wet in the spring"

Habitat and Ecology: This species appears to occur in gumbo soil, but with so few collections little more can be said. It grows at approximately 2,700 to 3,000 feet elevation. "This species needs field investigation and may be extinct, but the notably rich representation of the Cyperaceae in the type locality suggests that it may still exist," taken from the 1981 "Red Book," Vascular Plant Species of Concern in Idaho. Indian Valley Sedge has been unsuccessfully searched for by Heritage Program botanists in the last several years. More field work should be done in the Indian Valley area in late June or July to determine if the plant is still present. It probably occurs on private lands.

Threats: None known

Key Characteristics

Stems loosely clustered from  
short rhizomes  
Plants 15-80 centimeters tall  
Achene bract (perigynia) inflated,  
with a bidentate beak

Carex aboriginum

Indian Valley Sedge





Chaenactis cusickii (Cusick's False Yarrow)

Family: Asteraceae (Composite)

Status: Priority 1 on the State Sensitive Plant List

Known Locations: Owyhee County, Idaho (probably extinct in Canyon County)  
Malheur County, Oregon (8 known sites)

Idaho

T1S, R4W, Sec. 6 Shares Basin

T1S, R5W, Sec. 13,19 center Sec. 13 is a historic site, S. 19 is by  
McBride Creek

T1S, R6W, Sec. 1 1.5 miles N of The Rocks State Station on Sands Basin Road

T1N, R4W, Sec. 3,4 1937 collection, "Squaw Creek, above Blackstock Ranch",  
section numbers not certain

T2N, R4W, Sec. 22 or 23 about 4 miles SSE of Marsing, historic record

T2N, R5W, Sec. 22,27 near Jump Creek Canyon

Soil Type: Loose volcanic ash with a small pick up of clay

Habitat and Ecology: An annual found in dry, open places on volcanic ash soils, particularly of the Succor Creek Ash variety. Fairly restricted to this soil type, though not as much as most volcanic ash plants. Elevational range is from 2,400 to 4,100 feet, more commonly in the lower range in Atriplex-Wyoming big sage zone. Flower is similar to that of the common false yarrow (C. douglasii), but Cusick's false yarrow is an annual, has entire leaves, and is of smaller stature. Blooms April to May.

Threats: Off-road vehicles and mining of the substrate to line irrigation ditches.



Key Characteristics

Flowers white to whitish

Plant less than 10 cm tall

Leaves entire

Stem sparsely woolly



Cryptantha propria (Malheur Cryptantha)

Family: Boraginaceae (Borage)

Status: Review species on the State Sensitive Plant List

Known Locations: Owyhee, Payette (?) Counties, Idaho  
Malheur County, Oregon

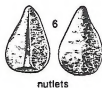
Idaho

T2S, R4W, Sec. 24 NWNE Summit of low hill W of Reynolds Creek crossing  
Snake River bluffs, 1932 record  
Squaw Creek, 1938 record  
Marsing, 1936 record  
18 miles below Weiser, 1910 record

Soil Type: Bare soil, ash, and clay slopes

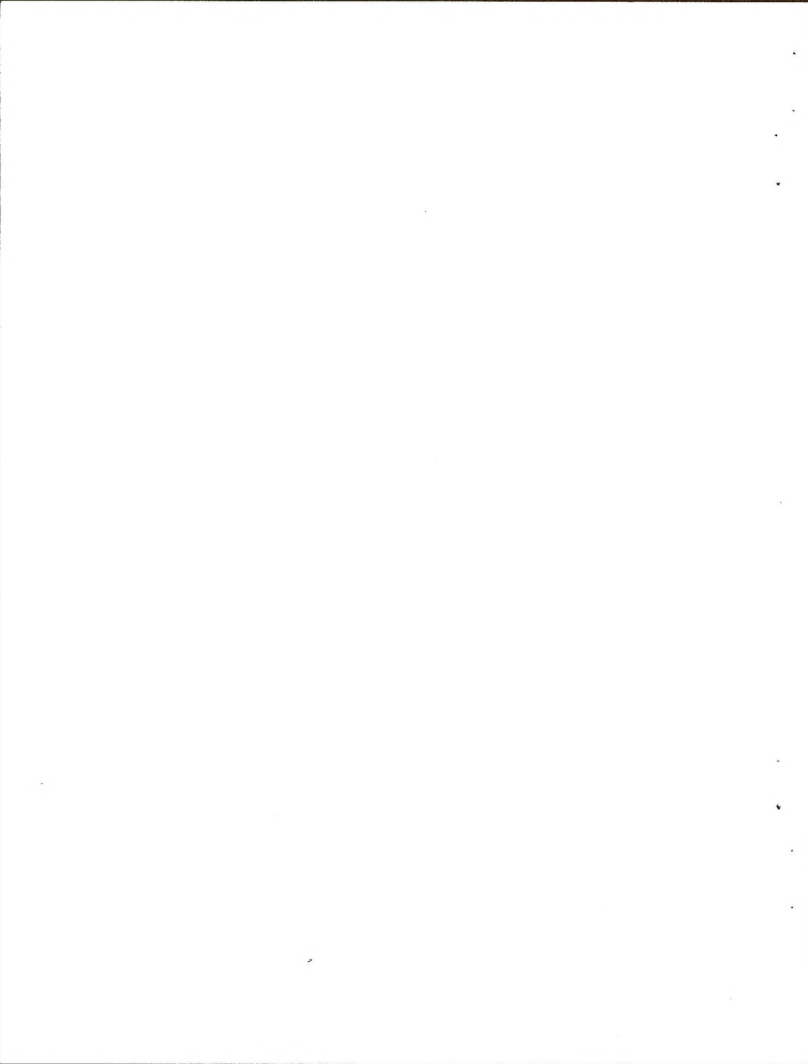
Habitat and Ecology: A perennial of dry open hillsides in the sagebrush-grassland zone from 3,000-4,000 feet. The plant is known from only 6-8 sites in Idaho and Oregon. This may be partly due to the difficulty in determining Cryptantha species, so that many collectors avoid them. It should be searched for and collected to determine its distribution. Blooms April to May.

Threats: Range improvement programs, diatomaceous earth mining



Key Characteristics

Flowers white  
Several to numerous equal  
erect stems  
Plants 10-24 cm tall  
Leaves entire, basal ones  
densely tufted  
Fruits are in form of nutlets



Cymopterus acaulis var. greeleyorum (Greeley's Parsley)

Family: Apiaceae (Carrot)

Status: Sensitive on the BLM and State Sensitive Plant Lists

Known Locations: Owyhee County, Idaho  
Succor Creek Canyon, Malheur County, Oregon

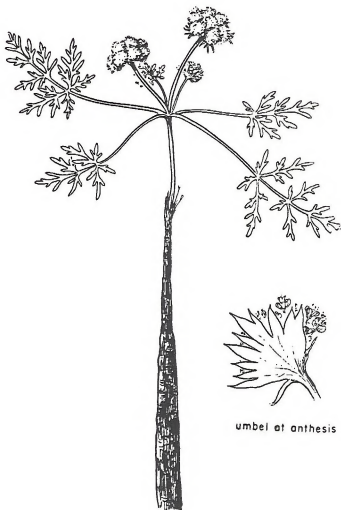
Idaho

T6S, R6E, Sec. 22 NENE Bruneau Sand Dunes State Park  
T6S, R6E, Sec. 22 ridge SW of Bruneau Sand Dunes State Park

Soil Type: Sandy soil in Idaho. Known in Oregon only from Succor Creek ash

Habitat and Ecology: A low-growing perennial with a very dense fruiting umbel. Sites in Idaho and Oregon differ greatly, but they are similar in that they undergo a lot of soil movement. The sand is loosely held together while the ash deposits that have weathered to clay shrink and swell greatly. The ash sites support other rare plants such as Mentzelia mollis and Chaenactis cusickii, while most other plant species will not grow there. On sandy sites it is associated with Indian ricegrass and prickly phlox in the Wyoming big sage-grassland zone. This variety is distinguished from the common var. acaulis by its bright yellow flowers (rather than white). Blooms March and April.

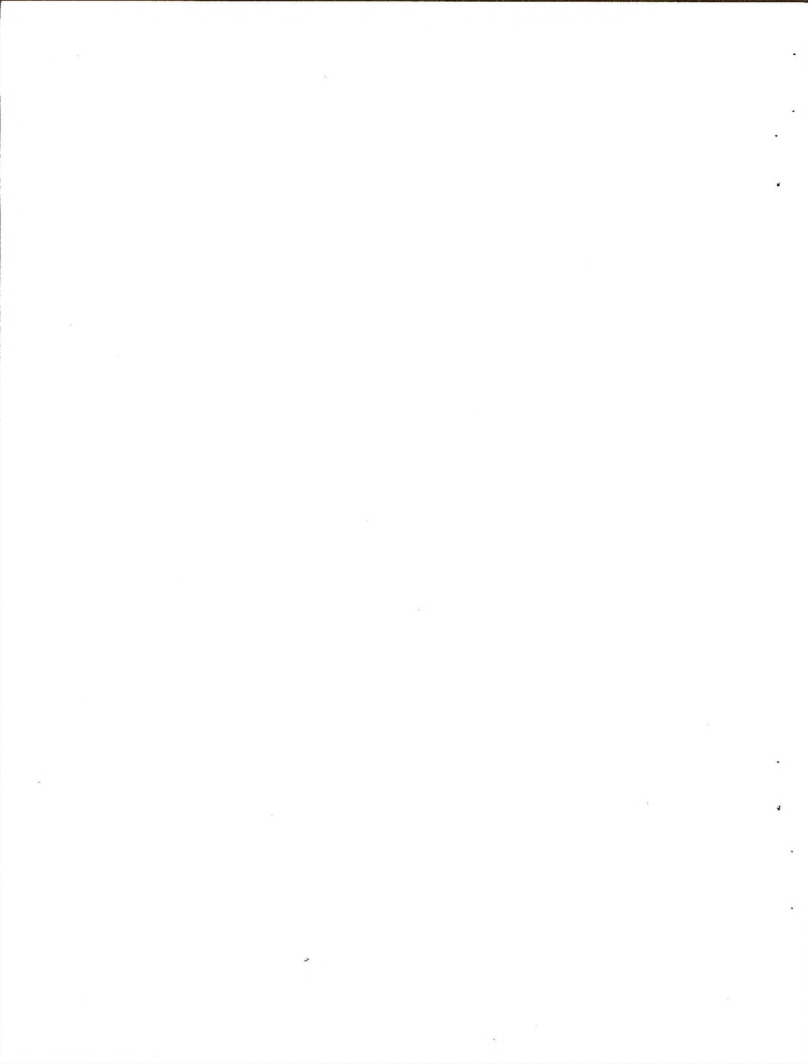
Threats: Off-road vehicles



umbel at anthesis

Key Characteristics

Restricted habitat  
Flowers yellow  
Ultimate leaf segments are  
larger than those of the  
typical variety



Dimersia howellii (Dimersia)

Family: Asteraceae (Composite)

Status: Federal Category 3C and Sensitive on the BLM and State Sensitive Plant Lists

Known Locations: Owyhee County, Idaho  
Harney, Malheur Counties, Oregon  
Elko, Humboldt, Washoe Counties, Nevada  
California (present in two NE counties)

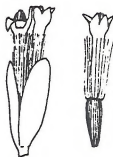
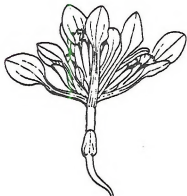
Idaho

T1S, R4W, Sec. 6, 34 Shares Basin; the divide between Squaw & Reynold's Crk  
T1S, R5W, Sec. 13 center South of Shares Basin  
T3S, R3W, Sec. 20 NENE near Dryden Creek and SE of Reynolds  
T9S, R6W, Sec. 36 near North Fork Owyhee River crossing  
T10S, R5W, Sec. 6 near North Fork crossing  
T10S, R6W, Sec. 1 just N of Fairylawn above N. Fork Owyhee River

Soil Type: Volcanic gravel, cinder size

Habitat and Ecology: A dwarf, cushion-like annual in the sunflower family. Found on dry, gravelly or rocky volcanic soil at low to mid elevations in the mountains. In Oregon it is found as low as 3,900 feet, while in Humboldt CO, Nevada it grows on an alpine ridge at 7,600 feet. Its habitat is usually surrounded by sagebrush, but no other plants occur directly with *Dimersia* except annual buckwheats. Idaho is at the NE edge of plant's range. Blooms from May to July.

Threats: Off-road vehicles. Its habitat protects it from most other hazards.



Key Characteristics

Flowers white to pinkish  
or purplish  
Plant woolly at base  
Leaves entire, spatulate  
to ovate  
Annual\*

Eatonella nivea (White Eatonella)

Family: Asteraceae (Composite)

Status: Monitor species on the State Sensitive Plant List

Known Locations: Custer, Elmore, Owyhee Counties, Idaho  
Harney, Malheur Counties, Oregon  
Elko County, Nevada

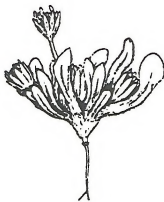
Idaho

T2S, R3W, Sec. 17 NE 4 miles NE of Reynolds off Upper Reynolds Crk Road  
T3S, R1E, Sec. 7 Sinker Creek, E of Otter Massacre site  
T3S, R1E, section number not known  
T4S, R11E, Sec. 31 Walker Reservoir, NE of Glenn's Ferry  
T6S, R6E, Sec. 16,21 NW Waterhouse Gulch vicinity, E and NE of Bruneau  
T8S, R6E, Sec. 16,21 NW SW of Indian Bathtub  
T15S, R4W, Sec. 22 NESE South Fork Owyhee River, Coyote Hole vicinity  
T12N, R19E, Sec. 28 Malm Gulch, 12 miles S of Challis  
4 miles S of Challis on steep gravel; 1947 collection

Soil Type: Dry, sandy or volcanic areas as low as 2,500 feet

Habitat and Ecology: A small woolly annual that frequently forms small tufts. Grows on barren ground usually surrounded by sagebrush, from 2,500-4,200 feet. It occurs in the same soil type as the sensitive species Peteria thompsonae. Not well collected or abundant. It may be sensitive to spring trampling. Blooms from May to July.

Threats: Off-road vehicles and grazing



Key Characteristics

Depressed white-woolly annual\*  
Flower rays yellow or purplish  
Branches from the base forming  
small tufts  
Leaves numerous, oblanceolate  
to spatulate



Epipactis gigantea (Giant Helleborine)

Family: Orchidaceae (Orchid)

Status: Priority 2 on the State Sensitive Plant List

Known Locations: Boise, Bonner, Boundary, Clark, Elmore, Idaho, Jerome,  
Owyhee, Twin Falls Counties, Idaho  
Uncommon in most of the Western states to the Rocky Mtns.

Idaho

T5N, R7E, Sec. 24 Middle Fork Boise River  
T6N, R5E, Sec. 33 S of Idaho City  
T6N, R11E, Sec. 35 near Atlanta  
T8N, R5E, Sec. 1,8,10 NESE South Fork Payette River  
T17N, R14E, Sec. 22 Middle Fork Salmon River  
T18N, R21E, Sec. 12  
T25N, R1E, Sec. 11  
T6S, R5E, Sec. 24 Bruneau  
Murtaugh section of the Snake River  
Vineyard Lake

Soil Type: Streambanks and springs, often on calcareous sites

Habitat and Ecology: A rhizomatous orchid with one to many stems. It is restricted to streambanks, springs, and seepage areas, near thermal or cold water, often in otherwise desert regions. Often grows with monkey flowers, spike rushes, and sedges. The plant still has a broad range, but because of its vulnerable habitat, it is rapidly disappearing. Blooms from April to July.

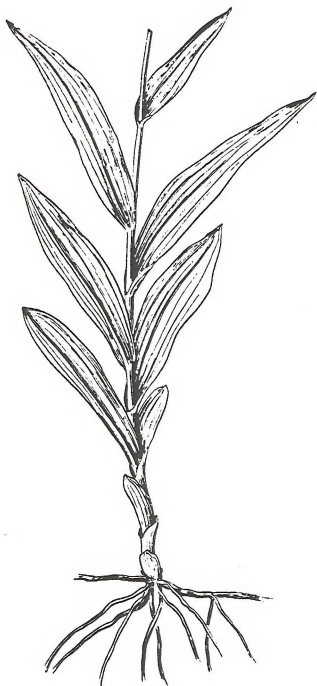
Threats: Development and human disturbance of cold and hot springs, livestock grazing

Key Characteristics

Flowers brownish-purple  
Plants up to 3 feet tall  
Leaves numerous, elliptical,  
broad

Epipactis gigantea

Giant Helleborine



Erigeron latus (Broad Fleabane)

Family: Asteraceae (Composite)

Status: Federal Category II (C2) and Sensitive on the BLM and State Sensitive Plant Lists

Known Locations: Cassia, Owyhee, Twin Falls Counties, Idaho  
Elko County, Nevada

Idaho

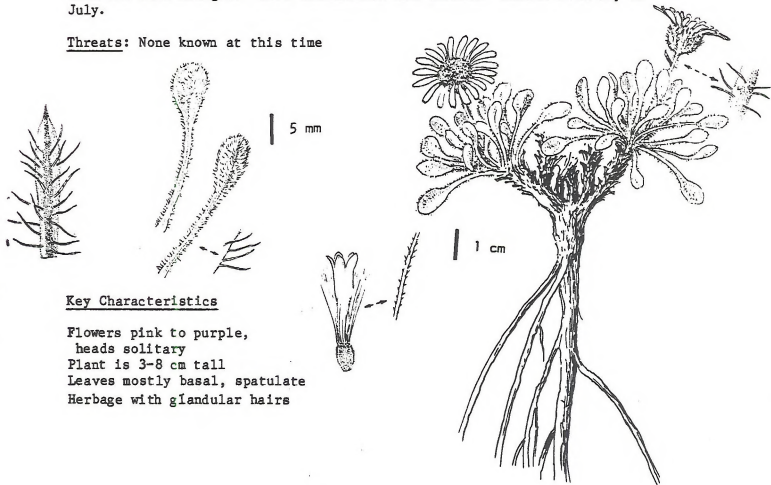
- T10S, R2W, Sec. 4,6 1946 record; 2 miles SW of Mudflat, on Juniper Mtn. road  
T10S, R4W, Sec. 20 SE,21 North Fork Pleasant Valley Creek  
T12S, R3W, Sec. 15 one mile N of Pleasant Valley Creek  
T12S, R4W, Sec. 20(?) NE of Red Rock Canyon  
T13S, R3W, Sec. 15,22 SWSW & NWNW,27,28 E1/2 of NE1/4,33 between Brace Ranch and the Owyhee River  
T15S, R11E, Sec. 34 Three Creeks, 30 miles WNW of Riddle  
T15S, R12E, Sec. 11 (or adjacent sections) 1949 record  
5 miles S of Mudflat  
10 miles S of Albion on Mt. Harrison (taxonomy questionable)

Soil Type: On volcanic sands and reddish rhyolitic gravels

Habitat and Ecology: A perennial found in barren places on soils of volcanic origin, usually surrounded by Wyoming big sage and rock outcrops.

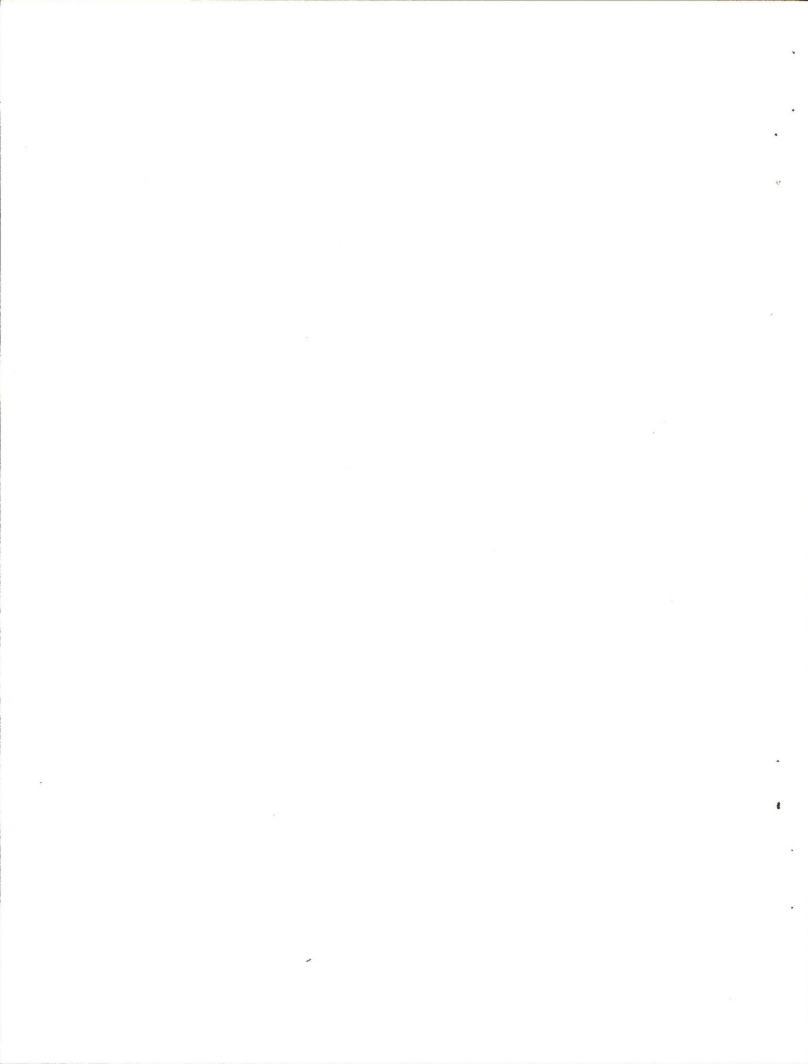
Associated species include Haplopappus acaulis, a variety of Eriogonum, and sometimes juniper. This plant is easily confused with other species of Erigeron, particularly E. disparipilus and E. nanus. May be more widespread than was once thought. More collections are needed. Blooms from May to July.

Threats: None known at this time



Key Characteristics

- Flowers pink to purple,
- heads solitary
- Plant is 3-8 cm tall
- Leaves mostly basal, spatulate
- Herbage with glandular hairs



Eriogonum salicornoides (Annual Salt Eriogonum)

Family: Polygonaceae (Buckwheat)

Status: Review species on the State Sensitive Plant List

Known Locations: Owhyee County, Idaho  
Malheur County, Oregon

Idaho

- T1N, R5W, Sec. 21 6 miles NE of ID/OR line, E of Jump Creek  
T1N, R24E, Sec. 3 Craters of the Moon National Monument  
T3N, R5W, Sec. 4,8 Succor Creek, W side of Homedale  
T5N, R3W, Sec. 17 8 miles N of Middleton  
T1S, R5W, Sec. 28,30 23 miles S of Marsing  
T1S, R6W, Sec. 36 3.5 miles NE of Oregon line  
T1S, R18E, Sec. 18 N of Magic Reservoir, off Hwy 68  
T2S, R2W, Sec. 10 4 miles N of Murphy  
T2S, R3W, Sec. 2 Upper Reynold's Creek  
T2S, R4W, Sec. 23 NE 5 miles N of Reynolds, Macks Creek Rd  
T2S, R6W, Sec. 11 29 miles SW of Marsing, one mile from ID/OR border  
T4S, R1E, Sec. 5,10 3 miles N of Oreana  
T4S, R2E, Sec. 25,30 19 miles SE of Murphy and 1.5 miles SE of Castle Crk  
T5S, R1W, Sec. 8 Hart Creek Canyon  
T5S, R1E, Sec. 11 E of Oreana  
T5S, R3E, Sec. 22 1/2 mile SE of Grandview  
T5S, R6E, Sec. 29 13.5 miles S of Mountain Home, 1.5 miles N of Snake River  
T6S, R5E, Sec. 24 Bruneau area  
T6S, R6E, Sec. 10,8 2-6 miles N of Bruneau  
T15S, R5W, Sec. 28 Blackstock Creek

Soil Type: Loose, white, ashy clay soil

Habitat and Ecology: An annual buckwheat endemic to SW Idaho and adjacent Oregon. It grows on bare, alkaline soils from 2,600-4,200 feet in shadscale-budsage and Wyoming big sage habitat. The plant is poorly collected and more information is needed. It is very similar to E. vimineum. Blooms April and May.

Threats: Mining, off-road vehicles

Key Characteristics

Annual\*  
Tiny yellow flowers

Eriogonum shockleyi var. shockleyi (Matted Cowpie Buckwheat)

Family: Polygonaceae (Buckwheat)

Status: Sensitive on the BLM and State Sensitive Plant Lists

Known Locations: Ada, Owyhee Counties, Idaho

T1S, R1W, Sec. 28 SESE, 32 NWNW, 35 SENE E of Halverson Lake & N of Swan Falls Dam

T5S, R5E, Sec. 14 N of CJ Strike Wildlife Management Area

T6S, R5E, Sec. 35 SE 2 miles SW of Bruneau

T6S, R6E, Sec. 18, 26 one mile N of Bruneau; just S of Bruneau Sand Dunes State Park, respectively

T6S, R9E, Sec. 8 SSE of Schoffs Island in the Snake River

T7S, R3E, Sec. 4 SENW, 5 Shoofly Creek, 10 miles S of Grandview

T7S, R5E, Sec. 1, 2, 20 S of Bruneau

T7S, R6E, Sec. 17 SWSW, 18, 19 NENE, 20 NWNW Sugar Valley Badlands, 3 miles SW of Hot Spring

Soil Type: On gravel benches in lake sediments

Habitat and Ecology: A perennial, mat-forming buckwheat of low elevations from 2,600 to 3,100 feet. In Wyoming big sage-rabbitbrush-Indian ricegrass habitat. Grows on wind-swept buttes of lake sediments where flat benches have formed that are covered with round, smooth gravel. This species is poorly defined taxonomically. More collections should be made. Blooms from May to July.

Threats: None known at this time

Key Characteristics

Flowers creamy white  
Matted, compact growth form  
Leaves small, with whitish cast

Glyptopleura marginata (White-Margined Wax Plant)

Family: Asteraceae (Composite)

Status: Priority 1 on the State Sensitive Plant List

Known Locations: Ada, Canyon, Owyhee, Twin Falls Counties, Idaho  
Harney, Malheur Counties, Oregon  
uncommon in California, Nevada, Utah

Idaho

T2S, R1W, Sec. 9 NW 3 miles E of Guffey Butte, N of Murphy  
T2S, R2W, Sec. 15 1938 record  
T2S, R2E, Sec. 2 1951 record, 12 miles S of Regina  
T3S, R2W, Sec. 22 1953 record, 5 miles S of Murphy

T4S, R1E, Sec. 33 near Foremans Reservoir, 14 miles W of Grand View  
T7S, R6E, Sec. 34 SW of Bruneau Hot Spring  
T7S, R5E, Sec. 20 8 miles SW of Bruneau  
T7S, R3E, Sec. 4 11 miles S of Grand View  
T7S, R2E, Sec. 14 1943 record, 15 miles SW of Grand View  
T8S, R5E, Sec. 18 1956 record, 13 miles S of Bruneau  
T16S, R14E, Sec. 29 SENW Player Canyon area SW of Salmon Falls Creek Reservoir  
T16S, R15E, Sec. 7 near Salmon Falls Creek Reservoir  
T2N, R4W, Sec. 17 SW of Marsing

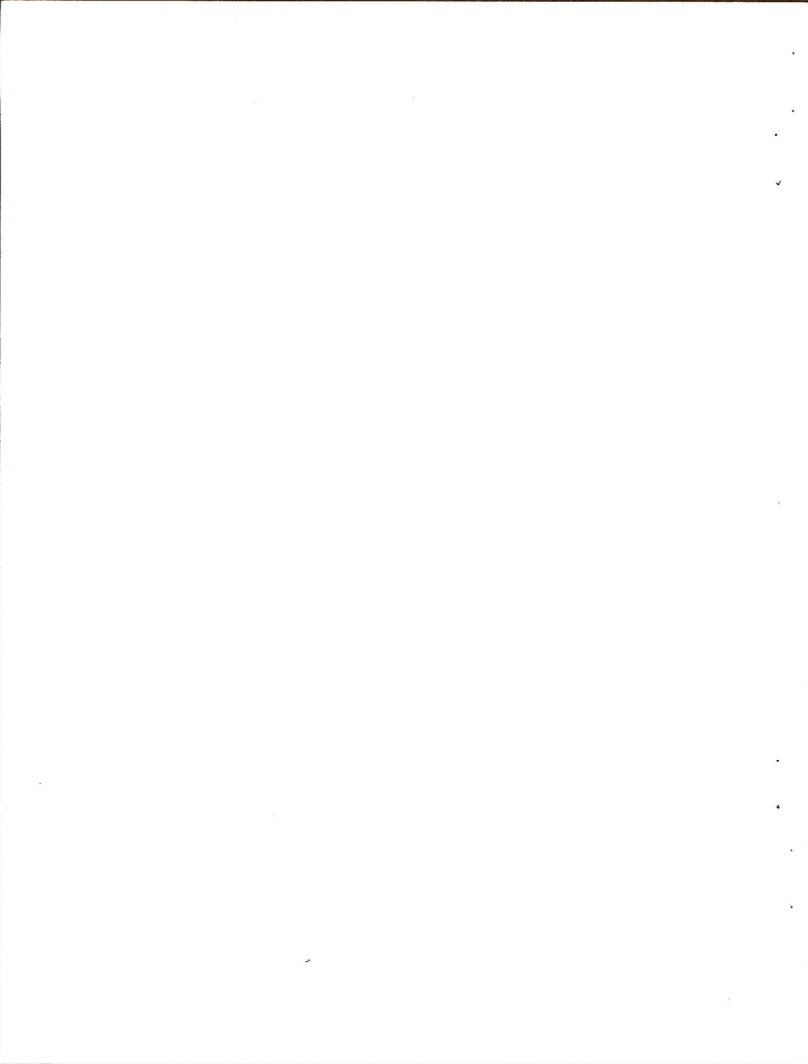
Soil Type: Dry, sandy places, sometimes in loose ash or in small basalt cinder

Habitat and Ecology: A dwarf, tufted winter annual with milky juice and a tap root. Grows in Atriplex-Artemisia habitat on warm, dry micro-sites barren of other vegetation, from 3,000-5,000 feet. This plant has a broad range but is highly infrequent in Idaho, with usually only a small number of individuals in those populations. Blooms from May to June, with flowers open in the morning, reputed to close in mid-afternoon.

Threats: Off-road vehicles, increased agricultural development, range improvement programs, and heavy recreational use in the Hot Springs area.

Key Characteristics

Flowers white or pale yellow,  
drying to pink  
Dwarf annual  
Leaves crowded, pinnately lobed  
or toothed with a white, waxy margin





Gymnosteris nudicaulis (Large-Flowered Gymnosteris)

Family: Polemoniaceae (Phlox)

Status: Sensitive on the BLM and State Sensitive Plant Lists

Known Locations: Blaine, Butte, Canyon, Elmore, Gem, Lincoln, Minidoka, Owyhee, Twin Falls Counties, Idaho  
Malheur County, Oregon

Idaho

- T1S, R19E, Sec. ? E of Magic Reservoir  
T3S, R20E, Sec. 7 NE of Shoshone  
T3S, R24E, Sec. 21 SWNE NE of Shoshone  
T5S, R8E, Sec. 23,24 N of Hammett  
T5S, R9E, Sec. 30 SENW,32 NE NE of Hammett  
T5S, R10E, Sec. 3 NE of Glenn's Ferry  
T6S, R10E, Sec. 16 1940 record, S of Glenn's Ferry  
T7S, R1E, Sec. 14 SW of Grandview  
T7S, R12E, Sec. 14 W of Hagerman  
T7S, R13E, Sec. 25 S of Hagerman  
T7S, R15E, Sec. 33 near Wendell  
T8S, R8E, Sec. 18 SE of Hot Spring  
T10S, R12E, Sec. 14 1950 record, 3 miles W of Balanced Rock  
T1N, R5W, Sec. 7 SESW Sands Basin vicinity SW of Jump Creek  
T1N, R30E, Sec. 18 NW  
T3N, R29E, Sec. 32 SE  
T4N, R3W, Sec. 10,15 1934 and 1938 records, near Caldwell  
T7N, R1W, Sec. 19 1937 record, N of Emmett  
T8N, R4W, Sec. 33 1911 record, N of Plymouth

Soil Type: Sandy to sandy loam, often on volcanic rock

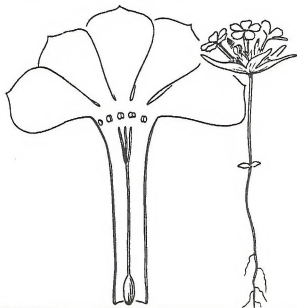
Habitat and Ecology: A weak-stemmed annual that grows in somewhat open, sandy areas in the Basin big sage-grassland zone. Found from 2,700-5,000 feet. The plant was collected much more frequently in the early to mid-1900s than in the past 15 years. It was once noted as common but is now rarely seen.

Blooms from April to June.

Threats: Agricultural development, range improvement programs, competition with cheatgrass

Key Characteristics

Flowers showy, vary from white to yellow to lavender  
Short naked stem  
Whorl of entire leaves just beneath the flower cluster



Gymnosteris parvula (Small-Flowered Gymnosteris)

Family: Polemoniaceae (Phlox)

Status: Review species on the State Sensitive Plant List

Known Locations: Blaine, Lincoln, Owyhee Counties, Idaho  
Colorado, Oregon, Wyoming, Northern California

Idaho

T3S, R16E, Sec. 9 NE, 16 NE Eastern Bennett Hills, NW of Twin Oaks Reservoir  
T9S, R1E, Sec. 13 NE E of Battle Creek, 30 miles S of Grandview  
T10S, R4W, Sec. 1, 20 Nickel Creek Table and Pleasant Valley  
Alturas Lake  
T10S, R8E, Sec. 15 Winter Camp, East Fork Bruneau River

Soil Type: Shallow, loamy to somewhat cindery or sandy soils

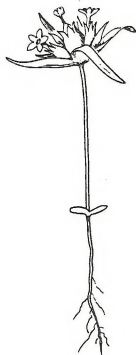
Habitat and Ecology: An annual of open, dry to moderately moist slopes, flats, and drier meadows. Up to high elevations (above 8,000 feet) in California. In Idaho it frequently grows under the protective branches of Basin big sage. Also associated with bluebunch wheatgrass and Sandberg bluegrass at 5,400 to 5,900 feet. More information is needed on this species. Blooms in May and June.

Threats: Trampling by grazing, agricultural development, off-road vehicles, competition with cheatgrass



Key Characteristics

Small annual  
Flowers inconspicuous,  
white to pale yellow or  
purplish  
Whorl of leaves below the  
flower cluster



Hackelia ophiobia (Rattlesnake Stickseed)

Family: Boraginaceae (Borage)

Status: Federal Category 3C and Sensitive on the BLM and State Sensitive Plant Lists

Known Locations: Owyhee County, Idaho  
Malheur County, Oregon  
Elko, Humboldt, Washoe Counties, Nevada

Idaho

T10S, R3W, Deep Creek, SE of Jordan Valley  
T13S, R2W, Sec. 5 Deep Creek  
T13S, R3W, Sec. 25 Deep Creek off the Owyhee River  
T14S, R5W, Sec. 11 NE South Fork Owyhee River  
T16S, R5W, Sec. 16 SW Little Owyhee River, 3 miles N of Nevada line  
Upper East Fork of the Owyhee River

Soil Type: Talus and crevices of rhyolitic rock cliffs

Habitat and Ecology: A slender perennial found on north-facing, well-shaded sites of coarse rhyolitic bluffs and cliffs at 4,000-5,000 feet. Grows in crevices and especially at the base of cliffs, on sites generally barren of other vegetation. Sometimes found with another uncommon species, Artemisia packardiae. Associated vegetation surrounding these sites include basin big sage, Great Basin wild rye, and Louisiana sage. Always grows in areas far from human influences and a look at historic heavy grazing in some sections of the Owyhee River suggest that it may be sensitive to grazing. Blooms from April to June.

Threats: Destruction of habitat by stream water level fluctuation, grazing in the river canyons

Key Characteristics

Flowers blue with a  
yellow throat  
Basal leaves broad, ovate,  
with a truncate base  
Leaves with long petioles,  
2-4 times as long as the  
blade  
Shadey, mesic sites and  
microsites

Hackelia ophiobia Rattlesnake Stickseed



Haplopappus radiatus (Snake River Goldenweed)

Family: Asteraceae (Composite)

Status: Federal Category II (C2) recommended for Threatened status

Known Locations: Washington County, Idaho

Baker, Malheur Counties, Oregon (about 35 sites)

Idaho

T10N, R5W, Sec. 10 about 5 miles SE of Weiser

T11N, R5W, Sec. 3 1941 record, N of Weiser by Barton Reservoir

T11N, R5W, Sec. 33 (or adjacent sec) just E of Weiser

T11N, R3W, Sec. 33

T14N, R6W, Sec. 9,10 4th of July Meadow, 1.5 miles E of Mineral

T17N, R5W, Sec. 26 1952 record, S of Brownlee Dam Spillway

Nutmeg Mountain E of Weiser 1974 record, only a single plant sighted in '85

Soil Type: Gravelly loam

Habitat and Ecology: A perennial species found in skeletal gravelly loam soils and on steep rocky hillsides in basin big sage-bluebunch wheatgrass-arrowleaf balsamroot habitat. Also in Sandberg bluegrass communities dominated by annuals. Frequently plants are found with heavy insect predation, and appear very sensitive to it. It is told from the wider ranging H. carthamoides by its larger size, broader basal leaves, and the greater number of rays (about 34). Blooms from June to July.

Threats: Competition with exotic annuals, grazing, and wild fires

Key Characteristics

Yellow flowers, heads broad

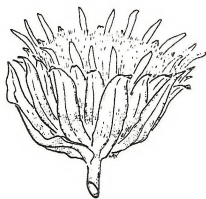
Plants very robust

Basal leaves 5-20 cm wide

Leaves tough and leathery

Haplopappus radiatus

Snake River Goldenweed



Lepidium davisii (Davis Peppergrass)

Family: Brassicaceae (Mustard)

Status: Federal Category II (C2) recommended for Threatened status

Known Locations: Ada, Elmore, Owyhee, Twin Falls Counties, Idaho  
Malheur County, Oregon

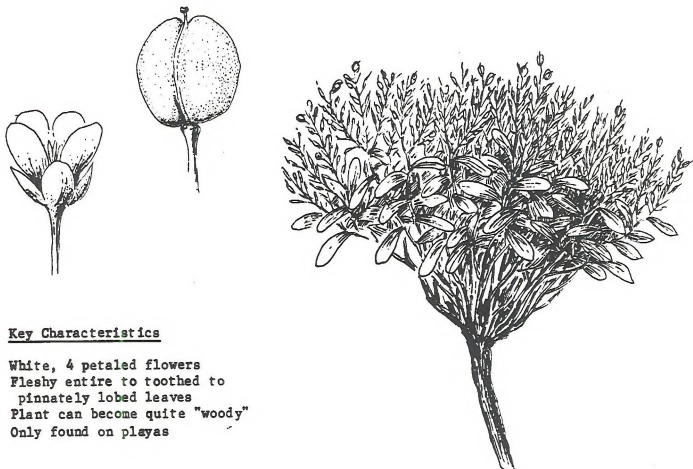
Idaho

see next page

Soil Type: Hard bottom playas

Habitat and Ecology: A caespitose perennial found only in very hard bottom playas that are usually barren of other vegetation. They are poorly drained and often inundated with standing water early in the spring. On rare occasions a few shadscale and silver sage plants may grow in the playas. Playas are located in Wyoming big sage-Fourwing saltbush-Sandberg bluegrass habitat at 2,900 to 5,000 feet. Populations vary in leaf shape, size, and time of flowering, and may be genetically distinct populations because of the plant's short-distance dispersal mechanism. Blooms from April to as late as August.

Threats: Water storage pond development, spring livestock trampling, off-road vehicles, military tanks, and some range rehabilitation projects



Key Characteristics

White, 4 petaled flowers  
Fleshy entire to toothed to  
pinnately lobed leaves  
Plant can become quite "woody"  
Only found on playas

Lepidium davisii sites known as of November 3, 1987

(approx. 65 total)

T14S, R6E, Sec. 2 E1/2,22 SESE,23 SESW

T14S, R15E, Sec. 23 NWE,31 SE,32 SW

T13S, R46E, Sec. 2, 3

T13S, R6E, Sec. 3,18,22 NW,23 NW,27

T12S, R7E, Sec. 6 SE,18 SW

T12S, R6E, Sec. 13 SE

T11S, R6E, Sec. 2 SENW,22 SE

T10S, R7E, Sec. 33 SENW

T10S, R6E, Sec. 11 NW & NE,22 SWSW

T10S, R5E, Sec. 23 NW

T10S, R4E, Sec. 9 SWSE,17 SESE,21

T5S, R6E, Sec. 9,17,19,21

T5S, R5E, Sec. 6

T4S, R6E, Sec. 9, 29

T4S, R5E, Sec. 1, 2, 6, 17, 18, 31

T4S, R4E, Sec. 2, 3, 4, 5, 6, 7, 8, 13, 16, 17, 18, 19, 21, 22, 27,  
(plays in Sec. 4 overlaps into Sec. 9)

T4S, R3E, Sec. 1, 12

T3S, R5E, Sec. 20, 35

T3S, R4E, Sec. 28, 31, 33, 36

T3S, R3E, Sec. 23 NWSE,27

T3S, R2E, Sec. 11 NE,21 SESE,31 NENE

T2S, R2E, Sec. 11 SESE



Lepidium montanum var. papilliferum (Montane Peppergrass)

Family: Brassicaceae (Mustard)

Status: Priority 1 on the State Sensitive Plant List

Known Locations: Ada, Canyon, Elmore, Gem, Payette Counties, Idaho

\*T1S, R4E, Sec. 14 NWNW 1987 record, jct. of freeway and Simco Road  
T3S, R6E, Sec. 23 (or 26,35) 1934 record, Mountain Home  
T5S, R6E, Sec. 9 1940 record, S of Mountain Home  
T5S, R7E, Sec. 24 1947 record, W of Hammett  
T5S, R9E, Sec. 18 1940 record, N of Hammett  
T2N, R1W, Sec. 24 1955 record, 7 miles S of Meridian  
T3N, R2W, Sec. 23 1897 record, Nampa  
T3N, R2E, Sec. 2 E1/2 of SW1/4, 12 1972 record, Boise foothills  
T3N, R3E, Sec. 20 1953 record, SE of Table Rock  
T4N, R1E, Sec. 13 1934 record, N of Garden City  
T4N, R3E, Sec. 10 1936 record, near Boise Peak  
\*T5N, R3W, Sec. 6 1974 record, Sand Hollow SW of Emmett  
T5N, R5W, Sec. 10 1938 record, just E of Parma  
T6N, R2W, Sec. 8 1947 record, 4 miles W of Emmett  
T7N, R1W, Sec. 19 1911 record, 3 miles N of Emmett  
T8N, R4W, Sec. 33 1910 record, near New Plymouth  
along the Boise River near Caldwell 1954 record  
\* = the only recent records

Soil Type: On bare, shallow natric sites

Habitat and Ecology: A perennial mustard of bare, shallow natric soil sites or tiny plays in the Wyoming big sage-grassland zone. The plant is probably extinct in some Idaho counties already, as most collections are historic and many of the old sites have been developed. Blooms May to June.

Threats: Land and agricultural developments, salt lick placement

#### Key Characteristics

Flowers white, 4 petals  
Leaves pinnate  
Stamen stalks bearded-  
(distinguished from the more  
common variety by this)

Leptodactylon glabrum (Bruneau River Prickly Phlox)

Family: Polemoniaceae (Phlox)

Status: Federal Category II (C2) recommended for Threatened status

Known Locations: Owyhee County, Idaho  
Pershing, Humboldt Counties, Nevada (3 sites)

Idaho

T10S, R7E, Sec. 35

T14S, R8E, Sec. 5 Cougar Creek on the Jarbidge River

T15S, R7E, Sec. 19 NE Starts here in the Bruneau River Canyon and goes  
intermittently for 30 miles downstream

Soil Type: Rhyolitic canyon walls, rock ledges and cliffs

Habitat and Ecology: A matted perennial that is always found on vertical or underhung rhyolitic canyon walls. Found along the Bruneau River from 2,800 to 4,800 feet. New growth comes out of last year's stalks. It is pollinated at night by a moth, and is intolerant of growing in seepage areas or ephemeral water paths in rock crevices.  
Blooms from April to July.

Threats: A dam on the Bruneau River would be its only threat

Key Characteristics

White to cream colored flowers  
Matted growth form that can be  
very large  
Prickly, narrow leaves  
Restricted habitat

Lupinus uncialis (Inch High Lupine)

Family: Fabaceae (Legume)

Status: Sensitive on the BLM and State Sensitive Plant Lists

Known Locations: Owyhee County, Idaho

Harney, Malheur Counties, Oregon

Elko, Humboldt Counties, Nevada

Idaho

T14S, R5W, Sec. 23 South Fork Owyhee River, below mouth of Little Owyhee R.

T15S, R4W, Sec. 19 NESE, 21 NW, 22 Coyote Hole

T16S, R4W, Sec. 13 South Fork Owyhee River in vicinity of Bull Camp

Soil Type: Barren loose rhyolitic cinder and gravel

Habitat and Ecology: A tiny desert annual that grows in barren rhyolitic cinder on level terraces in the sagebrush-grassland zone. From 3,100 feet in Oregon up to 5,600 feet in Idaho. It was first found in Idaho in 1981, and there are now three known sites. The plant appears to be more common in Nevada and Oregon than in Idaho. Blooms April to May.

Threats: Off-road vehicles, road building, and placement of salt licks

Key Characteristics

Tiny 1 inch tall annual with  
white and purple flowers

Palmate leaves

Rhyolitic cinder habitat

Only one seed per capsule

Malacothrix glabrata (Desert Dandelion)

Family: Asteraceae (Composite)

Status: Sensitive on the BLM and State Sensitive Plant Lists

Known Locations: Canyon, Owyhee Counties, Idaho  
Malheur County, Oregon  
Arizona, California

Idaho

T2N, R3W Dautrick Memorial Property, S of Lake Lowell  
T3S, R2W, Sec. 2 1963 record, 2 miles S of Murphy  
T3S, R1E, Sec. 7, 29, 31 SE above Sinkers Creek  
T5S, R3E, Sec. 17 (or adjacent) 1951 record, W of Grand View  
T5S, R11E, Sec. 7 1911 record, E of Glenn's Ferry  
T6S, R6E, Sec. 11, 32 1963 record, Bruneau Sand Dunes State Park and  
SE of Bruneau  
T7S, R3E, Sec. 3 11 miles S of Grand View  
T7S, R5E, Sec. 30 1956 record, about 7 miles SW of Bruneau

Soil Type: Barren sandy or ashy hills

Habitat and Ecology: An annual found on dry, somewhat barren sandy or ashy sites in gray rabbitbrush-Nama eretioides habitat, from 2,900-3,700 feet. The plant appears to be capable of storing water in its roots. It is occasionally found with several other uncommon plants. It is distinguished from the similar, common dandelion by its leafy stem and usually multiple heads. Stems are from 10-60 cm tall. Blooms May to June.

Threats: Off-road vehicles

Key Characteristics

Flowers yellow  
Pinnately dissected leaves  
with linear lobes  
Stems leafy at or near the  
base



Malacothrix torreyi (Torrey's Malacothrix)

Family: Asteraceae (Composite)

Status: Review species on the State Sensitive Plant List

Known Locations: Canyon, Custer, Owyhee Counties, Idaho  
Malheur, Harney Counties, Oregon  
Arizona, Nevada, Southern Wyoming, S. Utah

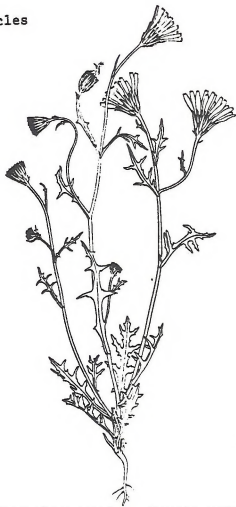
Idaho

T3N, R5W, Sec. 2 SENE behind Trueblood farm near Homedale  
T14N, R18E, Sec. 3 NW of Challis  
T2S, R3W, Sec. 29 NW near Reynolds Creek  
T3S, R1E, Sec. 25 along Snake River below Wild Horse Butte  
T7S, R2E, Sec. 23 SE near Perjue Canyon S of Grandview  
T16S, R4W, Sec. 13 Bull Camp

Soil Type: Reports vary from sandy to gravelly on top of lacustrine to clay ash soils

Habitat and Ecology: An annual known from dry desert areas, occasionally growing with bud sage. In Utah it is found in the salt desert shrub community. In Idaho it has been collected from 2,600 up to 5,800 feet, but still within the salt desert shrub community. The plant has a wide range but is infrequent throughout. It is usually from 10-30 centimeters tall, and the leaf shape distinguishes it from the preceding Malacothrix glabrata. Blooms May and June.

Threats: Range improvement projects, off-road vehicles



Key Characteristics

Annual  
Flowers yellow  
Pinnately dissected leaves  
with irregularly toothed lobes

Mentzelia mollis (Smooth Strickleaf)

Family: Loasaceae (Blazing Star)

Status: Federal Category II (C2) recommended for Endangered status

Known Locations: Owyhee County, Idaho  
Malheur County, Oregon (4 sites)

Idaho

T1S, R5W, Sec. 4, 20 1959 record, about 15 miles W of Walter's Ferry  
T1S, R5W, Sec. 9 NW, 19 center, 31 N1/2 about 15 miles W of Walter's Ferry  
T1S, R5W, Sec. 34 1946 record, between Squaw and McBride Creeks  
T2S, R5W, Sec. 36 W of Reynolds  
T3S, R5W, Sec. ?  
Jump Creek, 6 miles NE of the ID-OR border, approximately T1N, R5W

Soil Type: Green, brown, white, or grey volcanic ash derived from the Succor Creek Formation

Habitat and Ecology: A low annual that is highly selective in its soil-type preference and habitat requirements and has a very narrow range (30 x 15 miles). Elevations for the sites are 4,200-4,600 feet in the Wyoming big sage-Shadscale zone. Associated species on the barren sites are few and include povertyweed, Phacelia lutea, and sometimes Chaenactis cusickii (another sensitive species). Even though it is an annual, continued destruction of its required habitat has resulted in a marked decline in population size. Blooms May and June.

Threats: Off-road vehicle activities and range improvement programs (several sites already disturbed by these activities)

Key Characteristics

Petals narrowly ovate,  
bright yellow flowers  
Plant 5-12 cm tall  
Leaves entire, oblanceolate  
Volcanic ash endemic  
Annual



Mentzelia torreyi var. acerosa (Torrey's Blazing Star)

Family: Loasaceae (Blazing Star)

Status: Priority one on the State Sensitive Plant List

Known Locations: Ada, Elmore, Gooding, Owyhee, Twin Falls Counties, Idaho  
Mono County, California  
Nevada

Idaho

T2S, R1E, Sec. 17 1946 record, Snake River Canyon  
T5S, R12E, Sec. 6 SW 8 miles E of King's Hill  
T6S, R3E, Sec. 27 1946 record, 5 miles S of Grandview  
T6S, R5E, Sec. 33 1956 record, Sugar Creek, SW of Bruneau  
T6S, R11E, Sec. 7 NE, 22 SW of Bliss  
T6S, R13E, Sec. 33 NE on Snake River, across from mouth of Malad River  
T7S, R3E, Sec. 4 SENW, 5 10 miles S of Grandview  
T7S, R6E, Sec. 3, 26, 34, 36 NE of Indian Bathtub ?  
T8S, R5E, Sec. 19 1971 record, about 10 miles SW of Bruneau  
T8S, R6E, Sec. 3, 9 1947 record, Indian Bathtub area  
T8S, R13E, Sec. 10 SENW near Thousand Springs  
T8S, R14E, Sec. 29 SENW, 32 1949 record, several miles W of Buhl  
T9S, R5E, Sec. 5 1964 record, 17 miles S of Bruneau  
T9S, R14E, Sec. 10 near mouth of Mud Creek  
T9S, R15E, Sec. ? Snake River Canyon, 10 miles NW of Filer  
area below the Bliss Dam  
Guffey Butte  
several sites along Salmon Falls Creek

Soil Type: Barren sandy lacustrine soil or volcanic cinder

Habitat and Ecology: A caespitose perennial of barren sandy or volcanic soils from 2,900-3,500 feet in Idaho. It is typically found in the Wyoming big sage-grassland zone or shadscale zone, and often grows with shadscale, *Nama* sp., and white-stemmed blazing star. Southern Idaho is the northern limit of its range. In late summer and fall the plant is still easily recognized and often breaks loose, blowing around like a very small tumbleweed. Blooms May and June.

Threats: Off-road vehicles,  
increased agricultural  
development

Key Characteristics

Branched spiny white  
pubescent stems and  
leaves  
Flowers orange

Nemacladus rigidus (Rigid Thread-Stem)

Family: Campanulaceae

Status: Monitor species on the State Sensitive Plant List

Known Locations: Owyhee County, Idaho  
Harney, Malheur Counties, Oregon  
NE California, N Nevada

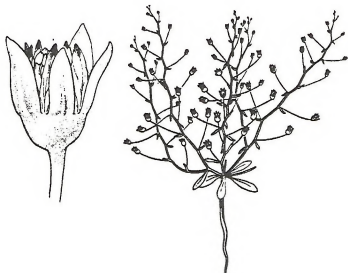
Idaho

T2S, R3W, Sec. 32 SE 10 miles W of Murphy, 1.5 miles E of Reynolds

Soil Type: Loose, sandy, cindery or ashy outcrops, cracks in basalt, or in dried mud

Habitat and Ecology: An exceedingly infrequent annual, known to have been collected only twice in Idaho. Known from the shadscale-sagebrush zone, the plant has been collected at 3,700 feet in Oregon up to 6,500 feet in California. Annuals are unpredictable in their occurrence, making them difficult to inventory or monitor. This species should be watched for and its sites protected from all hazards. Blooms May to June.

Threats: Off-road vehicles, range improvement programs



Key Characteristics

Compact annual to 10 cm tall  
Herbage dark greenish-purple or brownish-purple  
Stems spreading, often multi-branched  
Flowers white, inconspicuous



Pediocactus simpsonii var. robustior (Simpson's Hedgehog Cactus)

Family: Cactaceae (Cactus)

Status: Sensitive on the BLM and State Sensitive Plant Lists

Known Locations: Cassia, Idaho, Nez Perce, Owyhee Counties, Idaho  
Colorado, Nevada, Utah, Wyoming

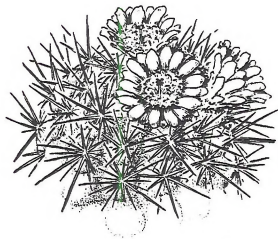
Idaho

T2S, R3W, Sec. 16 NE N of Reynolds  
T8S, R1E, Sec. 23,24,13 West Fork Shoofly Creek  
T8S, R2E, Sec. 2,28,36 East Fork Shoofly Creek  
T8S, R3E, Sec. 27,31,35 John's Pasture, Little Jack's Creek  
T9S, R2E, Sec. 1 Little Jack's Creek  
T10S, R4E, Sec. 4 S1/2,9 Wickahoney Creek  
T12S, R5W, Sec. 31,32 W of Grasmere  
T13S, R5W, Sec. 6 W of Red Canyon  
Reynolds Creek, half-way up  
Juniper Mountain, SE and E of Red Canyon  
near City of Rocks, SE Idaho

Soil Type: Dry rocky or sandy soil

Habitat and Ecology: Grows on benches and canyon rims on rocky or sandy soil. Associated with low sage, bud sage, Sandberg bluegrass, and Erigeron bloomeri. This cactus variety is relatively widespread in southern Idaho, and even though it is somewhat protected by its habitat, it may be exploited by cactus collectors.

Threats: Commercial collectors



habit



Key Characteristics

Only barrel cactus in S. Idaho  
Pink flowers

Peraphyllum ramosissimum (Squaw Apple)

Family: Rosaceae (Rose)

Status: Sensitive on the BLM and State Sensitive Plant Lists

Known Locations: Washington County, Idaho  
Nye County, Nevada  
Baker, Grant, Malheur Counties, Oregon  
California, S Utah

Idaho

T11N, R4W, Sec. 13 SWSW, 24 NW 12 miles E of Weiser  
T13N, R5W, Sec. 14 SE, 23 NE, 25 NE, 35 near Sage Creek, 15 miles NE of Weiser  
T14N, R5W, Sec. 33 1938 record  
T15N, R5W, Sec. 33 1938 record S of Sturgill Peak and about 10 miles E  
of Brownlee Reservoir  
Mann Creek, toward headwaters N of Weiser, historic record

Soil Type: Clayey silt of volcanic origin

Habitat and Ecology: A shrub of dry slopes, either brushy or open, in the sagebrush-grassland and mountain brush zones. This is a browse species highly selected for by both livestock and wildlife. Livestock over-browsing and trampling of seedlings may be a threat to the remaining isolated Idaho populations. The plant is fairly abundant in one drainage on the Oregon side of the Snake River. Its limited occurrence on the Idaho side possibly illustrates dispersal problems within the species. Blooms May to June.

Threats: Over-grazing, particularly warm season grazing by livestock



Key Characteristics

Shrub  
Flowers white to pink  
Fruits fleshy, apple-like,  
small, red in color  
Leaves alternate, entire or  
minutely serrate

Peteria thompsonae (Spine-Noded Milk-Vetch)

Family: Fabaceae (Legume)

Status: Federal Category 3C and Priority 2 on the State Sensitive Plant List

Known Locations: Owyhee County, Idaho

Arizona

Southern Nevada

Southern Utah

Idaho

T7S, R6E, Sec. 34 SWNESW just N of Indian Bathtub

T8S, R6E, Sec. 3,9 SW,21 NW Off Blackstone-Grasmere Road, near and S of Indian Bathtub

T8S, R5E, Sec. 18 1956 record, 13 miles S of Bruneau

Soil Type: Small, marble-sized volcanic cinder

Habitat and Ecology: A perennial disjunct of barren areas with thin cinder soils. At low elevations in Idaho from 2,600-3,200 feet. Found with purple sage, shadscale, and annual Eriogonums. Up to 5,800 feet in southern Utah, where it is found in the pinyon-juniper and mixed desert shrub communities. Our one Idaho population is apparently a small disjunct population. Blooms May to June.

Threats: Heavy recreational use of the nearby Indian Bathtub, off-road vehicles, and concentrated riparian grazing use of the adjacent area

Key Characteristics

Small, sharp spines at leaf bases

Flowers white to yellowish

Pods straight, flattened

Pods 1.5-3 inches long





Phacelia lutea var. calva (Malheur Yellow Phacelia)

Family: Hydrophyllaceae (Waterleaf)

Status: Sensitive on the BLM and State Sensitive Plant Lists

Known Locations: N Owyhee County, Idaho  
NW Humboldt County, Nevada  
E Malheur County, Oregon

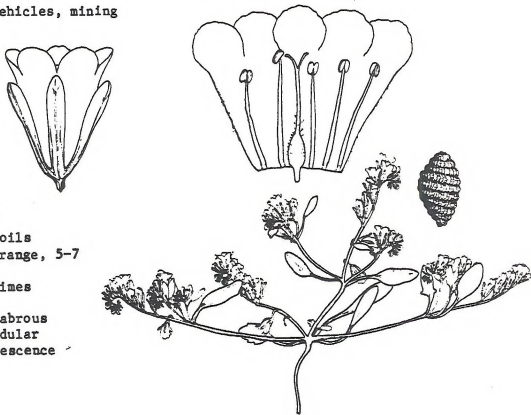
Idaho

T1S, R5W, Sec. 9 NW, 19 center, 28, 30 about 21-25 miles SW of Marsing  
T1S, R6W, Sec. 36 1959 record  
T2S, R6W, Sec. 11, 12 W of Hwy 95 along Dry Creek Rd, 1-2 miles from border  
T3S, R6W, Sec. 14 Succor Creek  
T15S, R5W, Sec. 28 Blackstone Spring  
T1N, R4W, Sec. 13 W1/2, 22, 24 6-8 miles SW of Marsing  
T2N, R5W, Sec. 27 Jump Creek Canyon, 8 miles SW of Marsing  
T3N, R6W, Sec. 26, 35 NE just E of the Oregon-Idaho border

Soil Type: Loose volcanic ash mixed with some clay

Habitat and Ecology: An annual that is freely branched at the base, laying prostrate and forming mats on the soil, sometimes up to 1.5 feet across. It is restricted to volcanic ash soils in the Wyoming big sage-Sandberg bluegrass-bluebunch wheatgrass or salt desert shrub zones. It frequently grows in monoculture because few plant species can grow in the unstable ashly soils. However, it has been found with Mentzelia mollis, another rare annual. This variety is difficult to separate from the others, which can grow intermixed in population sites. They may not be separate heterogenes, or varieties. More studies need to be done and specimens collected so that the species can be reevaluated. Blooms May to June.

Threats: Off-road vehicles, mining



Key Characteristics

Restricted to ash soils  
Flowers yellow to orange, 5-7  
mm long  
Prostrate and sometimes  
mat-forming  
This variety has glabrous  
herbage, or is glandular  
only in the inflorescence

Phacelia minutissima (Least Phacelia)

Family: Hydrophyllaceae (Waterleaf)

Status: Priority 2 on the State Sensitive Plant List

Known Locations: Camas, Owyhee Counties, Idaho  
Elko County, Nevada  
Wallowa Mountains, Oregon

Idaho

T4S, R3W, Sec. 7 SENW 1972 record, N of Slack Mountain on powerline road  
Soldier Mountains, two sites, 1900 record

Soil Type: ? Moist sites

Habitat and Ecology: An annual of moist open places at middle elevations in the mountains. Reportedly found in mountain big sage-aspen communities, at 6,400 feet in the Owyhee Mountains. The plant is known from only four disjunct locations, two of those being in Idaho, where it hasn't been collected since 1972. The plant should be searched for, its habitat defined, mapped, and avoided by any projects that would disturb the vegetation. Blooms in July.

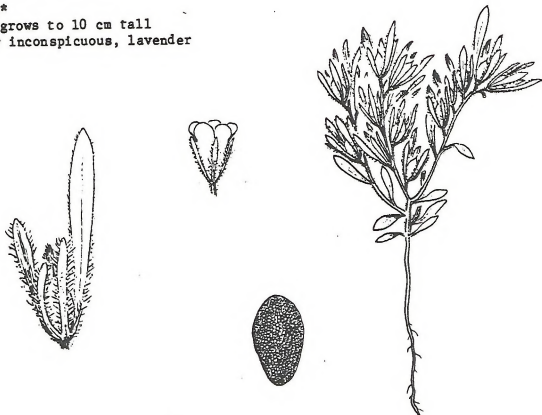
Threats: Uncertain

Key Characteristics

Annual\*

Plant grows to 10 cm tall

Flower inconspicuous, lavender



Primula wilcoxiana (Wilcox's Primrose)

Family: Primulaceae (Primrose)

Status: Federal Category 3b and a Review species on the State Sensitive Plant List

Known Locations: Ada, Boise, Elmore, Gem Counties, Idaho

T1N, R6E, Sec. 11 Long Gulch Creek, 2.5 miles NW of Danskin Peak  
T1N, R8E, Sec. 30 SWSW Granite Creek, along road to Smith Prairie  
T2N, R7E, Sec. 7,8,11 NE,31 South Fork Boise River  
T3N, R2E, Sec. 2 center at end of Eastway Street on N end of Boise  
T3N, R4E, Sec. 21 Mouth of Mores Creek  
T3N, R6E, Sec. 31 opposite Soap Creek, above the South Fork Boise River  
T4N, R2E, sec. 14 west of center,15,36 NESW Boise foothills  
T4N, R3E, Sec. 20 SWSW, 31 NESW Boise foothills  
T5N, R2E, Sec. 24  
T6N, R1W, Sec. 30 1-2 miles S of Emmett  
T6N, R2W, Sec. 25 NESW near Emmett  
T7N, R2E, Sec. 28 near Horseshoe Bend  
T9N, R3E, Sec. ? 1/2 mile E of Banks on the South Fork Payette River  
T1S, R6E, Sec. 3 Willow Creek, 5 miles SW of Danskin Peak  
T1S, R11E, Sec. ? 3.3 miles S of the Hill City Store

Soil Type: Moist hillsides of loamy soils, often with clay

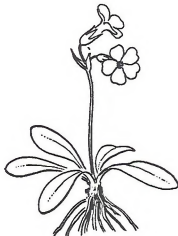
Habitat and Ecology: An early-blooming perennial found on steep, north-facing slopes in the mountain big sage-Idaho fescue and bitterbrush-sagebrush zone. It frequently grows in snowdrift areas on mats of moss. Its leaves are very similar to those of the shooting star, which occupies the same habitat, and the two are difficult to tell apart without flowers. The taxonomy of this group has not been worked out. Primula cusickiana is very similar and the two species might be lumped in the future, in which case neither would be considered rare. A thorough search for new populations of this taxon is needed. Blooms March and April.

Threats: Heavy grazing in spring, increasing housing developments, off-road vehicles



Key Characteristics

Flowers bluish-violet to  
purplish  
Leaves entire  
Plants to 9 cm tall







Stipa webberi (Webber's Needlegrass)

Family: Poaceae (Grass)

Status: Monitor species on the State Sensitive Plant List

Known Locations: Blaine, Elmore, Gooding Counties, Idaho  
E. California, Nevada, SE Oregon, one site in Colorado

Idaho

T3S, R12E, Sec. 4 SE, 7, 9 Dempsey Creek area S of Hill City

T16S, R14E, Sec. 2 Salmon Falls Creek drainage

T1N, R21E, Sec. 13 NW

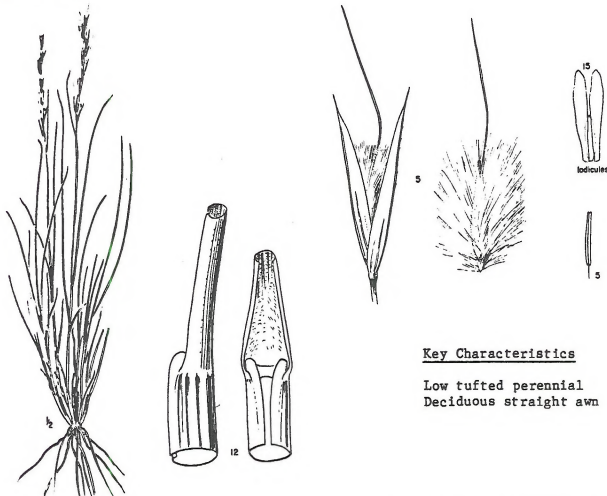
T1N, R23E, Sec. 2, 3, 34

East of Carey

Soil Type: Shallow clay soils over basalt

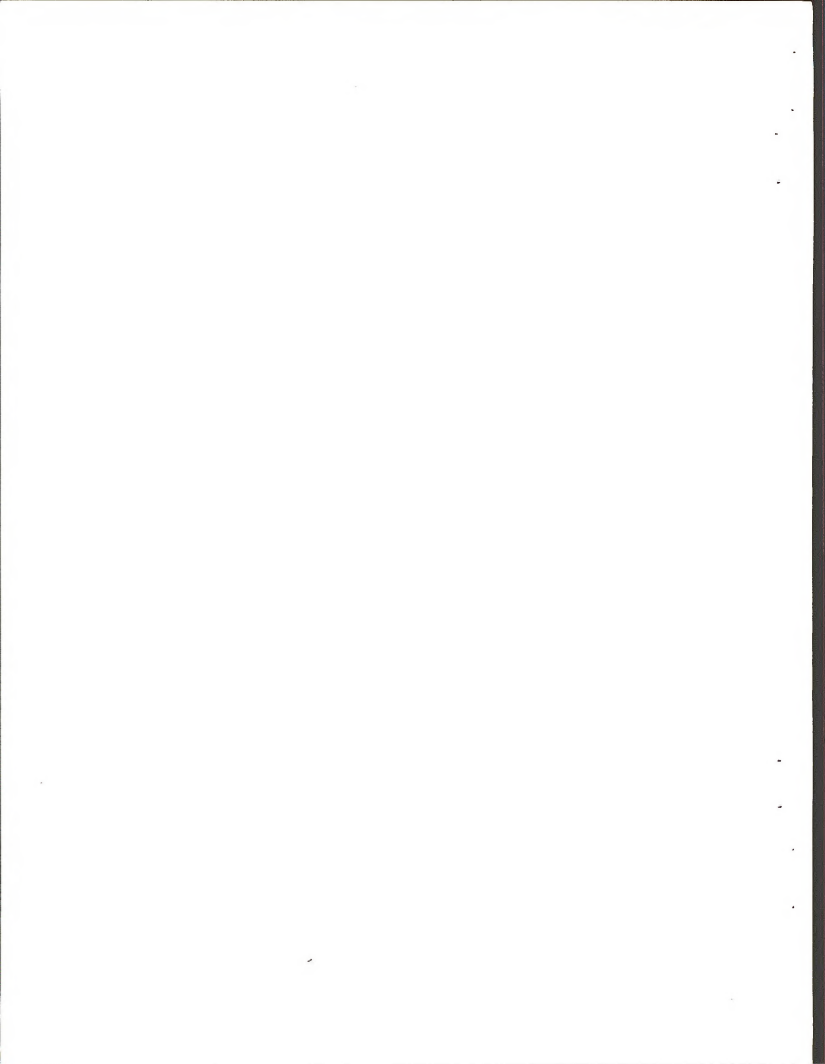
Habitat and Ecology: A low, densely tufted perennial that occurs in both monoculture stands on fairly barren shallow clay soil and mixed within Eriogonum thymoides plant communities. These shallow sites dry up by late spring. The awn on this grass is deciduous, making its identification difficult. All sites visited in Idaho are at approximately 5,000 feet, and consist of small islands of populations, occurring in areas that are internally drained. The plant has been treated as an Oryzopsis in the past. Flowers from June to August.

Threats: Overgrazing or even moderate grazing may eliminate this palatable grass species



Key Characteristics

Low tufted perennial  
Deciduous straight awn



Stylocline filaginea (Hooked Stylocline)

Family: Asteraceae (Composite)

Status: Monitor species on the State Sensitive Plant List

Known Locations: Blaine, Elmore, Lincoln, Owyhee, Washington Counties, Idaho  
California, NE Nevada, SE Oregon

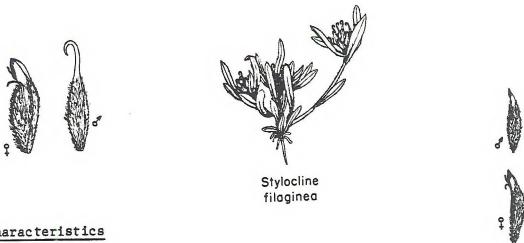
Idaho

T1S, R6W, Sec. 1 1.5 miles N of The Rocks Stage Station, S of Homedale  
T1S, R4E, Sec. 9 1943 record, 2 miles S of Regina  
T3S, R9E, Sec. 1 center Little Canyon, 22 miles N of Glenn's Ferry  
T3S, R10E, Sec. 19 by Canyon Creek, 17.5 miles N of Glenn's Ferry  
T3S, R11E, Sec. 3 SW E of King Hill Creek and S of Dear Heaven Mountain  
T3S, R13E, Sec. 19 SE on rim of Clover Creek, 14 miles S of Hill City  
T4S, R17E, Sec. 6 center near Tom Gooding Lake NW of Shoshone  
T16S, R3E, Sec. 18 1951 record, 2 miles N of the ID/NV border  
T1N, R7E, Sec. 24 NW 1900 record, S Fork Boise River, 8 miles S of Prairie  
Weiser 1900 record  
one mile NNE of Picabo

Soil Type: Shallow stony basalt with cindery gravel on the surface

Habitat and Ecology: A woolly annual of relatively barren sites of cinder over shallow basalt bedrock. The sites are level flats on terraces with little or no drainage, typically at mid-elevations from 4,100-5,000 feet. It was found in Weiser at 2,200 feet in 1900. Sites are commonly surrounded by Alkali sage (Artemisia longiloba), Owyhee sage (A. papposa), or stiff sage (A. rigida). The plant was collected in Eastern Oregon historically, but despite extensive survey work, it has not surfaced in recent years. More range data is needed. Blooms May and June.

Threats: Off-road vehicles, road building, and salt lick placement



Key Characteristics

Woolly annual  
Seldom up to 10 cm tall  
Male flower with hooked point

*S. psilocorphoides*

Texosporium sancti-jacobi (Texas-Spored Lichen)

Class: Ascomycetes (Fungi)

Status: A North American endemic lichen species of very limited distribution but with no official status

Known Locations: Ada County, Idaho  
San Diego, San Benito Counties, California

Idaho  
T1N, R2E, Sec. 28,33

Soil Type: Heavy clay soil

Habitat and Ecology: Grows on heavy clay microsites within the Wyoming big sage-Sandberg bluegrass zone, often associated with rabbitbrush. The known sites are currently dominated by rabbitbrush. The lichen appears to favor open areas with high light intensity. It is thought to be one of the few North American endemic lichens, as lichens are generally wide-ranging, and many are world-wide. This species occurs on only two sites in S. California, and is disjunct in Idaho. It grows on areas as small as one inch in diameter, which makes it difficult to locate. A specimen is kept in the Boise District herbarium and should be examined to assist in field identification. It is called the Texax-spored lichen because of its large-sized spores.

Key Characteristics

Green fruiting body with  
white rims  
Grows adnate to the soil  
or over moss

Trifolium owyheense (Owyhee Clover)

Family: Fabaceae (Legume)

Status: Federal Category II (C2) listed as Priority 1 on the State Sensitive Plant List

Known Locations: Owyhee County, Idaho  
Malheur County, Oregon

Idaho  
T3S, R6W, Sec. 14 center Succor Creek, near the OR-ID border

Soil Type: Volcanic ash and tuff

Habitat and Ecology: A perennial clover on slopes of volcanic ash or loose diatomaceous earth. The surrounding plant community is typically Wyoming big sage-grassland, but the plant usually grows alone or with annuals. It has a restricted habitat and small range, occurring in Leslie Gulch, the Honeycombs, and Succor Creek, so it is primarily found in Oregon. Blooms May and June.

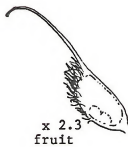
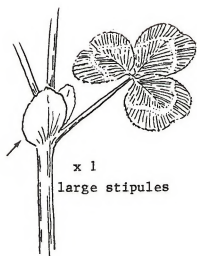
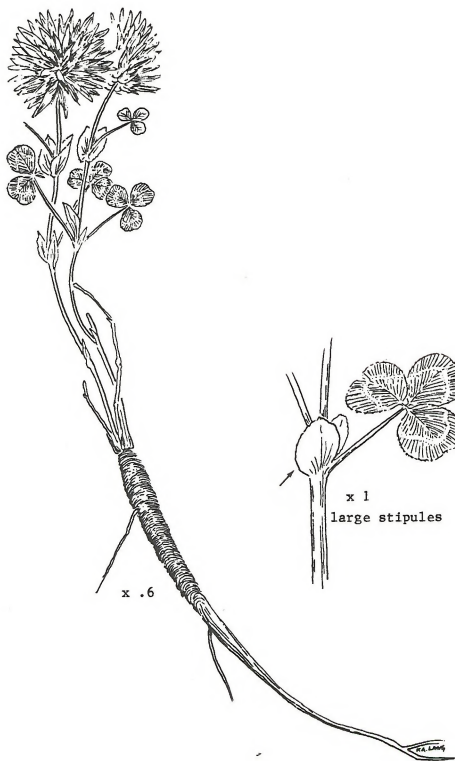
Threats: Removal of required substrate for road construction material, off-road vehicles

Key Characteristics

Large flower heads  
Flowers rose-colored  
Leaflets in threes  
Individual leaflets are  
circular  
Restricted habitat

Trifolium owyheense

Owyhee Clover



Legal Description of all Sensitive Plants in the Boise District  
February 23, 88

T1N, R4W, Sec. 3,4 Sec. 13,22,24	Chaenactis cusickii Phacelia lutea var. calva Gymnosteris nudicaulis Eriogonum salicornoides Texosporium sancti-jacobi Primula wilcoxiana Stylocline filaginea Primula wilcoxiana Stipa webberii " " Eriogonum salicornoides Gymnosteris nudicaulis
R5W, Sec. 7 Sec. 21	
R2E, Sec. 28,33	
R6E, Sec. 11	
R7E, Sec. 24	
R8E, Sec. 30	
R21E, Sec. 13	
R23E, Sec. 2,3,34	
R24E, Sec. 3	
R30E, Sec. 18	
T2N, R1W, Sec. 24	Lepidium montanum var. papilliferum
R3W, Sec. ?	Malacothrix glabrata Glyptopleura marginata
R4W, Sec. 17 Sec. 22 or 23 Sec. 22 or 23	Chaenactis cusickii Camassia cusickii Chaenactis cusickii
R5W, Sec. 22,27 Sec. 27	Phacelia lutea var. calva Primula wilcoxiana
R7E, Sec. 7,8,11,31	
T3N, R2W, Sec. 23	Lepidium montanum var. papilliferum
R5W, Sec. 4,8 Sec. 2	Eriogonum salicornoides Malacothrix torreyi
R6W, Sec. 26,35	Phacelia lutea var. calva
R2E, Sec. 1,2 Sec. 2,12,14 Sec. 2,12 Sec. 2	Allium aseae Astragalus mulfordiae Lepidium montanum var. papilliferum Primula wilcoxiana
R3E, Sec. 20	Lepidium montanum var. papilliferum
R4E, Sec. 21	Primula wilcoxiana
R6E, Sec. 31	Primula wilcoxiana
R29E, Sec. 32	Gymnosteris nudicaulis
T4N, R3W, Sec. 10,15	Gymnosteris nudicaulis
R1E, Sec. 13 Sec. 13	Lepidium montanum var. papilliferum Allium aseae
R2E, Sec. 15,35,36 Sec. 14,15,16 Sec. 6-9,15-17,20,21,23, 25,26,34-36	Astragalus mulfordiae Primula wilcoxiana Allium aseae Allium aseae
R3E, Sec. 20,21 Sec. 20,31	Primula wilcoxiana
T5N, R3W, Sec. 17 Sec. 6	Eriogonum salicornoides Lepidium montanum var. papilliferum
R5W, Sec. 10	Lepidium m. var. papilliferum
R1E, Sec. 1,4,7-10,14,15, 17,22-28	Allium aseae

T5N, R2E, Sec. 24 R2E, Sec. 27,34 R7E, Sec. 24	Primula wilcoxiana Allium aaseae Epipactis gigantea
T6N, R1W, Sec. 1-3,10-12,221-24,33,34 Sec. 30 R2W, Sec. 8 Sec. 25 R1E, Sec. 24,36 R2E, Sec. 28,34 R5E, Sec. 33 R11E, Sec. 35	Allium aaseae Primula wilcoxiana Lepidium montanum var. papilliferum Primula wilcoxiana Allium aaseae Allium aaseae Epipactis gigantea Epipactis gigantea
T7N, R1W, Sec. 19  R2E, Sec. 28	Gymnosteris nudicaulis Lepidium montanum var. papilliferum Primula wilcoxiana
T8N, R1W, Sec. 13,24,25 R4W, Sec. 33  R5E, Sec. 1,8,10	Camassia cusickii Gymnosteris nudicaulis Lepidium montanum var. papilliferum Epipactis gigantea
T9N, R5W, Sec. 12 R3E, Sec. ?	Astragalus mulfordiae Primula wilcoxiana
T10N, R5W, Sec. 36 Sec. 10	Astragalus mulfordiae Haplopappus radiatus
T11N, R3W, Sec. 33 R4W, Sec. 21,28,32 Sec. 13,24 R5W, Sec. 26,29,5 Sec. 3,33	Haplopappus radiatus Astragalus mulfordiae Peraphyllum ramosissimum Astragalus mulfordiae Haplopappus radiatus
T12N, R19E, Sec. 28	Eatonella nivea
T13N, R5W, Sec. 14,23,25,35	Peraphyllum ramosissimum
T14N, R5W, Sec. ? Sec. 33 R6W, Sec. 8 Sec. 9,10 R7W, Sec. 23 R18E, Sec. 3	Astragalus vallis Peraphyllum ramosissimum Astragalus vallis Haplopappus radiatus Astragalus vallis Malacothrix torreyi
T15N, R5W, Sec. 33	Peraphyllum ramosissimum
T17N, R5W, Sec. 26 Sec. 27 or 28 R14E, Sec. 22	Haplopappus radiatus Camassia cusickii Epipactis gigantea
T18N, R4W, Sec. 3,4,9 10,21,33 Sec. 3,4,13,35 R21E, Sec. 12	Camassia cusickii Astragalus vallis Epipactis gigantea



T19N, R4W, Sec. 17,20

*Camassia cusickii*

T1S, R1W, Sec. 28,32,35  
R2W, Sec. 28,29,33,34  
R3W, Sec. 14  
R4W, Sec. 6  
Sec. 6,34  
T1S, R5W, Sec. 13  
Sec. 13,19  
Sec. 30  
Sec. 28,30  
Sec. 4,9,19,20,31,34  
Sec. 9,19,28,30  
R6W, Sec. 36  
Sec. 1  
R4E, Sec. 9  
Sec. 14  
R6E, Sec. 3  
R11E, Sec. ?  
R18E, Sec. 18  
R19E, Sec. ?

*Eriogonum shockleyi* var. *shockleyi*  
*Astragalus camptopus*  
*Astragalus mulfordiae*  
*Chaenactis cusickii*  
*Dimersia howellii*  
*Dimersia howellii*  
*Chaenactis cusickii*  
*Astragalus sterilis*  
*Eriogonum salicornoides*  
*Mentzelia mollis*  
*Phacelia lutea* var. *calva*  
*Eriogonum salicornoides*, *Phacelia*  
*lutea* var. *calva*  
*Stylocline filaginea*, *Dimersia*  
*howellii*  
*Stylocline filaginea*  
*Lepidium montanum* var. *papilliferum*  
*Primula wilcoxiana*  
*Primula wilcoxiana*  
*Eriogonum salicornoides*  
*Gymnosteris nudicaulis*

T2S, R1W, Sec. 9  
Sec. 6  
R2W, Sec. 3,4,23,32  
Sec. 10  
Sec. 15  
R3W, Sec. 2  
Sec. 32  
Sec. 16  
Sec. 17  
R4W, Sec. 24  
Sec. 23  
R5W, Sec. 36  
R6W, Sec. 11  
Sec. 11,12  
R1E, Sec. 17  
R2E, Sec. 11  
Sec. 2  
R5E, Sec. 20  
R9E, Sec. 18  
R16E, Sec. 12  
R18E, Sec. 3,18,20

*Glyptopleura marginata*  
*Astragalus mulfordiae*  
*Astragalus camptopus*  
*Eriogonum salicornoides*  
*Glyptopleura marginata*  
*Eriogonum salicornoides*  
*Nemacladus rigidus*  
*Pediocactus simpsonii* var. *robustior*  
*Eatonella nivea*  
*Cryptantha propria*  
*Eriogonum salicornoides*  
*Mentzelia mollis*  
*Astragalus sterilis*, *Eriogonum*  
*salicornoides*  
*Phacelia lutea* var. *calva*  
*Mentzelia torreyi* var. *acerosa*  
*Lepidium davisii*  
*Glyptopleura marginata*  
*Astragalus camptopus*  
*Astragalus atratus* var. *owyheensis*  
*Astragalus atratus* var. *inseptus*  
" " " "

T3S, R2W, Sec. 10,12  
Sec. 2  
Sec. 22  
R3W, Sec. 20  
R4W, Sec. 2  
R5W, Sec. ?  
R6W, Sec. 14

*Astragalus camptopus*  
*Malacothrix glabrata*  
*Glyptopleura marginata*  
*Dimersia howellii*  
*Astragalus atratus* var. *owyheensis*  
*Mentzelia mollis*  
*Phacelia lutea* var. *calva*,  
*Trifolium owyheense*

T3S, R1E, Sec. 7,25,29,31	Malacothrix glabrata
Sec. 7	Eatonella nivea
R2E, Sec. 11,21,31	Lepidium davisii
R3E, Sec. 23,27	Lepidium davisii
R4E, Sec. 22,28,31,33,36	" "
R5E, Sec. 20,35	" "
R6E, Sec. 23 (or 26,35)	Lepidium montanum var. papilliferum
R9E, Sec. 1	Stylocline filaginea
R10E, Sec. 19	Stylocline filaginea
R11E, Sec. 3	" "
R12E, Sec. 4,7,9	Stipa webberi
R13E, Sec. 19	" "
R16E, Sec. 9,16	Gymnosteris parvula
Sec. 6	Astragalus atratus var. insepitus
R17E, Sec. 27	" "
R20E, Sec. 7	Gymnosteris nudicaulis
Sec. 10,19	Astragalus atratus var. insepitus
R24E, Sec. 21	Gymnosteris nudicaulis
T4S, R1W, Sec. 4	Astragalus kentrophyta var. jessiae
Sec. 23,24	" "
R3W, Sec. 7	Phacelia minutissima
R1E, Sec. 5,10	Eriogonum salicornoides
Sec. 33	Glyptopleura marginata
R2E, Sec. 25,30	Eriogonum salicornoides
R3E, Sec. 1,12	Lepidium davisii
R4E, Sec. 2-8,13,16-19,21,22,27	" "
R5E, Sec. 1,2,6,17,17,31	" "
R6E, Sec. 9,29	" "
R11E, Sec. 31	Eatonella nivea
R16E, Sec. 18	Astragalus atratus var. insepitus
R17E, Sec. 6	Stylocline filaginea
T5S, R1W, Sec. 8	Eriogonum salicornoides
R1E, Sec. 11	" "
R3E, Sec. 22	" "
Sec. 7	Astragalus kentrophyta var. jessiae
Sec. 11,22	Astragalus mulfordiae
Sec. 17	Malacothrix glabrata
R5E, Sec. 6	Lepidium davisii
Sec. 14	Eriogonum shockleyi var. shockleyi
R6E, Sec. 9,17,19,21	Lepidium davisii
Sec. 29	Eriogonum salicornoides
Sec. 9	Lepidium montanum var. papilliferum
R7E, Sec. 24	" "
R8E, Sec. 23,24	Gymnosteris nudicaulis
R9E, Sec. 30,32	" "
Sec. 18	Lepidium montanum var. papilliferum
Sec. 34	Astragalus atratus var. owyheensis
R10E, Sec. 3	Gymnosteris nudicaulis
R11E, Sec. 7	Malacothrix glabrata
R12E, Sec. 6	Mentzelia torreyi var. acerosa

- T6S, R3E, Sec. 22,34  
 Sec. 27  
 R5E, Sec. 24  
 Sec. 33  
 Sec. 35  
 R6E, Sec. 8,10  
 Sec. 11,32  
 Sec. 22  
 Sec. 18  
 Sec. 16,21  
 Sec. 18,26  
 R9E, Sec. 8  
 R10E, Sec. 16  
 R11E, Sec. 7,22  
 R13E, Sec. 20  
 Sec. 33
- T7S, R2W, Sec. 6,7  
 R3W, Sec. 4  
 R1E, Sec. 14  
 R2E, Sec. 14  
 Sec. 23  
 R3E, Sec. 2-5,7,9  
 Sec. 3  
 Sec. 4,5  
 Sec. 4  
 Sec. 5  
 R5E, Sec. 5,20,21,30,31  
 Sec. 30  
 Sec. 5,31  
 Sec. 20  
 Sec. 1,2,20  
 Sec. 20  
 R6E, Sec. 7  
 Sec. 3,26,34,36  
 Sec. 34  
 Sec. 17-20  
 Sec. 36  
 R12E, Sec. 14  
 R13E, Sec. 32  
 Sec. 25  
 R15E, Sec. 33
- T8S, R1W, Sec. 36  
 R1E, Sec. 13,23,24  
 R2E, Sec. 2,28,36  
 R3E, Sec. 27,31,35  
 R5E, Sec. 19  
 Sec. 6  
 Sec. 18
- Astragalus camptopus  
 Mentzelia torreyi var. acerosa  
 Astragalus camptopus, Epipactis  
 gigantea, Eriogonum salicornoides  
 Mentzelia torreyi var. acerosa  
 Eriogonum shockleyi var. shockleyi  
 Eriogonum salicornoides  
 Malacothrix glabrata  
 Cymopterus acaulis var. greeleyorum  
 Astragalus kentrophyta var. jessiae  
 Eatonella nivea  
 Eriogonum shockleyi var. shockleyi  
 " " "  
 " " "  
 Gymnosteris nudicaulis  
 Mentzelia torreyi var. acerosa  
 Astragalus atratus var. inseptus  
 " " "
- Astragalus yoder-williamsii  
 Astragalus camptopus  
 Gymnosteris nudicaulis  
 Astragalus camptopus, Glyptopleura  
 marginata  
 Malacothrix torreyi  
 Astragalus camptopus  
 Malacothrix glabrata  
 Mentzelia torreyi var. acerosa,  
 Eriogonum shockleyi var. shockleyi  
 Glyptopleura marginata  
 Astragalus mulfordiae  
 Astragalus camptopus  
 Malacothrix glabrata  
 Astragalus kentrophyta var. jessiae  
 Astragalus mulfordiae  
 Eriogonum shockleyi var. shockleyi  
 Glyptopleura marginata  
 Astragalus camptopus  
 Mentzelia torreyi var. acerosa  
 Peteria thompsonae, Glyptopleura  
 marginata  
 Eriogonum shockleyi var. shockleyi  
 Astragalus kentrophyta var. jessiae  
 Gymnosteris nudicaulis  
 Astragalus atratus var. owyheensis,  
 Astragalus atratus var. inseptus  
 Gymnosteris nudicaulis  
 Gymnosteris nudicaulis
- Astragalus yoder-williamsii  
 Pediocactus simpsonii var. robustior  
 " " "  
 " " "  
 " " "  
 Mentzelia torreyi var. acerosa  
 Astragalus camptopus  
 Peteria thompsonae, Glyptopleura  
 marginata

- T8S, R6E, Sec. 3,9  
 Sec. 21  
 Sec. 20  
 Sec. 16,21  
 R7E, Sec. 6  
 R8E, Sec. 18  
 R13E, Sec. 10  
 R14E, Sec. 29
- T9S, R1W, Sec. 3,8,10  
 R6W, Sec. 36  
 R1E, Sec. 13  
 R2E, Sec. 1  
 R5E, Sec. 5  
 R13E, Sec. 11  
 R14E, Sec. 10  
 R15E, Sec. ?
- T10S, R2W, Sec. 4,6  
 R3W, Sec. ?  
 Sec. 2,8  
 Sec. 27  
 R4W, Sec. 1,20  
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 R5W, Sec. 6  
 Sec. 22,36  
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 R4E, Sec. 4,9  
 Sec. 9,17,21  
 R5E, Sec. 23  
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 R7E, Sec. 33  
 Sec. 35  
 R8E, Sec. 15  
 R12E, Sec. 14
- T11S, R4W, Sec. 11,14  
 R6E, Sec. 2,22
- T12S, R3W, Sec. 15  
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 R5W, Sec. 31,32  
 R6E, Sec. 13  
 R7E, Sec. 6,18
- T13S, R2W, Sec. 5  
 R3W, Sec. 25  
 Sec. 15,22,27,28,33  
 R5W, Sec. 6  
 R6E, Sec. 3,18,22,23,27
- Mentzelia torreyi var. acerosa,  
 Peteria thompsonae  
 Peteria thompsonae  
 Astragalus camptopus  
 Eatonella nivea  
 Astragalus kentrophyta var. jessiae  
 Gymnosteris nudicaulis  
 Mentzelia torreyi var. acerosa  
 " " "
- Astragalus yoder-williamsii  
 Dimersia howellii  
 Gymnosteris parvula  
 Pediocactus simpsonii var. robustior  
 Astragalus kentrophyta var. jessiae,  
 Mentzelia torreyi var. acerosa  
 Astragalus atratus var. owyheensis  
 Mentzelia torreyi var. acerosa  
 " " "
- Erigeron latus  
 Hackelia ophiobia  
 Astragalus yoder-williamsii  
 Artemisia packardiae  
 Gymnosteris parvula  
 Astragalus yoder-williamsii  
 Erigeron latus  
 Dimersia howellii  
 Astragalus yoder-williamsii  
 Dimersia howellii  
 Pediocactus simpsonii var. robustior  
 Lepidium davisii  
 " "  
 " "  
 " "
- Leptodactylon glabrum  
 Gymnosteris parvula  
 Gymnosteris nudicaulis
- Astragalus yoder-williamsii  
 Lepidium davisii
- Erigeron latus  
 " "  
 Pediocactus simpsonii var. robustior  
 Lepidium davisii  
 " "
- Hackelia ophiobia  
 " "  
 Erigeron latus  
 Pediocactus simpsonii var. robustior  
 Lepidium davisii

T14S, R1W, Sec. 18	<i>Artemisia packardiae</i>
R5W, Sec. 11	<i>Hackelia ophiobia</i>
Sec. 23	<i>Lupinus uncialis</i>
R1E, Sec. 26	<i>Astragalus atratus</i> var. <i>owyheensis</i>
R6E, Sec. 2,22,23	<i>Lepidium davisii</i>
R8E, Sec. 5	<i>Leptodactylon glabrum</i>
R13E, Sec. 7	<i>Astragalus atratus</i> var. <i>owyheensis</i>
R15E, Sec. 23,,31,32	<i>Lepidium davisii</i>
T15S, R4W, Sec. 22	<i>Eatonella nivea</i>
Sec. 19,21,22	<i>Lupinus uncialis</i>
Sec. 15	<i>Artemisia packardiae</i>
R5W, Sec. 28	<i>Eriogonum salicornoides</i> ,
	<i>Phacelia lutea</i> var. <i>calva</i>
R7E, Sec. 19	<i>Leptodactylon glabrum</i>
R11E, Sec. 34	<i>Erigeron latus</i>
R12E, Sec. 11 (or adjacent)	" "
T16S, R4W, Sec. 13	<i>Lupinus uncialis</i> ,
	<i>Malacothrix torreyi</i>
R5W, Sec. 16	<i>Hackelia ophiobia</i>
R3E, Sec. 18	<i>Stylocline filaginea</i>
R9E, Sec. 11	<i>Astragalus atratus</i> var. <i>owyheensis</i>
R14E, Sec. 2	<i>Stipa webberi</i>
Sec. 29	<i>Glyptopleura marginata</i>
R15E, Sec. 7	" "

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