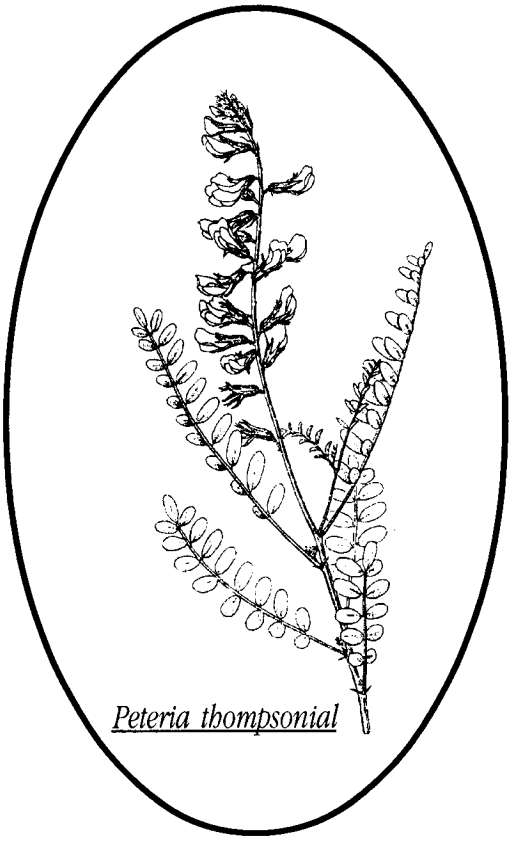
Sensitive Plants of the Jarbidge Resource Area, Idaho

by
Jim Klott
Ann DeBolt



TECHNICAL BULLETIN NO. 96-7 IDAHO BUREAU OF LAND MANAGEMENT April 1996

SENSITIVE PLANTS OF THE

JARBIDGE RESOURCE AREA, IDAHO

By

Jim Klott, Wildlife Biologist
Ann DeBolt, Botanist
April 1996

Table of Contents

	Page
Introduction	iii
Sensitive Plants Confirmed in the Jarbidge Resource Area	
Mourning milkvetch	1
Murphy Milkvetch	1
Snake River Milkvetch	2
Desert Pincushion	2
Greeley's Wavewing	3
White Eatonella	3
Giant Helliborine	4
Annual Salt Buckwheat	4
Packard's Cowpie Buckwheat	4
Matted Cowpie Buckwheat	5
White-margin Waxplant	5
Spreading Gilia	6
Davis Peppergrass	6
Slick-spot Peppergrass	7
Bruneau River Prickly Phlox	7
Torrey's Blazingstar	8
Rigid Threadbush	8
Simpson Hedgehog Cactus	8
Janish Penstemon	9
Spiny-node milkvetch	9
Dwarf Skullcap	10
Sensitive Plants likely in the Jarbidge Resource Area	
Two-headed Onion	10
Newberry Milkvetch	10
Four-wing Milkvetch	11
Dimeresia	11
Scapose Townsendia	11
Plants formerly on the Sensitive Species List	12
Literature Cited	13

Introduction

The Bureau of Land Management under the policy established in BLM Manual (Section 6840) manages special status species. This portion of the BLM Manual sets policy for managing threatened and endangered species as required by the Endangered Species Act. This portion of the BLM Manual also authorizes the BLM State Offices to carry out management of the conservation of state listed plants and animals. State laws protecting species applies to all BLM programs and actions to the extent that they are consistent with the Federal Land Policy and Management Act (FLPMA).

In Idaho, the Idaho Native Plant Society makes the recommendations to the State of Idaho, Forest Service, Bureau of Land Management, Fish and Wildlife Service and other agencies regarding the local rarity, endangerment, and extirpation of plant species. In general the State Director adopts the recommendations of the Idaho Native Plant Society for the BLM's Sensitive Plant List.

Currently, there are over 300 plants on the Idaho Native Plant Society's list. A couple of species, such as water howellia (*Howellia aquatilis*) and MacFarlane's four-o'clock (*Mirabilis macfarlanei*), have been listed as threatened or endangered by the Fish and Wildlife Service. However, the majority of the plants have little information regarding their presence, distribution, abundance, or identified threats. The plant list is reviewed by the Idaho Native Plant Society annually and updated based on new information. Over 50 species have have been removed from the list in the past 6 years based on new inventory data. In the Jarbidge Resource Area there are presently 26 plant species that are either present or are likely to be present. Another 9 species were removed from the list because they were found to be more widespread and abundant that previously believed.

The following are brief accounts of the sensitive plants in the Jarbidge Resource Area. Each account refers to technical references and/or reports that provided information. References for most species were very limited.

Sensitive Plants Confirmed in the Jarbidge Resource Area

Mourning milkvetch (Astragalus atratus var. inseptus) is a herbaceous member of the pea family. The leaves are pinnately compound with very small leaflets. The pea type flowers are white to lilac-tinged and are on an elongate wiry raceme. Mature fruits are narrow pendulous pods (Barneby 1989) one-half to three-quarters of an inch long by about one-eighth inch wide (12-18 mm x 3-4 mm (DeBolt and Rosentreter 1988). Flowering occurs from late May to June. This species occurs on thin gravelly soils over basalt (DeBolt and Rosentreter 1988).

Barneby (1989) separates mourning milkvetch from the more common Owyhee mourning milkvetch (A. a. var. owyheensis) by its linear-oblong leaflets, leathery pod, and jointed terminal leaflet. He then comments that the two varieties may not be taxonomically distinguishable. The majority of the populations of mourning milkvetch in Idaho are north of the Snake River. In the Jarbidge Resource Area there are three records of mourning milkvetch south of the Snake River. Owyhee mourning milkvetch was found to be common in the Jarbidge Resource Area and has since been dropped from the sensitive plant list (Conservation Data Center 1994). DeBolt and Rosentreter (1988) stated that range improvement projects and grazing were threats to mourning milkvetch.

Murphy milkvetch (Astragalus camptopus) (Conservation Data Center 1994) is a colonial perennial forb in the pea family (Barneby 1989). The stems are low growing, appear to zigzag from node to node, and the flowers are pink. Stems and leaves seem grayish because of the pubescence on the surfaces. Mature fruit may coil into a complete circle or more. Murphy milkvetch is found on sandy soils (DeBolt and Rosentreter 1988), dunes, and low gullied hills in desert shrub communities (Barneby 1989). It flowers in May and June. The only Jarbidge locations are from an area north of the town of Bruneau.

Murphy milkvetch is endemic to Idaho (DeBolt and Rosentreter 1988) and its distribution is restricted to near the Snake River in northern Owyhee County from Bruneau to near Melba. Murphy milkvetch could be confused with sickle-pod milkvetch. However, sickle-pod milkvetch grows singly, has a curved ascending stem, and white to pale yellowish flowers (Barneby 1989). Both species have curved pods on stipes, however sickle-pod milkvetch rarely forms a complete circle.

Threats to Murphy milkvetch on public lands include off road vehicles, range improvement projects, and agricultural trespass

(DeBolt and Rosentreter 1988). In some areas on private land agriculture has expanded onto areas formerly inhabited by Murphy milkvetch. Murphy milkvetch was recommended for removal from the Idaho rare plant list in 1995 by the Idaho Native Plant Society.

Snake River milkvetch (Astragalus purshii var. ophiogenes) is a subspecies of Pursh's milkvetch (Barneby 1989) also known as wooly-pod milkvetch (Hitchcock and Cronquist 1976). Wooly-pod milkvetch is a tufted, acaulescent perennial forb with dense hairy foliage, calyx, and fruit pod. Because of the amount of pubescence, the foliage appears grayish. Flowers are pink and the pod in this subspecies is strongly in-curved. Snake River milkvetch can be separated from other subspecies by its 9-15 leaflets on the larger leaves, 5-11 flowers in the raceme, a calyx less than 9 mm, and a strongly in-curved pod (8-13 mm) (Barneby 1989). Other subspecies of wooly-pod milkvetch do not have this combination of traits. Snake River milkvetch occupies a number of different soils including sands, gravel-sandy bluffs, talus, dunes and volcanic ash beds (Barneby 1989).

Snake River milkvetch has been reported from a number of locations along the Snake River Canyon in the Jarbidge Resource Area from near Hagerman west to Indian Cove Bridge. The majority of the locations are the result of an inventory completed by Dr. Pat Packard (retired from Albertson College of Idaho) and Nancy Cole (Idaho Power Company).

Desert pincushion (Chaenactis stevioides) is a winter annual of the sunflower family that reaches a height of up to 12 inches (30 cm) (Cronquist 1994). The leaves are pinnately divided and are darker green than the light gray leaves of the common Chaenactis douglasii. The stem is usually freely branched when well developed with flowers at the end of each branch. Flowers are all rayless and whitish. Flowering occurs in May and June in southern Idaho. Soils are open and sandy where this species is usually found. Desert pincushion is also tolerant of some alkaline conditions (Cronquist 1994).

Southern Idaho is the northern-most portion of this forb's geographic range. Cronquist (1994) notes that desert pincushion is rarer and more scattered in the northern half of its range. Desert pincushion was recently added to the Idaho Native Plant Society plant list as a Priority 1 species (Conservation Data Center 1994). Threats to this species may include competition with introduced annuals, livestock grazing, and off-road vehicle use.

This species is very similar to the much more common false-yarrow also known as dusty maidens (C. douglasii). Desert pincushion can be separated from this species by its annual rather than biennial/perennial growth form, and its more freely branched stem. False-yarrow also has 10 or more pappus scales, whereas desert pincushion has only 4 pappus scales (Cronquist 1994).

Greeley's wavewing (Cymopterus acaulis var. greeleyorum) is a perennial low-growing member of the parsley family (Hitchcock and Cronquist 1976). Herbaceous growth occurs from an enlarged taproot each spring. The leaves are bipinnately divided, similar to several species in the genus Lomatium. Flowers are bright yellow and appear from March to May (DeBolt and Rosentreter 1988). During flowering Greeley's wavewing resembles some of the more common biscuitroots (Lomatium spp.). By mid-summer the plants are dormant and the foliage has dried out. Seeds of Greeley's wavewing are rather unique in that a number of wavy wings are on the margins. Soils where this species is found are usually more sandy than loamy. Associated plant species may include Indian ricegrass (Oryzopsis hymenoides) and prickly phlox (Leptodactylon pungens) (DeBolt and Rosentreter 1988). DeBolt and Rosentreter (1988) only identified off-road vehicles as a threat to this species.

Greeley's wavewing has been reported in four locations in the Jarbidge Resource Area including near Yahoo Creek, north of Seventyone Gulch, west of Brown Creek, and west of the Cheatgrass Study Area.

White eatonella (Eatonella nivea) is a diminutive annual herb in the sunflower family. The leaves are entire and densely wooly (tomentose), appearing whitish over the green (Cronquist 1994). Flower heads are both sessile (without stems) and on short stems (Davis 1952). The ray flowers are yellowish to purple (DeBolt and Rosentreter (1988) and only slightly longer than the involucral bracts (Cronquist 1994). Flowering occurs from May to June (DeBolt and Rosentreter (1988). White eatonella occurs on dry sandy or volcanic soils in salt desert shrub habitats. Owyhee County is at the northeastern edge of this species geographic range (Cronquist 1994).

The only reported population in the Jarbidge Resource Area is just west of Bruneau Dunes State Park. Threats to this species include off road vehicles and spring livestock trampling (DeBolt and Rosentreter 1988).

Giant helleborine (Epipactis gigantea) is a perennial herbaceous member of the orchid family (also known as chatterbox orchid). One to several stems arise from creeping rhizomes (Cronquist et al. 1977). The stem has numerous clasping leaves and may reach 40 inches (100 cm) in height (Davis 1952). Giant helleborine flowers are showy, with the sepals being greenish to rose with purple, brown to reddish veins, whereas the petals are pale pink, rose or brown with purple nerves (Davis 1952). The flowers are in an open raceme (Cronquist et al. 1977). Giant helleborine is widespread but uncommon (DeBolt and Rosentreter 1988). Its habitat is streambanks, seeps, and springs including thermal springs at the base of cliffs in otherwise desert regions (Cronquist et al. 1977, DeBolt and Rosentreter 1988).

In the Jarbidge Resource Area giant helleborine has been found along the Bruneau River north of Bruneau and in the vicinity of Hot Creek. Threats to giant helleborine include development of springs and seeps and livestock grazing.

Annual salt buckwheat (Eriogonum salicornioides) is a small herbaceous member of the buckwheat family. Leaves are all basal and generally round in shape and the inflorescence is branched and open. The flowers are small and yellow and blooming occurs in April and May (DeBolt and Rosentreter 1988). DeBolt and Rosentreter (1988) report that annual salt buckwheat is found on bare ashy white alkaline soils and is associated with shadscale (Atriplex confertifolia), bud sage (Artemisia spinescens), and Wyoming big sagebrush (Artemisia tridentata var. tridentata). Annual salt buckwheat closely resembles other common annual buckwheats, including Bailey's buckwheat (E. baileyi) and broom buckwheat (E. vimineum). However, broom buckwheat has pink to white flowers (Davis 1952) rather than yellow (DeBolt and Rosentreter 1988). There are four locations of annual salt buckwheat reported for the Jarbidge Resource Area. All of the locations are in the vicinity of Bruneau and Bruneau Sand Dunes State Park.

Packard's cowpie buckwheat (Eriogonum shockleyi var. packardiae) is another perennial forb in the buckwheat family. The Packard cowpie buckwheat variety is very similar in appearance to matted cowpie buckwheat (Moseley and Reveal 1995). Flower color and the blooming period are the same as matted cowpie buckwheat. Packard's cowpie buckwheat occurs on oolitic limestone outcrops, sandy loess over basalt, and cobbly desert pavement over deep sandy-loam (Moseley and Reveal 1995). Associated vegetation is sparse, but may include smooth horsebrush (Tetradymia glabrata), winterfat (Ceratoides lanata), shadscale (Atriplex confertifolia), Indian ricegrass (Oryzopsis hymenoides), needle-

and-thread grass (Stipa comata), and langloisia (Langloisia punctata).

Packard's cowpie buckwheat is endemic to southwest Idaho along the Snake River and a few tributaries in Ada and Owyhee counties, Idaho (Moseley and Reveal 1995). Packard's cowpie buckwheat is apparently less common than matted cowpie buckwheat (Moseley and Reveal 1995). Mining of oolitic limestone has been identified as a threat to Packard's cowpie buckwheat, but livestock grazing impacts were considered minimal due to the paucity of forage in these sites (Moseley and Reveal 1995).

Packard's cowpie buckwheat is distinguished from matted cowpie buckwheat by its less than 10 mm long flowering stems, resulting in flowers that appear on the surface of the plant. In matted cowpie buckwheat the flowering stems extend above the plant's surface (Moseley and Reveal 1995).

Matted cowpie buckwheat (Eriogonum shockleyi var. shockleyi) is a perennial forb in the buckwheat family. The root and branches appear to be more woody than other buckwheat species. The plant forms a dense mound with the inflorescence just above the surface of the plant. Leaves of matted cowpie buckwheat are small, elliptic, and have a whitish cast from pubescence. The plants bloom from May to July and the flowers are cream-colored (DeBolt and Rosentreter 1988). Soils where this species occurs are sparsely vegetated sandy-loams, cobbly desert pavement, and gravelly calcrete on lacustrine sediments (Moseley and Reveal 1995). Because of the habitat requirements, this species is confined to very limited areas and is considered rare in Idaho (Moseley and Reveal 1995).

Idaho is the northern limit of distribution for this species and variety. Idaho's locations are considered disjunct by 60 miles from the main portion of its distribution in Nevada (Moseley and Reveal 1995). DeBolt and Rosentreter (1988) commented that no threats had been identified for matted cowpie buckwheat, however in some areas, off-road vehicle use, fire line construction, or range projects may have an impact on this species.

White-margined waxplant (Glyptopleura marginata) is a small tufted winter annual of the sunflower family (DeBolt and Rosentreter 1988). The flowers of this forb are white, relatively small, and do not extend much beyond the foliage. Flowering typically occurs from April to June (DeBolt and Rosentreter 1988). The leaves are pinnate and the outer margins are whitish. White-margined waxplant has milky juice (Cronquist 1994) similar to the common dandelion (Taraxacum officinale).

This species has been found on sandy soils that are typically sparsely vegetated on ridges and at the edge of upland benches. White-margined waxplant is tolerant to some extent to alkaline soil conditions. Southern Idaho is the northern extension of its geographic range (Cronquist 1994).

White-margined waxplant has been found in the Jarbidge Resource Area at one location north of Loveridge Gulch. Identified threats to this species in Idaho include off-road vehicles and range improvement projects (DeBolt and Rosentreter 1988).

Spreading gilia (Ipomopsis polycladon, formerly Gilia polycladon) (Conservation Data Center 1994) is an annual or winter annual in the phlox family (Cronquist et al. 1984). Flowers are small, white, and clustered in terminal bracted branches. Spreading gilia flowers from late April to June. Plants reach a height of 4 to 6 inches (10-20 cm). Soils are typically loamy to chalky, and often have a lakebed sediment origin. Associated plant species frequently include shadscale (Atriplex confertifolia) (Cronquist et al. 1984) and desert dandelion (Malacothrix sp.). Cronquist et al. (1984) note that this species is less common at the northern part of its geographic range. The Snake River Plain comprises its northern boundary. No threats have been identified for this species.

In 1995 spreading gilia was found at several locations from south of Seventyone Draw north and west to the Bruneau Arm. These are the only documented locations for spreading gilia in the Jarbidge Resource Area.

Davis peppergrass (Lepidium davisii) is a low-growing, deep rooted perennial herb in the mustard family (Moseley 1995). The leaves are fleshy and entire to pinnately lobed (DeBolt and Rosentreter 1988). The leaves are green but may appear to be gray from clay adhering to the surface (Moseley 1995). Flowers of Davis peppergrass are white and blooming occurs from April to as late as August. Habitat for Davis peppergrass is shallow playas located in shadscale (Atriplex confertifolia), four-wing saltbush (Atriplex canescens), Wyoming sagebrush (Artemisia tridentata ssp. wyomingensis), and Sandberg bluegrass (Poa secunda) habitats. Davis peppergrass can withstand extremes of moisture ranging from total submersion to multiple years of drought.

A large number of playas south of Indian Hot Spring in the Jarbidge Resource Area contain Davis peppergrass. Davis peppergrass occurs in the playas between the Bruneau and Jarbidge Rivers as well as some of the playas east of the Jarbidge River.

It has not been found north of Indian Hot Spring in the Jarbidge Resource Area. Off-road vehicle use, stock water pond construction, and some range rehabilitation projects have been identified as threats to Davis peppergrass (DeBolt and Rosentreter 1988). Moseley (1995) recommended that this species be listed as threatened under the Endangered Species Act.

Slick spot peppergrass (Lepidium papilliferum) is a herbaceous annual, winter annual, or in some instances biennial member of the mustard family (Moseley 1994). Leaves are pinnately compound and there are few leaves on the stem. Flowers are white and bloom in May and June (DeBolt and Rosentreter 1988). Slick spot peppergrass is only found in slick spots - small playettes in Wyoming big sagebrush habitats. Soils are usually bare, shallow and somewhat salty (DeBolt and Rosentreter 1988).

Threats to slick spot peppergrass include salt lick placement, agricultural development, and livestock grazing and trampling impacts, particularly when soils are wet. Sheep have been observed pulling up plants in the spring. Range projects should also be considered a risk, particularly water trough placement. In the Jarbidge Resource Area slick spot peppergrass has been found to persist in crested wheatgrass seedings and along water pipelines. However, long term survival in these sites is unknown. There are four known locations of slick spot peppergrass in the Jarbidge Resource Area. Moseley (1994) reported that 21 populations have been extirpated in Idaho and recommended that this species be listed as threatened under the Endangered Species Act.

Bruneau River prickly phlox (Leptodactylon glabrum) is a matted perennial herb in the phlox family. It is found on vertical cliffs or underhung rock ledges and canyon walls of rhyolite (DeBolt and Rosentreter 1988). The leaves are narrow and prickly and flowers are white to cream colored. Flowering occurs from April to June (DeBolt and Rosentreter 1988). Bruneau River prickly phlox is reported to be intolerant of seepage areas or ephemeral water paths (DeBolt and Rosentreter 1988).

This species has a very restricted habitat. In the Jarbidge Resource Area, Bruneau River prickly phlox has been reported from a number of locations in the Bruneau and Jarbidge River canyons. The only potential threat to this species would be dam construction. No dams are proposed for either the Bruneau or Jarbidge Rivers. Wilderness Study Area designation and

suitability for inclusion as a Wild and Scenic River offers interim legal protection for both rivers pending final congressional action.

Torrey's blazing-star (Mentzelia torreyi var. acerosa) is a low-growing perennial herb in the blazing star family. The leaves are pinnately divided with the leaf margins rolled under (Davis 1952). The leaf has a coarse texture. Flowers are yellow orange and blooming occurs in May and June (DeBolt and Rosentreter 1988). Torrey's blazing star is found on barren sandy lacustrine soil, gravel, or volcanic cinder.

In the Jarbidge Resource Area, Torrey's blazing star has been found in several locations on the upland benches south of the Snake River and a few locations in the uplands east of the Bruneau River. Threats to Torrey's blazing star include off-road vehicle use and agricultural trespass. Torrey's blazing star was recommended for removal from the Idaho rare plant list in 1995 by the Idaho Native Plant Society.

Rigid threadbush (Nemacladus rigidus) is a small compact annual forb less than 5 inches (11 cm) tall in the bell-flower family (Cronquist et al. 1984). The flower is white with a red central nerve (Cronquist et al. 1984). Rigid threadbush flowers in May and June (DeBolt and Rosentreter 1988). The stem and leaves are dark greenish purple to brownish purple. According to Cronquist et al. (1984) this species is found in sandy washes and volcanic ash soils. In the Jarbidge Resource Area it has been found on black cinder over basalt. Identified threats for rigid threadbush include off road vehicles and range improvement projects (DeBolt and Rosentreter 1988).

The Jarbidge Resource Area has only one known location of rigid threadbush. This site is southeast of Hot Creek on the east side of the Bruneau River in some badlands.

Simpson's hedgehog cactus (Pediocactus simpsonii var. robustior) is spherical in shape with the base partially buried in the soil. It is one of only three "barrel" cactus in Idaho. The flower petals are yellowish, appearing in May and June. Simpson's hedgehog cactus frequently has multiple blooms and buds more or less forming a ring around the top of the plant. Soils where Simpson's hedgehog cactus is found are usually rocky or sandy and are often associated with benches and canyon rims (DeBolt and

Rosentreter 1988) or ridgetops. Other plant species associated with Simpson's hedgehog cactus include low sage (Artemisia arbuscula) and Sandberg bluegrass (Poa secunda).

In the Jarbidge Resource Area Simpson's hedgehog cactus has been found along the canyon rims of Salmon Falls Creek and the Bruneau River. Most populations are of relatively few individuals. DeBolt and Rosentreter (1988) identified the only threat to this species as commercial collectors. The increase of off-road vehicle use in some areas may also pose a threat to some populations.

Janish's penstemon (Penstemon janishiae) is a perennial herb in the figwort family. It usually has multiple stems from a branched woody caudex on a taproot (Cronquist et al. 1984). The flower is bilabiate like most other penstemons. In the Jarbidge Resource Area, Janish's penstemon flowers appear to be dull purple in color, but Cronquist et al. (1994) report that they can be violet to pink with dark purple to red-violet guidelines in the throat. Flowering occurs from late May into June. Janish's penstemon occurs on clay soils derived from volcanic rock in sagebrush, juniper, or pinyon juniper habitats (Cronquist et al. 1984). Southern Idaho is the northeastern limit of this penstemon's geographic range.

Janish's penstemon is only known from the Snake River Canyon between Deer Gulch and Big Pilgrim Gulch in the Jarbidge Resource Area.

Spine-noded milkvetch (Peteria thompsoniae), a member of the pea family, is a perennial forb (Barneby 1989). New shoots emerge from a rhizomatous root system and buried caudex in the spring. Flowers are whitish and tinged with purple (Barneby 1989). Spine-noded milkvetch flowers in May and June. This species is similar to members of the genus Astragalus, but spine-noded milkvetch has spines at the leaf nodes, whereas Idaho Astragalus spp. lack such spines. Soils where this species is found include thin cinder soils (DeBolt and Rosentreter 1988) and sandy soils. Associated plant species include purple sage (Salvia dorrii), shadscale (Atriplex confertifolia) and annual buckwheat (Eriogonum spp.) (DeBolt and Rosentreter 1988).

The only known population of spine-noded milkvetch in the Jarbidge Resource Area is south of Hot Creek in the badlands east of the Bruneau River. DeBolt and Rosentreter (1988) identified

off-road vehicle use, heavy recreational use near Indian Bathtub, and concentrated grazing near Hot Creek as threats to known populations of this species.

Dwarf skullcap (Scutellaria nana) is a low growing perennial member of the mint family. Herbaceous stems come from deep, somewhat enlarged rhizomes and usually branch near ground level (Cronquist et al. 1984). Like many other members of the mint family the flower is irregular, bilabiate with the lower lip cream colored and the upper lip with a pale purple tinge (Cronquist et al. 1984). Flowering occurs in May and June. As with other rare plants in southern Idaho, dwarf skullcap is at the northern edge of its range. Unlike other mint species, dwarf skullcap is not very aromatic. Davis (1952) noted that this species is rare in Idaho.

In the Jarbidge Resource Area the only known populations occur in rocky (cobbly) draws that usually run some water in the spring. Associated species usually include Beckwith violet (Viola beckwithii), white-stemmed elkweed (Frasera albicaulis), barestem lomatium (Lomatium nudicaule), and bluebunch wheatgrass (Agropyron spicatum).

Sensitive Plants likely present in the Jarbidge Resource Area

Two-headed Onion (Allium anceps) is a perennial herbaceous member of the lily family. The stem arises from a bulb in the spring and has two leaves and a flattened stem (Cronquist et al 1994). Cronquist et al. (1994) reports that the flowers are pinkish with a diffuse green midrid and flowering is from May into July. Two-headed onion is found on heavy barren soils on flats and slopes. Two-headed onion has been reported to occur in Twin Falls County (Conservation Data Center 1994) and may occur in the Jarbidge Resource Area. If two-headed onion is present, it would be the only onion species with a flattened stem in the Jarbidge Resource Area.

Newberry's Milkvetch (Astragalus newberryi var. castoreus) is a low stemless perennial herbaceous member of the pea family. The leaves are pinnately compound, with each leaflet pubescent. Barneby (1989) describes the flowers of Newberry's milkvetch as pink-purple with pale pink or whitish margines and blooming runs from April through May. The pod is laterally flattened, upwardly

curved and densely pubescent (Barneby 1989). Newberry's milkvetch occupies foothills, bluffs and badlands with sagebrush or juniper.

This species closely resembles wooly-pod milkvetch (Barneby 1989). Barneby (1989) notes that Newberry milkvetch has a hard turbinate crown thatched with stipules and stiff persistent leaf-stalks, whereas, Wooly-pod milkvetch lacks a turbinate crown. Moseley and Reveal (1995) note that this species reaches the northern extension of its range in Salmon Falls Creek Valley. Conservation Data Center reports Newberry's milkvetch to occur in Twin Falls County. Salmon Falls Creek forms the eastern boundary of the Jarbidge Resource Area.

Four-wing Milkvetch (Astragalus tretrapterus) is a perennial herbaceous member of the pea family. The plants are erect with pinnately divided leaves, leaflets are linear elliptic in shape. Plants vary from green to silvery because of differences in pubescence with the upper surfaces of leaflets more densely pubescent than the undersides (Barneby 1989). Flower color varies from whitish tinged with pale purple to yellowis-pink tinged to bright pink-purple (Barneby 1989). Pods are only dorsally flattened giving the "winged" appearance and curved upward when dry. Soils where this species is found include sands or tuffs forming gullied bluffs, barren knolls, or stabilized dunes (Barneby 1989).

Moseley and Reveal (1995) note that this species reaches the northern extension of its range in Salmon Falls Creek Valley. Conservation Data Center reports four-wing milkvetch to occur in Twin Falls County. Salmon Falls Creek forms the eastern boundary of the Jarbidge Resource Area.

Dimeresia (Dimeresia howellii) is a short compact cushion-like taprooted annual in the sunflower family (Cronquist 1994). Dimeresia is the only member of this genus. The plant appears to be stemless and contains numerous leaves with flowers in clusters. Blooming is in May to July and the ray flowers are white to pinkish or purplish (DeBolt and Rosentreter (1988). Soils where this species is found include volcanic gravel and cinder and associated vegetation is annual buckwheats (Eriogonum sp.) (DeBolt and Rosentreter 1988). Conservation Data Center (1994) reports this species to occur in Owyhee County.

Scapose Townsendia (Townsendia scapigera) is a herbaceous biennial or short-lived perennial in the sunflower family.

Scapose townsendia usually has multiple stems from a taproot, with numerous basal leaves, nearly hiding the few reduced leaves on the short flower stems (Cronquist 1994). Ray flowers are white to pinkish and the disk flowers are yellow (Cronquist 1994). Scapose townsendia is similar to the much more common showy townsendia (T. florifer). These species can told apart by scapose townsendia having only one flower per short stem, whereas, showy townsendia has one to several flowers on each leafy stem.

Moseley and Reveal (1995) note that this species reaches the northern extension of its range in Salmon Falls Creek Valley. Conservation Data Center (1990) reports that scapose townsendia occurs in Twin Falls County. Salmon Falls Creek forms the eastern boundary of the Jarbidge Resource Area.

Plants formerly on the Sensitive Species List

A number of plants within the Jarbidge Resource Area were formerly included on the BLM sensitive and Idaho Native Plant Society rare plant lists. Torrey's malacothrix (Malacothrix torreyi) and Webber needlegrass (Stipa webberi) were removed from the rare plant list in 1990 (Conservation Data Center 1992). Owyhee mourning milkvetch (Astragalus atratus var. owyheensis), thistle milkvetch (Astragalus kentrophyta var. jessiae), broad fleabane (Erigeron latus) and large-flowered gymnosteris (Gymnosteris nudicaulis) were removed in 1994 (Conservation Data Center 1994). Smooth malacothrix (Malacothrix glabrata), Murphy milkvetch (Astragalus camptopus), and Torrey's blazing-star (Mentzelia torreyi var. acerosa), Packard's mugwort (Artemisia packardiae) were removed in 1995, and in 1996, small-flowered gymnosteris (Gymnosteris parvula) was recommended to be removed from the list. For all of these species, subsequent observations found them to be more abundant and having a wider distribution in Idaho than previously believed.

There has been some concern for retaining both Murphy milkvetch and Torrey's blazing-star as BLM sensitive species. Both are endemic to Idaho. Torrey's blazing-star is restricted to specific soils, and known sites typically have low numbers of Torrey's blazing-star. A number of known Torrey's blazing-star populations are found in a limited portion of the Snake River Canyon between Bliss and King Hill. Murphy milkvetch is apparently more widely distributed and more abundant where found. Murphy milkvetch is likely to be removed from the BLM sensitive species list.

Literature Cited

Barneby, R. C. 1989. Fabales (Vol. 3B), Intermountain Flora: Vascular plants of the Intermountain West, U.S.A. New York Botanical Garden, NY. 279 p.

Conservation Data Center. 1992. Rare, threatened, and endangered plants and animals of Idaho (2nd ed.). Idaho Dept. Fish and Game, Boise, ID. 38 p.

Conservation Data Center. 1994. Rare, threatened, and endangered plants and animals of Idaho (3rd ed.). Idaho Dept. Fish and Game, Boise, ID. 39 p.

Cronquist, A. 1994. Asterales (Vol. 5), Intermountain Flora: Vascular plants of the Intermountain West, U.S.A. New York Botanical Garden, NY. 496 p.

Cronquist, A., A. H. Holmgren, N. H. Holmgren, J. L. Reveal, and P. K. Holmgren. 1984. Intermountain Flora: Vascular plants of the Intermountain West, U.S.A. (Vol. 4), New York Botanical Garden, NY. 573 p.

Davis, R. J. 1952. Flora of Idaho. Brigham Young University Press, Provo, UT. 836 p.

DeBolt, A. and R. Rosentreter. 1988. An illustrated guide to the sensitive plants of the Boise District BLM. Technical Bull. 88-4, Idaho State Office, U.S. Dept. Interior, Bur. Land Mgmt., Boise, ID. 94 p.

Hitchcock, C. L. and A. Cronquist. 1976. Flora of the Pacific Northwest. University of Washington Press, Seattle, WA. 730 p.

Moseley, R. K. 1994. Report on the conservation status of Lepidium papilliferum. Conservation Data Center, Idaho Dept. Fish & Game, Boise, ID. 35 p.

Moseley, R. K. 1995. Report on the conservation status of Lepidium davisii. Conservation Data Center, Idaho Dept. Fish & Game, Boise, ID. 34 p.

Moseley, R. K. and J. L. Reveal. 1995. The taxonomy and preliminary conservation status of Eriogonum shockleyi S. Wats. in Idaho. Conservation Data Center, Idaho Dept. Fish & Game, Boise, ID. 29 p.

Bureau of Land Management
Idaho State Office
3380 Americana Terrace
Boise, Idaho 83706

BLM/ID/PT-96/012+1150