



Report on the Conservation Status of *Lepidium Davisii*

by
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Conservation Data Center

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**Idaho Department of Fish and Game
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**REPORT ON THE CONSERVATION STATUS OF
*LEPIDIUM DAVISII***

Taxon Name: *Lepidium davisii* Rollins

Common Name: Davis' peppergrass

Family: Brassicaceae

States Where Taxon Occurs: U.S.A.; Idaho, Oregon, Nevada

Current Federal Status: Category 2 Candidate

Recommended Federal Status: Category 1 Candidate

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SUMMARY

Lepidium davisii (Davis' peppergrass) is a regional endemic, known to be extant at 293 sites, and extirpated from at least two others. The populations are scattered throughout an area of southwestern and south-central Idaho, north-central Nevada, and southeastern Oregon that is approximately 180 miles long by 90 miles wide. Within this area, populations occur in six distinct clusters or distribution centers: Mountain Home Desert (Idaho), Bruneau Desert (Idaho), Salmon Falls Creek (Idaho), South Fork Owyhee River (Idaho, Oregon, Nevada), Alvord Desert (Oregon), and Barren Valley (Oregon). It's habitat is a unique wetland community; a vernal lake or playa, that can be filled with water in the spring and dry as hard as concrete in the summer. *Lepidium davisii* populations in the Mountain Home Desert distribution center show a decline and are the most vulnerable to extirpation. The overall cause of the decline is the poor ecological condition of the sagebrush-steppe ecosystem on the western Snake River Plain. There is no reversal in this trend seen in the near future. Populations in the other five distribution centers appear stable.

Due to the documented extirpation and declines in populations and habitat on the Mountain Home Desert, I recommend that *L. davisii* be changed from a category 2 to a category 1 candidate. While it is apparently stable and more or less secure in five of the six distribution centers, one entire disjunct segment of its distribution is in jeopardy. Preliminary evidence indicates that there may be genetic differentiation between populations and distribution centers, and the fact that the Mountain Home Desert populations occupy the elevational and aridity extremes for the species as a whole, makes these populations an important evolutionary unit whose conservation must be addressed. The Idaho Department of Parks and Recreation should pursue a Conservation Agreement with the Lower Snake River District BLM, Idaho Army National Guard, Idaho Department of Lands, and Mountain Home Air Force Base to maintain viable populations of *L. davisii* on the Mountain Home Desert.

Detailed discussions on the taxonomy, distribution, abundance, habitat requirements, conservation status, and recommendations to federal and state agencies are included in this report.

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I. Species Information.

1. Classification and nomenclature.

A. Species.

1. Scientific name.

a. **Binomial:** *Lepidium davisii* Rollins

b. **Full bibliographic citation:** Rollins, R.C. 1948. On two perennial caespitose *Lepidiums* of western North America. *Madrono* 9:162-165.

c. **Type specimen:** Idaho. Elmore Co: in dried-up pond of lava plain, 0.5 mile north of Snake River canyon, about 14 miles south of Mountain Home, *Davis 4670* (DS). [Site is actually on the rim of the canyon, along an old portion of State Highway 51, near the grade down into the canyon; T5S R6E S17, SE4; CDC occurrence # 028.]

2. **Pertinent synonym(s):** *Lepidium montanum* Nutt. ssp. *davisii* (Rollins) C.L. Hitchcock.

3. **Common name(s):** Davis' peppergrass, Davis pepper cress.

4. **Taxon codes:** PDBRA1M080 (Natural Heritage and Conservation Data Center Network and The Nature Conservancy).

5. **Size of genus:** More or less 175 species worldwide (Rollins 1993).

B. Family classification.

1. **Family name:** Brassicaceae

2. **Pertinent family synonyms:** Cruciferae

3. **Common name(s) for family:** Mustard

C. Major plant group: Dicotyledonea

D. History of knowledge of taxon: The only vernal lake (hereafter referred to as a playa) containing *Lepidium davisii* that was near a major road was along Idaho state Highway 51 near the edge of the Snake River Canyon, approximately 14 miles south of Mountain Home. All early collections of *L. davisii* were collected from this site, including John Christ in 1940, Ripley and Barneby in 1945 (Hitchcock 1950), Ray Davis in 1945, 1946, and 1947 (Rollins 1948), John Christ again in 1950, C. Leo Hitchcock in 1964, and possibly others. This portion of the highway was subsequently moved when the grade down into the canyon was reconstructed sometime during the last couple of decades. The new route no longer skirts the

playa. Rollins (1948) described the species using the 1946 (fruiting) and 1947 (flowering) collections of Davis and for many years this was the only known population (*i.e.*, Davis 1952). This population corresponds to the Idaho Conservation Data Center (CDC) occurrence number 028 (Appendix 1).

It wasn't until nearly a decade later that additional specimens of *L. davisii*, from Elmore and Owyhee counties, Idaho, and Malheur County, Oregon, were collected by Brown, Smithman, Packard, Grimes, and others. Many playas were found to support *L. davisii* in Idaho during the late 1970's, 1980's, and early 1990's, as a result of exploration and surveys by botanists associated with Albertson College, Idaho and Oregon BLM offices, CDC, and Science Applications International Corporation. During 1995, the CDC and Lower Snake River District BLM launched a massive, systematic, and thorough survey of all playas in southwestern Idaho, using ground, helicopter, and fixed-wing aerial surveys. Our knowledge of the distribution and abundance of *L. davisii* in Idaho is now largely complete. The Tent Creek drainage in extreme southeastern Oregon, and the South Fork Owyhee River drainage in northwestern Elko County, Nevada, remain to be surveyed.

E. Comments on current alternative taxonomic treatment(s): None, although it has been suggested that there is morphological variation within the species that may deserve recognition as infraspecific taxa (*e.g.*, Packard *et al.* 1979; Meinke 1982). Preliminary genetic studies by Yruegas (1991) detected differences in DNA between the Idaho and Oregon plants, but were unable to determine whether this was due to actual genomic DNA differences or differences in the phase of the cell cycle. More specific genetic probes are needed to elucidate this further.

2. Present legal or other formal status

A. International: None.

B. National.

1. Present designation of proposed legal protection or regulation: *Lepidium davisii* is currently recognized as a category 2 candidate for listing under the Endangered Species Act (U.S. Fish and Wildlife Service 1993).

2. Other current formal status recommendation: The Natural Heritage and Conservation Data Center network and The Nature Conservancy rank *Lepidium davisii* G3, a rank that includes taxa that are rare and uncommon but not imperiled (Conservation Data Center 1994).

The Idaho and Oregon BLM both treat *Lepidium davisii* as a Sensitive or Special Status species.

3. Review of past status: *Lepidium davisii* was on the original Smithsonian list as Endangered (Packard 1977) and later treated as a category 1 candidate (U.S. Fish and Wildlife Service 1980). Later, it was treated as a category 2 candidate (U.S. Fish and Wildlife Service 1983a; 1985; 1990).

In her review of the taxon for the Rare and Endangered Plants Technical Committee of the Idaho Natural Areas Council, Pat Packard (1981) recommended federal Threatened status, due to its limited distribution, disturbed habitat, and small number of plants.

C. State.

1. Idaho.

a. **Present designation or proposed legal protection or regulation:** None.

b. **Other current formal status recommendation:** The Conservation Data Center state rank (S) equals the global (G) rank (see above; Conservation Data Center 1994).

The Idaho Native Plant Society concurs with the federal C2 status and does not place federal candidates or listed taxa in any state category (Idaho Native Plant Society 1995).

c. **Review of past status:** None.

2. Oregon.

a. **Present designation or proposed legal protection or regulation:** *Lepidium davisii* was listed as Threatened in Oregon by the Oregon Department of Agriculture on July 12, 1995.

b. **Other current formal status recommendation:** *Lepidium davisii* is on List 1 in Oregon, which contains those taxa which are endangered or threatened throughout their range (Oregon Natural Heritage Program 1993).

c. **Review of past status:** Siddall *et al.* (1979) considered it very rare and endangered in Oregon.

3. Nevada.

a. **Present designation or proposed legal protection or regulation:** None.

b. **Other current formal status recommendation:** None. *Lepidium davisii* was only recently discovered in Nevada, in July 1995.

c. **Review of past status:** None.

3. Description.

A. General nontechnical description: A member of the mustard family, *Lepidium davisii* is a caespitose, deep-rooted perennial forming irregular or regular clumps; stems slender, mostly unbranched or sometimes branched, 4-8 cm tall, pubescent with small, simple hairs; leaves simple, sessile, entire to toothed or pinnately lobed, greenish but often gray with

adhering clay, sparingly pubescent to glabrous, 1-2.5 cm long; inflorescence subcorymbose; petals white, 2-3 mm long; siliques crowded, glabrous to sparingly pubescent, slightly notched at apex, 3-5 mm long; style slightly longer than the notch (from Packard 1978; 1979; Meinke 1982).

B. Technical Description: Caespitose, deep-rooted perennial forming clumps; roots thick and fleshy, 0.5-2 cm across, expanding at summit and divided into numerous caudex branches; caudex corymbose, the apex of the branches partially invested in old-leaf bases; stems slender, numerous, each terminated by an inflorescence, simple or rarely branched, leafy, 4-8 cm high, densely pubescent with minute whitish simple trichomes; leaves sessile, basal and cauline similar, spatulate, obtuse, greenish, sparsely pubescent, much-exceeding the internodes, 1-2.5 cm long, 2-5 mm wide; inflorescence subcorymbose, slightly elongated; sepals broadly oblong, not persistent, greenish with a broad hyaline margin, ca. 1.5 mm long and 1 mm wide, glabrous to very sparsely pubescent near the base; petals white, spatulate, 2-3 mm long, ca. 1 mm wide above; paired stamens only slightly longer than single stamens; infructescence subcorymbose; pedicels divaricate, pubescent, terete, 3-4 mm long; siliques crowded, ovate, glabrous to sparsely pubescent, slightly winged above, flattened contrary to replum, slightly notched at apex, 3-3.5 mm long, 2-2.5 mm wide; styles ca. 0.5 mm long; seeds wingless, one in each locule; cotyledons accumbent (Rollins 1948).

C. Local field characters: Perennial cruciferous plant growing on hard clay bottom playas with no (or a few) associated plants. Differs from *Lepidium papilliferum*, sometimes found in nearby habitats, in having simple leaves (Packard 1979).

D. Identifying characteristics of material which is in interstate or international commerce or trade: No interstate or international trade is known. See above section for differences with a related species.

E. Photographs and/or line drawings: The only line drawing known to me is by Frank Lang, published in Meinke (1982) and reproduced in DeBolt and Rosentreter (1988) and DeBolt (1989). The only published photograph I know of is on a beautiful color poster produced by the State of Idaho, Army National Guard. Other photos occur in slide collections of the Conservation Data Center, Idaho Army National Guard, Lower Snake River District BLM, Idaho, Vale and Burns BLM districts in Oregon, and probably others.

4. Significance.

A. Natural: None known.

B. Human: None known.

5. Geographical distribution.

A. Geographical range: A total of 293 *Lepidium davisii* populations are known to be extant. They are scattered throughout an area of southwestern and south-central Idaho, north-central Nevada, and southeastern Oregon that is approximately 180 miles long (east-west) by 90 miles wide (north-south) (Figure 1). Within this range, populations occur in six distinct clusters or distribution centers, as follows:

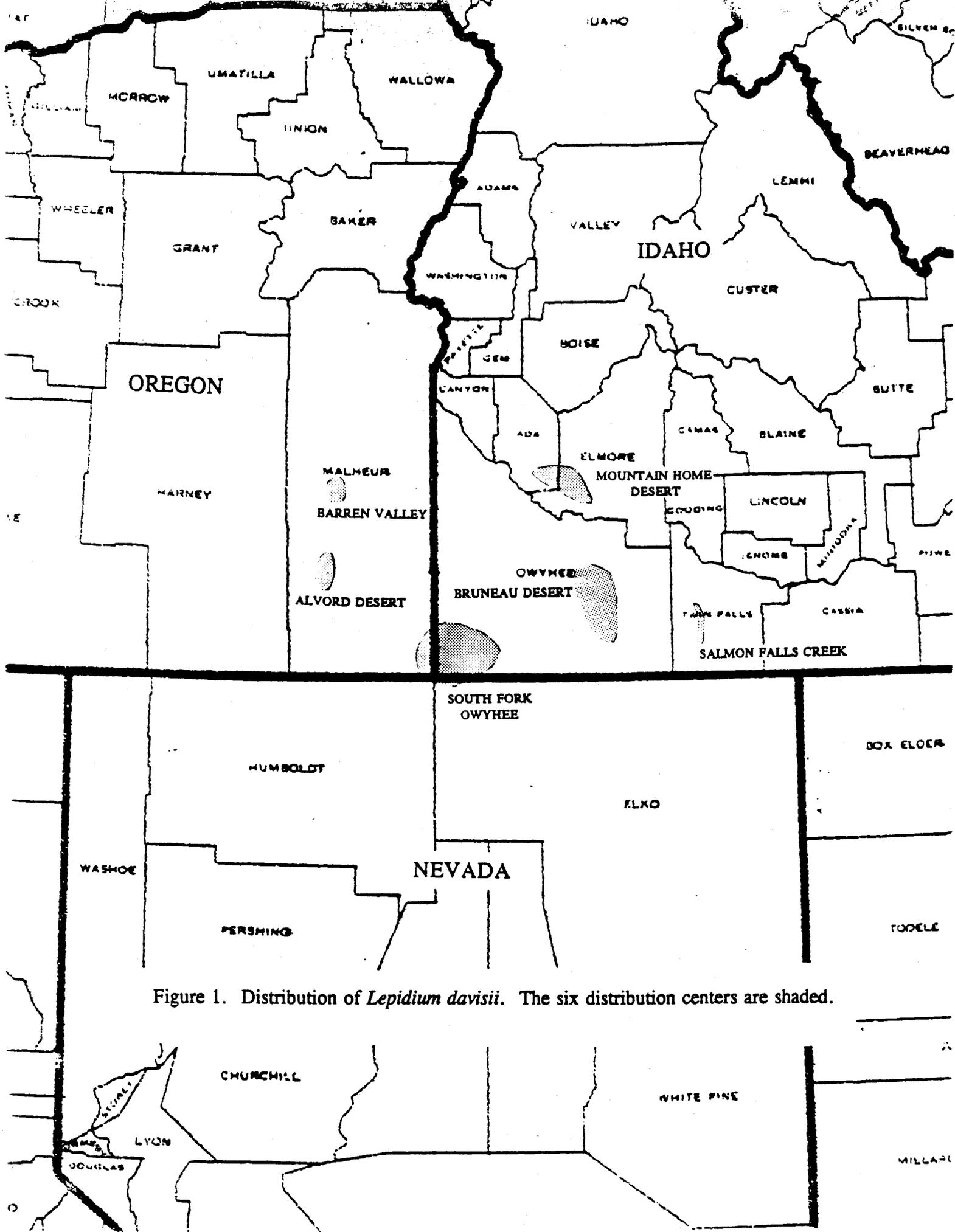


Figure 1. Distribution of *Lepidium davisii*. The six distribution centers are shaded.

(1) *Mountain Home Desert* - *L. davisii* occupies playas on the western Snake River Plain between Mountain Home and the Snake River, in Elmore and Ada counties, Idaho. Fifty-four playas are known to be occupied over a 200 square mile area of the plain (approximately 25 miles long by 8 miles wide). One population is known to have been extirpated, as have possibly three others. Elevations of occupied playas on the Mountain Home Desert range from 2920 to 3160 feet. This portion of its range has been thoroughly inventoried.

(2) *Bruneau Desert* - 152 playas are occupied by *L. davisii* on the volcanic plain of the Owyhee Plateau dissected by the Bruneau River and two of its major tributaries, Sheep Creek and the Jarbidge River, Owyhee County, Idaho. One population is known to have been extirpated. This portion of its range encompasses approximately 670 square miles of the plateau (32 miles long by 21 miles wide) and lies 26 miles south of the area occupied by *L. davisii* on the Mountain Home Desert. Elevations of occupied playas on the Bruneau Desert range from 4010 to 5430 feet. Like the Mountain Home Desert, this portion of its range has been thoroughly inventoried.

(3) *Salmon Falls Creek* - *L. davisii* occupies 17 playas scattered over 20 miles along the eastern rim of Salmon Falls Creek canyon in Twin Falls County, between Twin Falls, Idaho, and Jackpot, Nevada. This area lies 42 miles east of the Bruneau Desert portion of its range. Playas range from 4200 to 5120 feet. Playas in this portion of its range have also been thoroughly inventoried.

(4) *South Fork Owyhee River* - Prior to 1993, no *L. davisii* was known from this remote portion of the Owyhee Plateau. Currently, 60 playas are known to be occupied in this corner of Idaho and adjacent portions of Nevada and Oregon. This portion of its range encompasses at least 350 square miles (approximately 27 miles long by 13 miles wide). The Idaho portion of this area has been thoroughly inventoried, but no systematic inventories have been conducted in Nevada or Oregon. During August 1995, I discovered two playas in Malheur County, Oregon, containing *L. davisii* along the road between Star Valley, Idaho, and McDermitt, Nevada (Appendix 4). These are the first observations from this part of Oregon, and during an aerial reconnaissance in July 1995, I observed others playas in the area that appeared to be suitable habitat. I also discovered the first Nevada population during an aerial reconnaissance in July 1995, two miles south of the Idaho border (Appendix 5). Many other suitable-appearing playas occur in this area of Nevada. This distribution center lies 45 miles WSW of the Bruneau Desert portion of its distribution. Elevations of the playas range from 5140 to 5332 feet.

(5) *Alvord Desert* - Five playas are occupied by *L. davisii* in this portion of southern Malheur County, Oregon. These populations lie approximately 50 miles northwest of the South Fork Owyhee River portion of its range. The area has been thoroughly inventoried (U.S. Fish and Wildlife Service 1994). Playas range in elevation from 4180 to 4460 feet.

(6) *Barren Valley* - Five playas are occupied in this portion of its range in central Malheur County, Oregon. These populations are disjunct by approximately 20 miles to the north of the Alvord Desert area. Playas in the vicinity of this distribution center have also been thoroughly surveyed (U.S. Fish and Wildlife Service 1994). Elevations range from 4125 to 4135 feet.

B. Precise occurrences in Idaho.

1. Populations currently or recently known extant: 280 playas are known to support *Lepidium davisii* in Idaho, based on comprehensive 1995 surveys by the BLM and CDC. That's 53% *L. davisii* occupancy of the 530 playas checked in the state (Appendices 2 and 3). The Conservation Data Center data base contains 167 occurrence records for *L. davisii* in Idaho, in some cases lumping two or more neighboring playas into a single occurrence for convenience. Occurrence records for the Idaho occurrences appear in Appendix 1, each one being identified by a three digit code (i.e., 005, 009). Among other things, each record contains information on the county of occurrence, site name, narrative of the location, date of initial discovery, date of most recent observation, pertinent USGS quads, township, range and section, and latitude and longitude. Mapped locations of all the occurrences are on file at the CDC and Lower Snake River District BLM offices, on both USGS 7.5' (1:24,000) quadrangles and Idaho Transportation Department 1:100,000-scale maps.

Following is a breakdown of occurrences by distribution center:

- (1) *Mountain Home Desert*: 022-026, 028-029, 033-037, 039, 042-062, 064, 084-085, 087, 089, 106, 125-126, 153.
- (2) *Bruneau Desert*: 001-018, 031-032, 038, 040-041, 063, 065-083, 086, 088, 093-094, 107-124, 127-140, 154-167.
- (3) *Salmon Falls Creek*: 019-020, 095, 141.
- (4) *South Fork Owyhee River*: 021, 027, 030, 090-092, 096-105, 142-152.

2. Populations known or assumed extirpated: At least two, and possibly five populations are known to be extirpated. Four occur on the Mountain Home Desert (occurrence 029 and possibly three of the four playas that comprise occurrence 049) and one on the Bruneau Desert (occurrence 003). Grazing by cattle and halogeton have been implicated in the extirpation of 029 and 003.

3. Historically known populations where current status not known: None.

4. Locations not yet investigated believed likely to support additional natural populations: A comprehensive inventory was conducted in Idaho by the CDC and Lower Snake River District BLM in 1995. The 61 playas that remain to be checked are listed in Appendices 2 and 3.

5. Reports having ambiguous or incomplete locality information: Two herbarium specimens have insufficient location information to precisely map the locations, as follows:

Elmore Co: playa just off Black Sands Road south of Mountain Home. *Grimes, Packard, Smithman, Smithman 1312* (CIC) June 15, 1978 (Packard 1978). [Packard *et al.* (1979) lists the collection as *Packard, Grimes, Smithman, Smithman.*]

Owyhee Co: T13S R46E *Brown 135* (CIC) June 21, 1974 (Packard 1978; 1979; Packard *et al.* 1979; Rosentreter 1983). [Could be either R4E or R3E; there is no R46E in Idaho.]

Population represented by these collections have probably been accounted for in the recent, comprehensive surveys that have taken place.

6. Locations known or suspected to be erroneous reports: Packard (1978; 1979) speculated that *Lepidium davisii* may have occurred at Dry Lake, Canyon County, a playa that has been totally converted to agricultural uses. There is no evidence to suggest it ever occurred there, and we now know that there are many undisturbed playas in southwestern Idaho that do not have the species.

DeBolt and Doremus (1990) list four sites on the Mountain Home Desert as having *L. davisii* populations, but for which no other supporting evidence of their existence can be found. The legal locations are as follows: T2S R2E S11, T4S R6E S9, T4S R5E S6, and T4S R5E S18. I consider these to be erroneous reports.

C. Precise occurrences in Oregon.

1. Populations currently or recently known extant: Twelve playas are known to support *Lepidium davisii* in Oregon. The Oregon Natural Heritage Program data base contains nine occurrence records for *L. davisii*, in one case lumping two neighboring playas into a single occurrence 006. Occurrence records for the Oregon occurrences appear in Appendix 4, each one being identified by a three digit code. Among other things, each record contains information on the county of occurrence, site name, narrative of the location, date of initial discovery, date of most recent observation, pertinent USGS quads, township, range and section, and latitude and longitude. The August 1995 occurrences I discovered near the Idaho border have not been processed by the Heritage Program yet, but are shown on a map in Appendix 4. Mapped locations of all occurrences are on file at the Heritage Program and the Burns and Vale BLM offices.

The Oregon occurrences, listed by distribution center, are as follows:

- (1) *Barren Valley*: 002, 006 (2 playas), 007, 008.
- (2) *Alvord Valley*: 001, 003, 004, 005, 009.
- (3) *South Fork Owyhee River*

Pigeon-toe Lake, Tent Creek drainage, between Tent Creek and Star Valley Knoll, 1.5 miles west of Idaho border, ca. 5 miles west of Star Valley, Idaho, T40S R48E S35 NE4. Elevation 5332. Vale District BLM land. Star Valley Knoll quadrangle. Discovered August 12, 1995.

Small playa along road between Star Valley, Idaho, and McDermitt, Nevada, Tent Creek drainage, ca. 6.5 miles west of the Idaho border, T40S R47E S25

NW4. Vale District BLM land. Lookout Butte quad? Discovered August 13, 1995.

2. Populations known or assumed extirpated: None.

3. Historically known populations where current status not known: None.

4. Locations not yet investigated believed likely to support additional natural populations: Prior to 1995, no populations of *L. davisii* were known from the South Fork Owyhee River (Tent Creek) drainage of Oregon. During an aerial reconnaissance of the area in July 1995, I observed several suitable-appearing playas within a four mile wide strip of Malheur County adjacent to Idaho and south of the East Fork (Main) Owyhee River canyon. The populations I discovered in August 1995 were along the road and within a few miles of the Idaho border. Also, two nearby Idaho populations are within a few feet of the Oregon border. I believe other populations will be discovered in this portion of Malheur County.

Surveys of playas in the Alvord Desert and Barren Valley distribution centers are complete (U.S. Fish and Wildlife Service 1994).

5. Reports having ambiguous or incomplete locality information: None.

6. Locations known or suspected to be erroneous reports: Harney County is occasionally mentioned as having *Lepidium davisii* populations, but this appears to be an error.

D. Precise occurrences in Nevada.

1. Populations currently or recently known extant: *Lepidium davisii* was recently discovered to occur in Nevada. I observed one large playa that supported *L. davisii* during an aerial reconnaissance of the South Fork Owyhee River drainage in 1995. The precise occurrence is as follows:

Elko County: between Calico Creek and (west of) the Little Owyhee River, south of Willow Creek, ca. 2.25 miles south of the Idaho border, T47N R45E S19 NW4. Elevation 5125'. Elko District BLM land. Star Valley Ridge West quadrangle. Discovered July 1995.

2. Populations known or assumed extirpated: None.

3. Historically known populations where current status not known: The BLM held a *Lepidium davisii* coordination meeting in 1992, where it was suggested that "up to three" populations were known from Nevada. Jim Morefield, Botanist for the Nevada Natural Heritage Program, was not aware of any information regarding historical populations in the state. As far as he knew, the site reported above was the first record for the state (personal communication, September 1995).

4. Locations not yet investigated believed likely to support additional natural populations: I discovered only one playa containing *L. davisii*, but I observed many other suitable-appearing playas during an aerial reconnaissance of the Owyhee Plateau in the South Fork and Little Owyhee River drainages, within 10 miles of the Idaho border. Previous to 1993, no populations were known from the South Fork area in Idaho; currently 60 populations are known. Similarly, ground inventories in Nevada will probably discover that many of the playas observed from the air contain *L. davisii* populations.

5. Reports having ambiguous or incomplete locality information: None.

6. Locations known or suspected to be erroneous reports: None.

E. Biogeographical and phylogenetic history: Largely unknown. There was some argument in the past on whether *Lepidium davisii* was more closely related to the taxonomically isolated *L. nanum*, endemic to northern Nevada, or to several of the perennial infraspecific taxa of the *L. montanum* complex that have entire leaves (Rollins 1948; Hitchcock 1950).

6. General environment and habitat description.

A. Concise statement of general environment: *Lepidium davisii* is restricted to a narrow suite of environmental conditions. It occurs in playas on volcanic plains where the regional vegetation is dominated by *Artemisia tridentata* and, to a lesser extent, *Atriplex confertifolia*. The beds have a hard clay bottom and are commonly referred to as "hard-bottom playas." During springs with average or above precipitation, these playas are inundated with up to a foot of water (although usually only an inch or two). They then dry out during the spring and summer and the lake beds become as hard as a concrete sidewalk. These extreme conditions preclude all but a few other species from growing in the playa. During springs of low precipitation, the playas may have no water in them during the growing season. Elevations of playas occupied by *L. davisii* range from 2950 feet at occurrence 025 on the Mountain Home Desert, to 5430 feet at occurrence 113 on the Bruneau Desert.

B. Physical characteristics.

1. Climate.

a. Koppen climate classification: Populations of *Lepidium davisii* lie in an area classified as Koppen's unit BSk: semiarid climate or steppe climate, with an average annual temperature under 64.4°F (Trewartha and Horn 1980).

b. Regional macroclimate: A general description of the climatic pattern is as follows. The average monthly maximum temperature reaches its highest point during the month of July, a month which also marks the beginning of a pronounced dry season. About 15% of the total annual precipitation falls during the period from July through October. Two periods of peak precipitation occur, one in January and the other in May. The winter precipitation peak is greatest with more than 38% of the mean annual precipitation falling between December and February (Noe 1991).

Mean annual precipitation at Mountain Home, Idaho, which is representative of populations on the Snake River Plain, is 10.2 inches and the mean annual temperature is 50.6 (Noe 1991). Temperatures are lower and precipitation higher for populations on the Owyhee Uplands and in southeastern Oregon than those on Snake River Plain.

c. Local microclimate: *Lepidium davisii* is a low-growing plant that has no associated species growing with it on the playas. When it is not inundated, and the playa bottom has dried, *L. davisii* plants are exposed to the considerable winds that blow every afternoon during the growing season. Because these playas are internally drained, they do accumulate water, which then perches on the underlying bedrock and doesn't drain into the subsurface. This makes the soils water-logged at times, usually in the winter, spring, and early summer.

2. Air and water quality requirements: Unknown.

3. Physiographic provinces: The entire distribution of *Lepidium davisii* is encompassed by Omernik and Gallant's (1986) Snake River Basin/High Desert Ecoregion. Following Bailey's Ecogenerational classification, nearly all occurrences lie within the Owyhee Uplands Section (342C) of the Intermountain Semi-desert Province (McNab and Avers 1994).

Occurrences of *L. davisii* on the Mountain Home Desert lie within the Mahleur-Boise-King Hill Section of the Columbia-Intermountain Geomorphic Province. Those in the Bruneau Desert, Salmon Falls Creek, and South Fork Owyhee River areas are within the Owyhee Uplands Section of the Columbia-Intermountain Province (Ross and Savage 1967; Wellner and Johnson 1974). Following the Idaho Floristic Regions of Ertter and Moseley (1992), the Mountain Home Desert populations occur in the Mountain Home Unit of the Lower Snake River Plain Division, the Bruneau Desert populations occur in the Bruneau Plateau Unit of the Owyhee Division, and the Salmon Falls Creek and South Fork Owyhee portions of its range lie within the Jarbidge Uplands of the Owyhee Unit. Oregon occurrences all fall in Owyhee Uplands Physiographic Province (Natural Heritage Advisory Council to the State Land Board 1988).

4. Physiographic and topographic characteristics: All populations occur on flat playa beds on flat to gently rolling volcanic plains. Relief is minimal in the vicinity of occupied playas, although occasionally the volcanic plain is abruptly dissected by very steep canyons. Elevation of occupied playas range from 2920 to 5430 feet.

5. Edaphic factors: *Lepidium davisii* occurs in playa bottoms that usually have saturated soils or are totally inundated during the winter, spring and possibly early summer. As the playas dry, the clay soil shrinks and forms polygonal cracks. The individual polygons are either bordered by clay (*i.e.*, are one consistency) or are bordered by cobbles that have been differentially sorted by shrinking and swelling of the clay and/or by freeze-thaw sorting. This arrangement forms polygonal stone nets on the playa bottom. The *L. davisii* plants grow in the cracks between the polygons. As Pacard (1978; 1979) pointed out, playas occupied by *L. davisii* do not show deposits of loose white "alkali." Soil of occupied playas that have been measured have a circumneutral pH.

Studies have failed to isolate the edaphic variable(s) responsible for determining why certain playas are occupied by *L. davisii* and near-by, apparently similar playas are not (Yruegas 1990; 1991). These results may point to dispersal as the limiting mechanism responsible for the current distribution.

6. Dependence of this taxon on natural disturbance: This species is not dependent on large-scale natural disturbances, such as fire. It appears, however, to require smaller-scale disturbance to the soil caused by shrink-swell and/or freeze-thaw cycles that cause cracks in the playa bottom necessary for seedling establishment. The 1995 season was an excellent year for seedlings due to a moist spring and all the seedlings I observed occurred in the cracks between polygons.

7. Other unusual physical features: In the cosmic scheme of things, all the physical characteristics of *L. davisii* habitat are unusual.

C. Biological characteristics.

1. Vegetation physiognomy and community structure: The physiognomy and structure of communities occupied by *L. davisii* are extremely simple; in most cases, *L. davisii* is the sole native member of the community, vascular and nonvascular. Most of the habitat is covered with bare soil or cobbles. Occasionally the playas contain low to relatively high-density populations of the shrub *Atriplex confertifolia*. A couple of other native species occur with *L. davisii* on rare occasions.

2. Regional vegetation type: The regional vegetation surrounding playas occupied by *Lepidium davisii* is mostly dominated by *Artemisia tridentata* ssp. *wyomingensis* and, to a lesser extent, by *Atriplex confertifolia* at the lower elevations. For some reason, possibly related to development of playas on differing types of volcanic substrates, no *L. davisii* populations (and few playas) are known from within the extensive areas of low sagebrush (*Artemisia arbuscula* and *A. longiloba*) that adjoin some distribution centers (e.g., Dickshooter Ridge-Big Springs Butte adjacent to the South Fork Owyhee River center).

3. Frequently associated species:

Native Species: *Atriplex confertifolia*, *Chrysothamnus nauseosus*, *Artemisia cana*, *Sitanion hystrix*, *Astragalus calycosus*, *Allium anceps*, *Iva axillaris*. All these species are at very low densities in *L. davisii* playas.

Alien Species: *Salsola kali* (mostly in Idaho) and *Halogeton glomerata*.

4. Dominance and frequency: The density of *L. davisii* is normally very low, less than 1 plant per m², but can be as high as 20+ plants per m² on rare occasions. The density is usually not even over the entire playa. It is at low density or absent where water stands the deepest in the playas.

5. Successional phenomena: This is not applicable to most populations, as the habitats

are maintained in and open state by physical processes. In some cases, however, exotic and native weeds appear to be invading the playas and negatively impacting the *L. davisii* populations.

6. **Dependence on dynamic biotic features:** None known.

7. **Other endangered species:** None.

7. Population biology.

A. General summary: It has been observed that *Lepidium davisii* plants show distinct inter-playa differences in leaf size, leaf shape, and plant phenology. If future studies bear this out, it suggests that *L. davisii* disperses poorly, probably not beyond individual playas, and that there is minimal pollination between neighboring playas. For these reasons, each playa should be defined as a discrete population (U.S. Fish and Wildlife Service 1994).

B. Demography.

1. **Known populations:** 293 populations (= number of occupied playas) of *Lepidium davisii* are known extant; five are thought to be extirpated. Populations range in size from just a few plants to over 2.5 million estimated for Palomino Lake, Oregon. Many populations contain several thousand individuals. The age class structure appears to be well distributed among immature and mature (reproductive) individuals in most populations. Seedlings are only observed during moist springs, but these long-lived perennials probably only need episodic seedling establishment to maintain long-term viability.

2. **Demographic details:** Demographic details for each occurrence in Idaho and most in Oregon appear in Appendices 1 and 4, respectively.

C. Phenology.

1. **Patterns:** Flowers May to August (Meinke 1982).

2. **Relation to climate and microclimate:** During extremely dry summers, such as in 1994, few viable fruits appear to be produced, although flowering was profuse.

Bob Kinschey, Vale District BLM, has observed that above-ground biomass production of individual plants varies with winter and spring precipitation. His long-term observations of several playas in Oregon suggest that *L. davisii* produces larger plants and more flowers and fruits during high-precipitation years than during low-precipitation years.

D. Reproductive ecology.

1. **Type of reproduction:** *Lepidium davisii* reproduces only by seed.

2. Pollination.

a. **Mechanisms:** Little known, but insects are probably the main pollinators. Packard (1978; 1979) did not rule out self pollination. Packard *et al.* (1979) observed great morphological variation between playas (populations), suggesting to her that gene flow may be limited.

b. **Specific known pollinators:** Unknown.

c. **Other suspected pollinators:** None known.

d. **Vulnerability of pollinators:** Unknown, but if insects are the main pollinator, they will be vulnerable to changes in vegetation surrounding the playas inhabited by *L. davisii*. This is of great concern on the Mountain Home Desert portion of its range due to near total conversion of the native sagebrush-steppe vegetation to one dominated by exotic annuals. This may affect population levels of important pollinators. This is less a concern on the Owyhee Uplands, where the other populations occur. More native sagebrush vegetation is intact at these higher, moister elevations, except where purposefully replaced by crested wheatgrass.

3. Seed dispersal.

a. **General mechanisms:** Unknown, but probably gravity and possibly wind and water are important for the relatively large seeds. The fact that *Lepidium davisii* does not appear to inhabit all suitable habitat in an area, suggests dispersal mechanisms are not highly effective (Packard 1978; 1979). On the other hand, it is distributed over a range with a long axis of over 180 miles.

b. **Specific agents:** Unknown, but probably gravity is the most important.

c. **Vulnerability of dispersal agents and mechanisms:** Unknown.

d. **Dispersal patterns:** Specific details unknown.

4. Seed biology.

a. **Amount and variation of seed production:** During "good" years, which may coincide with moist springs, seed production is profuse. Other years, possibly related to winter and spring droughts, nearly all fruits appear to abort and seed production is nil (Bernatas and Moseley 1991).

b. **Seed viability and longevity:** Unknown.

c. **Dormancy requirements:** See below.

d. **Germination requirements:** What follows are results of studies conducted by Jennifer Yruegas (1990; 1991), Nyssa High School, on *Lepidium davisii* from three

playas in the two Oregon distribution centers and one from the Mountain Home Desert in Idaho. Seed germination experiments revealed that pre-chilling is not necessary for *Lepidium davisii* and, in fact, reduces germination. Darkness enhanced seed germination. Germination percentages varied between 40 and 80, depending on treatment. Optimum germination took place at a pH between 6 and 7, which correlates with measured soil pH from the same playas.

e. Percent germination: See above.

5. Seedling ecology: No data.

6. Survival and nature of mortality of plants: *Lepidium davisii* is probably a long-lived perennial. The nature of mortality is unknown, but Ann DeBolt, Lower Snake River District BLM Botanist, has observed that, four years after being buried by silt, plants reappeared above ground, probably from surviving rootstocks.

7. Overall assessment of reproductive success: No data.

8. Population ecology.

A. General summary: Little is known regarding the population ecology of *Lepidium davisii*.

B. Positive and neutral interactions: None known.

C. Negative interactions.

1. Herbivores, parasites and diseases: Cattle and wild horses (in Oregon) can have a significant local impact on *Lepidium davisii* plants near a stock watering holes, where livestock are highly concentrated.

Heavy cattle grazing possibly caused the extirpation of *L. davisii* from at least two playas (029 and 003). Occurrence 003 was first observed in 1979 with ca. 200 plants. By 1995, they were gone. At occurrence 029, 16 plants were observed in 1987, and none were present in 1995. Severe cattle trampling during the winter of 1992-1993 is given as the cause of extirpation.

2. Evidence of competition.

a. Intraspecific: Largely unknown. Possibly some intraspecific competition for space and resources in the polygonal crack systems of the playa floors.

b. Interspecific: Largely unknown. Throughout most of its range, there is little or no interspecific competition with any native species because few other natives can establish and survive in these relatively extreme habitats. The native perennial, *Iva axillaris*, is advancing into one playa in Oregon and may present a threat to the *L. davisii* population. Boise State University has been contracted to examine the effect

of *Iva axillaris* toxins on the growth and development of *L. davisii* (U.S. Fish and Wildlife Service 1994).

In some cases, playas have become infested with the exotic weeds *Salsola kali* in Idaho, and *Halogeton glomerata* in Idaho and Oregon. In Oregon, at least, *L. davisii* appears to be competitive and resistant to *H. glomerata* invasion.

3. Toxic and allelopathic interactions with other organisms: See above paragraph.

D. Hybridization.

1. Naturally occurring: None known.

2. Artificially induced: Unknown.

3. Potential in cultivation: Unknown.

E. Other factors of population ecology: None.

9. Current land ownership and management responsibility.

A. General nature of ownership: Most populations are on public land managed by the BLM (all Oregon and Nevada populations are on BLM land). The Idaho Department of Lands, is the second largest owner/manager of *Lepidium davisii* populations. A few Idaho populations occur on private land.

B. Specific landowners: Specific landowners/managers are indicated on occurrence records in Appendices 1 and 4. A summary of the number of occurrences managed by each entity is as follows:

1. Idaho.

Lower Snake River District BLM

Bruneau Resource Area - 118 occurrences; 2 are shared with State, 1 with private.

Owyhee Resource Area - 26 occurrences; 1 shared with state.

Jarbidge Resource Area - 9 occurrences

Upper Snake River Districts BLM

Snake River Resource Area - 4 occurrences

Idaho Department of Lands

Southwest Idaho Supervisory Area - 11 occurrences; 1 shared with Mountain Home AFB, 2 with Bruneau RA, 1 with Owyhee RA.

U.S. Air Force

Mountain Home Air Force Base - 3 occurrences; 1 shared with State.

Private - 1 occurrence; shared with Bruneau RA.

2. Oregon.

Vale District BLM

Jordan Resource Area - 9 occurrences

Burns District BLM

Andrews Resource Area - 2 occurrences

3. Nevada.

Elko District BLM - 1 occurrence

C. Management responsibility: For the most part, the ownership outlined above reflects management responsibility. Twelve playas on the Bruneau Resource Area occur on the Orchard Training Area (OTA), a military training facility co-managed by the BLM and the Idaho Army National Guard. Occurrences on the OTA that include these 12 playas are: 022, 029, 035, 055, 056, 058, 060, 061, 062, and 089 (Appendix 1).

D. Easements, conservation restrictions, special designations, etc.: Two playas containing *Lepidium davisii* (occurrences 109 and 020) are included in the Playas Area of Critical Environmental Concern (ACEC) on the Snake River Resource Area, Upper Snake River Districts BLM. Established in January 1988, specifically to protect *L. davisii*, these two 30-acre sites are the only playas having a special protective designation. The ACEC boundary includes the playas and an upland buffer fully surrounding each site.

The Vale District BLM is carrying forward the nomination of Palomino Lake (002) as an ACEC in the Vale District Resource Management Plan (U.S. Fish and Wildlife Service 1994).

10. Management practices and experience.

A. Habitat management.

1. Review of past management and land-use experiences.

a. This taxon: Annual monitoring of Oregon occurrence 003 by Rick Hall, Burns District BLM, revealed that between 1987 and 1995, *Lepidium davisii* had declined slightly. He speculated this was probably due primarily to drought (he saw less mortality during springs with average or above-average precipitation) and possibly to the slow invasion of the native perennial, *Iva axillaris*, which is slowly invading the playa at a rate of about 0.7 ft/yr.

Monitoring at 25 playas on the Lower Snake River District BLM since 1988, revealed a wide variation in above-ground plant numbers from year to year. Taylor-Grant and DeBolt (1995) attributed this variation primarily to invasion of the playas

by blowing *Salsola kali* plants, *Halogeton glomerata* competition, and, in one instance, by heavy livestock trampling. Monitoring data also show that there has been a steady decline of *L. davisii* populations on monitored playas in the Mountain Home Desert distribution center, while monitored populations in the Bruneau Desert center have remained stable. Taylor-Grant and DeBolt (1995) attribute this decline to the abysmal ecological condition of the sagebrush-steppe communities on the western Snake River Plain, a factor also attributed to the decline of another narrowly-distributed congener, *Lepidium papilliferum* (Moseley 1994).

b. Related taxa: N/A

c. Other ecologically similar taxa: N/A

2. Performance under changed conditions: In 1995, John Doremus, Lower Snake River District BLM, found approximately 60 *L. davisii* individuals that had colonized several man-made "playas" along a ditch at the Buster Butte SW occurrence (040). Apparently, soil had been scraped from areas adjacent to the ditch for fill, creating depressions that became suitable habitat. Population vigor was assessed as poor, however. The age of the depressions is unknown, as is the rate and method of colonization. These man-made sites are within about 500 feet of a natural playa containing an excellent population.

3. Current management policies and actions: Two Conservation Agreements between the U.S. Fish and Wildlife Service and the BLM currently guide management of *Lepidium davisii* on Bureau lands. One agreement covers Oregon populations (U.S. Fish and Wildlife Service 1994), and the other populations on the Lower Snake River District BLM in Idaho (U.S. Fish and Wildlife Service 1989). The Idaho BLM agreement is currently under revision (Taylor-Grant and DeBolt 1995).

The purpose and objectives of the Oregon Conservation Agreement are to formally document the intent of the Vale and Burns districts of the BLM and the U.S. Fish and Wildlife Service to protect and conserve *Lepidium davisii* and its habitat on the Burns and Vale districts, BLM, and provide a means to that end. Actions in the agreement are as follows: (1) the BLM must provide annual reports to the Fish and Wildlife Service on conservation activities; (2) collect seeds for *ex situ* conservation activities; (3) continue to pursue establishment of Palomino Lake as an ACEC; (4) prohibit construction or development in playas containing *L. davisii*; (5) close *L. davisii* habitat to vehicular traffic; (6) prepare and implement a management plan to conserve all existing populations in Oregon; and (7) continue population monitoring.

Actions outlined in the Idaho Conservation Agreement, which covers the Lower Snake River District BLM, are as follows: (1) efforts will be made by the BLM to remove the threats facing the species; (2) the BLM will establish representative transects to monitor population density and age structure trends of *L. davisii*; and (3) the Fish and Wildlife Service will review all management plans and status reports and provide comments.

4. Future land use(s): Unknown.

B. Cultivation.

1. Controlled propagation techniques: None known.
2. Ease of transplanting: Unknown.
3. Pertinent horticultural knowledge: None known.
4. Status and location of presently cultivated material.
 - a. Specimen plants: None known.
 - b. Stored seed/propagule banks: As part of the Conservation Agreement in Oregon (U.S. Fish and Wildlife Service 1994), the BLM will collect seed and deposit them in a long-term seed storage facility.

11. Evidence of threats to survival.

A. Present or threatened destruction, modification, or curtailment of habitat or range.

1. **Past threats:** In 1982, the Bruneau Resource Area, Lower Snake River District BLM, proposed building 17 pit-type reservoirs in three allotments, including several in playas containing *Lepidium davisii*. After discussions with the U.S. Fish and Wildlife Service, the BLM decided not build one reservoir and a monitoring program was established for *L. davisii* populations in the others, as spelled out in the first Conservation Agreement (MOU) for the species between the Service and the BLM (U.S. Fish and Wildlife Service 1983b).

2. **Existing threats:** The threats to the long-term viability of *Lepidium davisii* are best summarized by DeBolt and Doremus (n.d.) and Taylor-Grant and DeBolt (1995) for Idaho and U.S. Fish and Wildlife Service (1994) for Oregon. Much of the discussion that follows is from these summaries, although several other sources were also consulted (Packard 1977; 1978; 1979; 1981; Packard *et al.* 1979; Siddall *et al.* 1979; Rosentreter 1980; 1983; 1986; Meinke 1982; U.S. Fish and Wildlife Service 1983b; 1989; DeBolt and Rosentreter 1988; DeBolt 1989). Known threats are numerous, and include direct disturbance of the plant as well as habitat alteration. Most of the playas that DeBolt and Doremus (n.d.) examined in southwestern Idaho had one or more noticeable impacts. Most threats can be grouped into the following classes:

Livestock use - This occurs on many playas, and the combination of grazing and trampling appears to have at least some detrimental effect on the plant. Cattle grazing has been given as the reason for extirpation of two populations. Grazing is severe only when stock ponds or salt are located in or near the playas. Season of grazing use is an important consideration. It may be that light mechanical disturbance late in summer after seed set would be a time when the plant is more resistant and the habitat less sensitive to grazing, rather than spring when soils are wet and sensitive to trampling. Most livestock impacts are from cattle, but wild horses use some playas in Oregon. This threat is minimal in the South Fork Owyhee River distribution center, and does not appear to be

significant in the Barren Valley, Alvord Desert, and Salmon Falls Creek distribution centers. It is probably having the greatest effect on the Bruneau Desert and Mountain Home Desert areas.

Stock pond development - The construction of pit-type water storage ponds in some playas has caused a decline in affected populations so affected (Pellant 1985), although these have apparently recovered over the next decade (Taylor-Grant and DeBolt 1995). It is believed that the change in drainage patterns resulting from the storage ponds caused the initial decline in *L. davisii* rather than direct grazing impacts. Similar to the previous threat, this disturbance is most common on the Mountain Home Desert and Bruneau Desert areas.

Vehicle use - Vehicle use, including motorcycles, four-wheel drive, and military tanks, is common on many playas. A number of playas have roads crossing through them, while others are used as racetracks, with courses established using old tires. Declines in these populations probably result from mechanical disturbance to the plant as well as from the alteration of the playa bottom. This threat is most prevalent in the Mountain Home Desert.

Rangeland fires - The indirect effects of increased fire frequencies on the Snake River Plain due to overgrazing and subsequent weed invasions may be causing declines in some populations in the Mountain Home Desert distribution center. With depletion of the native plant community, there is evidence of accelerated erosion on several playas. Sedimentation rates of up to 0.5 inch of deposition in a year appear to kill plants (DeBolt and Doremus n.d.), although at least a portion may survive for several years only as below-ground rootstocks and caudices.

An indirect effect of rangeland fires is the subsequent invasion of weeds. In the case of *L. davisii*, *Salsola kali* is of particular concern in Idaho (Taylor-Grant and DeBolt 1995). Although it may be able to invade and compete with *L. davisii*, of greater concern is the deposition of dead plants in playas, especially if a fence is nearby. These, sometimes huge, piles of tumbleweeds physically smother *L. davisii* plants. This has been observed in Idaho at occurrence 028 (type locality) and 084 (Mountain Home Air Force Base), and probably occurs elsewhere as well. As mentioned above, this threat is largely confined to the Mountain Home Desert portion of its range.

Rangeland rehabilitation projects - These projects, especially greenstripping, could have some detrimental effect on populations. DeBolt and Doremus (n.d.) observed two playas adjacent to an unvegetated greenstrip to have undergone some silt deposition, possibly at increased rates. This is a threat only on the Mountain Home Desert.

Herbicide spraying - This is a potential threat. Although it has not been observed, many playas are vulnerable because of the proximity to roads and agricultural land. Probably only a threat on the Mountain Home Desert.

3. Potential threats: See above.

B. Overutilization for commercial, sporting, scientific, or educational use.

1. Past threats: None known.
2. Existing threats: Minimal to no existing threats.
3. Potential threats: Minimal to no potential threats.

C. Disease, predation, or grazing.

1. Past threats: None known.
2. Existing threats: See Past and Existing Threats.
3. Potential threats: See Past and Existing Threats.

D. Inadequacy of existing regulatory mechanisms.

1. Past threats: None.
2. Existing threats: None.
3. Potential threats: None.

E. Other natural or manmade factors.

1. Past threats: None.
2. Existing threats: None.
3. Potential threats: None.

II. Assessment and Recommendations.

12. General assessment of vigor, trends, and status: Taylor-Grant and DeBolt (1995) recently summarized the results of the Lower Snake River District BLM monitoring program, which reflects the overall status and trend of *Lepidium davisii*. What follows is based largely on their summary, embellished by me to include the entire range of the species.

- > *L. davisii* populations in the Mountain Home Desert distribution center show a decline and are the most vulnerable to extirpation. The overall cause of the decline is the poor ecological condition of the sagebrush-steppe ecosystem on the western Snake River Plain. There is no reversal in this trend seen in the near future.
- > Populations appear stable throughout the remainder of the species range in the Salmon Falls Creek, Bruneau Desert, South Fork Owyhee River, Alvord Desert, and Barren Valley distribution centers. Within these portions of its range, livestock-related impacts (reservoir

development, herbivory, trampling) are greatest in the Bruneau Desert, where many playas have been gouged to create watering holes. Playas in the South Fork Owyhee River area are entirely undisturbed.

- > Alteration of the playa surface by livestock trampling permits invasion of the normally weed resistant surface by *Halogeton glomerata*, *Salsola kali*, and *Iva axillaris*. This problem is most acute on the Mountain Home Desert.
- > Direct grazing by livestock is not a serious threat to the species. The majority of livestock and wild horse trampling impacts probably occur during winter and early spring when the playas still contain water and the plants are dormant.
- > National Guard tank maneuvers have stopped on playas occupied by *L. davisii*. Populations are probably little affected by light and intermittent vehicle use, although this use could affect the playa surface in a similar way to cattle grazing and facilitate the invasion of weeds.

13. Recommendations for listing, status change, and/or conservation actions.

A. Recommendations to the U.S. Fish and Wildlife Service: Due to the documented extirpation and declines in populations and habitat on the Mountain Home Desert, I recommend that *L. davisii* be changed from a category 2 to a category 1 candidate. While it is apparently stable and more or less secure in five of the six distribution centers, one entire disjunct segment of its distribution is in jeopardy. Preliminary evidence indicates that there may be genetic differentiation between populations and distribution centers, and the fact that the Mountain Home Desert populations uniquely occupy the elevational and aridity extremes for the species as a whole, makes these populations an important evolutionary unit whose conservation must be addressed.

B. Recommendations to other U.S. Federal Agencies.

1. Bureau of Land Management: The Bureau of Land Management should maintain *L. davisii* as a special status plant in Idaho, where the Mountain Home Desert portion of its range is declining and vulnerable, and in Oregon and Nevada where the species is rare. In Idaho, the Salmon Falls Creek populations appear to be stable but there are only a few scattered populations in this distribution center, making this portion of its range inherently vulnerable. The South Fork Owyhee and, to a lesser extent, those on the Bruneau Desert are relatively secure and stable. The BLM in Nevada and Oregon should conduct thorough surveys in the South Fork Owyhee drainage to determine the full extent of *L. davisii* in this area.

Population monitoring should continue on all populations currently being studied in Oregon and Idaho. The Lower Snake River District should be especially vigilant in monitoring population trends on the Mountain Home Desert.

2. Army Corps of Engineers: Playas occupied by *L. davisii* are jurisdictional wetlands. The Corps should deny all 404 Clean Water Act permits requesting to place fill in occupied playas, including from reservoir construction.

3. Air Force, Mountain Home Air Force Base: Four occupied playas are managed by the Air Force on Mountain Home Air Force Base and the adjacent Small Arms Range. These populations are important to the long-term persistence of *L. davisii* on the Mountain Home Desert. All populations should be protected from all disturbance. One of the playas on the Small Arms Range has been monitored since 1991 (Bernatas and Moseley 1991). This monitoring should be continued, although at a somewhat less intensive level, and expanded to include other occurrences on the base. In addition, areas surrounding playas should be stabilized to prevent high rates of erosion.

C. Other status recommendations.

1. Municipalities): No recommendations.

2. Counties: No recommendations.

3. State(s) (Idaho):

a. Department of Parks and Recreation: The Department should pursue a Conservation Agreement with the Lower Snake River District BLM, Idaho Army National Guard, Idaho Department of Lands, and Mountain Home Air Force Base to maintain viable populations of *L. davisii* on the Mountain Home Desert.

b. Department of Lands, Southwest Idaho Supervisory Area: Eleven playas partly or entirely on state lands are known to have populations of *L. davisii* in the Mountain Home Desert and Bruneau Desert distribution centers. All playas should be off limits to major disturbances. This especially applies to populations on the Mountain Home Desert. Soils surrounding playas on the Mountain Home Desert should be stabilized to prevent high rates of erosion from filing in occupied playas.

c. Army National Guard: The Idaho Army National Guard comanages, along with the BLM, 11 playas that contain *L. davisii* and one that used to contain the plant prior to its extirpation. These include all or part of 11 occurrences (Appendix 1), as follows: 022, 029, 035, 055, 056, 056, 058, 060, 061, 062, 089. All these playas are in the Mountain Home Desert. They should be monitored and protected from all military training activity. Soils surrounding the playas should be stabilized to prevent possible siltation.

d. Idaho Conservation Data Center: I plan on keeping the global and Idaho state Heritage/CDC network rank at G3 S3 due its limited geographic distribution and unique habitat that is vulnerable to disturbance throughout two of this distribution centers.

e. Idaho Native Plant Society: The Idaho Native Plant Society should keep *Lepidium davisii* on its list of recommended candidate species.

4. Other Nations: No recommendations.

5. International Trade, etc.: No recommendations.

14. Recommended critical habitat: All playas on the Mountain Home Desert containing *L. davisii* should be designated as critical habitat, along with an appropriate buffer around each playa that would include habitat for pollinators and that can be stabilized to prevent high rates of erosion. Future research is needed to determine the optimal size needed for a buffer.

15. Conservation/recovery recommendations.

A. General conservation recommendations.

1. Recommendations regarding present or anticipated activities: None.

2. Areas recommended for protection: All playas on the Mountain Home Desert containing *L. davisii* should be protected from disturbance. This action will help stem the decline that is currently taking place in this distribution center. The Lower Snake River District BLM, is applying for reserved water rights on most playas containing *L. davisii* within their jurisdiction, as part of the Snake River water rights adjudication process. At least part of the reason the BLM is applying for water rights in playas is for the protection of natural habitats, therefore benefiting *L. davisii*.

3. Habitat management recommendations: Disturbances to playas and surrounding buffer areas on the Mountain Home Desert should be limited. Soils surrounding playas on the Mountain Home Desert should be stabilized to prevent high rates of erosion from filling in occupied playas.

All fences that traverse playas, or run along their periphery, should be removed. These fences act as drift fences for tumbling *Salsola kali* that can accumulate 4-5 feet deep and extend up to 20 feet or more from the fence if it is oriented perpendicular to the prevailing wind. This is especially true on the Mountain Home Desert, where *S. kali* is prevalent and can roll for miles across flat, shrubless terrain. *Salsola kali* accumulates on some playas on the Mountain Home Desert because they are in depressions. Eradication of deep deposits on playas should be considered in this area, possibly through burning and mechanical means.

4. Publicity sensitivity: None.

5. Other recommendations: None.

B. Monitoring activities and further research recommendations: Population monitoring has been conducted on a number of populations by several agencies.

(1) *Mountain Home Air Force Base* - Population monitoring began in two playas in 1991 (Bernatas and Moseley 1991), and the transects were sampled annually until 1995, the last year of the contract. Monitoring data are currently being analyzed and population trends and modelling results will be summarized in a report by December 1995. CDC occurrence: 084 (Appendix 1).

(2) *Lower Snake River District BLM* - The two Conservation Agreements between the U.S. Fish and Wildlife Service and the BLM (U.S. Fish and Wildlife Service 1983b; 1989) stipulated that a monitoring program be established by the BLM to determine rangeland management effects on *Lepidium davisii* populations. Some monitoring began as early as 1983 (Pellant 1985), with most of the permanent transects established in 1987 and 1988 (Doremus and DeBolt 1987; DeBolt and Doremus 1989; 1990; Taylor-Grant and DeBolt 1995). All populations are being monitored for population trend. In addition, erosion studies have been established at six playas to measure silt loading due to increased fire frequencies on adjacent land (U.S. Fish and Wildlife Service 1989; Doremus and DeBolt 1987). CDC occurrences: 011, 016, 018, 022, 025, 026, 029 (2 playas monitored), 033, 036, 037, 042, 045, 047, 049, 051 (2 playas monitored), 052 (2 playas monitored), 056, 058, 062, 064, 089, and 126 (Appendix 1).

(3) *Upper Snake River Districts BLM* - Two playas on the Upper Snake River Districts, occurring in Playas ACEC, are being monitored with permanent belt transects. CDC occurrences: 019 and 020 (Appendix 1).

(4) *Vale District BLM* - The Vale District has been monitoring Palomino Lake (Oregon occurrence 002, Appendix 4) since about 1986. Monitoring goals and objectives were recently formalized in a Conservation Agreement (U.S. Fish and Wildlife Service 1994).

(5) *Burns District BLM* - The Burns District is monitoring Oregon occurrences 003 and 009 (U.S. Fish and Wildlife Service 1994; Appendix 4). Occurrence 003 has been monitored specifically in relation to the effect of *Iva axillaris* invasion on *L. davisii* population trends. Transects were established here in 1987, and have been resampled (almost) annually.

16. Interested parties:

District Manager
Lower Snake River District BLM
3948 Development Ave.
Boise, ID 83705

District Manager
Upper Snake River Districts BLM
940 Lincoln Road
Idaho Falls, ID 83401

District Manager
Elko District BLM
Elko, NV

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III. Information Sources.

17. Sources of information.

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a. Technical:

Spencer, S.G., and B.F. Russell, eds. 1979. Bruneau known geothermal resource area: an environmental analysis. EGG-GTH-5004. Prepared for the U.S. Department of Energy, Idaho Operations Office, Idaho Falls, ID. 146 p., plus appendices.

b. Popular: None.

B. Herbaria consulted: All regional and many national herbaria have been consulted several times over the years regarding specimens of Idaho's rare flora (see Moseley 1990). Herbarium specimens of *Lepidium davisii* from Idaho are listed in the appropriate field on the occurrence records in Appendix 1, where herbarium acronyms follow Holmgren et al. (1990), except for local Idaho herbaria, which follow Moseley (1990).

C. Fieldwork: Considerable field time has been spent in the last two decades searching for *Lepidium davisii* populations, first by Pat Packard and others associated with the College of Idaho (now Albertson College) in the mid- and late 1970's. Their early searches were both in Idaho and Oregon (Packard 1978; 1979, Packard *et al.* 1979). Eidemiller (1977) searched unsuccessfully for *L. davisii* on BLM land in the Bennett Hills in the late 1970's. The Lower Snake River District BLM spent considerable time inventorying playas in southwestern Idaho during the 1980's and early 1990's, expanding its known distribution substantially (Rosentreter 1980; 1983; 1986; DeBolt and Rosentreter 1988). The U.S. Air Force inventoried Mountain Home Air Force base for rare plants in 1990 (Thompson 1990).

During 1995, many Lower Snake River District BLM personnel conducted a nearly complete inventory of potential habitat in their area. Gaps in their inventory were filled by the CDC and the Idaho Army National Guard, also during 1995. Playas in the Salmon Falls Creek area were thoroughly surveyed by Jim Tharp, Upper Snake River Districts BLM, in 1994 and 1995. Potential habitat in the Alvord Desert and Barren Valley distribution centers in Oregon were thoroughly surveyed by Vale and Burns District BLM personnel in the 1980's and 1990's (U.S. Fish and Wildlife Service 1994).

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E. Other information sources: None known.

18. Summary of material on file: Color slides, field forms, maps, and most published and unpublished references pertaining to *Lepidium davisii* in Oregon, Nevada, and Idaho are on file at the Idaho Conservation Data Center office. The Lower Snake River, Vale, and Burns BLM District Offices have extensive files and maps pertaining to *L. davisii* in their areas. The Oregon Natural Heritage Program is also a central source of information for the species in Oregon.

IV. Authorship.

19. Initial authorship:

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20. Maintenance of status report: The Idaho Conservation Data Center will maintain current information and update the status report as needed.

V. New information.

21. Record of revisions: Not applicable.

Appendix 1

Idaho Conservation Data Center records for *Lepidium davisii* in Idaho.

DAVIS' PEPPERGRASS
Occurrence Number: 001

Survey Site Name: LONG LAKE

County: Owyhee

USGS quadrangle: INDIAN HOT SPRINGS

Latitude: 421708N Longitude: 1154335W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
013S006E	22	80	N2NE4
013S006E	23	80	NW4

Location: J - P Desert, Long Lake and adjacent playas.

Survey Date: First Observed: 1974-06-21 Last Observed: 1995-07-28

EORANK: B

Population Data:

1974: Collected by Brown. 1978-1979: Several hundred plants at Long Lake playa which is connected to the large western playa by a wash that also contains *L. davisii*. Ca 1000 plants at the western playa. Observations by Lynda Smithman. 1988: Many thousands of plants on the western playa. Monitoring plot established by Ann DeBolt, Boise District BLM. 1995: 1000+ plants at each of the large playas. Ca 100 plants at small plays to the NE of Long Lake. Plants are 2-5% vegetative, 2-5% in flower, and 85-95% in fruit, and 1-5% dormant. Population age class structure is 1-3% seedlings, 10-20% immature, 75-89% mature, and 0-2% senescent. Population vigor assessed as good. Observation on a cursory visit by Matt McCoy, Boise District BLM.

Habitat Description:

Hard-bottom playas with pieces of basalt. Long Lake playa has been scraped to construct a water hole. Species adjacent to the playas include *Artemisia tridentata*, *Bromus tectorum*, and *Chrysothamnus viscidiflorus*.

Minimum Elevation: 5070 feet Maximum Elevation: feet Size: 3 + AC

Land Owner/Manager: BRUNEAU RA

Ownership Comments:

Boise District BLM, Bruneau RA.

Comments:

Photos on file at Boise District BLM. C. G. Brown's collection labels say "between Sheep Creek crossing and Indian Creek crossing of the Bruneau River, in a playa E of the road; T13S R6E, center of township."

Protection Comments:

1978: Long Lake playa has been scraped with a cat to construct an earthen dam to store water for livestock. 1995: Playas receive moderate livestock use.

Management Comments:

Boise District BLM monitoring plot #2. Site is monitored for population trend.

Specimens:

Cecil G. Brown 135 (CIC).
Cecil G. Brown 735 (IFGH).
Ann DeBolt 1012 (Boise BLM7).

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 002

Survey Site Name: BIG LAKE SOUTH

County: Owyhee

USGS quadrangle: AUSTIN BUTTE

Latitude: 423111N Longitude: 1154009W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
010S007E	31	80	NE4NE4NE4

Location:
Blackstone Desert. Small playa ca 0.75 mile S of Big Lake. Ca 1.1 air miles SE of Twin Butte.

Survey Date: First Observed: 1995-06-16 Last Observed: 1995-06-16

EORANK: B

EORANK Comments:

1995: 1500 or more mature genets in flower. Plants are abundant on the plays. Population vigor assessed as high. Area thoroughly surveyed by Jon Nelson, Boise District BLM.

Habitat Description:
Playa with dry rocky soil. No associated species.

Minimum Elevation: 4190 feet Maximum Elevation: feet Size: 1 + AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim # 5101681247.

Protection Comments:
Apparent cattle use at some time.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 003

Survey Site Name: CATHOLIC LAKE WEST

County: Owyhee

USGS quadrangle: CAVE DRAW

Latitude: 422422N Longitude: 1154045W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
012S007E 06 80 W2SW4SW4, E2SE4SW4

Location:
J - P Desert. 2 small playas 0.15 and 0.5 miles W of Catholic Lake. SE of Monument Butte.

Survey Date: First Observed: 1979-03-24 Last Observed: 1995-09-08

EORANK: BC
EORANK Comments: Overall site quality is good to fair.

Population Data:
1979: More than 200 plants at Catholic Lake; majority of plants grazed to ground level - "limited amount of new plants". Observation by Lynda Smithman. 1995: Plants no longer present at Catholic Lake, but present at 2 small playas W of Catholic Lake. Ca 1000 genets at the westernmost plays and 100+ at the plays closest to Catholic Lake. Plants mature and dormant. Population vigor assessed as fair to good. Observation on a cursory visit by Lynn Miracle, Boise District BLM.

Habitat Description:
2 small playas with clay textured soil. Ca 95% bare ground at the westernmost plays and ca 50% bare ground at the plays closest to Catholic Lake. Dry with good light. Associated species are Bromus tectorum and Lepidium perforatum. Artemisia tripartita has taken over the Catholic Lake plays.

Minimum Elevation: 4780 feet Maximum Elevation: feet Size: 1 AC OR LESS

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim #5101680175-15 and 5101680174-14.

Protection Comments:
Area is grazed, cattle tracks/droppings are evident. Lepidium davisii is apparently extirpated from Catholic Lake.

Management Comments:

Specimens:

DAVIS' PEPPERGRASS
Occurrence Number: 004

Survey Site Name: BARINAGA LAKE

County: Owyhee

USGS quadrangle: CAVE DRAW

Latitude: 422243N Longitude: 1154123W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
012S006E	13	80	E2SE4
012S007E	18	80	W2W2SW4

Location:

J - P Desert, Barinaga Lake. Accessible via Grasmere to Indian Hot Springs Road. Ca 3 air miles NNW of Indian Hot Springs and the Bruneau River Canyon, ca 2.1 miles SSW of Catholic Lake.

Survey Date: First Observed: 1979-03-24 Last Observed: 1979-03-24

EORANK: A

EORANK Comments: 1000+ plants, good reproduction.

Population Data:

1979: More than 1000 plants, but grazed to ground level. Numerous new plants were generating. Observation by Lynda Smithman.

Habitat Description:

Hard-bottom plays covered by massive amounts of basalt; has been dammed, but water depth is quite shallow.

Minimum Elevation: 4770 feet Maximum Elevation: feet Size:

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:

Protection Comments:

1979: Plants have been heavily grazed.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 005

Survey Site Name: BUNCEL PLACE EAST

County: Owyhee

USGS quadrangle: HILL PASTURE

Latitude: 423307N Longitude: 1160012W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
010S004E	17	80	N2SE4SE4

Location:

Lava plateau E of Duncan Creek. Ca 1 air mile SE of the confluence of Duncan Creek and Big Jacks Creek. Ca 1 air mile E of the Buncel Place.

Survey Date: First Observed: 1979-04-01 Last Observed: 1995-06-07

EORANK: A

EORANK Comments:

Population Data:

1979: Approximately 100 plants. Observation by Lynda Smithman. 1988: No data. Observation by John Doremus, Boise District BLM. 1995: Ca 500+ genets, >90% mature and in flower. Population is abundant and vigorous. Observation on a cursory visit by Helen Fisher, Boise District BLM.

Habitat Description:

plays with no associated species. Visually distinct area, lacking shrubs. Soil surface is approximately flat with polygonal cracking (polygons ca 50 cm across) and a distinct gravel orientation along cracks. Lepidium plants are very often growing along or within cracks. Clay is virtually at surface - within 5 cm of soil surface. No evidence of surface puddling - plays dry at time of visit. It is expected that the subsoil is moist but not saturated.

Minimum Elevation: 4780 feet Maximum Elevation: feet Size: 40 SQ FT

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:

Protection Comments:

A 4wd road ends at the plays. The plays could be damaged if the road is extended. Cattle trails are in the area, but not over the plays.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 006

Survey Site Name: LOWER WICKAHONEY CREEK

County: Owyhee

USGS quadrangle: WICKAHONEY CROSSING

Latitude: 423359N Longitude: 1155918W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
010S004E 09 BO SW4SE4

Location:

Ca 1.1 air miles SE of the confluence of Wickahoney Creek and Big Jacks Creek. Ca 1.8 air miles NW of Wickahoney Crossing. Plays is between road and Wickahoney Creek.

Survey Date: First Observed: 1979-03-31 Last Observed: 1995-07-19

EORANK: C
EORANK Comments:

Population Data:

1979: At least 500 plants. Average size: 4 in. X 4 in. There are dying plants, but also an equal number of newly generating plants. Observation by Lynda Smithman. 1995: Ca 100 plants, 10% in flower and 90% in fruit. Population vigor assessed as good. Observation on a cursory visit by Dale Dunn, Boise District BLM.

Habitat Description:

Hard-bottom plays with scattered basalt over 3/4 of plays. No basalt nor *L. davisii* in NE corner. Adjacent land reseeded with perennial grasses. Adjacent species include *Artemisia* sp., *Bromus tectorum*, *Sitanion hystrix*, and *Oryzopsis hymenoides*.

Minimum Elevation: 4750 feet Maximum Elevation: feet Size: 0.1 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:

Protection Comments:
Area is grazed.

Management Comments:

Specimens:

LEPIDIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 007

Survey Site Name: WICKAHONEY CROSSING

County: Owyhee

USGS quadrangle: WICKAHONEY CROSSING

Latitude: 423210N Longitude: 1155917W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
010S004E 21 BO SE4SW4SE4

Location:

Accessed by taking Wickahoney to Duncan Creek Road S of Wickahoney Crossing (which leads to Buncel Place).
Plays is 0.1 mi beyond first gate after leaving main Wickahoney Battle Creek Road. Ca 0.7 air mile SW of
Wickahoney Crossing.

Survey Date: First Observed: 1979-03-31 Last Observed: 1979-03-31

EORANK:

EORANK Comments:

Population Data:

1979: Ca 300 plants. Plants heavily grazed. Observation by Lynda Smithman.

Habitat Description:

Hard-bottom plays almost completely covered with basalt; surrounding plateau seeded with perennial grasses; no
standing water, but soil moist.

Minimum Elevation: 4840 feet Maximum Elevation: feet Size:

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:

Protection Comments:

1979: Plants have been heavily grazed.

Management Comments:

Specimens:

LEPIDIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 008

Survey Site Name: BIG HILL

County: Owyhee

USGS quadrangle: AUSTIN BUTTE

Latitude: 423427N Longitude: 1154322W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
010S006E 11 BO NW4SW4NW4

Location:

E side of Big Hill, W of Blackstone-Grasmere Road ca 1 mile. Ca 2.2 air miles S of Rock Lake and 3.7 air miles
W of Austin Butte.

Survey Date: First Observed: PRE 1983 Last Observed: 1995-06-16

EORANK: 8

EORANK Comments:

Population Data:

1995: 3000 or more mature genets in flower. Plants are abundant. Population vigor assessed as high. Area
thoroughly surveyed by Jon Nelson, Boise District BLM.

Habitat Description:

Minimum Elevation: 4020 feet Maximum Elevation: feet Size: 1 + AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim # 5101681251.

Protection Comments:
Plays receives a little cattle use. There was some evidence of antelope or deer browsing a few plants.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 009

Survey Site Name: BIG HILL

County: Owyhee

USGS quadrangle: AUSTIN BUTTE

Latitude: 423423N Longitude: 1154249W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
010S006E	11	BO	NE4

Location:
Accessible by foot from Blackstone Grasmere Road, E side Big Hill and W of Austin Butte. About 17 mi S of (Bruneau) Hot Spring. Ca 2.3 air miles SSE of Rock Lake.

Survey Date: First Observed: PRE 1983 Last Observed: 1995-06-19

EORANK: B
EORANK Comments:

Population Data:
1995: 4000 or more mature genets in flower. Population vigor assessed as high. Area thoroughly surveyed by Jon Nelson, Boise District BLM.

Habitat Description:
Open light. Dry rocky, dirt/sand soil of plays. Some scattered Atriplex confertifolia in areas.

Minimum Elevation: 4010 feet Maximum Elevation: feet Size:

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim # 5101681250.

Protection Comments:
Some cattle use as well as signs of browsing by antelope or deer.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 010

Survey Site Name: BIG HILL SOUTHEAST

County: Owyhee

Latitude: 423216N Longitude: 1154435W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
010S006E 22 80 NE4SW4SW4

Location:
SE end of Big Hill. Ca 1.9 air miles W of Blackstone-Grasmere Road and ca 2.8 air miles WNW of Twin Butte.

Survey Date: First Observed: PRE 1983 Last Observed: 1995-06-19

EORANK: B
EORANK Comments:

Population Data:
1995: Ca 500 mature genets in flower. Plants are abundant on small plays. Population vigor assessed as high. Area thoroughly surveyed by Jon Nelson, Boise District BLM.

Habitat Description:
Hard-bottom plays with clay/dirt soil and a rocky surface. Dry with good light. No other species present on plays.

Minimum Elevation: 4320 feet Maximum Elevation: feet Size: 1 AC OR LESS

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim # 5101681254.

Protection Comments:
Some signs of deer or antelope eating the plants. No cattle present.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 011

Survey Site Name: WINDY POINT

County: Owyhee

USGS quadrangle: JUSTIN BUTTE

Latitude: 423055N Longitude: 1153826W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
010S007E 33 80 SE4NW4

Location:
Accessible by foot from road which heads SE from Blackstone Grasmere Road about 14.5 mi S of (Bruneau) Hot Spring. NNE of Windy Point, S of White Lake, Blackstone Desert.

Survey Date: First Observed: 1988-06-06 Last Observed: 1995-06-15

EORANK: B
EORANK Comments:

Population Data:
1988: Monitoring plot established by Boise District BLM personnel. Collected by Riley. 1995: 3 plays - 2 containing *Lepidium davisii*. 3000 or more mature genets in flower. Population vigor assessed as high, abundant. Area thoroughly surveyed by Jon Nelson, Boise District BLM.

Habitat Description:
Hard-bottom, rocky plays with sparse *Atriplex confertifolia* surrounded by *Artemisia tridentata wyomingensis*/*Sitanion hystrix* habitat. One plays is a watering hole for cattle and contains no *Lepidium davisii*.

Minimum Elevation: 4140 feet Maximum Elevation: feet Size: 0.75 - 1 AC

Land Owner/Manager:
BRUNEAU RA

Boise District BLM, Bruneau RA.

Comments:

Water claim # 5101681248.

Protection Comments:

One of the three plays is used as a water hole for cattle and does not support *Lepidium davisii*. Cattle may disturb the other plays as well.

Management Comments:

Boise District BLM monitoring plot #3. Site is monitored for population trend.

Specimens:

Riley 356 (SRP).

Riley 450 (SRP) - label reads "SE4SE4" but there is no plays on the topo map in that part of the section.

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 012

Survey Site Name: TABLE BUTTE

County: Owyhee

USGS quadrangle: TABLE BUTTE

Latitude: 423238N Longitude: 1155023W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
010S005E 23 80 center S2NW4

Location:

Blackstone Desert. W of Sugar Creek and ca 0.6 mile N of Table Butte. Plays is accessible by foot from jeep trail which heads SE from CCC Road along Sugar Creek.

Survey Date: First Observed: PRE 1983 Last Observed: 1995-09-30

EORANK: B

EORANK Comments:

Population Data:

1995: Ca 400 mature dormant genets. Population vigor assessed as good. Area thoroughly surveyed by Jon Nelson, Boise District BLM.

Habitat Description:

Hard-bottom plays with a dry rocky (both boulders and cobbles) surface. Dry area with good light. Associated species are scattered amounts of *Bromus*, *Poa*, and *Sitanion hystrix*.

Minimum Elevation: 4680 feet Maximum Elevation: feet Size: 1 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:

Water claim #5101681233-26.

Protection Comments:

No signs of recent cattle use but older tracks/droppings are present. No sign of recent water use.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 013

Survey Site Name: TWIN BUTTE SW

County: Owyhee

USGS quadrangle: AUSTIN BUTTE

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
011S006E 02 80 center E2E2NW4

Location:

Blackstone Desert. Ca 0.7 miles S of Blackstone-Grassmere Road. Ca 2.2 air miles SW of Twin Butte.

Survey Date: First Observed: PRE 1983 Last Observed: 1995-06-19

EORANK: B
EORANK Comments:

Population Data:

1995: 1000 or more mature genets in flower. Plants are abundant on the plays. Population vigor assessed as high. Area thoroughly surveyed by Jon Nelson, Boise District BLM.

Habitat Description:

Hard-bottom plays with dry dirt/clay soil. Good light. No other species present on the plays.

Minimum Elevation: 4430 feet Maximum Elevation: feet Size: 1 AC OR LESS

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim # 5101681252.

Protection Comments:
No visible land use by cattle or vehicles.

Management Comments:

Specimens:

LEPIDIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 014

Survey Site Name: DIAMOND A RESERVOIR

County: Owyhee

USGS quadrangle: TRIGUERO LAKE

Latitude: 421417N Longitude: 1154252W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
014S006E 02 80 center W2E2

Location:

About 11 mi S of Indian Hot Springs and W of Bruneau Canyon. Diamond A Reservoir. Ca 1.2 air mi SW of the Indian Batt Cabin.

Survey Date: First Observed: 1977-09-04 Last Observed: 1995-06-23

EORANK: B
EORANK Comments:

Population Data:

1977: No data. Collected by Jim Johanson. 1995: 1 plays with ca 1000's of genets in flower. Population vigor assessed as good. Observation on a cursory visit by A. Jossie, Boise District BLM.

Habitat Description:

Hard-bottom plays; flat, 100% exposure. Associated species include *Artemisia tridentata wyomingensis* and *Atriplex confertifolia*.

Minimum Elevation: 5120 feet Maximum Elevation: feet Size: 2 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:

Protection Comments:
No visible disturbance or threats.

Management Comments:

Specimens:

Jim Johanson s.n. (herbarium unknown) - identified by Sarah J. Richards, confirmed J. Kallunki 1979.

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 015

Survey Site Name: UPPER TWIN LAKES - WEST

County: Owyhee

USGS quadrangle: TRIGUERO LAKE

Latitude: 421118N Longitude: 1154343W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
014S006E	22	80	SE4SE4
014S006E	23	80	SW4SW4SW4

Location:

Upper Twin Lake - West. Ca 14.5 mi S of Indian Hot Springs. J - P Desert, W of Bruneau Canyon.

Survey Date: First Observed: PRE 1983 Last Observed: 1995-06-23

EORANK: B

EORANK Comments:

Population Data:

1985: Lepidium abundant on plays. Observation by Johnson and Brunsfeld. 1995: 1 plays with ca 1000's of genets in flower of mixed age classes. Population vigor assessed as good. Observation on a cursory visit by A. Jossie, Boise District BLM.

Habitat Description:

Hard-bottom plays. Species surrounding plays include Artemisia tridentata wyomingensis, Poa secunda, and Sitanion hystrix.

Minimum Elevation: 5240 feet Maximum Elevation: feet Size: 2 AC OR LESS

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:

Protection Comments:

Area is part of a historically overgrazed pasture, but plants seem to persist.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 016

Survey Site Name: UPPER TWIN LAKES - EAST

County: Owyhee

USGS quadrangle: TRIGUERO LAKE

Latitude: 421127N Longitude: 1154318W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
014S006E	23	80	center SW4

Desert, W of Bruneau Canyon.

Survey Date: First Observed: 1985 Last Observed: 1995-06-23

EORANK: C
EORANK Comments:

Population Data:
1985: Average of 20 plants/meter square (2 acres), seedlings common. Collected by Johnson and Brunsfeld. 1988: Monitoring plot established by Ann DeBolt, Boise District BLM. 1995: 1 plays, ca 1000's of genets in flower of mixed age classes. Population vigor assessed as fair. Observation on a cursory visit by A. Jossie, Boise District BLM.

Habitat Description:
Hard-bottom plays. Clay soil with volcanic surface rock. Ca 1/3 of the plays excavated as a water catchment. *Lepidium davisii* is not found immediately adjacent to inundated areas or berms of the reservoir. Some *Atriplex confertifolia* and *Halogeton glomeratus* on the plays. Species surrounding the plays include *Artemisia tridentata wyomingensis*, *Poa secunda*, and *Sitanion hystrix*.

Minimum Elevation: 5240 feet Maximum Elevation: feet Size: 3 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
This is presumed to be the location of the Johnson and Brunsfeld collection.

Protection Comments:
Reservoir construction has affected ca 1/3 of the plays. The area is overgrazed.

Management Comments:
Boise District BLM monitoring plot #4. Site is monitored for population trend.

Specimens:
F. D. Johnson and S. J. Brunsfeld 2736 (IDF) - label gives only township and range. Despite a detailed habitat description it is not certain that this is the correct plays. Better locational information is needed.

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 017

Survey Site Name: WHITE LAKE

County: Owyhee

USGS quadrangle: AUSTIN BUTTE

Latitude: 423208N Longitude: 1153756W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
010S007E	21	80	S2SE4SE4
010S007E	28	80	N2NE4NE4

Location:
Blackstone Desert, White Lake. Ca 2.75 miles SSE of Austin Butte, SW of the Bruneau Canyon.

Survey Date: First Observed: 1995-06-16 Last Observed: 1995-06-15

EORANK: C
EORANK Comments:

Population Data:
1995: Ca 100-150 mature genets in flower. Population vigor assessed as low to fair. Plants are more concentrated in some areas of the plays and are few and far between in the bare parts of the plays. Area thoroughly surveyed by Jon Nelson, Boise District BLM.

Habitat Description:
Plays with very dry sand/dirt soil. No associated species.

Minimum Elevation: 4060 feet Maximum Elevation: feet Size: 10 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim #5101681237.

Protection Comments:
Playa receives much cattle use and a road goes through part of the plays.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 018

Survey Site Name: MARYS CREEK RESERVOIR

County: Owyhee

USGS quadrangle: BUSTER BUTTE

Latitude: 421748N Longitude: 1154727W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
013S006E 18 BO S2NE4

Location:
Accessible by foot from jeep trail which heads E from Grasmere - Mountain City, NV, road, about 7.5 mi SE of Grasmere. W of Sheep Creek, S of Marys Creek. Ca 2 air miles WNW of James Lake.

Survey Date: First Observed: PRE 1983 Last Observed: 1994

EORANK:
EORANK Comments:

Population Data:
1988: Monitoring plot established by Boise District BLM personnel.

Habitat Description:
2 small playas.

Minimum Elevation: 5130 feet Maximum Elevation: feet Size:

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Photos on file at Boise District BLM.

Protection Comments:

Management Comments:
Boise District BLM monitoring plot #1. Site is monitored for population trend.

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 019

Survey Site Name: PLAYAS ACEC - #1

County: Twin Falls

USGS quadrangle: SALMON BUTTE

Latitude: 421013N Longitude: 1144355W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
014S015E 31 BO NE4NE4

Perch I Bay on Salmon Falls Creek Reservoir. Accessible by foot. N of jeep trail. N of

Survey Date: 1987-08-13

First Observed: 1979-06-08

Last Observed: 1987-08-13

EORANK:

EORANK Comments:

Population Data:

1979: No data. Collected by Packard and Smithman. 1987: Lots of plants, fruits ripe. Dominant on plays. Area surveyed by Bob Moseley, Idaho CDC.

Habitat Description:

Hard-bottom plays; some old cattle pies. Only other plant on plays is Halogeton glomerata, which occurs only very occasionally towards the edges. Community surrounding the plays is a kind of Artemisia tridentata/Sitanion hystrix.

Minimum Elevation: 5034 feet Maximum Elevation: feet Size:

Land Owner/Manager:

SNAKE RIVER RA
PLAYAS ACEC

Ownership Comments:

Burley District BLM, Snake River RA.

Comments:

Protection Comments:

Within Playas ACEC. Evidence of cattle on plays (cow pies), but no apparent damage to plays. Surrounding sagebrush community is grazed.

Management Comments:

Specimens:

J. W. Grimes and L. C. Smithman 1452 (CIC).

P. L. Packard and L. C. Smithman 79-118 (CIC).

LEPIDIDIUM DAVISII

DAVIS' PEPPERGRASS

Occurrence Number: 020

Survey Site Name: PLAYAS ACEC - #2

County: Twin Falls

USGS quadrangle: SALMON BUTTE

Latitude: 420945N Longitude: 1144328W

TOWNRANGE: SECTION:
014S015E 32

MERIDIAN: TRSNOTE:
BO NE4SW4

Location:

Playas ACEC. About 4 mi S of Salmon Falls Dam via jeep trails. Accessible by foot - E of Perch I Bay on Salmon Falls Creek Reservoir.

Survey Date: 1987-08-13

First Observed: 1979-06-08

Last Observed: 1987-08-13

EORANK:

EORANK Comments:

Population Data:

1979: No data. Collected by Packard and Smithman. 1987: Lots of plants, fruits ripe. Dominant on plays. Area surveyed by Bob Moseley, Idaho CDC.

Habitat Description:

Hard-bottom plays, mostly covered with rocks; no sign of cattle. Only other plant on plays is Halogeton glomeratus, which is very occasional towards the edges of the plays. Plays is surrounded by Artemisia tridentata wyomingensis community.

Minimum Elevation: 5120 feet Maximum Elevation: feet Size:

Land Owner/Manager:

SNAKE RIVER RA
PLAYAS ACEC

Ownership Comments:
Burley District BLM, Snake River RA.

Comments:

Protection Comments:
Within Playas ACEC. Surrounding sagebrush community is grazed, but no sign of cattle on the plays.

Management Comments:

Specimens:

P. L. Packard and L. C. Smithman 79-117 (CIC, Deep Creek BLM) - there is some confusion at the Deep Creek BLM herbarium which gives the location as SW4 of section 23, but this is probably a mistake, it should probably be section 32. .

J. W. Grimes and L. C. Smithman 1453 (CIC).

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 021

Survey Site Name: ESE OF BULL CAMP

County: Owyhee

USGS quadrangle: BULL CAMP BUTTE

Latitude: 420147N Longitude: 1164349W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
016S003W 18 BO SE4SE4NE4, SE4NW4SE4

Location:

ESE of Bull Camp, ca 0.8 mile E of the South Fork Owyhee River Canyon, ca 2 air miles N of the Nevada border and ca 2.2 air miles SW of Middle Windmill.

Survey Date: 1995-08-11 First Observed: 1995-08-11 Last Observed: 1995-08-11

EORANK: A
EORANK Comments:

Population Data:

1995: Ca 2000 genets in fruit at 2 small undisturbed playas. All age classes represented. Area surveyed by Bob Moseley, Idaho CDC, and Susan Bernatas, SAIC.

Habitat Description:

Dry lakebeds with very low vegetative density. A few *Chrysothamnus nauseosus* in the NE plays.

Minimum Elevation: 5180 feet Maximum Elevation: feet Size: 2.5 AC

Land Owner/Manager:
OWYHEE RA

Ownership Comments:
Boise District BLM, Owyhee RA.

Comments:

Protection Comments:

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 022

Survey Site Name: DORSEY BUTTE NORTH

County: Elmore

USGS quadrangle: DORSEY BUTTE

TOWNRANGE: SECTION:
004S003E 01

MERIDIAN: TRSNOTE:
BO W2SE4, E2NE4SW4

Location:

Ca 1 air mile north of Dorsey Butte. 1 large plays and 4 small plays to the SE.

Survey Date: 1993-05-12 First Observed: 1981 Last Observed: 1995-10-25

EORANK: A

EORANK Comments: The largest plays is in excellent condition; the other smaller plays to the SE are in good to poor condition.

Population Data:

1987: Monitoring plot established by Boise District BLM personnel. Subjective estimate of abundance ranges from abundant to poor. 1993: >1000 vegetative genets in early bud. Good size class distribution. Vigor of the population assessed as good. The area was thoroughly surveyed by Bob Moseley, Idaho CDC. 1995-05-12: Ca 10,000+ genets in flower. An additional 1000 genets at one of the 4 small plays to the SE. Population age class structure is 25% immature and 75% mature. Observation on a cursory visit by Dale Dunn, Boise District BLM. 1995-10-25: Several thousand plants at the largest plays, 300-500 and 1 plant(s) at two smaller plays to the SE. Plants are dormant and had produced seed this year. Observation by Jay Weaver and Ellen Clark, Idaho Army National Guard.

Habitat Description:

Hard-bottom plays in burned habitats. Mostly silt substrate with some basalt cobbles at the S end of the large plays. No associated species in the plays. Burned habitats were formerly *Atriplex confertifolia*-*Eurotia lanata* and *Artemisia tridentata wyomingensis*-*Sitanion hystrix*. Invasion by exotic annual species is occurring at the two smaller plays that have *Lepidium davisii* present.

Minimum Elevation: 2975 feet Maximum Elevation: feet Size: 2 - 3 AC

Land Owner/Manager:
BRUNEAU RA
ORCHARD TRAINING AREA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:

Protection Comments:

No threats to the largest plays, however, the surrounding land was burned, disked, and seeded. Site is within the Orchard National Guard Training Area but is off limits to military use. Grazing and invasion by exotic annuals are threats.

Management Comments:

Boise District BLM monitoring plot #33. Site is monitored for population trend.

Specimens:

Rosentreter 1997 (CIC, MONTU) - collection label gives county as Ada County.
Rosentreter 1919 (MONTU) - collection label gives county as Ada County.
Jay Weaver and Ellen Clark s.n. (Idaho Army National Guard) - seed collected.

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 023

Survey Site Name: SQUAW CREEK/CANYON CREEK

County: Elmore

USGS quadrangle: CRATER RINGS SW

Latitude: 430659N Longitude: 1155526W

TOWNRANGE: SECTION:
003S004E 36

MERIDIAN: TRSNOTE:
BO NE4SW4SE4

Location:

Ca 1.75 air miles NNE of the confluence of Squaw and Canyon creeks. Between Orchard Training Area and Mountain Home AFB Small Arms Range. NW of Mountain Home AFB.

Survey Date: First Observed: PRE 1983 Last Observed: 1987

EORANK:

EORANK Comments:

Population Data:
1987: Subjective estimate of abundance is good. Observation by Boise District BLM personnel.

Habitat Description:
Hard-bottom plays.

Minimum Elevation: 3040 feet Maximum Elevation: feet Size:

Land Owner/Manager:
STATE LAND WITHIN ELMORE COUNTY

Ownership Comments:
State land.

Comments:
Boise District BLM site #79.

Protection Comments:

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 024

Survey Site Name: LINE NNW

County: Elmore

USGS quadrangle: CRATER RINGS SW

Latitude: 430442N Longitude: 1155931W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
004S004E 16 BO center S2NW4

Location:
Ca 0.75 air mile NNW of Line triangulation point. 1.3 air miles W of Simco Road.

Survey Date: First Observed: PRE 1983 Last Observed: 1995-05-31

EORANK: B
EORANK Comments:

Population Data:
1987: Subjective estimate of abundance is good. Observation by Boise District BLM personnel. 1995: Numerous mature genets in flower. Population vigor assessed as good. Observation on a cursory visit by Dale Dunn, Boise District BLM.

Habitat Description:
Hard-bottom plays with some *Atriplex confertifolia*.

Minimum Elevation: 2970 feet Maximum Elevation: feet Size:

Land Owner/Manager:
STATE LAND WITHIN ELMORE COUNTY

Ownership Comments:
State land.

Comments:
Boise District BLM site #58.

Protection Comments:
Some signs of past cattle use.

Management Comments:

Specimens:

DAVIS' PEPPERGRASS
Occurrence Number: 025

Survey Site Name: CANYON CREEK PLAYA

County: Elmore

USGS quadrangle: CRATER RINGS SW

Latitude: 430245N Longitude: 1155817W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
004S004E 27 BO SW4

Location:

About 9 mi E of Grandview and 16 mi SW of Mountain Home. W of Mountain Home Air Force Base boundary. Ca 0.6 mile S of the Simco Road/State Route 67 junction. South of the highway ca 0.3 mi. Ca 0.3 mile E of the road to C.J. Strike Dam.

Survey Date: First Observed: 1979 Last Observed: 1995-05-13

EORANK: B

EORANK Comments:

Population Data:

1987: Subjective estimate of abundance is good to fair. Monitoring plot established by Boise District BLM personnel. 1990: Ca 2000 individuals, 70% in flower, 30% in fruit. Observation by Linda Williams, Boise District BLM. 1995: Numerous young vegetative plants. Population age class structure is 5% seedlings, 35% immature, and 60% mature. Observation on a cursory survey by Dale Dunn, Boise District BLM.

Habitat Description:

Hard-bottom playa in burned range. A few *Atriplex confertifolia* on the plays.

Minimum Elevation: 2920 feet Maximum Elevation: feet Size: 1 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim #61068020.

Protection Comments:

Management Comments:

Boise District BLM monitoring plot #55. Site is monitored for population trend.

Specimens:

G. Wuerthner 83-29 (MONTU, CIC) - Wuerthner calls this site "Mountain Home Playa".
Roger Rosentreter 1924 (MONTU).
Roger Rosentreter 1324 (CIC).
J. Grimes 1312 (CIC) - collection label reads "T4S R4E S34, 6.5 miles SW of Mountain Home in a hard bottom playa".

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 026

Survey Site Name: MOUNTAIN HOME SOUTH

County: Elmore

USGS quadrangle: MOUNTAIN HOME SOUTH
CRATER RINGS SE

Latitude: 430030N Longitude: 1154452W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
005S006E 09 BO NW4

Location:

About 10.6 miles N of Bruneau (or about 10 miles S of Mountain Home) via State Route 51. E of the highway, ca 1.3 air miles S of Beet Dump Road.

Survey Date: First Observed: 1951 Last Observed: 1995-06-08

B
EORANK Comments:

Population Data:

1951: Collected by J. H. Christ. 1987: Subjective estimate of abundance is good. Monitoring plot established by Boise District BLM personnel. 1995: Ca 2,100+ vegetative genets at a number of playas. All age classes represented. Population vigor assessed as good. Observation by Nancy Taylor-Grant, Boise District BLM.

Habitat Description:

Several hard-bottom playas in burned area that has been seeded to crested wheatgrass. Species adjacent to playas include *Sisymbrium altissimum*, *Poa secunda*, *Sitanion hystrix*, *Ranunculus testiculatus*, and *Descurainia* sp.

Minimum Elevation: 3040 feet Maximum Elevation: feet Size: 2 - 3 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:

Boise District BLM, Bruneau RA.

Comments:

Water claim #'s: 6101680348-04, 6101680265-06, and 6101680266-07. Occurrence includes both BLM site #97 and #100.

Protection Comments:

Some signs of past cattle use are evident.

Management Comments:

Boise District BLM monitoring plot #100. Site is monitored for population trend and silt sedimentation rates.

Specimens:

J. H. Christ 51-74 (ID).
Ann DeBolt 1040 (Boise BLM?).

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 027

Survey Site Name: HOMER WELLS RESERVOIR NW

County: Owyhee

USGS quadrangle: BULL CAMP BUTTE

Latitude: 420130N Longitude: 1163828W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
016S003W	13	BO	S2SW4
016S003W	24	BO	NW4

Location:

NW of Homer Wells Reservoir. Ca 3.5 air miles E of the South Fork Owyhee River Canyon and ca 1.5 to 2 air miles N of the Nevada Border. 4 playas on ridgeline extending N above Horse Basin.

Survey Date: 1995-08-11 First Observed: 1995-08-11 Last Observed: 1995-08-11

EORANK: A

EORANK Comments:

Population Data:

1995: Ca 3500 genets in fruit at four playas. All age classes represented. Area thoroughly surveyed by Bob Moseley, Idaho CDC, and Susan Bernatas, SAIC.

Habitat Description:

Dry lake beds. Associated with widely scattered *Astragalus calycosus* and *Chrysothamnus nauseosus*. *Artemisia tridentata wyomingensis* is adjacent.

Minimum Elevation: 5200 feet Maximum Elevation: feet Size: 5 AC

Land Owner/Manager:
OWYHEE RA

Ownership Comments:

Boise District BLM, Owyhee RA.

Comments:

Minor cattle trailing through

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 028

Survey Site Name: RATTLESNAKE CREEK

County: Elmore

USGS quadrangle: BRUNEAU

Latitude: 425913N Longitude: 1154555W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
005S006E 17 B0 center S2

Location:

Ca 11 miles south of Mountain Home on the west side of the new State Route 51, just north of the Snake River Canyon rim. Immediately adjacent to the old roadbed of Highway 51, hence all the old collections made here.

Survey Date: 1993-05-12 First Observed: 1945-05-09 Last Observed: 1993-05-12

EDRANK: C

EDRANK Comments: One small, disturbed playa, although relatively dense and vigorous population.

Population Data:

1993: Ca 400 plants; all size classes, although no seedlings were seen. Observation by Bob Moseley, Idaho CDC.

Habitat Description:

Playa (dry in May 1993) - no other associates except sparse Salsola kali.

Minimum Elevation: 2990 feet Maximum Elevation: feet Size: 1.4 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLN, Bruneau RA.

Comments:

Protection Comments:

There is a powerpole in the middle of the playa, and a barbed-wire fence traverses the population. There is moderate invasion by Salsola kali. The barbed-wire fence is at ground level throughout the playa and catches dried Salsola kali, which in turn has trapped wind-blown soils, forming a deeper-soil strip of Bromus tectorum across what used to be suitable habitat. An old highway roadbed traverses the playa.

Management Comments:

Specimens:

R. J. Davis 4670 (IDS).

R. J. Davis 4745 (IDS).

C. L. Hitchcock 23639 (NY) - label reads "hard packed clay sink on sagebrush mesa above highway." Collected 5/28/64.

J. H. Christ 11102 (NY) - label reads "Owyhee County, 13 miles S of Mountain Home."

J. H. Christ 51-74 (ID).

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 029

Survey Site Name: TADPOLE LAKE

County: Ada

USGS quadrangle: BIG FOOT BUTTE

Latitude: 431102N Longitude: 1161046W

TOWNRANGE: 003S002E 11

MERIDIAN: BO TRSNOTE: NE4

Location:

Just N of Tadpole Lake, ca 2.9 air miles SE of Big Foot Butte. Within the Orchard Training Area.

Survey Date:

First Observed: 1981-06-18

Last Observed: ~~1992~~ 1995

ORANK: X

ORANK Comments: Extirpated by severe cattle trampling.

Population Data:

1981: Scarce, less than 20 plants seen, all depauperate; flowers white. Collection by Barbara Ertter. 1987: 16 plants. Subjective estimate of abundance is very poor. Monitoring plots established by Boise District BLM personnel. 1995: Severe cattle trampling in the winter of 1992-93 destroyed the plants and the habitat. Observation by Jay Weaver and Ellen Clark, Idaho Army National Guard. 1994: 14 plants seen

Habitat Description:

Small playa N side of lake, hard white clay with few basalt cobbles. Surrounding area is exotic annuals with some Artemisia tridentata nearby.

Minimum Elevation: 3140 feet **Maximum Elevation:** feet **Size:** 4000 SQ M

Land Owner/Manager:

BRUNEAU RA
ORCHARD TRAINING AREA

Ownership Comments:

Boise District BLM, Bruneau RA.

Comments:

Protection Comments:

Some disturbance by tanks. Destroyed by cattle.

Management Comments:

Boise District BLM monitoring plots #13A and 13B. Site is monitored for population trend.

Specimens:

Barbara Ertter 4236 (CIC).

LEPIDIUM DAVISII

DAVIS' PEPPERGRASS

Occurrence Number: 030

Survey Site Name: HOMER WELLS RESERVOIR WEST

County: Owyhee

USGS quadrangle: BULL CAMP BUTTE

Latitude: 420035N **Longitude:** 1163822W

TOWNRANGE: SECTION:
016S003W 25

MERIDIAN: TRSNOTE:
BO NE4NW4

Location:

W of Homer Wells Reservoir, ca 0.8 mile N of the Nevada border, and ca 3.5 air miles E of the South Fork Owyhee River Canyon.

Survey Date: 1995-08-11

First Observed: 1995-08-11

Last Observed: 1995-08-11

ORANK: B

ORANK Comments:

Population Data:

1995: Ca 600 genets in fruit. All age classes represented. Area thoroughly surveyed by Bob Moseley, Idaho CDC, and Susan Bernatas, SAIC.

Habitat Description:

Dry lake bed with no associated plants.

Minimum Elevation: 5200 feet **Maximum Elevation:** feet **Size:** 1 AC OR LESS

Land Owner/Manager:

OWYHEE RA

Ownership Comments:

Boise District BLM, Owyhee RA.

Protection Comments:
Plays experiences moderate cattle trailing and use.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 031

Survey Site Name: NW OF TWIN LAKES

County: Owyhee

USGS quadrangle: INDIAN HOT SPRINGS

Latitude: 421612N Longitude: 1154422W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
013S006E 27 BO E2NW4, NW4NE4SW4

Location:
Group of playas NW of Twin Lakes and ca 1.3 miles SW of Long Lake. J - P Desert, W of the Bruneau Canyon ca 1.5 miles.

Survey Date: First Observed: PRE 1983 Last Observed: 1995-07-28

EORANK: B
EORANK Comments:

Population Data:
1995: Ca 6000+ genets, 5% vegetative, 10% in flower, and 85% in fruit. Population age class structure is 2% seedlings, 15% immature, and 83% mature. Main playa has good dense stands of *Lepidium* on the S and W sides away from the water hole at the NE end. Several small playas to the E, W, and S have low densities and small numbers of plants. Population vigor assessed as good. Observation on a cursory visit by Matt McCoy, Boise District BLM.

Habitat Description:
Hard-bottom playas. Species adjacent to the playas include *Atriplex confertifolia*, *Artemisia tridentata* vaseyana, *Astragalus* sp., *Poa sandbergii*, and *Bromus tectorum*.

Minimum Elevation: 5076 feet Maximum Elevation: feet Size: 1 + AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:

Protection Comments:
Grazing and water development are threats. A water hole has been dug at the NE end of the large playa.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 032

Survey Site Name: BLACKSTONE DESERT

County: Owyhee

USGS quadrangle: CAVE DRAW

Latitude: 422712N Longitude: 1154354W

TOWNRANGE: SECTION:
011S006E 22

MERIDIAN: TRSNOTE:
BO SE4SE4

Location:

Blackstone Desert, 5 mi E of Blackstone Ranch and just W of Sheep Creek Canyon.

Survey Date: First Observed: 1987 Last Observed: 1987

EORANK:

EORANK Comments:

Population Data:

1987: No data. Observation by Ann DeBolt, Boise District BLM.

Habitat Description:

Plays.

Minimum Elevation: 4580 feet Maximum Elevation: feet Size:

Land Owner/Manager:

BRUNEAU RA

Ownership Comments:

Boise District BLM, Bruneau RA.

Comments:

Protection Comments:

Management Comments:

Specimens:

LEPIDIUM DAVISII

DAVIS' PEPPERGRASS

Occurrence Number: 033

Survey Site Name: MOUNTAIN HOME AIR FORCE BASE SOUTHWEST

County: Elmore

USGS quadrangle: CRATER RINGS SW

Latitude: 430134N Longitude: 1155348W

TOWNRANGE: SECTION:
005S005E 06

MERIDIAN: TRSNOTE:
BO NE4NE4

Location:

Just outside the SW corner of Mountain Home Air Force Base.

Survey Date: First Observed: 1987 Last Observed: 1995-06-02

EORANK: C

EORANK Comments:

Population Data:

1987: Subjective estimate of abundance is good. Monitoring plot established by Boise District BLM personnel.
1995: Ca 100+ mature genets in flower. Population vigor assessed as fair. Observation on a cursory visit by Dale Dunn, Boise District BLM.

Habitat Description:

Plays with no associated species. Outside plays is Bromus tectorum/Brassica sp. association.

Minimum Elevation: 2980 feet Maximum Elevation: feet Size: 0.25 AC

Land Owner/Manager:

BRUNEAU RA

Ownership Comments:

Boise District BLM, Bruneau RA.

Comments:

Protection Comments:

Management Comments:
Boise District BLM monitoring plot #84. Site is monitored for population trend.

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 034

Survey Site Name: EXTRA SE

County: Elmore

USGS quadrangle: CRATER RINGS SE

Latitude: 430259N Longitude: 1154617W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
004S006E	29	BO	NE4SW4NW4

Location:
E of Mountain Home Air Force Base. Ca 2.8 air miles SE of Extra triangulation point. Ca 2.5 air miles E of Watch triangulation point.

Survey Date: First Observed: 1987 Last Observed: 1995-06-30

GORANK: B
GORANK Comments:

Population Data:
1987: Subjective estimate of abundance is fair. Observation by Boise District BLM personnel. 1995: Ca 1000 plants, 50% vegetative and 50% in flower. Population vigor assessed as good. Observation on a cursory visit by Sale Dunn, Boise District BLM.

Habitat Description:
Some Bromus tectorum invasion of plays. Outside of plays is a Bromus tectorum/Brassica sp. community.

Minimum Elevation: 3060 feet Maximum Elevation: feet Size: 1 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Boise District BLM site #98.

Protection Comments:

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 035

Survey Site Name: SOUTH OF TADPOLE LAKE

County: Ada

USGS quadrangle: BIG FOOT BUTTE

Latitude: 430827N Longitude: 1161108W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
003S002E	23	BO	SE4SE4SW4
003S002E	26	BO	NE4NE4NW4

Location:
Ca 2.8 air miles S of Tadpole Lake. Ca 4.9 air miles SSE of Big Foot Butte. 2 miles N of the Ada/Elmore county line.

Date:

First Observed:

1995-10-25

EORANK: D
EORANK Comments:

Population Data:

1995-04: Ca 100+ genets, 5% vegetative and 95% in flower. Population age class structure is 5% seedlings, 10% immature, and 85% mature. Population vigor assessed as fair to poor. Observation on a cursory visit by Doug Peton, Boise District BLM. 1995-10-25: 4 dormant genets. Observation by Jay Weaver and Ellen Clark, Idaho Army National Guard.

Habitat Description:

Disturbed, hard-bottom plays. No associated species on plays. Adjacent species include *Artemisia tridentata*, *Bromus tectorum*, *halogeton glomeratus*, and *Kochia* sp.

Minimum Elevation: 2981 feet Maximum Elevation: feet Size: 1 AC

Land Owner/Manager:
BRUNEAU RA
ORCHARD TRAINING AREA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim #6301683127-11.

Protection Comments:

Within the Orchard Training Area. Plays has been fenced off as a cultural site. Possible erosion of adjacent soil may have affected the population. The surrounding area is used for military training and grazing.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 036

Survey Site Name: EXTRA NNE

County: Elmore

USGS quadrangle: CRATER RINGS SE

Latitude: 430558N Longitude: 1154820W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
004S005E 01 80 SW4SE4

Location:

Ca 0.5 mile SE of State Route 67. E of Mountain Home AFB Gunnery Range. Ca 1.8 air miles NNE of Extra triangulation point.

Survey Date: First Observed: 1987 Last Observed: 1995-06-30

EORANK: B
EORANK Comments:

Population Data:

1987: Subjective estimate of abundance is good. Observation by Boise District BLM personnel. 1995: Ca 250 plants, 50% in flower and 50% in fruit. Population vigor assessed as good. Observation on a cursory visit by Dale Dunn, Boise District BLM.

Habitat Description:

Some *Bromus tectorum* invasion of plays. Outside of plays is a *Bromus tectorum*/*Brassica* sp. community.

Minimum Elevation: 3150 feet Maximum Elevation: feet Size: 1 + AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Boise District BLM site #95.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 037

Survey Site Name: EXTRA NORTH

County: Elmore

USGS quadrangle: CRATER RINGS SE

Latitude: 430556N Longitude: 1154913W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
004S005E 02 BO S2SE4

Location:
Ca 0.25 mile SE of State Route 67. E of Mountain Home AFB Gunnery Range. Ca 1.7 air miles N of Extra triangulation point.

Survey Date: First Observed: 1987 Last Observed: 1995-06-30

EORANK: C
EORANK Comments:

Population Data:
1987: Subjective estimate of abundance is good. Observation by Boise District BLM personnel. 1995: Ca 500 plants, 50% in flower and 50% in fruit. Population vigor assessed as fair. Observation on a cursory survey by Dale Dunn, Boise District BLM.

Habitat Description:
Some Bromus tectorum invasion of plays. Outside of plays is a Bromus tectorum/Brassica sp. community. Area has been seeded and has a composition of ca 10% Agropyron cristatum.

Minimum Elevation: 3130 feet Maximum Elevation: feet Size: 2 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Boise District BLM site #94.

Protection Comments:
Area has been seeded.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 038

Survey Site Name: SHEEP CREEK RIM

County: Owyhee

USGS quadrangle: BUSTER BUTTE

Latitude: 421748N Longitude: 1154632W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
013S006E 17 BO SW4SW4NE4

Location:
Playa along the W rim of Sheep Creek Canyon. Ca 2.3 air miles S of the confluence of Sheep Creek and Mary

Survey Date: First Observed: 1995-08-25 Last Observed: 1995-08-25

EORANK: B
EORANK Comments:

Population Data:
1995: Ca 1000+ plants. Observation by Pat Ryan and Steve Jirik, Boise District BLM.

Habitat Description:
Playa with some Atriplex confertifolia present.

Minimum Elevation: 5080 feet Maximum Elevation: feet Size: 0.5 AC OR LESS

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim #5101681310-31.

Protection Comments:

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 039

Survey Site Name: MOUNTAIN HOME AIR FORCE BASE NORTH

County: Elmore

USGS quadrangle: CRATER RINGS SW
CRATER RINGS SE

Latitude: 430427N Longitude: 1155230W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
004S00SE	16	BO	NW4SW4SW4, SW4NW4SW4
004S00SE	17	BO	SE4NE4SE4, NE4SE4SE4

Location:
0.25 mile N of the Mountain Home AFB perimeter. Ca 1.1 air miles WNW of where State Route 67 enters the base.

Survey Date: First Observed: 1987 Last Observed: 1987

EORANK:
EORANK Comments:

Population Data:
1987: Subjective estimate of abundance is good to fair. Observation by Boise District BLM personnel.

Habitat Description:
Playa.

Minimum Elevation: 3000 feet Maximum Elevation: feet Size:

Land Owner/Manager:
MOUNTAIN HOME AIR FORCE BASE
STATE LAND WITHIN ELMORE COUNTY

Ownership Comments:
Mountain Home AFB and state land.

Comments:
Boise District BLM site #86.

Protection Comments:

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 040

Survey Site Name: BUSTER BUTTE SW

County: Owyhee

USGS quadrangle: BUSTER BUTTE

Latitude: 422023N Longitude: 1155204W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
012S005E 33 BO SE4NE4

Location:

Ca 1.5 air miles SW of Buster Butte. Ca 2.6 air miles SSE of Grasmere. Ca 0.75 mile ESE of the Hart Ranch.

Survey Date: First Observed: 1995-09-12 Last Observed: 1995-09-26

EORANK: AB

EORANK Comments: Excellent to good site quality at the plays. Poor site quality at the man-made playas along the ditch.

Population Data:

1995: Ca 1000-2000 genets at the plays and ca 60 genets at the man-made playas along the ditch. Plants are dormant and 0-2% seedlings and 98-100% mature. Population vigor is good at the plays and poor along the ditch. Observations on cursory visits by John Doremus and Steve Jirik, Boise District BLM.

Habitat Description:

Natural plays and small man-made playas where the soil was removed to build fill for a ditch. *Lepidium davisii* is present on both sides of the ditch. Fine caliche soil. Flat with good light. Species adjacent to the playas include *Artemisia tridentata wyomingensis* and *Chrysothamnus nauseosus*.

Minimum Elevation: 5150 feet Maximum Elevation: feet Size: 4000 + SQ M

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim #5101681305-26.

Protection Comments:
Area is grazed.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 041

Survey Site Name: E OF LOOKOUT POINT

County: Owyhee

USGS quadrangle: INSIDE LAKES

Latitude: 421904N Longitude: 1153725W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
013S007E 03 BO SW4SE4SW4
013S007E 10 BO NW4NE4NW4

Location:

Ca 0.9 air mile ENE of Lookout Point. Inside Desert, near the eastern rim of the Jarbidge/Bruneau Canyon above Indian Hot Springs.

EORANK: B
EORANK Comments:

Population Data:

1995: Ca 500 genets, some in standing water. Some habitat destroyed by reservoir, otherwise the population is in good condition. Area surveyed by Bob Moseley, Idaho CDC.

Habitat Description:

Hard-bottom plays with no associated species.

Minimum Elevation: 4770 feet Maximum Elevation: feet Size:

Land Owner/Manager:

JARBIDGE RA
BRUNEAU-JARBIDGE RIVER ACEC

Ownership Comments:

Boise District BLM, Jarbidge RA.

Comments:**Protection Comments:**

Within the Bruneau-Jarbidge River ACEC. The reservoir has destroyed some habitat.

Management Comments:**Specimens:**

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 042

Survey Site Name: LOWER SQUAW CREEK WEST

County: Elmore

USGS quadrangle: CRATER RINGS SW

Latitude: 430617N Longitude: 1155717W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
004S004E 02 BO NW4SW4

Location:

Ca 1 air mile NW of the confluence of Squaw Creek and Canyon Creek. E of Simco Road, SE of the Orchard Training Area.

Survey Date: First Observed: 1987 Last Observed: 1995-06-02

EORANK: B
EORANK Comments:

Population Data:

1987: Plants abundant. Monitoring plot established by Boise District BLM personnel. 1995: Ca 1000+ mature plants in flower. Population vigor assessed as good. Observation on a cursory visit by Dale Dunn, Boise District BLM.

Habitat Description:

Cobbled, hard-bottom plays. Outside of plays is a Bromus tectorum/Brassica sp. association, Artemisia sp., and Atriplex confertifolia.

Minimum Elevation: 3000 feet Maximum Elevation: feet Size:

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:

Boise District BLM, Bruneau RA.

Comments:**Protection Comments:**

Some signs of past cattle use.

Boise District BLM monitoring plot #78. Site is monitored for population trend.

Specimens:
Ann DeBolt 1043 (Boise BLM?).

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 043

Survey Site Name: SE CORNER OF OTA

County: Elmore

USGS quadrangle: CRATER RINGS SW

Latitude: 430645N Longitude: 1155828W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
004S004E 03 BO NW4NW4

Location:
Just SSE of the SE corner of the Orchard Training Area and the Ada/Elmore county line. Ca 0.4 mile W of Simco Road.

Survey Date: First Observed: 1987 Last Observed: 1995-10-25

EORANK: B
EORANK Comments:

Population Data:
1987: Subjective estimate of abundance is good. Observation by Boise District BLM personnel. 1995-07-11: Ca 500 plants, 50% in flower and 50% in fruit. Population vigor assessed as good. Observation on a cursory visit by Dale Dunn, Boise District BLM. 1995-10-25: Healthy population in excellent condition. Many plants of all sizes. Observation by Idaho Army National Guard personnel.

Habitat Description:
Plays.

Minimum Elevation: 3000 feet Maximum Elevation: feet Size: 0.5 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Boise District BLM site #63.

Protection Comments:

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 044

Survey Site Name: ADA/ELMORE SOUTH

County: Elmore

USGS quadrangle: CRATER RINGS SW

Latitude: 430550N Longitude: 1155907W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
004S004E 04 BO S2SE4
004S004E 09 BO N2

Location:
Large plays, ca 1 air mile S of the Ada/Elmore county line. Ca 0.7 to 1.2 miles W of Simco Road. S of the SE

Survey Date: First Observed: 1987 Last Observed: 1995-05-31

EORANK: C
EORANK Comments:

Population Data:

1987: Subjective estimate of abundance is poor. Observation by Boise District BLM personnel. 1995: Scattered vegetative genets. Population age class structure is 5% seedlings and 95% mature. Population vigor assessed as fair. Observation on a cursory visit by Dale Dunn, Boise District BLM.

Habitat Description:

Playa with no associated species.

Minimum Elevation: 2980 feet Maximum Elevation: feet Size: 10 - 12 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Boise District BLM site #61.

Protection Comments:
Two roads run through the plays. There are some signs of past cattle use as well.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 045

Survey Site Name: CANYON CREEK EAST

County: Elmore

USGS quadrangle: CRATER RINGS SW

Latitude: 430456N Longitude: 1155537W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
004S004E	12	BO	SE4SE4SW4
004S004E	13	BO	center N2N2

Location:

Ca 1 air mile SE of the confluence of Squaw Creek and Canyon Creek. Ca 2 air miles E of Simco Road. Ca 2 air miles NW of Mountain Home AFB.

Survey Date: First Observed: 1987 Last Observed: 1995-07-11

EORANK: B
EORANK Comments:

Population Data:

1987: Subjective estimate of abundance is abundant to good. Monitoring plot established by Boise District BLM personnel. 1995: 2 plays: smaller northern plays with ca 200+ plants; larger southern plays with ca 5000 plants. Plants are 50% in flower and 50% in fruit. Population vigor assessed as good. Observation on a cursory visit by Dale Dunn, Boise District BLM.

Habitat Description:

Plays surrounded by Bromus tectorum/Brassica sp community with scattered Artemisia tridentata wyomingensis.

Minimum Elevation: 3000 feet Maximum Elevation: feet Size: 1 + AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA; and private land.

Comments:

Area may be grazed.

Management Comments:

Boise District BLM monitoring plot #77. Site is monitored for population trend and sedimentation rates.

Specimens:

Ann DeBolt 1042 (Boise BLM?).

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 046

Survey Site Name: LINE TRIANGULATION POINT

County: Elmore

USGS quadrangle: CRATER RINGS SW

Latitude: 430403N Longitude: 1155906W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
004S004E 21 BO SW4NW4NE4

Location:

Just E of Line triangulation point. Ca 1.2 air miles NW of the junction of Simco Road and Grandview Road (road names from the Idaho Atlas and Gazetteer).

Survey Date: First Observed: 1987 Last Observed: 1995-05-13

EORANK: B

EORANK Comments:

Population Data:

1987: Subjective estimate of abundance is poor. Observation by Boise District BLM personnel. 1995: Numerous young, green, vegetative plants. Population age class structure is 10% seedlings and 90% immature. Observation on a cursory visit by Dale Dunn, Boise District BLM.

Habitat Description:

Plays with a few Atriplex confertifolia.

Minimum Elevation: 2960 feet Maximum Elevation: feet Size:

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:

Water claim #6101680287. Boise District BLM site #56.

Protection Comments:

Signs of past cattle use.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 047

Survey Site Name: SIMCO JUNCTION

County: Elmore

USGS quadrangle: CRATER RINGS SW

Latitude: 430344N Longitude: 1155744W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
004S004E 01 BO center N2N2SE4

Location:

Ca 0.5 mile ENE of the junction of Simco Road and the Grandview-Mountain Home Highway. Ca 1.5 air miles ESE of

Survey Date: First Observed: 1987 Last Observed: 1994

EORANK:
EORANK Comments:

Population Data:
1987: 52 plants. Monitoring plot established by Boise District BLM personnel.

Habitat Description:
Small plays.

Minimum Elevation: 2950 feet Maximum Elevation: feet Size:

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:

Protection Comments:

Management Comments:
Boise District BLM monitoring plot #75. Site is monitored for population trend.

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 048

Survey Site Name: NATIONAL GUARD MANEUVER AND FIRING AREA SOUTH

County: Elmore

USGS quadrangle: CRATER RINGS SW

Latitude: 430450N Longitude: 1155951W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
004S004E 17 BO NE4

Location:
About 2 mi S of SE corner of National Guard Maneuver and Firing Area.

Survey Date: First Observed: 1988-07-19 Last Observed: 1988-07-19

EORANK:
EORANK Comments:

Population Data:
1988: No data. Collected by Ann DeBolt, Boise District BLM.

Habitat Description:
Hard-bottom playa surrounded by *Artemisia tridentata wyomingensis*-*Poa sandbergii* habitat.

Minimum Elevation: 2980 feet Maximum Elevation: feet Size:

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:

Protection Comments:

Management Comments:

Specimens:
Ann DeBolt 1037 (Boise BLM?).

DAVIS' PEPPERGRASS
Occurrence Number: 049

Survey Site Name: DORSEY BUTTE ENE

County: Elmore

USGS quadrangle: DORSEY BUTTE

Latitude: 430558N Longitude: 1160027W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
004S004E	05	BO	SE4SW4, W2SW4SE4
004S004E	08	BO	NE4NE4NW4

Location:
Ca. 2.5 air miles ENE of Dorsey Butte, 1 mile S of the Ada/Elmore county line.

Survey Date: First Observed: 1987 Last Observed: 1995-06-01

EORANK: C
EORANK Comments:

Population Data:
1987: Subjective estimate of abundance is very poor. Monitoring plot established by Boise District BLM personnel. 1995: Scattered genets in flower. Population age class structure is 5% seedlings, 5% immature, and 90% mature. Population vigor assessed as fair. Observation on a cursory visit by Dale Dunn, Boise District BLM.

Habitat Description:
Large plays with moist brown soil, silt to sandy in texture.

Minimum Elevation: 3000 feet Maximum Elevation: feet Size: 1 + AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim #6101680370-15. The 3 smaller plays to the SE do not support *Lepidium davisii*.

Protection Comments:
1995: No recent evidence of use by cattle.

Management Comments:
Boise District BLM monitoring plot #35. Site is monitored for population trend and silt sedimentation rates.

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 050

Survey Site Name: DORSEY BUTTE NE #2

County: Elmore

USGS quadrangle: DORSEY BUTTE

Latitude: 430602N Longitude: 1160206W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
004S004E	06	BO	W2SW4

Location:
Ca 1.5 air miles NE of Dorsey Butte. Along the border of the Orchard Training Area, ca 0.8 mile S of the Ada/Elmore county line. Ca 1.2 miles W of the Simco Road Weather Station (not on topo map).

Survey Date: First Observed: 1987 Last Observed: 1995-06-08

EORANK: BC
EORANK Comments: Overall site quality is good to fair.

Population Data:
1987: Subjective estimate of abundance is good. Observation by Boise District BLM personnel. 1995: 4 small plays. 2 southern plays with ca 10,000 mature genets in flower. The 2 northern plays with ca 100+ genets in

flower. Population vigor assessed as good. Observation on a cursory visit by Dale Dunn, Boise District BLM.

Habitat Description:

Playas with a few *Atriplex confertifolia* on site. Adjacent to playas is a *Bromus tectorum*-*Brassica* sp. association.

Minimum Elevation: 2990 feet Maximum Elevation: feet Size: 1.1 AC

Land Owner/Manager:

BRUNEAU RA
ORCHARD TRAINING AREA

Ownership Comments:

Boise District BLM, Bruneau RA.

Comments:

Boise District BLM site #34.

Protection Comments:

Partly within Orchard Training Area. Area is grazed.

Management Comments:

Specimens:

LEPIDIUM DAVISII

DAVIS' PEPPERGRASS

Occurrence Number: 051

Survey Site Name: DORSEY BUTTE NE #1

County: Elmore

USGS quadrangle: DORSEY BUTTE

Latitude: 430544N Longitude: 1160202W

TOWNRANGE: SECTION:
004S004E 07

MERIDIAN: TRSNOTE:
BO N2NW4

Location:

Ca 1 air mile NE of Dorsey Butte, ca 1.25 miles S of the Ada/Elmore county line. Large plays.

Survey Date: First Observed: 1987 Last Observed: 1995-10-25

EORANK: A

EORANK Comments:

Population Data:

1987: Subjective estimate of abundance is good. Monitoring plots established by Boise District BLM personnel.
1995-06-01: Ca 100,000+ mature genets in flower. Population vigor assessed as good. Observation on a cursory visit by Dale Dunn, Boise District BLM. 1995-10-25: Tens of thousands of dormant plants. Observation by Jay Weaver and Ellen Clark, Idaho Army National Guard.

Habitat Description:

Hard-bottom playa with basalt cobbles. Adjacent species include *Atriplex confertifolia* and exotic annuals.

Minimum Elevation: 2990 feet Maximum Elevation: feet Size: 4 - 5 AC

Land Owner/Manager:

BRUNEAU RA

Ownership Comments:

Boise District BLM, Bruneau RA.

Comments:

Protection Comments:

Some old signs of grazing are evident. The area has been temporarily fenced since the fall of 1992 for a BLM *Atriplex* seeding. Fire, grazing (when the fence is removed), and invasion by exotic annuals are possible threats.

Management Comments:

Boise District BLM monitoring plots #31E and 31W. Site is monitored for population trend.

Specimens:

Ann DeBolt 1030 (Boise BLM?).

DAVIS' PEPPERGRASS
Occurrence Number: 052

Survey Site Name: DORSEY BUTTE EAST

County: Elmore

USGS quadrangle: CRATER RINGS SW

Latitude: 430505N Longitude: 1155951W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
004S004E	08	BO	S2SE4SE4
004S004E	09	BO	SW4SW4SW4
004S004E	17	BO	NE4NE4NE4

Location:
Ca 3 air miles E of Dorsey Butte. Ca 1.3 air miles MNW of Line triangulation point, ca 1.6 miles W of Simco Road.

Survey Date: First Observed: 1987 Last Observed: 1995-05-31

EORANK: C
EORANK Comments:

Population Data:
1987: Subjective estimate of abundance is abundant to fair. Monitoring plots established by Boise District BLM personnel. 1995: Population of medium density. Plants are mature and in flower. Population vigor assessed as good. Observation on a cursory survey by Dale Dunn, Boise District BLM.

Habitat Description:
Plays with no associated species. Species adjacent to the plays include Bromus tectorum and Brassica sp.

Minimum Elevation: 2971 feet Maximum Elevation: feet Size:

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA. State land is immediately adjacent.

Comments:

Protection Comments:
Some signs of past cattle use.

Management Comments:
Boise District BLM monitoring plots #59S and 59N. Site is monitored for population trend.

Specimens:
Ann DeBolt 1036 (Boise BLM).

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 053

Survey Site Name: DORSEY BUTTE ESE

County: Elmore

USGS quadrangle: DORSEY BUTTE

Latitude: 430450N Longitude: 1160110W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
004S004E	18	BO	E2NE4, NE4NE4SE4

Location:
Ca 1.8 air miles ESE of Dorsey Butte, ca 2.3 air miles S of the Ada/Elmore county line.

Survey Date: First Observed: 1987 Last Observed: 1995-06-09

EORANK: C
EORANK Comments:

Population Data:
1995: 3 plays. Ca 1000+ genets in flower at the two northern plays. An unknown number of genets at the

southern plays. Population age class structure is 10% vegetative, 30% immature, and 91-98% mature. Population vigor is good at the northern plays and fair at the southern plays. Observation on a cursory visit by Dale Dunn, Boise District BLM.

Habitat Description:

Plays with a few *Atriplex confertifolia*. Adjacent vegetation consists of *Bromus tectorum* and *Brassica* sp.

Minimum Elevation: 2960 feet Maximum Elevation: feet Size: 2.25 AC

Land Owner/Manager:

BRUNEAU RA

Ownership Comments:

Boise District BLM, Bruneau RA.

Comments:

Boise District BLM site #28.

Protection Comments:

Livestock grazing is a possible threat.

Management Comments:

Specimens:

LEPIDIUM DAVISII

DAVIS' PEPPERGRASS

Occurrence Number: 054

Survey Site Name: DORSEY BUTTE SOUTHEAST

County: Elmore

USGS quadrangle: DORSEY BUTTE

Latitude: 430345N Longitude: 1160113W

TOWNRANGE: SECTION:
004S004E 19

MERIDIAN:
BO

TRSNOTE:
S2SE4NE4, N2NE4SE4

Location:

Ca 2.3 air miles SE of Dorsey Butte. Ca 3 air miles NE of Chattin Hill.

Survey Date:

First Observed: 1987

Last Observed: 1995-06-09

EORANK: C

EORANK Comments:

Population Data:

1995: Ca 1000+ genets, 25% vegetative and 75% in flower. Population vigor assessed as good on the western portion of the plays. Observation on a cursory visit by Dale Dunn, Boise District BLM.

Habitat Description:

Plays with a few *Atriplex confertifolia*. Adjacent to the plays is a *Bromus tectorum* and *Brassica* sp. association.

Minimum Elevation: 2940 feet Maximum Elevation: feet Size: 4 AC

Land Owner/Manager:

BRUNEAU RA

Ownership Comments:

Boise District BLM, Bruneau RA.

Comments:

Boise District BLM site #25.

Protection Comments:

Livestock grazing is a possible threat.

Management Comments:

Specimens:

DAVIS' PEPPERGRASS
Occurrence Number: 055

Survey Site Name: DORSEY BUTTE NORTH

County: Elmore

USGS quadrangle: DORSEY BUTTE

Latitude: 430546N Longitude: 1160247W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
004S003E 12 BO W2NW4NE4, E2NE4NW4

Location:
N side of Dorsey Butte. Ca 1.2 miles S of the Ada/Elmore county line. Just S of the Orchard Training Area boundary.

Survey Date: First Observed: 1982-04-09 Last Observed: 1995-10-25

EORANK: C
EORANK Comments:

Population Data:
1982: No data. Collected by Roger Rosentreter, Idaho State BLM. 1987: Subjective estimate of abundance is good to fair. Observation by Boise District BLM personnel. 1995-06-08: Ca 1000+ genets, 50% in flower. Population age class structure is 50% seedlings and 50% mature. Population vigor assessed as low. Observation on a cursory visit by Dale Dunn, Boise District BLM. 1995-10-25: Several thousand dormant plants. Observation by Jay Weaver and Ellen Clark, Idaho Army National Guard.

Habitat Description:
Hard-bottom plays with basalt cobbles and no associated species on site. Plays is surrounded by exotic annuals.

Minimum Elevation: 2975 feet Maximum Elevation: feet Size: 10 AC

Land Owner/Manager:
BRUNEAU RA
ORCHARD TRAINING AREA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Rosentreter's collection label reads "in plays near Mtn. Home, T4S R3E." This is presumed to be the collection site as this is the most conspicuous plays in T4S R3E. Boise District BLM site #32.

Protection Comments:
Fire, livestock grazing, and invasion by annuals (especially *Salsola iberica*) are possible threats. Plays extends partly into the Orchard Training Area but is off limits to military use.

Management Comments:

Specimens:
Roger Rosentreter 2570 (CIC, MONTU).

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 056

Survey Site Name: ADA/ELMORE LINE

County: Ada

USGS quadrangle: DORSEY BUTTE

Latitude: 430649N Longitude: 1160122W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
003S004E 31 BO SE4SW4SE4

Location:
Roughly 2 mi NE of Dorsey Butte and about 8 air mi E of the Snake River. Small plays just N of the Ada/Elmore county line.

Survey Date: First Observed: 1987 Last Observed: 1995-10-25

EORANK: A
EORANK Comments:

Population Data:

1987: Subjective estimate of abundance is good. Monitoring plot established by Boise District BLM personnel. 1995-06-12: Ca 100+ genets in flower. Population age class structure is 10% seedlings and 90% mature. Population vigor assessed as good. Observation on a cursory visit by Dale Dunn and Steve Dobson, Boise District BLM. 1995-10-25: Several hundred to one thousand dormant plants. Population assessed as healthy. Observation by Jay Weaver and Ellen Clark, Idaho Army National Guard.

Habitat Description:

Small hard-bottom plays. Some *Atriplex confertifolia* in the plays. Plays is surrounded by *Atriplex confertifolia*, *Artemisia tridentata wyomingensis*, *Sitanion hystrix*, *Bromus tectorum*, *Eurotia lanata*, and *Brassica* sp.

Minimum Elevation: 3025 feet Maximum Elevation: feet Size:

Land Owner/Manager:

BRUNEAU RA
ORCHARD TRAINING AREA

Ownership Comments:

Boise District BLM, Bruneau RA.

Comments:

There are 2 plays on USGS topographic map in the SW4SE4 of the section. Only the southern plays supports *Lepidium davisii*.

Protection Comments:

Within Orchard Training Area. Livestock grazing, fire, and military use are possible threats.

Management Comments:

Boise District BLM monitoring plot #38. Site is monitored for population trend.

Specimens:

Ann Debolt 1031 (Boise BLM?).

LEPIDIUM DAVISII

DAVIS' PEPPERGRASS

Occurrence Number: 057

Survey Site Name: FRASER RESERVOIR

County: Elmore

USGS quadrangle: CINDER CONE BUTTE

Latitude: 430855N Longitude: 1155256W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
003S005E	20	BO	NW4SE4

Location:

N side of the W end of Fraser Reservoir. Ca 0.9 air mile NE of the dam.

Survey Date: First Observed: 1987 Last Observed: 1995-06-15

EORANK: C

EORANK Comments:

Population Data:

1987: Plants abundant. Observation by Boise District BLM personnel. 1995: Ca 200+ mature genets in flower. Population vigor assessed as good. Observation on a cursory visit by Dale Dunn, Boise District BLM.

Habitat Description:

Dry plays.

Minimum Elevation: 3140 feet Maximum Elevation: feet Size: 0.2 AC

Land Owner/Manager:

BRUNEAU RA

Ownership Comments:

Boise District BLM, Bruneau RA.

Comments:

Boise District BLM site #88.

Protection Comments:

Evidence of past cattle use.

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 058

Survey Site Name: NATIONAL GUARD MANEUVER AND FIRING AREA SOUTHEAST

County: Ada

USGS quadrangle: CINDER CONE BUTTE

Latitude: 430745N Longitude: 1155903W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
003S004E 28 BO SW4SE4

Location:
SE corner of National Guard Maneuver and Firing Area about 14 air mi W of Mountain Home. 0.4 mile W of the Ada/Elmore county line.

Survey Date: First Observed: 1987 Last Observed: 1995-10-25

EORANK: B
EORANK Comments:

Population Data:
1987: Subjective estimate of abundance is fair. Monitoring plot established by Boise District BLM personnel.
1995: Ca 200-300 dormant plants. Population assessed as healthy. Observation by Jay Weaver and Ellen Clark, Idaho Army National Guard.

Habitat Description:
Hard-bottom plays with basalt cobbles, barren of any other vegetation. Plays is surrounded by exotic annuals.

Minimum Elevation: 3020 feet Maximum Elevation: feet Size: 2500 SQ M

Land Owner/Manager:
BRUNEAU RA
ORCHARD TRAINING AREA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:

Protection Comments:
Site is within Orchard Training Area. Lots of cattle tracks are present on the plays. Possible threats include fire, grazing, encroachment by exotic annuals, and military training.

Management Comments:
Boise District BLM monitoring plot #65. Site is monitored for population trend.

Specimens:
Ann DeBolt 1035 (Boise BLN7).

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 059

Survey Site Name: MOUNTAIN HOME AIR FORCE BASE GUNNERY RANGE NE

County: Elmore

USGS quadrangle: CRATER RINGS

Latitude: 430733N Longitude: 1155001W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
003S005E 35 BO NW4NW4

Location:
SE of Fraser Reservoir, E side of Mountain Home Air Force Base Gunnery Range NE corner. Ca 2.4 air miles S of Cairn triangulation point.

Survey Date:

First Observed: 1987

Last

EORANK:

EORANK Comments:

Population Data:

1987: Subjective estimate of abundance is very poor. Observation by Boise District BLM personnel.

Habitat Description:

Playa.

Minimum Elevation: 3160 feet Maximum Elevation: feet Size:

Land Owner/Manager:

STATE LAND WITHIN ELMORE COUNTY

Ownership Comments:

State land.

Comments:

Boise District BLM site #92.

Protection Comments:

Management Comments:

Specimens:

LEPIDIUM DAVISII

DAVIS' PEPPERGRASS

Occurrence Number: 060

Survey Site Name: ORCHARD TRAINING AREA

County: Ada

USGS quadrangle: CRATER RINGS SW

Latitude: 430720N Longitude: 1155858W

TOWNRANGE: SECTION:
003S004E 33

MERIDIAN:
80

TRSNOTE:
E2SW4NE4

Location:

SE corner of Orchard Training Area. Ca 1 mile W of Simco Road.

Survey Date:

First Observed: 1987

Last Observed: 1995-10-25

EORANK: 80

EORANK Comments: Large plays - good site quality. Small plays - poor site quality.

Population Data:

1987: 75 plants. Monitoring plot established by Boise District BLM personnel. 1995: Small plays with 55 dormant plants, population status assessed as fair. Larger plays with several thousand dormant plants. Observations by Jay Weaver and Ellen Clark, Idaho Army National Guard.

Habitat Description:

2 small hard-bottom playas with basalt cobbles. *Lepidium davisii* is the dominant plant on the playas. Surrounding vegetation is exotic annuals, mostly *Bromus tectorum* and *Salsola kali*.

Minimum Elevation: 3000 feet Maximum Elevation: feet Size: 8850 SQ M

Land Owner/Manager:

BRUNEAU RA
ORCHARD TRAINING AREA

Ownership Comments:

Boise District BLM, Bruneau RA.

Comments:

Protection Comments:

Within the Orchard Training Area. Threats include grazing, fire, and military training. The smaller plays has been heavily disturbed by cattle. The larger plays has some, but not severe, cattle damage.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 061

Survey Site Name: CORDER CREEK

County: Ada

USGS quadrangle: LITTLE JOE BUTTE

Latitude: 430852N Longitude: 1160350W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
003S003E 23 80 NW4SE4

Location:
E of Corder Creek, ca 3 air miles WSW of Little Joe Butte.

Survey Date: First Observed: 1986-09-22 Last Observed: 1995-10-25

EORANK: C
EORANK Comments:

Population Data:
1986: Plants present on plays. Observation by Roger Rosentreter, Idaho State BLM. 1987: Subjective estimate of abundance is good. Observation by Boise District BLM personnel. 1995: Plants present, population is in fair condition. Observation by Idaho Army National Guard personnel.

Habitat Description:
Playa being invaded by exotic annuals.

Minimum Elevation: 3025 feet. Maximum Elevation: feet Size:

Land Owner/Manager:
BRUNEAU RA
ORCHARD TRAINING AREA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Boise District BLM site # 107.

Protection Comments:
Within Orchard Training Area, military training is a possible threat. Invasion of the plays by exotic annuals and cattle/sheep damage is evident.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 062

Survey Site Name: BIG FOOT BUTTE SOUTH

County: Ada

USGS quadrangle: BIG FOOT BUTTE

Latitude: 430858N Longitude: 1161253W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
003S002E 21 80 SE4SE4NE4

Location:
Ca 4 air miles S of Big Foot Butte and ca 3 air miles SW of Tadpole Lake.

Survey Date: First Observed: 1986-09-22 Last Observed: 1995-04

EORANK: CD

Comments: Overall site quality rated as fair to poor.

Population Data:

1986: No data. Observation by Roger Rosentreter, Idaho State BLM. 1987: 16 plants. Subjective estimate of abundance is very poor. Monitoring plot established by Boise District BLM personnel. 1995: Ca 100+ genets, 5% vegetative and 95% in flower. Population age class structure is 5% seedlings, 10% immature, and 85% mature. Population vigor assessed as fair to poor. Observation on a cursory visit by Doug Peton, Boise District BLM.

Habitat Description:

Playa with a good deal of disturbance. Good light regime. Species adjacent to plays include *Bromus tectorum*, *Halogeton glomeratus*, *Kochia* sp., and *Artemisia* sp.

Minimum Elevation: 3000 feet Maximum Elevation: feet Size: 1 AC

Land Owner/Manager:

BRUNEAU RA
ORCHARD TRAINING AREA

Ownership Comments:

Boise District BLM, Bruneau RA.

Comments:

Protection Comments:

Within the Orchard Training Area. Threatened by tank traffic and cattle grazing.

Management Comments:

Boise District BLM monitoring plot #9. Site is monitored for population trend.

Specimens:

LEPIDIUM DAVISII

DAVIS' PEPPERGRASS

Occurrence Number: 063

Survey Site Name: BUNCLE RESERVOIR EAST

County: Owyhee

USGS quadrangle: WICKAHONEY CROSSING

Latitude: 423021N Longitude: 1155624W

TOWNRANGE: SECTION:
011S004E 01

MERIDIAN: TRSNOTE:
BO NW6NW4

Location:

Between Wickahoney Creek and State Route 51. Ca 1.1 air miles E of Buncle Reservoir and ca 3 air miles SE of Wickahoney Crossing.

Survey Date: First Observed: 1995 Last Observed: 1995

EORANK:

EORANK Comments:

Population Data:

1995: Ca 1000 plants or less in good condition. Observation by Boise District BLM personnel.

Habitat Description:

Playa.

Minimum Elevation: 4900 feet Maximum Elevation: feet Size:

Land Owner/Manager:

BRUNEAU RA

Ownership Comments:

Boise District BLM, Bruneau RA.

Comments:

Protection Comments:

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 064

Survey Site Name: MOUNTAIN HOME AIR FORCE BASE WEST

County: Elmore

USGS quadrangle: CRATER RINGS SW

Latitude: 430231N Longitude: 1155445W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
004S005E	30	BO	S2SW4
004S005E	31	BO	N2NW4

Location:
Ca 0.7 to 0.9 mile W of the western perimeter of Mountain Home AFB. Ca 1 air mile W of West triangulation point.

Survey Date: First Observed: 1987 Last Observed: 1995-06-02

EORANK: B
EORANK Comments:

Population Data:
1987: Plants abundant. Monitoring plot established by Boise District BLM personnel. 1995: Ca 2000+ mature genets in flower at 5 small playas. Population vigor assessed as good. Observation on a cursory visit by Dale Dunn, Boise District BLM.

Habitat Description:
Playas surrounded by Artemisia sp./Bromus tectorum community.

Minimum Elevation: 2975 feet Maximum Elevation: feet Size: 2 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA. Adjacent to private land.

Comments:

Protection Comments:
Some signs of past cattle use.

Management Comments:
Boise District BLM monitoring plot #74. Site is monitored for population trend.

Specimens:
Ann DeBolt 1041 (Boise BLM7).

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 065

Survey Site Name: WHITE HOMESTEAD NNE

County: Owyhee

USGS quadrangle: TRIGUERO LAKE

Latitude: 421349N Longitude: 1154405W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
014S006E	10	BO	NW4NE4

Location:
Approximately 12 air mi SE of Grasmere and 1.5 mi W of the Bruneau Canyon. Ca 1.75 air mi NNE of the White Homestead.

Survey Date: First Observed: 1985 Last Observed: 1995-06-23

EORANK: D
EORANK Comments:

Population Data:
1985: Thousands of plants. Collected by Johnson and Brunfeld. 1988: Several thousand plants. Collected by Ann

DeBolt, Boise District BLM. 1995: Hundreds of genets in flower of mixed age class assessed as poor. Observation on a cursory visit by A. Jossie, Boise District BLM.

Habitat Description:

Hard-bottom plays with small man-made reservoir. Clay/rock soil. Plants are scattered in dry portions of the plays. No associated species on the plays; surrounding habitat is *Artemisia tridentata* ssp. *wyomingensis*-*Poa sandbergii*.

Minimum Elevation: 5190 feet Maximum Elevation: feet Size: 2 AC OR LESS

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
This is presumably the location of the Johnson and Brunsfeld collection.

Protection Comments:
A reservoir has been developed at the plays.

Management Comments:

Specimens:
F. D. Johnson and S. J. Brunsfeld 2735 (IDF) - collection label gives elevation as 5325 ft.

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 066

Survey Site Name: BLACKSTONE RESERVOIR NE

County: Owyhee

USGS quadrangle: BLACKSTONE RESERVOIR

Latitude: 422950N Longitude: 1154508W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
011S006E 04 BO NE4SE4

Location:
Along the SE side of Blackstone-Grasmere Road on the Blackstone Desert at the junction with the access road to Fivemile Lake. Ca 4.5 air miles NE of Blackstone Reservoir.

Survey Date: First Observed: 1987-11-05 Last Observed: 1995-07-05

EORANK: B
EORANK Comments:

Population Data:
1987: Not numerous, given a subjective rating of fair. Observation by John Doremus, Boise District BLM. 1995: Ca 800 or more mature genets, 80% in flower and 20% in fruit. Population vigor assessed as high to good. Area thoroughly surveyed by Jon Nelson, Boise District BLM.

Habitat Description:
Plays with dry soil of dirt/clay texture. No moisture, good light. Species adjacent to the plays include *Bromus tectorum*, *Atriplex confertifolia*, *Sitanion hystrix*, and *Poa* sp.

Minimum Elevation: 4520 feet Maximum Elevation: feet Size: 1 AC OR LESS

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:

Protection Comments:
Some minor use of the plays by cattle is evident.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 067

Survey Site Name: BIG HOLES

County: Owyhee

USGS quadrangle: BLACKSTONE RESERVOIR

Latitude: 422630N Longitude: 1155015W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
011S005E 26 BO S2SE4NW4

Location:
Ca 1 mile W of Blackstone Reservoir, near Big Holes. S side of an unimproved road that heads W from Blackstone Reservoir to State Route 51.

Survey Date: First Observed: 1987-11-05 Last Observed: 1995-08-28

EORANK: B
EORANK Comments:

Population Data:
1987: Plants not numerous, overall abundance rated as fair. Observation by John Doremus, Boise District BLM.
1995: Plants that was moist earlier in the season with ca 100-1000 genets, 6% vegetative, 2% in flower, 90% in fruit, and 2% dormant. Population age class structure is 3% seedlings, 10% immature, 85% mature, and 2% senescent. Population vigor assessed as good. Observation on a cursory visit by Lynn Miracle and Steve Jirik, Boise District BLM.

Habitat Description:
Plays with good light regime. Species adjacent to the plays include *Sitanion hystrix*, *Artemisia tridentata wyomingensis* and *Agrostis* sp.

Minimum Elevation: 4860 feet Maximum Elevation: feet Size: 0.1 - 1 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, BrunEAU RA.

Comments:
Water claim #5101681206-33.

Protection Comments:
Area is grazed.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 068

Survey Site Name: BIG JACKS/DUNCAN CREEKS #1

County: Owyhee

USGS quadrangle: HILL PASTURE

Latitude: 423330N Longitude: 1160024W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
010S004E 17 BO SE4SW4NE4

Location:
Lava plateau E of Duncan Creek. Ca 0.6 air mile SE of the confluence of Duncan Creek and Big Jacks Creek. Ca 1.1 air miles NE of the Buncel Place. NW of Wickahoney Crossing.

Survey Date: First Observed: 1988-10-26 Last Observed: 1995-06-07

EORANK: A
EORANK Comments:

Population Data:

1988: No data. Observation by John Doremus, Boise District BLM. 1995: Undisturbed plays with ca 500 genets >90% immature and in flower. Population is mostly small plants (5 cm diameter), vigor assessed as healthy and good. Observation on a cursory survey by Helen Fisher, Boise District BLM.

Habitat Description:

Plants distributed throughout the plays. Basalt rubble and gravel across the plays surface with plants growing in between. Surface is unpuddled and slightly moist. No other species on site.

Minimum Elevation: 4780 feet Maximum Elevation: feet Size: 0.4 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:

Protection Comments:

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 069

Survey Site Name: BIG JACKS/DUNCAN CREEKS #2

County: Owyhee

USGS quadrangle: HILL PASTURE
WICKAHONEY CROSSING

Latitude: 423322N Longitude: 1160003W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
010S004E	16	BO	NW4NW4SW4, SW4NE4NW4
010S004E	17	BO	NE4NE4SE4

Location:

Lava plateau E of Duncan Creek. Ca 0.9 air mile SE of the confluence of Duncan Creek and Big Jacks Creek. Ca 1.25 air miles ENE of the Buncel Place. NW of Wickahoney Crossing. 2 plays.

Survey Date: First Observed: 1988-10-26 Last Observed: 1995-06-07

EORANK: A
EORANK Comments:

Population Data:

1988: No data. Observation by John Doremus, Boise District BLM. 1995: SW plays with ca 150+ genets >90% mature and in flower. Population mostly composed of small plants (5 cm diameter), vigor assessed as good and healthy. Good population present at the NE plays. Observations by Boise District BLM personnel.

Habitat Description:

SW plays with an area of rubble/cobbles at the SW margin. No associated species.

Minimum Elevation: 4780 feet Maximum Elevation: feet Size: 0.1 AC

Land Owner/Manager:
BRUNEAU RA
STATE LAND WITHIN OWYHEE COUNTY

Ownership Comments:
Boise District BLM, Bruneau RA, and state land.

Comments:

Protection Comments:

Evidence of very light livestock trampling, otherwise the SW plays is undisturbed.

Management Comments:

Specimens:

Protection Comments:
Antelope present in the vicinity of the plays.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 161

Survey Site Name: BIG LAKE DRAW

County: Owyhee

USGS quadrangle: CAVE DRAW

Latitude: 422248N Longitude: 1154235W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
012S006E 14 80 SE4NE4SE4

Location:

J - P Desert, NE side of Big Lake Draw and Bighorn Country. Ca 1.1 miles W of Barinaga Lake and ca 2 air miles E of the confluence of Louse Creek and Sheep Creek.

Survey Date: First Observed: 1995-09-08 Last Observed: 1995-09-08

EORANK: BC

EORANK Comments: Overall site quality is good to fair.

Population Data:

1995: Ca 100+ dormant genets. Population age class structure is 5% seedlings, 5% immature, and 90% mature. Population vigor assessed as fair to good. Observation on a cursory visit by Steve Jirik, Boise District BLM.

Habitat Description:

Plays is very rocky and gravelly with brown silty soil. Ca 90% bare ground. Very dry area with a good source of light. Only *Lepidium davisii* is present on the plays.

Minimum Elevation: 4700 feet Maximum Elevation: feet Size: 0.87 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:

Water claim #5101680171-11.

Protection Comments:

No signs of use.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 162

Survey Site Name: BARINAGA LAKE EAST

County: Owyhee

USGS quadrangle: CAVE DRAW

Latitude: 422248N Longitude: 1153927W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
012S007E 17 80 W2NW4SE4

Location:

J - P Desert, midway between Barinaga Lake and the W rim of the Bruneau Canyon. Ca 1.6 miles E of Barinaga Lake and ca 2 miles SE of Catholic Lake.

Boise District BLM.

Habitat Description:
Hard-bottom plays. Associated species include *Atriplex confertifolia* or

Minimum Elevation: 5160 feet Maximum Elevation: feet Size: 1 A

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:

Protection Comments:
1988: Doremus noted that a water hole had been dug in the plays. 1995:
developed, unlike other nearby plays. The surrounding area is heavily

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 072

Survey Site Name: TRIGUERO TRAIL

County: Owyhee

USGS quadrangle: TRIGUERO LAKE

Latitude: 421055N Longitude: 1154255W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
014S006E 26 80 SW4NE4

Location:
2 small plays ca 1.2 miles W of the Triguero Trail and the W rim of the
Lakes.

Survey Date: First Observed: 1988-10-26 Last Observed:

EORANK: BC
EORANK Comments: Overall site quality is good to fair.

Population Data:
1988: 2 small plays with good to abundant populations. Observation by John
1000's of genets in flower. Population vigor assessed as good. Observation
Boise District BLM.

Habitat Description:
Hard-bottom plays. Species adjacent to plays include *Artemisia tridentata*
Sitanion hystrix.

Minimum Elevation: 5240 feet Maximum Elevation: feet Size: 2 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:

Protection Comments:
Cattle have been in the plays when soils were wet. Grazing in the area
range is in poor to fair condition, but *Lepidium davisii* persists at the

Management Comments:

Specimens:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 164

Survey Site Name: MONUMENT LAKE

County: Owyhee

USGS quadrangle: CAVE DRAW

Latitude: 422508N Longitude: 1154245W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
011S006E	35	BO	SW4SE4SE4, SE4SW4SE4
012S006E	02	BO	NE4NW4NE4, NW4NE4NE4

Location:

J - P Desert, Monument Lake. NW of Monument Butte and E of Sheep Creek.

Survey Date: First Observed: 1995-09-08 Last Observed: 1995-09-08

EORANK: C
EORANK Comments:

Population Data:

1995: Ca 200+ mature genets. Population vigor assessed as fair. Surface water present on plays. Observation on a cursory visit by Lynn Miracle, Boise District BLM.

Habitat Description:

Large playa with clay textured soil. Ca 95% bare ground. Dry with good light. Chrysothamnus viscidiflorus is outside the plays.

Minimum Elevation: 4785 feet Maximum Elevation: feet Size: 7 - 10 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim #5101680177-17.

Protection Comments:
Area is grazed, cattle tracks/droppings are evident.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 165

Survey Site Name: FIVEMILE LAKE NNE

County: Owyhee

USGS quadrangle: TABLE BUTTE

Latitude: 423155N Longitude: 1154522W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
010S006E	28	BO	center N2

Location:

Blackstone Desert, S of Big Hill. Ca 1.8 air miles NNE of Fivemile Lake and ca 4.5 air miles E of Table Butte.

Survey Date: First Observed: 1995-09-23 Last Observed: 1995-09-23

EORANK: D
EORANK Comments:

Surrounding plays are Artemisia tridentata wyomingensis, Poa secunda, and Sitanion

hystrix.

Minimum Elevation: 5160 feet Maximum Elevation: feet Size: 1 AC OR LESS

Land Owner/Manager:
STATE LAND WITHIN Owyhee County

Ownership Comments:
State land.

Comments:

Protection Comments:
No visible threats or disturbances.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 075

Survey Site Name: TRIGUERO LAKE

County: Owyhee

USGS quadrangle: TRIGUERO LAKE

Latitude: 420938N Longitude: 1154108W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
014S007E 31 BO SW4SW4

Location:
Triguero Lake, J - P Desert, W of the Bruneau Canyon.

Survey Date: First Observed: 1988-10-26 Last Observed: 1995-06-22

EORANK: A
EORANK Comments:

Population Data:
1988: Plants abundant. Observation by John Doremus, Boise District BLM. 1995: Ca 1000's of genets in flower of mixed age classes. Population is abundant. Observation on a cursory visit by A. Jossie, Boise District BLM.

Habitat Description:
Hard-bottom plays with a shallow water hole dug in it. Species surrounding the plays are Artemisia tridentata wyomingensis, Sitanion hystrix, and Poa secunda.

Minimum Elevation: 5160 feet Maximum Elevation: feet Size: 1.5 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:

Protection Comments:
Current land uses are grazing and hunting. Drought is a possible threat.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 076

Survey Site Name: GRASMERE RESERVOIR SE

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 167

Survey Site Name: FIVEMILE LAKE NW

County: Owyhee

USGS quadrangle: TABLE BUTTE

Latitude: 423135N Longitude: 1154717W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
010S006E 30 80 N2SE4

Location:
Blackstone Desert, S of Big Hill. 2 plays ca 1.5 miles NW of Fivemile Lake. Ca 3 air miles E of Table Butte.

Survey Date: First Observed: 1995-09-23 Last Observed: 1995-09-23

EORANK: AB

EORANK Comments: Site quality is excellent at the larger plays and good at the smaller plays.

Population Data:

1995: 2 plays. Larger, eastern plays with ca 3000 genets, population vigor is high. Smaller, western plays with ca 300 genets, population vigor is good. Plants are mature and dormant. Area thoroughly surveyed by Jon Nelson, Boise District BLM.

Habitat Description:

2 dry plays with dirt/clay soil. Larger plays with a rocky/gravelly surface. Dry area with good light. No associated species on the larger plays, but some Artemisia sp., Chrysothamnus sp., and Bromus tectorum at the small plays.

Minimum Elevation: 4550 feet Maximum Elevation: feet Size: 5 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim # 5101682132-25 and 5101681224-17.

Protection Comments:

Management Comments:

Specimens:

Minimum Elevation: feet Size: 20 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim #5101681301-22.

Protection Comments:
The area is grazed. Water hole development is a possible threat.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 078

Survey Site Name: JAMES LAKE NORTH

County: Owyhee

USGS quadrangle: BUSTER BUTTE

Latitude: 421817N Longitude: 1154523W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
013S006E 09 BO S2S2 center

Location:
J - P Desert, 0.5 mile E of Sheep Creek, W of Bruneau Canyon, about 9 air miles SE of Grasmere. Ca 1.1 miles N of James Lake.

Survey Date: First Observed: 1989-08-30 Last Observed: 1995-09-12

EORANK: B
EORANK Comments:

Population Data:
1989: Good-abundant population in fruit. Observation by John Doremus, Boise District BLM. 1995: Ca 1500 dormant genets. Population age class structure is 2% immature and 98% mature. Observation on a cursory visit by Doremus.

Habitat Description:
Open, flat plays with fine soil and basalt cobbles. *Chrysothamnus viscidiflorus* is throughout the plays. *Artemisia tridentata wyomingensis* is adjacent.

Minimum Elevation: 5069 feet Maximum Elevation: feet Size: 4 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim #5101681309-30.

Protection Comments:
No disturbance of the plays. The area is grazed and water hole development is a possible threat.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 079

Survey Site Name: JAMES LAKE

MOUNTAIN HOME DESERT

BIG FOOT BUTTE QUAD

Playa location	Checked	Leda occurrence	CDC occurrence #
T3S R2E S26 NW4	BLM 95, IANG 95	yes	035
T3S R2E S21 NE4	BLM 95	yes	062
T3S R2E S11 NE4	BLM	no	ex029
Wind Butte Lakes T2S R3E S32 NW4	BLM	no	---
Wind Butte lakes T2S R3E S32 NW4	BLM	no	---
T2S R2E S35 NW4	BLM	no	---
T3S R2E S17 NE4	BLM, IANG 95	no	---
T3S R2E S16 SW4	BLM 95	no	---
Tadpole Lake T3S R2E S11 NW4	BLM, IANG 95	no	---
T3S R2E S20 SE4	BLM 95	no	---
T3S R2E S28 NW4	BLM 95	no	---
T3S R2E S21 NW4	IANG 95	no	---
T3S R3E S30 SW4	BLM 95, IANG 95	no	---

BRUNEAU QUAD

T5S R6E S17 SE4	CDC 95	yes	028
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CASTLE BUTTE QUAD

T3S R2E S31 NE4	BLM	no	---
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CHRISTMAS MOUNTAIN QUAD

T2S R2E S13 NE4	BLM	no	---
T2S R2E S12 SW4	BLM	no	---
T2S R2E S11 SE4	BLM	no	---
T2S R2E S11 SE4	BLM	no	---
T2S R2E S2 SW4	BLM	no	---
T2S R2E S5 SE4	IANG 95	no	---
T1S R2E S16 SW4	BLM	no	---

Three separate small playas - two in section 23, one in section 22. All have gravel-clay bottoms. Species adjacent to the playas include *Atriplex confertifolia*, *Artemisia tridentata vaseyana*, *Poa sandbergii*, and *Sitanion hystrix*.

Minimum Elevation: 5080 feet Maximum Elevation: feet Size: 3 AC OR LESS

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:

Protection Comments:
Cattle trail through the westernmost playa but it is not used much. The other two playas are used as a water source by cattle.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 081

Survey Site Name: TWIN LAKES

County: Owyhee

USGS quadrangle: INDIAN HOT SPRINGS

Latitude: 421535N Longitude: 1154320W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
013S006E	26	80	S2
013S006E	35	80	NW4

Location:

J - P Desert, SE of Grasmere. Playas in the Twin Lakes vicinity extending ENE to the Bruneau Canyon.

Survey Date: First Observed: 1989-08-30 Last Observed: 1995-07-28

EORANK: B
EORANK Comments:

Population Data:

1989: Small playas have "good" overall populations. Largest playa has "abundant" population at edge but plants are gone close to reservoir where site quality is poor. Observation by John Doremus, Boise District BLM. 1995: Numerous playas with 4000+ genets, 4-5% vegetative, 3-15% in flower, and 80-90% in fruit. Population age class structure is 2-3% seedlings, 14-22% immature, and 75-84% mature. Population vigor assessed as good to very good. Observation on a cursory visit by Matt McCoy, Boise District BLM.

Habitat Description:

8+ playas in two sections. Largest playa in section 35 NW4 contains a reservoir and exclosure (?). Species adjacent to the playas include *Atriplex confertifolia*, *Artemisia tridentata vaseyana*, *Poa sandbergii*, *Sitanion hystrix*, *Bromus tectorum*, *Halogeton glomeratus*, *Festuca idahoensis*, and *Atriplex spinosa*.

Minimum Elevation: 5076 feet Maximum Elevation: feet Size: 20 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:

Protection Comments:
Threatened by reservoir development and grazing.

Management Comments:

Specimens:

T4S R5E S10 NE4	SAIC 90	yes	085
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CRATER RINGS SW QUAD

T4S R4E S21 NE4	BLM 95	yes	046
T4S R4E S27 SW4	BLM 95	yes	025
T4S R4E S8 SE4	BLM 95	yes	052
T4S R4E S9 N2	BLM 95	yes	044
T4S R4E S16 NW4	BLM 95	yes	024
T5S R5E S6 NE4	BLM 95	yes	033
T4S R5E S30 SW4	BLM 95	yes	064
T4S R5E S31 NW4	BLM 95	yes	064
T4S R4E S2 SW4	BLM 95	yes	042
T4S R4E S21 SW4	BLM 95	yes	106
T4S R4E S3 NW4	BLM 95	yes	043
T4S R4E S12 SW4	BLM 95	yes	045
T4S R4E S13 NW4	BLM 95	yes	045
T3S R4E S33 NE4	IANG 95	yes	060
T3S R4E S33 NE4	IANG 95	yes	060
T3S R4E S33 NE4	IANG 95	no	---
T4S R4E S36 NE4	BLM	no - converted to ag	---
T4S R4E S36 NE4	BLM	no - converted to ag	---
T4S R4E S36 NE4	BLM	no - converted to ag	---
T4S R4E S22 SE4	BLM	yes	047
T4S R4E S17 NE4	BLM	yes	048
T4S R4E S14 SE4	BLM	no	---
T4S R5E S17 SW4	BLM	no	---
T4S R5E S17 SW4	BLM	no	---
T4S R5E S17 SE4	BLM	yes	039
T4S R4E S4 SW4	BLM	no	---
T4S R4E S36 SE4	BLM	yes	023
T4S R4E S36 NW4	BLM	yes	153

1989: Plants 77-47-011, 012, 013, 014, 015, 016, 017, 018, 019, 020, 021, 022, 023, 024, 025, 026, 027, 028, 029, 030, 031, 032, 033, 034, 035, 036, 037, 038, 039, 040, 041, 042, 043, 044, 045, 046, 047, 048, 049, 050, 051, 052, 053, 054, 055, 056, 057, 058, 059, 060, 061, 062, 063, 064, 065, 066, 067, 068, 069, 070, 071, 072, 073, 074, 075, 076, 077, 078, 079, 080, 081, 082, 083, 084, 085, 086, 087, 088, 089, 090, 091, 092, 093, 094, 095, 096, 097, 098, 099, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

Habitat Description:

Plays with some *Chrysothamnus nauseosus*. Species adjacent to the plays include *Atriplex confertifolia*, *Artemisia tridentata vaseyana*, *Poa sandbergii*, and *Sitanion hystrix*.

Minimum Elevation: 5100 feet Maximum Elevation: feet Size: 7 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:

Protection Comments:
Threatened by reservoir development and grazing.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 084

Survey Site Name: MOUNTAIN HOME AFB SMALL ARMS RANGE

County: Elmore

USGS quadrangle: CRATER RINGS SE

Latitude: 430555N Longitude: 1155138W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
004S005E	04	BO	SE4SE4, SW4SE4
004S005E	09	BO	NE4NE4, NW4NE4

Location:

Mountain Home AFB Small Arms Range, N of Mountain Home AFB. SE corner of range.

Survey Date: 1991-07 First Observed: 1990-05-17 Last Observed: 1991-07

EORANK: BC
EORANK Comments:

Population Data:

1990: 3 plays with "good" populations of peppergrass. (A) 100-300 plants in bud. (B) ca 100 plants in bud. (C) 50-75 plants in bud. Area surveyed by Rosie Thompson, SAIC, and Roger Rosentreter, Idaho State BLM. 1991: Monitoring transects established by Susan Bernatas, TNC, and Bob Moseley, Idaho CDC. 832 plants in 6 transects. Per transect plants are 0-3% seedlings, 2-16% non-reproductive, and 84-96% reproductive.

Habitat Description:

3 plays: east playa (A) has a dirt road and a fence through the western side, and tire tracks of an indeterminate age occur near its eastern side. Center playa (B) contains scattered debris (wood and metal) from prior human structures/equipment. The debris is about 50 years old based on lichen growth (Rosentreter). West playa (C) is the smallest and shows no evidence of disturbance. The area around the plays was recently burned, leaving only charred stubs of *Artemisia tridentata wyomingensis*. A variety of native and introduced grasses and tumbleweed predominate around the plays; grasses include *Bromus tectorum*, *Sitanion hystrix*, and *Agropyron spicatum*. Tumbleweed is invading the plays. Plays A and B contain aquatic and terrestrial lichens on the basalt cobbles/boulders scattered over the playa bottom.

Minimum Elevation: 3070 feet Maximum Elevation: 3075 feet Size: 0.5 AC

Land Owner/Manager:
MOUNTAIN HOME AFB SMALL ARMS RANGE

Ownership Comments:
Mountain Home AFB.

Comments:

T4S R4E S8 NE4	BLM 95	no (extirpated)	ex049
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GRAND VIEW QUAD

T5S R3E S14 NE4	BLM	no	---
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INITIAL POINT QUAD

T1S R1E S6 SW4	BLM	no	---
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JACKASS BUTTE QUAD

T4S R2E S2 SW4	BLM	no	---
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LITTLE JOE BUTTE QUAD

T3S R3E S23 SE4	BLM	yes	061
T3S R3E S2 NW4	BLM	no	---
T3S R3E S2 NE4	BLM 95	no	---
T2S R4E S32 SE4	BLM, IANG 95	no	---
T2S R4E S31 NE4	BLM, IANG 95	no	---
T2S R4E S30 SE4	BLM, IANG 95	no	---
T2S R4E S30 W2	BLM 95	no	---
T2S R3E S25 NW4	BLM 95	no	---
T2S R3E S24 NW4	BLM 95	no	---
T2S R3E S28 SW4	BLM	no	---

MAYFIELD SE QUAD

T1S R5E S36 NW4	blm	no	---
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MAYFIELD SW QUAD

T1S R4E S3 NW4	BLM	no	---
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MOUNTAIN HOME SOUTH QUAD

T5S R6E S9 NW4	BLM 95	yes	026
T5S R6E S9 NW4	BLM 95	yes	026
T4S R7E S31 SE4	BLM	no - converted to ag	---
T4S R6E S34 NW4	BLM	no	---
T4S R6E S27 NW4	BLM 95	no	---
T4S R6E S27 NW4	BLM 95	no	---

Location:
Ca 7 miles SE of Grasmere, east of Marys Creek, and 0.5 mile ENE of Dans Place.

Survey Date: First Observed: 1990-08-15 Last Observed: 1995-08-24

EORANK: C
EORANK Comments:

Population Data:
1990: Ca 8000 individuals, all dormant. Observation by John Doremus, Boise District BLM. 1995: Less than 500 plants. Observation by Pat Ryan and Steve Jirik, Boise District BLM.

Habitat Description:
Playa is flat with a covering of water rounded basalt cobbles. The area around the playa is covered by *Artemisia tridentata wyomingensis* and *Poa sandbergii*. The playa is overgrown with *Chrysothamnus viscidiflorus*. Some *Artemisia tridentata* ssp. *wyomingensis* is also on the playa.

Minimum Elevation: 5210 feet Maximum Elevation: feet Size: 3000 SQ M

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Boise District BLM site #52. Water claim #5101681300-21.

Protection Comments:
The grass around the playa is heavily grazed, but there is no visible disturbance to the playa.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 087

Survey Site Name: MOUNTAIN HOME AIR FORCE BASE

County: Elmore

USGS quadrangle: CRATER RINGS SE

Latitude: 430353N Longitude: 1155047W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
004S005E 22 BO SE4NW4

Location:
NE corner of Mountain Home AFB, open area about 0.23 mile SE of the new hospital.

Survey Date: First Observed: 1990-10 Last Observed: 1990-10

EORANK:
EORANK Comments:

Population Data:
1990: Roughly 100 individuals. Observation by Rosemary Thompson, SAIC, and Roger Rosentreter, Idaho State BLM.

Habitat Description:
Playa.

Minimum Elevation: 3025 feet Maximum Elevation: feet Size: 0.39 AC

Land Owner/Manager:
MOUNTAIN HOME AIR FORCE BASE

Ownership Comments:
Mountain Home AFB.

Comments:

Protection Comments:
A little-used dirt road crosses this playa, but appears to have minimal effect on the population. Russian thistle is becoming established on the playa.

Appendix 3

Results of Idaho playa inventory - Owyhee Uplands.

Survey Date: 1993-05-12

First Observed: 1993-05-10

EORANK: C
EORANK Comments:

Population Data:

1987: Subjective estimate of abundance is good to fair. Monitoring plot established by Boise District BLM personnel. 1993: >500 vegetative genets in early bud. Good size class distribution. Vigor of the population assessed as good. The area was thoroughly surveyed by Bob Moseley, Idaho CDC. 1995-06-08: Ca 1000+ genets in flower. Population age class structure is 5% seedlings, 5% immature, and 90% mature. Population vigor assessed as fair. Observation on a cursory visit by Dale Dunn, Boise District BLM. 1995-10-25: Several hundred dormant plants. Plants produced seed in 1995. Population is unevenly distributed over the plays. Observation by Jay Weaver and Ellen Clark, Idaho Army National Guard.

Habitat Description:

Hard-bottom plays with basalt cobbles and no associated species. Some *Salsola kali* has invaded, but at a low density.

Minimum Elevation: 2975 feet Maximum Elevation: feet Size: 1 AC

Land Owner/Manager:
BRUNEAU RA
ORCHARD TRAINING AREA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:

Protection Comments:

Site is within the Orchard National Guard Training Area but is off limits to military use. Livestock grazing is a possible threat.

Management Comments:

Boise District BLM monitoring plot #37. Site is monitored for population trend.

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 090

Survey Site Name: BULL CAMP ENE

County: Owyhee

USGS quadrangle: BULL CAMP BUTTE

Latitude: 420213N Longitude: 1164417W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
016S003W 18 BO NE4NW4

Location:

Y - P Desert, ca 0.5 air mile ENE of Bull Camp on the South Fork Owyhee River.

Survey Date: First Observed: 1993-05-10 Last Observed: 1993-05-10

EORANK: B
EORANK Comments:

Population Data:

1993: >1000 vegetative genets. Observation was made on a cursory visit by Susan Bernatas, SAIC. Population vigor assessed as good.

Habitat Description:

Hard bottom clay plays. *Lepidium davisii* found mostly on edge of pool, less in the center. Rocks and cobbles found in drying cracks in the north side of plays. South end of plays is more "clay bottom" in nature rather than "stone-net pattern." North end of pool contains water and *L. davisii* is not present.

Minimum Elevation: 5180 feet Maximum Elevation: feet Size: 20 AC

Land Owner/Manager:
OWYHEE RA
OWYHEE RIVER BIGHORN SHEEP HABITAT ACEC

Ownership Comments:
Boise District BLM, Owyhee RA

Battle Creek Lakes T13S R1WS23 SE4	CDC 95 (air)	no	---
Battle Creek Lakes T13S R1WS27 NE4	CDC 95 (air)	no	---

BEAVER CHARLIE BREAKS QUAD

Oregon Lake T13S R6WS10NW4	CDC 95 (air)	no	---
T13S R6W S11 E2	CDC 95 (air)	no	---
Bull Lake T13S R6W S26NE4	CDC 95 (air)	no	---
T13S R6W S2 NE4	CDC 95 (air)	no	---

BIG HORSE BASIN GAP QUAD

T9S R4E S18 SE4	BLM 95	yes	094
T9S R4E S17 NE4	BLM 95	no	---

BLACKSTONE RESERVOIR QUAD

T11S R6E S4 SE4	BLM 95	yes	066
T11S R5E S26NW4	BLM 95	yes	067
T11S R5E S35 SE4	BLM 95	yes	127
T11S R5E S35 SE4	BLM 95	yes	127
T11S R5E S11 NE4	BLM 95	yes	128
T12S R6E S7 SW4	BLM 95	yes	132
T12S R6E S7 SW4	BLM 95	yes	132
T12S R6E S8 SW4	BLM 95	yes	131
T12S R6E S17NW4	BLM 95	yes	130
T12S 6E S9 SW4	BLM 95	yes	129
T11S R6E S8 NW4	BLM 95	yes	140
T11S R6E S8 NW4	BLM 95	yes	140
T11S R6E S8 SW4	BLM 95	yes	140
T11S R6E S8 SW4	BLM 95	yes	140
T11S R6E S4 SE4	BLM 95	yes	139
T11S R6E S8 SE4	BLM 95	yes	140
T11S R6E S8 SE4	BLM 95	yes	140

Location:

Y - P Desert, ca 2.25 air miles SE of Coyote Hole in 3 small playas near the canyon rim of South Fork Owyhee River.

Survey Date: First Observed: 1993-05-10 Last Observed: 1993-05-10

EORANK: A
EORANK Comments:

Population Data:

1993: 3 vernal pools containing a total of >2500 genets, 99% vegetative, 1% in flower. Observation by Susan Bernatas, SAIC. Population vigor assessed as good. Diameter size from 2 cm to 8 cm.

Habitat Description:

3 vernal stone-net clay playas. Associated with *Lomatium macrophyllum*, *Atriplex spinosa*, and *Astragalus* sp.

Minimum Elevation: 5180 feet Maximum Elevation: 5190 feet Size:

Land Owner/Manager:

STATE LAND WITHIN Owyhee COUNTY
Owyhee River Bighorn Sheep Habitat ACEC

Ownership Comments:
State land.

Comments:

Protection Comments:

Population occurs in very small shallow pools that dry easily so they are not used by cattle. Minor amount of grazing in the area. Owyhee River Bighorn Sheep Habitat ACEC.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 093

Survey Site Name: GRASMERE RESERVOIR SOUTH

County: Owyhee

USGS quadrangle: GRASMERE RESERVOIR

Latitude: 422033N Longitude: 1155338W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
012S005E	32	B0	N2

Location:

0.25 air mile SE of Grasmere Reservoir, on the west side of Grasmere Reservoir Road, 0.4 mile NW of the intersection with State Route 51. Also along the S side of the road near the S end of the reservoir.

Survey Date: First Observed: 1993-06-09 Last Observed: 1995-06-20

EORANK: CD

EORANK Comments: Overall site quality is fair along Grasmere Reservoir Road and poor at the S end of the reservoir.

Population Data:

1993: >500 genets in flower. Population vigor assessed as poor. Observation was made on a cursory visit by John Doremus, Boise District BLM. 1995: Ca 21 genets, 5% vegetative and 95% in flower, at a small plays at the S end of the reservoir. Population age class structure is 95% mature and 5% unknown. Population vigor assessed as poor. Observation on a cursory visit by Del Bale, Boise District BLM.

Habitat Description:
2 small playas.

Minimum Elevation: 5210 feet Maximum Elevation: feet Size: 1 + AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

T15S R4E S3 NE4	BLM 95	no	---
T15S R5E S5 NW4	BLM 95	no	---
T15S R5E S6 NE4	BLM 95	no	---

BULL BASIN CAMP QUAD

T13S R5W S21SW4	BLM 95	no	---
T13S R5W S21SW4	CDC 95 (air)	no	---
T13S R5W S21SW4	CDC 95 (air)	no	---
T13S R5W S21SW4	CDC 95 (air)	no	---
T13S R5W S21 SE4	CDC 95 (air)	no	---
T13S R5W S21 SE4	CDC 95 (air)	no	---
T13S R5W S21 SE4	CDC 95 (air)	no	---
T13S R5W S21 SE4	CDC 95 (air)	no	---
T13S R6W S1 S2 & S12 N2 -numerous	CDC 95 (air)	no	---

BULL CAMP BUTTE QUAD

T16S R3WS25NW4	CDC 95	yes	030
T16S R3WS24NW4	CDC 95	yes	027
T16S R3WS24NW4	CDC 95	yes	027
T16S R3WS13 SW4	CDC 95	yes	027
T16S R3WS13 SW4	CDC 95	yes	027
T16S R3W S20 SE4	unchecked		
T16S R3W S18 SE4	CDC 95	yes	021
T16S R3W S18NE4	CDC 95	yes	021
T16S R3WS18NW4	BERNATAS 93	no	---
T16S R3WS18NW4	BERNATAS 93	no	---
T16S R3WS18NW4	BERNATAS 93	yes	090
T16S R3W S7 SW4	BERNATAS 93	yes	091
T16S R3W S7 SW4	BERNATAS 93	no	---

BUSTER BUTTE QUAD

T13S R5E S21 SE4	BLM 95	yes	155
T13S R5E S22 SW4	BLM 95	yes	155

2164W Longitude: 1144259W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
013S015E 20 BO NW4NE4SE4

Location:

Plays on the E side of an unimproved road, ca 0.7 air mile SW of Salmon triangulation point, ca 5 air miles NNE of Salmon Falls Dam.

Survey Date: First Observed: 1993-06 Last Observed: 1993-06

EORANK: BC

EORANK Comments: Overall site quality is good to fair.

Population Data:

1993: Ca 1000 ramets observed on a cursory visit by Marc Vinson, Burley District BLM.

Habitat Description:

Plays with no associated species.

Minimum Elevation: 5005 feet Maximum Elevation: feet Size: 1.5 AC

Land Owner/Manager:

SNAKE RIVER RA

Ownership Comments:

Burley District BLM, Snake River RA.

Comments:

Protection Comments:

Area is used for cattle grazing. A pit was been dug in the plays for stock water sometime between 1957 and 1977. Probably due to the general lack of water in the pit, cattle don't concentrate for long and therefore the plants are doing fairly well.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 096

Survey Site Name: MIDDLE OF NOWHERE - NORTH

County: Owyhee

USGS quadrangle: COYOTE HOLE

Latitude: 420320N Longitude: 1164535W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
016S004W 01 BO SE4SW4SW4

Location:

W rim of the South Fork Owyhee River Canyon. Ca 1.6 air miles NNW of Bull Camp and ca 2.9 air miles N of Bull Camp Reservoir.

Survey Date: 1995-08-12 First Observed: 1995-08-12 Last Observed: 1995-08-12

EORANK: A

EORANK Comments:

Population Data:

1995: Undisturbed plays with ca 2000 genets in fruit. All age classes represented. Area thoroughly surveyed by Bob Moseley, Idaho CDC, and Susan Bernatas, SAIC.

Habitat Description:

Dry, flat lake bed with large rocks arranged in polygonal nets around clay centers. Surrounded by Artemisia tridentata wyomingensis uplands.

Minimum Elevation: 5140 feet Maximum Elevation: feet Size: 2 +- AC

Land Owner/Manager:

OWYHEE RA

Ownership Comments:

CAVE DRAW QUAD

Monument Lake T12S R6E S2 NE4	BLM 95	yes	164
T12S R6E S2 SE4	BLM 95	yes	163
T12S R6E S11 NE4	BLM 95	yes	163
T12S R7E S17 SE4	BLM 95	yes	162
T12S R6E S14 SE4	BLM 95	yes	161
T12S R6E S11 SW4	BLM 95	yes	160
T11S R6E S23 SE4	BLM 95	yes	159
Catholic Lake T12S R7E S6 SE4	BLM 95	no (extirpated)	ex003
T12S R7E S6 SW4	BLM 95	yes	003
T12S R7E S6 SW4	BLM 95	yes	003
Barinaga Lake T12S R6E S13 SE4	BLM	yes	004
T11S R6E S22 SE4	BLM 95	yes	032
T11S R6E S3 SE4	unchecked		
T11S R6E S11NW4	unchecked		
T11S R6E S28 SE4	unchecked		
T11S R7E S9 NE4	unchecked		
T11S R7E S17NW4	unchecked		
T12S R6E S1 NW4	unchecked		
T12S R6E S1 SW4	unchecked		
T12S R6E S11 SW4	unchecked		
T12S R6E S11 SE4	unchecked		

CLOVER BUTTE SOUTH QUAD

T12S R9E S31 SE4	unchecked		
T12S R9E S31NW4	unchecked		

COWAN RESERVOIR QUAD

T16S R8E S16 SW4	CDC 95	no	---
T15S R8E S17 NE4	CDC 95	no	---
T15S R7ES26 NW4	unchecked		

Location:
W rim of the South Fork Owyhee River Canyon. Ca 1.5 air miles W of Bull Camp and ca 1.4 air miles NNW of Bull Camp Reservoir.

Survey Date: 1995-08-11 First Observed: 1995-08-11 Last Observed: 1995-08-11

EORANK: B
EORANK Comments:

Population Data:
1995: Undisturbed plays with ca 4000 genets in fruit. All age classes represented. Area thoroughly surveyed by Susan Bernatas, SAIC.

Habitat Description:
Clay lake bed with polygonal cobble nets.

Minimum Elevation: 5160 feet Maximum Elevation: feet Size:

Land Owner/Manager:
OWYHEE RA

Ownership Comments:
Boise District BLM, Owyhee RA.

Comments:

Protection Comments:

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 099

Survey Site Name: HALOGETON FLAT - SOUTH END

County: Owyhee

USGS quadrangle: STAR VALLEY

Latitude: 420716N Longitude: 1165308W

TOWNRANGE: SECTION: MERIDIAM: TRSNOTE:
015S005W 14 80 NE4

Location:
8 small plays on Halogeton Flat. E rim of the Little Owyhee River Canyon. Ca 3 air miles SSW of the confluence with the South Fork Owyhee River.

Survey Date: First Observed: 1995-08-11 Last Observed: 1995-08-11

EORANK: A
EORANK Comments:

Population Data:
1995: Ca 50,000+ genets in fruit on 8 small plays. All age classes represented. Area thoroughly surveyed by Susan Bernatas, SAIC.

Habitat Description:
Dry lake beds with rock nets developed in clay polygons. Associated with a few widely scattered *Atriplex confertifolia*. On a flat mesa surrounded by *Artemisia tridentata wyomingensis* uplands.

Minimum Elevation: 5230 feet Maximum Elevation: feet Size: 3 AC OR LESS

Land Owner/Manager:
OWYHEE RA
OWYHEE RIVER BIGHORN SHEEP HABITAT ACEC

Ownership Comments:
Boise District BLM, Owyhee RA.

Comments:

T16S R2W S25 SE4	CDC 95	no	---
T16S R2W S25 SE4	CDC 95	no	---
T16S R2W S25 SE4	CDC 95	no	---
T16S R2W S25 SE4	CDC 95	no	---
T16S R2W S25 SE4	CDC 95	no	---
T16S R2W S25 SE4	CDC 95	no	---
T16S R2W S25 SE4	CDC 95	no	---
T16S R2W S25 SE4	CDC 95	no	---

GRASMERE QUAD

T12S R5E S17 SE4	BLM 95	yes	114
T11S R5E S28 SW	BLM 95	yes	115
T11S R5E S6 SE4	unchecked		
T11S R5E S28 SE4	BLM 95	no	---
T11S R5E S28 SE4	BLM 95	no	---
T11S R5E S28 SW4	BLM	no	---
T11S R5E S28 SW4	BLM	no	---
T11S R5E S28 SW4	BLM	no	---
T11S R5E S28 SW4	BLM	no	---
T11S R5E S28 SW4	BLM	no	---
T11S R5E S29 NE4	BLM 95	no	---
T12S R5E S6 SW4	BLM 95	no	---
T12S R5E S7 SE4	BLM 95	no	---

GRASMERE RESERVOIR QUAD

T13S R5E S4 NW4	BLM 95	yes	076
T13S R5E S4 NW4	BLM 95	yes	076
T13S R5E S4 NW4	BLM 95	yes	076
T12S R5E S32NW4	BLM 95	yes	093
T12S R4E S28 SE4	BLM 95	no	---
T13S R4E S26NW4	BLM 95	no	---
T13S R4E S27 SW4	BLM 95	no	---
T13S R4E S27 SW4	BLM 95	no	---
T12S R5E S30NW4	BLM 95	no	---

Survey Date: 1995-08-12 First Observed: 1995-08-12

Last Observed: 1995-08-12

EORANK: B
EORANK Comments:

Population Data:

1995: Undisturbed plays with ca 1000 genets in fruit. All age classes represented in a moderate density population. Area thoroughly surveyed by Bob Moseley, Idaho CDC, and Susan Bernatas, SAIC.

Habitat Description:

Flat, dry lake bed with cobble nets. Surrounded by *Artemisia tridentata wyomingensis* uplands.

Minimum Elevation: 5150 feet Maximum Elevation: feet Size: 1 AC

Land Owner/Manager:
Owyhee RA

Ownership Comments:
Boise District BLM, Owyhee RA.

Comments:

Protection Comments:

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 102

Survey Site Name: HALOGETON FLAT - NORTH END

County: Owyhee

USGS quadrangle: SPRING CREEK BASIN

Latitude: 420823N Longitude: 1165257W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
015S005W	11	BO	NE4NE4
015S005W	12	BO	center W2W2SW4

Location:

North end of Halogeton Flat, ca 2 air miles SSW of the confluence of the Little Owyhee River and the South Fork Owyhee River.

Survey Date: 1995-08-14 First Observed: 1995-08-14 Last Observed: 1995-08-14

EORANK: B
EORANK Comments:

Population Data:

1995: Ca 2000 total genets in fruit at 4 small plays. All age classes represented. Area thoroughly surveyed by Bob Moseley, Idaho CDC.

Habitat Description:

Dry lake bed with cobble nets developed around polygons of clay. Associated with *Chrysothamnus nauseosus* and *Atriplex confertifolia*. Surrounded by *Artemisia tridentata wyomingensis* uplands.

Minimum Elevation: 5220 feet Maximum Elevation: feet Size: 2 AC

Land Owner/Manager:
Owyhee RA
Owyhee River Bighorn Sheep Habitat ACEC

Ownership Comments:
Boise District BLM, Owyhee RA.

Comments:

Protection Comments:

Minor cow trailing is evident at the plays. Area is within the Owyhee River Bighorn Sheep Habitat ACEC.

INDIAN HOT SPRINGS QUAD

Cedar Tree Trail Lakes T13S R7E S30 NW4	CDC 95, BLM 95	yes	108
Cedar Tree Trail Lakes T13S R7E S30 SW4	CDC 95, BLM 95	yes	108
Cedar Tree Trail Lakes T13S R7E S31 NW4	CDC 95, BLM 95	yes	108
T13S R6E S22 SW4	BLM 95	yes	083
T13S R6E S23NW4	BLM 95	yes	001
T13S R6E S27NW4	BLM 95	yes	031
T13S R6E S27NW4	BLM 95	yes	031
T13S R6E S27NW4	BLM 95	yes	031
T13S R6E S27NW4	BLM 95	yes	031
T13S R6E S27NW4	BLM 95	yes	031
Twin Lakes T13S R6E S35NW4	BLM 95	yes	081
T13S R6E S35NW4	BLM 95	yes	081
T13S R6E S35NW4	BLM 95	yes	081
T13S R6E S26 SW4	BLM 95	yes	081
T13S R6E S26 SW4	BLM 95	yes	081
T13S R6E S26 SW4	BLM 95	yes	081
T13S R6E S26 SW4	BLM 95	yes	081
T13S R6E S26 SW4	BLM 95	yes	081
Long Lake T13S R6E S23NW4	BLM 95	yes	001
T13S R6E S22 NE4	BLM 95	yes	002
T13S R6E S27 NE4	BLM 95	yes	082
T13S R6E S27 NE4	BLM 95	yes	082
T13S R6E S27 SE4	BLM 95	yes	082
T13S R6E S26 SE4	BLM 95	yes	081
T13S R6E S26 SE4	BLM 95	yes	081
T13S R6E S26 SE4	BLM 95	yes	081
T13S R6E S23 SW4	BLM 95	yes	080
T13S R6E S23 SW4	BLM 95	yes	080
T13S R6E S22 SE4	BLM 95	yes	080

EORANK: B
EORANK Comments:

Population Data:
1995: Ca 2000 genets in fruit. All age classes represented in this moderately dense population on an undisturbed plays. Area thoroughly surveyed by Bob Moseley, Idaho CDC.

Habitat Description:
Dry lake bed surrounded by *Artemisia tridentata wyomingensis* uplands. A few widely scattered *Atriplex confertifolia* on the lake bed.

Minimum Elevation: 5220 feet Maximum Elevation: feet Size: 1 AC

Land Owner/Manager:
Owyhee RA

Ownership Comments:
Boise District BLM, Owyhee RA.

Comments:

Protection Comments:
Minor cow trailing is evident on the plays.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 105

Survey Site Name: CENTER OF NOWHERE - WEST

County: Owyhee

USGS quadrangle: STAR VALLEY KNOLL

Latitude: 420412N Longitude: 1170125W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
015S006W	34	80	S2

Location:
Ca 0.25 mile S of Tent Creek, a few feet E of the Oregon border.

Survey Date: 1995-08-12 First Observed: 1995-08-12 Last Observed: 1995-08-12

EORANK: A
EORANK Comments:

Population Data:
1995: Total of ca 3000+ genets in flower at 2 small plays. Population around outer edge of the southern plays is large and dense. Area thoroughly surveyed by Bob Moseley, Idaho CDC.

Habitat Description:
2 dry lake beds surrounded by *Artemisia tridentata wyomingensis* uplands. *Atriplex confertifolia* is a prominent but widely scattered associate on the plays.

Minimum Elevation: 5270 feet Maximum Elevation: feet Size: 4 AC

Land Owner/Manager:
Owyhee RA

Ownership Comments:
Boise District BLM, Owyhee RA.

Comments:

Protection Comments:

Management Comments:

T16S R1WS29NW4	BLM 95	no	---
T16S R1W S27 SE4	BLM 95	no	---
T16S R1W S27 SE4	BLM 95	no	---

LITTLE BLUE TABLE QUAD

T13S R4E S7 W2	CDC 95 (air)	no	---
T13S R4E S29 NE4	unchecked		
T13S R4E S19 SW4	unchecked		

LOST VALLEY QUAD

T12S R2E S7 SW4	CDC 95 (air)	no	---
T12S R1E S15 NE4	BLM	no	---
T12S R1E S4 NW4	BLM 95	no	---
T12S R1E S4 NW4	BLM 95	no	---

O X LAKE QUAD

T8S R2E S32 NW4	CDC 95 (air)	no	---
Twin Lakes T9S R2E S5 SE4	CDC 95 (air)	no	---
Twin Lakes T9S R2E S9 NW4	CDC 95 (air)	no	---
O X Lake T9S R2E S16 SE4	CDC 95 (air)	no	---

PIUTE BASIN WEST QUAD

T14S R3W S7 SW4	Bernatas 92, BLM95	no	---
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POISON BUTTE QUAD

T15S R9E S4 NE4	needs recheck	---	---
T15S R9E S6 SW4	BLM 95	no	---

RED BASIN QUAD

T13S R4W S21NE4	Bernatas 92, BLM95	no	---
T13S R4W S21NE4	Bernatas 92, BLM95	no	---
T13S R4W S21NE4	Bernatas 92	no	---

Population Data:

1995: 5 playas. 10,000+ genets at each of the 3 large playas. Populations are very dense and vigor appears to be good. Ca 300-1000 genets at each of the smaller playas. The playas were mostly filled with water on 6/12 and no plants were visible at the East Inside Lake. On 9/16 the playas were dry and the plants were 35% in fruit and 65% dormant. Observations on surveys by Bob Moseley, Idaho CDC, on 6/12 and Jim Klott, Boise District BLM, Jarbidge RA, on 9/16.

Habitat Description:

Hard-bottom playas with no associated species. Soils: light colored clay/silt. Aspect: northern. Species adjacent to the playas include Astragalus calycosus, Grayia spinosa, Artemisia tridentata, Atriplex confertifolia, Poa secunda, Hordeum jubatum, and Alyssum desertorum.

Minimum Elevation: 4790 feet Maximum Elevation: 4860 feet Size: 165 + AC

Land Owner/Manager:
JARBIDGE RA

Ownership Comments:
Boise District BLM, Jarbidge RA.

Comments:

Protection Comments:

Several stock ponds have been dug at the three larger playas. The small eastern playa is bisected by a road which has destroyed some plants and habitat. Invasion by annual grasses and weeds is a possible threat.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 108

Survey Site Name: CEDAR TREE TRAIL LAKES

County: Owyhee

USGS quadrangle: INDIAN HOT SPRINGS

Latitude: 421547N Longitude: 1154102W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
013S007E	30	BO	S44, S2S44NW4
013S007E	31	BO	N2NW4

Location:

Cedar Tree Trail Lakes (3 playas), Diamond A Desert. Between the Bruneau Canyon and Long Draw.

Survey Date: 1995-06-13 First Observed: 1995-06-13 Last Observed: 1995-09-16

EORANK: A
EORANK Comments:

Population Data:

1995-06-13: North playa: 10,000+ plants, very dense population, playa is undisturbed. Middle playa: 6,000 plants, low to mostly high density, playa is undisturbed. South playa: 3000 plants, some in standing water, low density, playa receives a little cattle use. Area thoroughly surveyed by Bob Moseley, Idaho CDC.
1995-09-16: 1000+ genets at each of the 3 playas. Plants 35% in fruit and 65% dormant. Population age class structure is 10% immature and 90% mature. Population vigor appears to be good. Observation on a cursory visit by Jim Klott, Boise District BLM, Jarbidge RA.

Habitat Description:

3 hard-bottom playas with no associated species. All had water on 6-13-95. Soils: light colored clay/silt. N aspect. Species adjacent to the playas include Astragalus calycosus, Grayia spinosa, Artemisia tridentata, Atriplex confertifolia, Poa secunda, Hordeum jubatum, and Alyssum desertorum.

Minimum Elevation: 4990 feet Maximum Elevation: feet Size: 43 AC

Land Owner/Manager:
JARBIDGE RA

Ownership Comments:
Boise District BLM, Jarbidge RA.

Comments:

T15S R5W S11NE4	CDC 95	yes	102
T15S R5W S11NE4	CDC 95	yes	102
T15S R5W S11NE4	CDC 95	yes	102
T15S R5WS11NW4	unchecked		
T15S R5W S2 SW4	unchecked		
T15S R5W S2 NW4	unchecked		
T15S R5W S3 E2	CDC 95 (air)	no	---
T14S R5W S34SW4	unchecked		
T14S R5WS34NW4	unchecked		
T14S R5W S19, 20, 29, 30	unchecked - numerous playas observed from air by CDC 95		
T15S R6W S1 SE4	BLM 95	yes	143
T15S R6W S12SW4	BLM 95	yes	144
T15S R6W S12SW4	BLM 95	yes	144
T15S R6W S12SW4	BLM 95	yes	144
T15S R6W S12SW4	BLM95	yes	144
T15S R5W S6 NE4	BLM 95	no	---

STAR VALLEY QUAD

T15S R5W S14NE4	CDC 95	yes	099
T15S R5W S14NE4	CDC 95	yes	099
T15S R5W S14NE4	CDC 95	yes	099
T15S R5W S14NE4	CDC 95	yes	099
T15S R5W S14NE4	CDC 95	yes	099
T15S R5W S14NE4	CDC 95	yes	099
T15S R5W S14NE4	CDC 95	yes	099
T15S R5W S14NE4	CDC 95	yes	099
T16S R5W S20 SE4	CDC 95	yes	100
T16S R5W S3 SW4	CDC 95	yes	010
T15S R6W S25NE4	CDC 95	no	---
T16S R5W S30NE4	BLM 95	yes	146
T16S R6W S13NE4	BLM 95	yes	145

010S007E 14

MERIDIAN: TRSNOTE:
BO

Location:

Inside Desert, Twin Lakes. 3 playas (E and W Twin Lakes and a small playa to the south) between Clover Creek and the Bruneau River.

Survey Date: 1995-06-21 First Observed: 1995-06-21 Last Observed: 1995-06-21

EORANK: B
EORANK Comments:

Population Data:

1995: Area thoroughly surveyed by Bob Moseley, Idaho CDC. E Twin Lake: very low density - ca 500 plants. Cattle trail across playa. No reservoir. W Twin Lake: very low density - ca 500 widely scattered plants. Cattle trailing throughout. 2 reservoirs gouged out of the playa destroying some habitat. Extraordinary number of seedlings. Playa S of Twin Lakes: moderate density - ca 1000 plants. Playa is undisturbed.

Habitat Description:

Hard-bottom playas with no associated species. No water observed except at reservoirs at W Twin Lake.

Minimum Elevation: 4010 feet Maximum Elevation: 4020 feet Size:

Land Owner/Manager:
JARBIDGE RA

Ownership Comments:
Boise District BLM, Jarbidge RA.

Comments:

Protection Comments:

Both Twin Lakes disturbed by cattle trailing. 2 reservoirs gouged out of W Twin Lake. Small playa S of Twin Lakes is undisturbed.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 111

Survey Site Name: COUGAR SPRING NNE

County: Owyhee

USGS quadrangle: THE ARCH

Latitude: 421350N Longitude: 1153320W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
014S008E	06	BO	S2S2SE4
014S008E	07	BO	NW4NE4NE4

Location:

Diamond A Desert; two playas ca 1.1 air miles WSW of the confluence of Cougar Creek (Arch Canyon) and the Jarbidge River. Ca 0.75 air miles NNE of Cougar Spring.

Survey Date: 1995-06-13 First Observed: 1995-06-13 Last Observed: 1995-09-16

EORANK: A
EORANK Comments:

Population Data:

1995-06-13: 2 playas, both with standing water. Ca 4000 genets at the southern playa and ca 3000 genets at the northern playa. Populations are mostly very dense. Area surveyed by Bob Moseley, Idaho CDC. 1995-09-16: Playas are dry. Plants 35% in fruit and 65% dormant. Population age class structure is 10% immature and 90% mature. Population vigor appears to be good. Observation on a cursory visit by Jim Klott, Boise District BLM, Jarbidge RA.

Habitat Description:

2 hard-bottom playas with no associated species. Soils: light colored clay/silt. Aspect: northern. Species adjacent to the playas include *Astragalus calycosus*, *Grayia spinosa*, *Artemisia tridentata*, *Atriplex confertifolia*, *Poa secunda*, *Hordeum jubatum*, and *Alyssum desertorum*.

Minimum Elevation: 5040 feet Maximum Elevation: feet Size: 4 AC OR LESS

TABLE BUTTE

T10S R6E S32 SE4	BLM 95	yes	123
T10S R6E S32 SE4	BLM 95	yes	123
T10S R6E S32 SE4	BLM 95	yes	123
T11S R6E S5 NW4	BLM 95	yes	124
T11S R6E S5 NW4	BLM 95	yes	124
T10S R6E S30 SE4	BLM 95	yes	167
T10S R6E S30 SE4	BLM 95	yes	167
T10S R6E S23NW4	BLM 95	yes	012
T10S R6E S28NW4	BLM 95	yes	165
T10S R6E S29 NE4	BLM 95	yes	166
T10S R6E S20NW4	unchecked		

THE ARCH QUAD

T15S R8ES16 NW4	CDC 95	no	---
T14S R8E S33 SW4	CDC 95, BLM 95	no	---
T14S R7E S1 SW4	CDC 95, BLM 95	yes	112
T14S R8E S6 SW4	CDC 95, BLM 95	yes	111
T14S R8E S6 SW4	CDC 95, BLM 95	yes	111
Rocky Lake T14S R7E S15 SW4	CDC 95, BLM 95	yes	113
T15S R7ES10 NW4	CDC 95	no	---
T14S R8E S6 SW4	BLM 95	yes	112

TRIANGLE RESERVOIR QUAD

T7S R2W S14 SW4	CDC 95 (air)	no	---
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TRIGUERO LAKE QUAD

T11S R7E S8 NW4	CDC 95, BLM 95	yes	109
T14S R7E S20 NE4	BLM 95	yes	120
T14S R6E S23 SW4 Upper Twin Lakes	BLM 95	yes	016
T14S R6E S22 SE4 Upper Twin Lakes	BLM 95	yes	015
T14S R5E S36 SE4	BLM 95	yes	074

County: Owyhee

USGS quadrangle: THE ARCH

Latitude: 421228N Longitude: 1163654W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
014S007E 15 80 center N2N2SE4

Location:
Diamond A Desert, Rocky Lake. Ca 3.6 air miles W of The Arch.

Survey Date: 1995-09-13 First Observed: 1995-06-13 Last Observed: 1995-09-16

EORANK: B
EORANK Comments:

Population Data:
1995-06-13: Ca 500 plants. Low density population on one side of the playa. Standing water on a portion of the playa. Area surveyed by Bob Moseley, Idaho CDC. 1995-09-16: Playa is dry. Plants 35% in fruit and 90% mature. Population vigor appears to be good. Observation on a cursory visit by Jim Klott, Boise District BLM, Jarbidge RA.

Habitat Description:
Hard-bottom playa with no associated species. Soils: light colored clay/silt. Aspect: northern. Species adjacent to the playa include *Astragalus calycosus*, *Grayia spinosa*, *Artemisia tridentata*, *Atriplex confertifolia*, *Poa secunda*, *Hordeum jubatum*, and *Alyssum desertorum*.

Minimum Elevation: 5430 feet Maximum Elevation: feet Size: 3 AC

Land Owner/Manager:
JARBIDGE RA

Ownership Comments:
Boise District BLM, Jarbidge RA.

Comments:

Protection Comments:
Playa receives some grazing use. Invasion by annual weeds and grasses is a possible threat.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 114

Survey Site Name: GRASHERE WEST

County: Owyhee

USGS quadrangle: GRASHERE

Latitude: 422237N Longitude: 1155328W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
012S005E 17 80 S2SW4SE4
012S005E 20 80 N2NW4NE4

Location:
Ca 0.4 mile W of Grasmere and State Route 51. Between China Creek and Louse Creek.

Survey Date: First Observed: 1995-07-21 Last Observed: 1995-07-21

EORANK: B
EORANK Comments:

Population Data:
1995: Ca 5000 mature plants, 50% in flower and 50% in fruit. Population vigor assessed as good. Observation on a cursory visit by Dale Dunn, Boise District BLM.

Habitat Description:
Playa covered with lava rock.

WINTER CAMP QUAD

Twin Lakes T10S R7E S14 NE4	CDC 95	yes	110
Twin Lakes T10S R7E S14 NW4	CDC 95	yes	110
T10S R7E S10 SE4	CDC 95	no	—
T10S R7E S14 SW4	CDC95	yes	110

USGS quadrangle: ANTELOPE CREEK

Latitude: 421447N Longitude: 1154810W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
013S006E 31 B0 SU4S44

Location:

Ca 2 air miles W of the Eastman Place and Sheep Creek. Ca 0.2 mile W of Grasmere - Butte Mtn. Road (name not on topo map). Ca 3.8 air miles N of Antelope Creek Reservoir.

Survey Date: First Observed: 1995-08 Last Observed: 1995-08

EORANK: C
EORANK Comments:

Population Data:

1995: Ca 100 genets, 5% vegetative, 1% in flower, 90% in fruit, and 4% dormant. Population age class structure is 4% seedlings, 9% immature, 85% mature, and 2% senescent. Population vigor assessed as fair. Observation on a cursory visit by John Doremus, Boise District BLM.

Habitat Description:

Playa is very small and sits close to the road. Soil texture is silty to clay. Light regime is good. Species outside the plays include *Artemisia tridentata tridentata*, *Bromus tectorum*, *Chrysothamnus* sp., and *Sitanion hystrix*.

Minimum Elevation: 5174 feet Maximum Elevation: feet Size: 1 AC OR LESS

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:

Protection Comments:
No sign of cattle use.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 117

Survey Site Name: SHEEP/CAT CONFLUENCE NORTH

County: Owyhee

USGS quadrangle: ANTELOPE CREEK

Latitude: 421047N Longitude: 1154607W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
014S006E 29 B0 center E2E2

Location:

Playa ca 0.8 air miles NW of the confluence of Sheep Creek and Cat Creek. Ca 2.4 air miles ESE of Antelope Creek Reservoir.

Survey Date: First Observed: 1995-06-23 Last Observed: 1995-06-23

EORANK: B
EORANK Comments:

Population Data:

1995: Hundreds of genets in flower. Population vigor assessed as good. Observation on a cursory visit by A. Jossie, Boise District BLM.

Habitat Description:

Rocky playa. Silty loam soil. No associated species.

Minimum Elevation: 5290 feet Maximum Elevation: feet Size: 0.5 AC

Land Owner/Manager:

Appendix 4

Occurrence information for Oregon populations of *Lepidium davisii*.

Latitude: 4212430

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
014S007E 17 80 center NW4

Location:

Diamond A Desert, between Long Draw and the Bruneau Canyon. Ca 1.2 air miles E of the Bruneau Canyon rim and 1.7 air miles W of Long Draw. Ca 2.3 air miles NNE of the Frank Triguero Homestead.

Survey Date: First Observed: 1995-09-16 Last Observed: 1995-09-16

EORANK: B
EORANK Comments:

Population Data:

1995: 1 plays with ca 1000+ genets, 35% in fruit and 65% dormant. Population age class structure is 10% immature and 90% mature. Population vigor appears to be good. Observation on a cursory visit by Jim Klott, Boise District BLM, Jarbidge RA.

Habitat Description:

Soils: light colored clay/silt. Dry plays. N aspect, flat slope. No associated species in the plays. Adjacent to the plays are *Astragalus calycosus*, *Grayia spinosa*, *Artemisia tridentata*, *Atriplex confertifolia*, *Poa secunda*, *Hordeum jubatum*, and *Alyssum desertorum*.

Minimum Elevation: 5250 feet Maximum Elevation: feet Size: 1 AC

Land Owner/Manager:
JARBIDGE RA

Ownership Comments:
Boise District BLM, Jarbidge RA.

Comments:

Protection Comments:

Introduced annual grasses and weeds are a possible threat. There is little evidence of livestock use in the area.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 120

Survey Site Name: FRANK TRIGUERO HOMESTEAD NE

County: Owyhee

USGS quadrangle: TRIGUERO LAKE

Latitude: 421145N Longitude: 1153925W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
014S007E 20 80 center SW4NE4

Location:

Diamond A Desert, between upper Long Draw and the Bruneau Canyon. Ca 1.6 air miles NE of the Frank Triguero Homestead.

Survey Date: First Observed: 1995-09-16 Last Observed: 1995-09-16

EORANK: B
EORANK Comments:

Population Data:

1995: 1 plays with ca 1000+ genets, 35% in fruit and 65% dormant. Population age class structure is 10% immature and 90% mature. Population vigor appears to be good. Observation on a cursory visit by Jim Klott, Boise District BLM, Jarbidge RA.

Habitat Description:

Dry plays with light colored clay/silt soil. N aspect, flat slope. No associated species in the plays. Adjacent species include *Astragalus calycosus*, *Grayia spinosa*, *Artemisia tridentata*, *Atriplex confertifolia*, *Poa secunda*, *Hordeum jubatum*, and *Alyssum desertorum*.

Minimum Elevation: 5240 feet Maximum Elevation: feet Size: 5 AC

NAME: LEPIDIUM DAVISII
 COMMON NAME: DAVIS' PEPPERGRASS
 EO-CODE: PDBRA1M080*001 LAST OBS: 1986-06-19 FED STATUS: C2
 COUNTY(s): MALHEUR FIRST OBS: 1976 STATE STATUS: PT
 QUAD NAMES: TWELVEMILE RIDGE LAT: 422810N SIZE: 0
 PHYSIOGRAPHIC PROV: BR LONG: 1180205W MINELEV (Feet): 4400
 T-R-S: 035S038E 28,27 QUADCODE: 4211841 MAXELEV (Feet):
 T-R-S COMMENTS: SW4SW4 SEC 28; SE4SE4 SEC 27 PRECISION: S 61
 EO-RANK/COMM: A :
 DIRECTIONS: PLAYA SE OF COYOTE LAKE. NORTH OF WHITEHORSE ROAD.
 DESCRIPTION: HARD CLAY-BOTTOMED PLAYA WHERE WATER STANDS IN WINTER AND SPRING. WET CLAY, WITH LITTLE ALKALI RIME VISABLE.
 EO-DATA: PACKARD 1979 BLM UPDATE; ALSO P STOEL 77 SIGHTING (ONHP), PACKARD COLLECTION #76-187, 7/5/76, CIC; AND SEYER 1976 SIGHTING (ONHP). VANDERSHAFF AND JOYAL PLAYA SITING, 1986 IN FLOWER, BETWEEN 250-500 PLANTS SEEN. APPARENTLY STABLE.
 EOTYPE:
 COMMENTS: JOYAL COLLECTION, 1986, OSC. ALSO SEEN BY MCCAFFERY, 6/11/86.
 ANNUAL OBSERVATION:
 OWNER: SOUTH MALHEUR RA
 OWNER COMM: BLM VALE DISTRICT
 MANAGED AREA: VALE BLM DISTRICT
 JORDAN RESOURCE AREA
 MANAGE COMM:
 PROT COMM: POSSIBLY THREATENED BY WILD HORSE WATERING (S.MACCAFFREY)
 BEST SOURCE: PACKARD P. 1979. BLM-VALE. RTE PL SURVEY 1979 UPDATE. JOYAL & VANDERSCHAFF SITING, JOYAL OSC COLLECTION.

NAME: LEPIDIUM DAVISII
 COMMON NAME: DAVIS' PEPPERGRASS
 EO-CODE: PDBRA1M080*002 LAST OBS: 1986-09-10 FED STATUS: C2
 COUNTY(s): MALHEUR FIRST OBS: 1978 STATE STATUS: PT
 QUAD NAMES: PALOMINO LAKE LAT: 425352N SIZE: 4
 PHYSIOGRAPHIC PROV: OU LONG: 1175637W MINELEV (Feet): 4132
 T-R-S: 031S039E 05 QUADCODE: 4211788 MAXELEV (Feet):
 T-R-S COMMENTS: PRECISION: M 1
 EO-RANK/COMM: :
 DIRECTIONS: PALOMINO LAKE
 DESCRIPTION: PLAYA-HARD CLAY, NOW CRACKING; SOME BASALT RUBBLE. PLAYA: ONLY LEDA & HALOGETON, ARTR-ATCO/SIHY SURROUNDING. ALSO W/ATSP. (JOYAL, 1985)
 EO-DATA: ON 9-7-85, MOSTLY PAST FRUIT, 1001-10,000 PLANTS OVER 40+ ACRES. 35% IMMATURE AND 60% MATURE AND 5% SENESCENT (JOYAL, 1985). ALSO COLLECTED BY PAT PACKARD, #78-256, 8-2-78, CIC. ALSO SEEN IN 1986.
 EOTYPE:
 COMMENTS: PACKARD, 1979 BLM-VALE UPDATE REPORT. ALSO SEEN BY JOYAL IN 1985, BLM VALE SIGHTING REPORT. 1986 NOTES, KINDSCHY, BOB.
 ANNUAL OBSERVATION:
 OWNER:
 OWNER COMM: BLM VALE DISTRICT
 MANAGED AREA: VALE BLM DISTRICT
 JORDAN RESOURCE AREA
 MANAGE COMM:
 PROT COMM:
 BEST SOURCE: JOYAL, ELAINE, VALE DISTRICT, BLM

NAME: LEPIDIUM DAVISII
 COMMON NAME: DAVIS' PEPPERGRASS
 EO-CODE: PDBRA1M080*003 LAST OBS: 1991-06-12 FED STATUS: C2
 COUNTY(s): MALHEUR FIRST OBS: 1986 06-12 STATE STATUS: PT
 QUAD NAMES: GRASSY RIDGE WELL LAT: 423745N SIZE: 40
 PHYSIOGRAPHIC PROV: BR LONG: 1180622W MINELEV (Feet): 4175
 T-R-S: 033S037E 36 QUADCODE: 4211861 MAXELEV (Feet):
 T-R-S COMMENTS: SW4 & W2SE4 PRECISION: S 1

Latitude: 423058N Longitude: 1154455W

TOWNRANGE: SECTION:
010S006E 33

MERIDIAN: TRSNOTE:
80 NE4SE4NE4

Location:

Blackstone Desert, ca 1.1 miles N of Blackstone-Grasmere Road. Ca 1.3 air miles ENE of Fivemile Lake and ca 3.1 air miles WSW of Twin Butte.

Survey Date: First Observed: 1995-06-19 Last Observed: 1995-06-19

EORANK: B
EORANK Comments:

Population Data:

1995: 300 or more mature genets in flower. Population vigor assessed as fair. Plants at edge of plays. Area thoroughly surveyed by Jon Nelson, Boise District BLM.

Habitat Description:

Plays with rocky surface and dirt/clay soil. No associated species on plays.

Minimum Elevation: 4470 feet Maximum Elevation: feet Size:

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim #5101681245-15.

Protection Comments:
Signs of cattle use are evident.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 123

Survey Site Name: FIVEMILE LAKE

County: Owyhee

USGS quadrangle: TABLE BUTTE

Latitude: 423030N Longitude: 1154622W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
010S006E 32 80 SE4

Location:

Blackstone Desert, Fivemile Lake and 2 small adjacent plays.

Survey Date: First Observed: 1995-07-05 Last Observed: 1995-07-05

EORANK: BD
EORANK Comments: Site quality is good at the small plays and poor at Fivemile Lake.

Population Data:

1995: Ca 1000 or less genets at Fivemile Lake; 1000+ at a small SE plays; and 2000+ at a small NE plays. Plants 70-80% in flower and 20-30% in fruit. Population vigor is good to high at the small plays and low to poor at Fivemile Lake. Area thoroughly surveyed by Jon Nelson, Boise District BLM.

Habitat Description:

Plays with dry dirt/clay soil and black cobble covered surfaces. Associated species include Artemisia tridentata, Atriplex confertifolia, halogeton glomeratus, penstemon sp., and some Chaenactis sp.

Minimum Elevation: 4490 feet Maximum Elevation: feet Size: 3 + AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:

VALE BLM DISTRICT

MANAGE COMM:
 PROT COMM:
 BEST SOURCE: KINDSCHY, BOB

NAME: LEPIDIUM DAVISII
 COMMON NAME: DAVIS' PEPPERGRASS
 EO-CODE: PDBRA1M080*006 LAST OBS: 1989-08-07 FED STATUS: C2
 COUNTY(s): MALHEUR FIRST OBS: 1989 STATE STATUS: PT
 QUAD NAMES: WRANGLE BUTTE LAT: 430337N SIZE: 40
 PHYSIOGRAPHIC PROV: OU LONG: 1175038W MINELEV (Feet): 4000
 T-R-S: 029S040E 08,17 QUADCODE: 4311717 MAXELEV (Feet):
 T-R-S COMMENTS: SE4SW4 SEC 8; NW4NE4 SEC 17 PRECISION: S 1
 EO-RANK/COMM: :
 DIRECTIONS: 3 MI SE OF SADDLE BUTTE
 DESCRIPTION: DESERT PLAYA-BARREN EXCEPT FOR LEPIDIUM DAVISII. LAKE BED SILTS
 EO-DATA: 51-100 IN LEAF AND FRUIT
 EOTYPE:
 COMMENTS: 1989 BLM SIGHTING REPORT, KINDSCHY, BOB
 ANNUAL OBSERVATION:
 OWNER: JORDAN RA
 OWNER COMM: VALE DISTRICT BLM
 MANAGED AREA: JORDAN RESOURCE AREA
 VALE BLM DISTRICT
 MANAGE COMM:
 PROT COMM:
 BEST SOURCE: KINDSCHY, BOB

NAME: LEPIDIUM DAVISII
 COMMON NAME: DAVIS' PEPPERGRASS
 EO-CODE: PDBRA1M080*007 LAST OBS: 1989-09-28 FED STATUS: C2
 COUNTY(s): MALHEUR FIRST OBS: 1989 STATE STATUS: PT
 QUAD NAMES: WRANGLE BUTTE LAT: 430222N SIZE: 40
 PHYSIOGRAPHIC PROV: OU LONG: 1175122W MINELEV (Feet): 4000
 T-R-S: 029S040E 19,20 QUADCODE: 4311717 MAXELEV (Feet):
 T-R-S COMMENTS: SE4NE4 AND NE4SE4 SEC 19; W4 SEC 20 PRECISION: S 2
 EO-RANK/COMM: :
 DIRECTIONS: 3 MI SE OF SADDLE BUTTE
 DESCRIPTION: BARREN-DRY LAKE BED; WHITE CLAY AND SILT
 EO-DATA: 51-100 PLANTS IN 40 ACRES IN FRUIT
 EOTYPE:
 COMMENTS: 1989 BLM SIGHTING REPORT, KINDSCHY, BOB (1 REPORT, MAPPED AS 2)
 ANNUAL OBSERVATION:
 OWNER: JORDAN RA
 OWNER COMM: VALE DISTRICT BLM
 MANAGED AREA: JORDAN RESOURCE AREA
 VALE BLM DISTRICT
 MANAGE COMM:
 PROT COMM:
 BEST SOURCE: KINDSCHY, BOB

NAME: LEPIDIUM DAVISII
 COMMON NAME: DAVIS' PEPPERGRASS
 EO-CODE: PDBRA1M080*008 LAST OBS: 1989-08-07 FED STATUS: C2
 COUNTY(s): MALHEUR FIRST OBS: 1989 STATE STATUS: PT
 QUAD NAMES: WRANGLE BUTTE LAT: 430233N SIZE: 20
 PHYSIOGRAPHIC PROV: OU LONG: 1175159W MINELEV (Feet): 4000
 T-R-S: 029S040E 19 QUADCODE: 4311717 MAXELEV (Feet):
 T-R-S COMMENTS: NE4NW4 PRECISION: S 3
 EO-RANK/COMM: :
 DIRECTIONS: 3 MI SE OF SADDLE BUTTE
 DESCRIPTION: BARREN DRY LAKE BED, WHITE CLAY AND SILT

Location:

Ca 1.5 air miles E of Dorsey Butte and ca 1.6 air miles S of the Ada/Elmore county line.

Survey Date:

First Observed: 1987

Last Observed: 1995-06-12

EORANK: B

EORANK Comments:

Population Data:

1987: Subjective estimate of abundance is good. Observation by Boise District BLM personnel. 1995: Ca 1000+ genets in flower. Population age class structure is 5% seedlings and 95% mature. Population vigor assessed as good. Observation on a cursory visit by Dale Dunn and Steve Dobson, Boise District BLM.

Habitat Description:

Playa. Species adjacent to playa include *Bromus tectorum*, *Brassica* sp., and *Atriplex confertifolia*.

Minimum Elevation: 2975 feet Maximum Elevation: feet Size: 0.5 AC

Land Owner/Manager:

BRUNEAU RA

Ownership Comments:

Boise District BLM, Bruneau RA.

Comments:

Boise District BLM site #30.

Protection Comments:

Livestock grazing is a possible threat.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 126

Survey Site Name: DORSEY BUTTE ENE

County: Elmore

USGS quadrangle: DORSEY BUTTE

Latitude: 430548N Longitude: 1160002W

TOWNRANGE: SECTION:
004S004E 08MERIDIAN:
BOTRSNOTE:
NE4NE4

Location:

Ca 2.8 air miles ENE of Dorsey Butte. Ca 1.1 air miles S of the Ada/Elmore county line. Ca 0.7 mile SSE of the Simco Road Weather Station (not on topo map).

Survey Date:

First Observed: 1987

Last Observed: 1995-06-01

EORANK: C

EORANK Comments:

Population Data:

1987: Subjective estimate of abundance is good. Monitoring plot established by Boise District BLM personnel. 1995: Less than 100 mature genets in flower. Population vigor assessed as fair. Observation on a cursory visit by Dale Dunn, Boise District BLM.

Habitat Description:

Playa with a few *Atriplex confertifolia*.

Minimum Elevation: 3000 feet Maximum Elevation: feet Size:

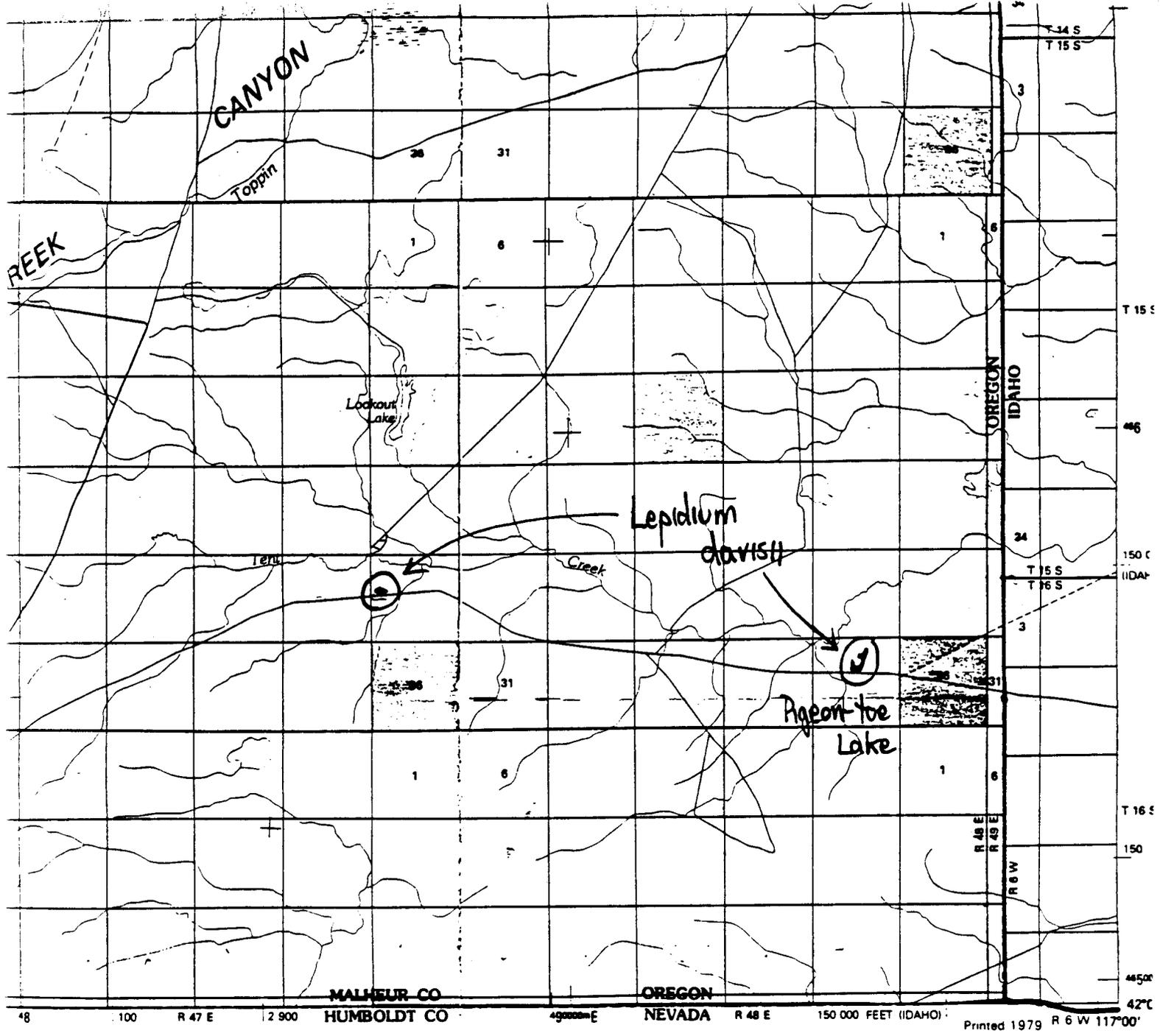
Land Owner/Manager:

BRUNEAU RA

Ownership Comments:

Boise District BLM, Bruneau RA.

Comments:



LEGEND

- Perennial stream, lake
- Intermittent stream, lake
- Village or locality
- Landmark structure

ROAD CLASSIFICATION

- Primary highway, hard surface
- Secondary highway, hard surface
- Light-duty road, hard or improved surface
- Street or other road
- Trail
- Interstate route ○ U.S. route ○ State route

O, lac
2x 150 plants

LA ROSA CANYON, OREGON—IDAHO
 SW/4 JORDAN VALLEY (NK 11-5) 1:250 000-SCALE MAP
 N4200—W11700/30X60
1978
SURFACE MANAGEMENT STATUS

Survey Date:

First Observed: 1995-08-28

Last Observed: 1995-08-28

EORANK: B

EORANK Comments:

Population Data:

1995: 1 small plays that contained water early in the season. Ca 100-1000+ genets, 6% vegetative, 2% in flower, 90% in fruit, and 2% dormant. Population age class structure is 3% seedlings, 10% immature, 85% mature, and 2% senescent. Population vigor assessed as good. Observation on a cursory visit by Lynn Miracle and Steve Jirik, Boise District BLM.

Habitat Description:

Plays with no associated species. Species adjacent to the plays include *Sitanion hystrix*, *Artemisia tridentata wyomingensis*, and *Agrostis* sp.

Minimum Elevation: 4910 feet Maximum Elevation: feet Size: 0.1 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim #5101681217-44.

Protection Comments:
Area is grazed.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 129

Survey Site Name: BIGHORN COUNTRY

County: Owyhee

USGS quadrangle: BLACKSTONE RESERVOIR

Latitude: 422328N Longitude: 1154533W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
012S006E 09 80 S2SE4SW4

Location:

N of Bighorn Country. Ca 0.75 air miles NW of the confluence of Louse Creek and Sheep Creek.

Survey Date: First Observed: 1995-08-28 Last Observed: 1995-08-28

EORANK: B
EORANK Comments:

Population Data:

1995: 1 small plays with ca 200-1000+ genets, 5% vegetative, 2% in flower, 90% in fruit, and 3% dormant. Population age class structure is 3% seedlings, 10% immature, 86% mature, and 1% senescent. Population vigor assessed as good. Observation on a cursory visit by Lynn Miracle, Boise District BLM.

Habitat Description:

Plays with moist, brown, clay-textured soil. Species adjacent to the plays include *Artemisia* sp., *Sitanion hystrix*, and *Halogeton glomeratus*.

Minimum Elevation: 4790 feet Maximum Elevation: feet Size: 0.3 - 1 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA. State land is adjacent to the south.

Comments:
Water claim #5101681220-4.

Protection Comments:
Area is grazed by cattle and used by antelope as well.

NEVADA

RARE PLANT OBSERVATION REPORT

Please enter all information available to you. Use the back for comments and/or a sketch map of the exact location of the rare plant population. Attach a copy of the USGS map showing the precise location of the population.

Species: Lepidium davisi Date of Observation: 95-7-6

Observer(s): Bob Moseley Phone: (208) 334-3402

Address: Idaho Conservation Data Center, PO Box 25, Boise ID 83707

Location (be specific): between Calico Creek and the Little Owyhee River, south of Willow Creek, ca 2.25 miles S of Idaho Border

County: Elko, Nevada T 47N R 45E unsurveyed but appears to be 1/4 of NW 1/4 of Sec. 19

Coordinate or Polygon Identifier (e.g., UTM, Lat-Long, Stand #) _____

Elevations: 5125 to _____ Quad Name: Star Valley Ridge West

Landowner/Manager: BLM

Is this a new location? Unknown No Yes -> please provide CDC occurrence # (e.g., 023) _____

Total # of individuals in population: _____ Actual several Estimated _____
thousand

What was counted (check one)? Genets (genetically distinct individuals) or Ramets (stems of a clonal plant)

Phenology (# individuals or % population): most in flower Vegetative _____ Flower _____ Fruit _____ Dormant _____

Population age class structure: _____ %Seedlings _____ %Immature _____ %Mature _____ %Senescent Unknown

Population area: covers entire playa Assessment of population vigor: _____

Was population thoroughly surveyed or was it a cursory visit? surveyed from air - ca. 50' above ground at low airspeed in fixed-wing aircraft

Compared to your last visit (# of plants, area, vigor, age classes): _____

Habitat description [community, associated species (no abbrev.), substrate/soil, aspect, slope, moisture regime, light regime, natural disturbance regimes]:

Vernal lake-bed (playa) on volcanic plain. Flat. No water in playa during survey. No associated species; playa surrounded by ~~the~~ vegetation dominated by Artemisia tridentata ssp. wyomingensis.

Current land use, cultural disturbance, possible threats (imminent or nonimminent?): Undisturbed. No reservoir has been dug to retain water for livestock. No evidence of livestock use.

Overall Site Quality: Excellent Good Fair Poor
How was identification made: _____

Collector & #: _____ Herbarium where deposited: _____ Photo? _____
Other knowledgeable individuals: Susan Bernatas

EORANK: B
EORANK Comments:

Population Data:

1995: 1 small plays with ca 200-1000+ genets, 5% vegetative, 2% in flower, 90% in fruit, and 3% dormant. Population age class structure is 3% seedlings, 10% immature, 86% mature, and 1% senescent. Population vigor assessed as good. Observation on a cursory visit by Lynn Miracle, Boise District BLM.

Habitat Description:

Plays with moist, brown, clay-textured soil. Species adjacent to the plays include *Artemisia* sp., *Sitanion hystrix*, and *Halogeton glomeratus*.

Minimum Elevation: 4820 feet Maximum Elevation: feet Size: 0.3 - 1 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim #5101681196-23.

Protection Comments:
Area is grazed by cattle and used by antelope as well.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 132

Survey Site Name: LOWER LOUSE SW #2

County: Owyhee

USGS quadrangle: BLACKSTONE RESERVOIR

Latitude: 422333N Longitude: 1154756W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
012S006E 07 BO E2SW4

Location:

SW of lower Louse Creek, NW of Bighorn Country. Ca 2.4 air miles SSW of Juniper Draw.

Survey Date: First Observed: 1995-08-28 Last Observed: 1995-08-28

EORANK: B
EORANK Comments:

Population Data:

1995: 2 small plays that contained water earlier in the season. Ca 100-500 genets, 8% vegetative, 2% in flower, 88% in fruit, and 2% dormant. Population age class structure is 5% seedlings 15% immature, 77% mature, and 3% senescent. Population vigor assessed as good. Observation on a cursory visit by Lynn Miracle, Boise District BLM.

Habitat Description:

2 plays with clay textured soil. Good light. Species adjacent to the plays include *Artemisia* sp., *Sitanion hystrix*, and *Halogeton glomeratus*.

Minimum Elevation: 4890 feet Maximum Elevation: feet Size: 2 AC OR LESS

Land Owner/Manager:
BRUNEAU RA

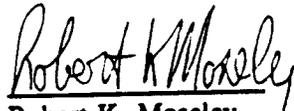
Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim #5101681198-25 and 5101681197-24.

Protection Comments:
Area is grazed by cattle.

Management Comments:

Submitted by:



Robert K. Moseley
Coordinator/Plant Ecologist
Idaho Conservation Data Center

Approved by:

IDAHO DEPARTMENT OF FISH AND GAME



Cal Groen, Chief
Natural Resources Policy Bureau

EORANK: B
EORANK Comments:

Population Data:

1995: 2 undisturbed playas that were moist earlier in the season. Ca 100-1500 genets at each plays. Plants 8% vegetative, 2% in flower, 87% in fruit, and 3% dormant. Population age class structure is 2% seedlings, 10% immature, 86% mature, and 2% senescent. Population vigor assessed as good. Observation on a cursory visit by Lynn Miracle and Steve Jirik, Boise District BLM.

Habitat Description:

Playas with good light regime. Species adjacent to the playas include *Sitanion hystrix* and *Artemisia tridentata wyomingensis*.

Minimum Elevation: 4930 feet Maximum Elevation: feet Size: 0.2 - 1 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim #5101681211-38 and 5101681216-43.

Protection Comments:
No signs of cattle use.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 135

Survey Site Name: BLACKSTONE RESERVOIR NORTH

County: Owyhee

USGS quadrangle: BLACKSTONE RESERVOIR

Latitude: 422734N Longitude: 1154822W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
011S005E 24 B0 SE4NE4NE4

Location:

Ca 1 air mile N of Blackstone Reservoir. 0.7 mile W of Blackstone-Grasmere Road. Ca 2.1 air miles NE of Big Holes.

Survey Date: First Observed: 1995-08-28 Last Observed: 1995-08-28

EORANK: B
EORANK Comments:

Population Data:

1995: 1 small undisturbed plays that was moist earlier in the season. Ca 100-1500 genets. Plants 8% vegetative, 2% in flower, 87% in fruit, and 3% dormant. Population age class structure is 2% seedlings, 10% immature, 86% mature, and 2% senescent. Population vigor assessed as good. Observation on a cursory visit by Lynn Miracle and Steve Jirik, Boise District BLM.

Habitat Description:

Playas with good light regime. Species outside the playas include *Sitanion hystrix* and *Artemisia tridentata wyomingensis*.

Minimum Elevation: 4900 feet Maximum Elevation: feet Size: 0.2 - 1 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim #5101681209-36.

Protection Comments:
No signs of cattle use or other disturbance.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 136

Survey Site Name: FIVEMILE LAKE SW #2

County: Owyhee

USGS quadrangle: BLACKSTONE RESERVOIR

Latitude: 422958N Longitude: 1154728W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
011S006E 06 BO SE4SW4NE4

Location:

Blackstone Desert, ca 1.1 air miles SW of Fivemile Lake. Ca 4 air miles N of the Blackstone Ranch.

Survey Date: First Observed: 1995-08-28 Last Observed: 1995-08-28

EORANK: B
EORANK Comments:

Population Data:

1995: 1 small playa that was moist earlier in the year. Ca 100-1000 genets, 7% vegetative, 2% in flower, 87% in fruit, and 4% dormant. Population age class structure is 4% seedlings, 12% immature, 83% mature, and 1% senescent. Population vigor assessed as good. Observation on a cursory visit by Lynn Miracle and Steve Jirik, Boise District BLM.

Habitat Description:

Playa with brown, clay to silty soil and gravel polygons. Good light regime. Halogeton glomeratus and Artemisia tridentata wyomingensis are outside the playa.

Minimum Elevation: 4630 feet Maximum Elevation: feet Size: 0.3 - 1.00

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim #5101681214-41.

Protection Comments:
Area is grazed.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 137

Survey Site Name: BLACKSTONE RESERVOIR NORTH

County: Owyhee

USGS quadrangle: BLACKSTONE RESERVOIR

Latitude: 422710N Longitude: 1154818W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
011S006E 19 BO SW4NW4SW4

Location:

0.6 mile W of Blackstone-Grasmere Road, N of Blackstone Reservoir. 0.75 mile NNW of the Blackstone Ranch.

Survey Date: First Observed: 1995-08-28 Last Observed: 1995-08-28

EORANK: B
EORANK Comments:

Population Data:

1995: 1 small plays that was moist earlier in the year. Ca 100-1000 genets, 7% vegetative, 2% in flower, 87% in fruit, and 4% dormant. Population age class structure is 4% seedings, 12% immature, 83% mature, and 1% senescent. Population vigor assessed as good. Observation on a cursory visit by Lynn Miracle and Steve Jirik, Boise District BLM.

Habitat Description:

Plays with brown, clay to silty soil and gravel polygons. Good light regime. Halogeton glomeratus and Artemisia tridentata wyomingensis are outside the plays.

Minimum Elevation: 4920 feet Maximum Elevation: feet Size: 0.3 - 1 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim #5101681215-42.

Protection Comments:
Area is grazed.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 138

Survey Site Name: BLACKSTONE RESERVOIR EAST

County: Owyhee

USGS quadrangle: BLACKSTONE RESERVOIR

Latitude: 422627N Longitude: 1154645W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
011S006E 29 BO S2SE4NW4, N2NE4SW4

Location:

Blackstone Desert, ca 1 air mile E of the Blackstone Ranch. Ca 1.1 air miles MNE of Juniper Draw.

Survey Date: First Observed: 1995-08-28 Last Observed: 1995-08-28

EORANK: B
EORANK Comments:

Population Data:

1995: 1 small plays that was moist earlier in the year. Ca 100-1000 genets, 7% vegetative, 2% in flower, 87% in fruit, and 4% dormant. Population age class structure is 4% seedings, 12% immature, 83% mature, and 1% senescent. Population vigor assessed as good. Observation on a cursory visit by Lynn Miracle and Steve Jirik, Boise District BLM.

Habitat Description:

Plays with brown, clay to silty soil and gravel polygons. Good light regime. Halogeton glomeratus and Artemisia tridentata wyomingensis are outside the plays.

Minimum Elevation: 4840 feet Maximum Elevation: feet Size: 0.3 - 1 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim #1501681191-18.

Protection Comments:
Area is grazed.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 139

Survey Site Name: FIVEMILE LAKE SE

County: Owyhee

USGS quadrangle: BLACKSTONE RESERVOIR

Latitude: 422932N Longitude: 1154521W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
011S006E 04 80 SW6SW4SE4

Location:
Blackstone Desert, 0.2 mile SE of Blackstone-Grasmere Road. Ca 1.4 air miles SE of Fivemile Lake. Ca 4 air miles NE of the Blackstone Ranch.

Survey Date: First Observed: 1995-08-28 Last Observed: 1995-08-28

EORANK: B
EORANK Comments:

Population Data:
1995: 1 small undisturbed plays that was moist earlier in the year. Ca 250-1000 genets, 6% vegetative, 3% in flower, 88% in fruit, and 3% dormant. Population age class structure is 4% seedlings, 6% immature, and 90% mature. Population vigor assessed as good. Observation on a cursory visit by Lynn Miracle and Steve Jirik, Boise District BLM.

Habitat Description:
Plays with brown clay soil and a great deal of bare ground. Halogeton glomeratus and Artemisia tridentata wyomingensis are outside of the plays.

Minimum Elevation: 4520 feet Maximum Elevation: feet Size: 0.2 - 0.8 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim #5101681208-35.

Protection Comments:
No signs of disturbance or cattle use.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 140

Survey Site Name: FIVEMILE LAKE SOUTH

County: Owyhee

USGS quadrangle: BLACKSTONE RESERVOIR

Latitude: 422912N Longitude: 1154652W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
011S006E 08 80

Location:
Blackstone Desert, 6 small playas on both sides of Blackstone-Grasmere Road. Ca 3.2 air miles NE of Blackstone Reservoir and ca 1.1 to 1.8 air miles S of Fivemile Lake.

Survey Date:

First Observed: 1995-08-28

Last Observed: 1995-08-28

EORANK: B

EORANK Comments:

Population Data:

1995: 6 small playas that were moist earlier in the season. Each playa with ca 100-1000 genets. Plants are 6-7% vegetative, 2-3% in flower, 87-88% in fruit, and 3-4% dormant. Population age class structure is 4% seedlings, 6-12% immature, 83-90% mature, and 0-1% senescent. Population vigor assessed as good. Observation on a cursory visit by Lynn Miracle and Steve Jirik, Boise District BLM.

Habitat Description:

Playas with brown, clay to silty soil and a great deal of bare ground. Two playas with gravel polygons. Good light regime. *Halogeton glomeratus* and *Artemisia tridentata wyomingensis* are outside of the playas.

Minimum Elevation: 4620 feet Maximum Elevation: 4640 feet Size: 1 - 3 AC

Land Owner/Manager:

BRUNEAU RA

Ownership Comments:

Boise District BLM, Bruneau RA.

Comments:

Water claim #5101681203-30, 5101681202-29, 5101681210-37, and 5101681207-34.

Protection Comments:

Area SE of Blackstone-Grasmere Road is grazed. Playas NW of the road are undisturbed with no signs of cattle use.

Management Comments:

Specimens:

LEPIDIUM DAVISII

DAVIS' PEPPERGRASS

Occurrence Number: 141

Survey Site Name: SALMON FALLS CREEK

County: Twin Falls

USGS quadrangle: ROSEWORTH NE

Latitude: 422530N Longitude: 1144908W

TOWNRANGE: SECTION:
011S014E 33

MERIDIAN:
BO

TRSNOTE:
NE4NE4SW4, W2SE4

Location:

NE rim of Salmon Falls Creek Canyon. Between Deep Creek and the canyon. Ca 1 air mile N of the mouth of Cedar Creek.

Survey Date:

First Observed: 1995-07-26

Last Observed: 1995-07-26

EORANK: AB

EORANK Comments: Overall site quality rated as excellent to good.

Population Data:

1995: 2 groups of small playas. The northern group has 8-10 playas with ca 150,000 genets. The southern group has 6 small playas with ca 10,000 genets. Plants are 20% vegetative, 10% in flower, and 70% in fruit. Population age class structure is 2% seedlings, 5-7% immature, 89-91% mature, and 2% senescent. Population vigor assessed as high. Observation on a cursory visit by Jim Tharp and Paul Nakela, Burley District BLM.

Habitat Description:

14-16 total small playas of varying sizes. Playas are dry. *Artemisia* sp./*Agropyron cristatum* zone around playas. A miniscule amount of *Agropyron cristatum* occurs within some of the southern group of playas.

Minimum Elevation: 4200 feet Maximum Elevation: feet Size: 9.5 AC

Land Owner/Manager:

SNAKE RIVER RA

Ownership Comments:

Burley District BLM, Snake River RA.

Comments:

Photos on file at Burley District BLM.

Protection Comments:
Area is grazed by cattle. No disturbances noted at the northern group of plays.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 142

Survey Site Name: COYOTE FLAT

County: Owyhee

USGS quadrangle: GRASSY RIDGE

Latitude: 420820N Longitude: 1164615W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
015S004W 11 BO S2NW4NE4

Location:
Coyote Flat area, YP Desert. Plays along an unimproved road ca 1.4 air miles E of Coyote Hole Reservoir and ca 1.5 air miles SE of Coyote Flat Reservoir.

Survey Date: First Observed: 1995-07 Last Observed: 1995-07

EORANK:
EORANK Comments:

Population Data:
1995: Plants present on an undisturbed plays. Observation by Boise District BLM personnel.

Habitat Description:
Plays.

Minimum Elevation: 5190 feet Maximum Elevation: feet Size:

Land Owner/Manager:
OWYHEE RA

Ownership Comments:
Boise District BLM, Owyhee RA.

Comments:

Protection Comments:

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 143

Survey Site Name: 45 HILL NW

County: Owyhee

USGS quadrangle: SPRING CREEK BASIN

Latitude: 420837N Longitude: 1165857W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
015S006W 01 BO W2SE4SE4

Location:
Ca 2.1 air miles NW of 45 Hill. SW of Spring Creek Basin and the South Fork Owyhee River. Ca 2 air miles N of Sorrel Reservoir.

Survey Date: First Observed: 1995-07 Last Observed: 1995-07

EORANK:
EORANK Comments:

Population Data:
1995: Plants present on an undisturbed plays. Observation by Boise District BLM personnel.

Habitat Description:
Plays.

Minimum Elevation: 5280 feet **Maximum Elevation:** feet **Size:**

Land Owner/Manager:
OWYHEE RA

Ownership Comments:
Boise District BLM, Owyhee RA.

Comments:

Protection Comments:

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 144

Survey Site Name: 45 HILL WEST

County: Owyhee

USGS quadrangle: SPRING CREEK BASIN

Latitude: 420758N **Longitude:** 1165943W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
015S006W	12	BO	N2SW4

Location:
Ca 2.5 air miles W of 45 Hill. SW of Spring Creek Basin. Ca 1.5 air miles MNW of Sorrel Reservoir.

Survey Date: **First Observed:** 1995-07 **Last Observed:** 1995-07

EORANK:
EORANK Comments:

Population Data:
1995: Plants present on 4 small undisturbed plays. Observation by Boise District BLM personnel.

Habitat Description:
Playas.

Minimum Elevation: 5300 feet **Maximum Elevation:** feet **Size:**

Land Owner/Manager:
OWYHEE RA

Ownership Comments:
Boise District BLM, Owyhee RA.

Comments:

Protection Comments:

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 145

Survey Site Name: STAR VALLEY WEST

County: Owyhee

USGS quadrangle: STAR VALLEY

Latitude: 420205N Longitude: 1165855W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
016S006W 13 B0 SE4NE4, NE4SE4

Location:
2 playas ca 2.25 air miles WSW of the Star Valley Ranch. Ca 3.25 air miles SSW of Tent Creek Reservoir.

Survey Date: First Observed: 1995-07 Last Observed: 1995-07

EORANK:
EORANK Comments:

Population Data:
1995: Plants present on 2 undisturbed playas. Observation by Boise District BLM personnel.

Habitat Description:
Playas.

Minimum Elevation: 5190 feet Maximum Elevation: feet Size:

Land Owner/Manager:
OWYHEE RA

Ownership Comments:
Boise District BLM, Owyhee RA.

Comments:

Protection Comments:

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 146

Survey Site Name: ALMOST NEVADA

County: Owyhee

USGS quadrangle: STAR VALLEY

Latitude: 420035N Longitude: 1165732W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
016S005W 30 B0 E2NE4NE4

Location:
W of the Little Owyhee River. Ca 2.4 air miles SSW of Star Valley Ranch and ca 0.75 mile N of the Nevada border.

Survey Date: First Observed: 1995-07 Last Observed: 1995-07

EORANK:
EORANK Comments:

Population Data:
1995: Plants present on an undisturbed playa. Observation by Boise District BLM personnel.

Habitat Description:
Playa.

Minimum Elevation: 5110 feet Maximum Elevation: feet Size:

Land Owner/Manager:
Owyhee RA

Ownership Comments:
Boise District BLM, Owyhee RA.

Comments:

Protection Comments:

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 147

Survey Site Name: TENT CREEK POINT WEST

County: Owyhee

USGS quadrangle: STAR VALLEY

Latitude: 420323N Longitude: 1165657W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
016S005W 05 B0 center S2

Location:

2 playas on the W side of Tent Creek Point. Ca 1.5 air miles SSE of Tent Creek Reservoir and ca 1.2 to 1.4 air miles NNW of the Star Valley Ranch.

Survey Date: First Observed: 1995-07 Last Observed: 1995-07

EORANK:
EORANK Comments:

Population Data:

1995: Plants present on 2 undisturbed playas. Observation by Boise District BLM personnel.

Habitat Description:

Playas.

Minimum Elevation: 5100 feet Maximum Elevation: feet Size:

Land Owner/Manager:
Owyhee RA

Ownership Comments:
Boise District BLM, Owyhee RA.

Comments:

Protection Comments:

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 148

Survey Site Name: TENT CREEK POINT EAST

County: Owyhee

USGS quadrangle: STAR VALLEY

Latitude: 420322N Longitude: 1165607W

TOWNRANGE: SECTION:
016S005W 04

MERIDIAN:
BO

TRSNOTE:
SE4SW4SW4

Location:

E side of Tent Creek Point. Ca 1.1 air miles N of the Star Valley Ranch. W of the Little Owyhee River.

Survey Date: First Observed: 1995-07 Last Observed: 1995-07

EORANK:

EORANK Comments:

Population Data:

1995: Plants present on an undisturbed plays. Observation by Boise District BLM personnel.

Habitat Description:

Plays.

Minimum Elevation: 5120 feet Maximum Elevation: feet Size:

Land Owner/Manager:

OWYHEE RA

Ownership Comments:

Boise District BLM, Owyhee RA.

Comments:

Protection Comments:

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 149

Survey Site Name: UNNAMED POINT

County: Owyhee

USGS quadrangle: STAR VALLEY

Latitude: 420342N Longitude: 1165538W

TOWNRANGE: SECTION:
016S005W 04

MERIDIAN:
BO

TRSNOTE:
NW4NW4SE4

Location:

Plays on an unnamed point E of Tent Creek Point and W of the Little Owyhee River. Ca 1.6 air miles MNE of the Star Valley Ranch.

Survey Date: First Observed: 1995-07 Last Observed: 1995-07

EORANK:

EORANK Comments:

Population Data:

1995: Plants present on an undisturbed plays. Observation by Boise District BLM personnel.

Habitat Description:

Plays.

Minimum Elevation: 5110 feet Maximum Elevation: feet Size:

Land Owner/Manager:

OWYHEE RA

Ownership Comments:

Boise District BLM, Owyhee RA.

Comments:

Protection Comments:

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 150

Survey Site Name: SORREL RESERVOIR

County: Owyhee

USGS quadrangle: STAR VALLEY

Latitude: 420652N Longitude: 1165923W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
015S006W 13 BO SE4SE4SW4, NW4SW4SE4

Location:
2 small playas within ca 0.5 mile W and NW of Sorrel Reservoir. Ca 2.8 air miles NNW of Tent Creek Reservoir.

Survey Date: First Observed: 1995-07 Last Observed: 1995-07

EORANK:
EORANK Comments:

Population Data:
1995: Plants present on 2 undisturbed playas. Observation by Boise District BLM personnel.

Habitat Description:
Playas.

Minimum Elevation: 5270 feet Maximum Elevation: feet Size:

Land Owner/Manager:
Owyhee RA

Ownership Comments:
Boise District BLM, Owyhee RA.

Comments:

Protection Comments:

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 151

Survey Site Name: TENT CREEK POINT NE

County: Owyhee

USGS quadrangle: STAR VALLEY

Latitude: 420426N Longitude: 1165535W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
015S005W 33 BO S2NW4SE4

Location:
NE of Tent Creek Point, W of the Little Owyhee River. Ca 1.75 air miles E of Tent Creek Reservoir and ca 2.4 air miles NNE of the Star Valley Ranch.

Survey Date: First Observed: 1995-07 Last Observed: 1995-07

EORANK:
EORANK Comments:

Population Data:
1995: Plants present on an undisturbed playa. Observation by Boise District BLM personnel.

Habitat Description:
Playa.

Minimum Elevation: 5130 feet Maximum Elevation: feet Size:

Land Owner/Manager:
Owyhee RA

Ownership Comments:
Boise District BLM, Owyhee RA.

Comments:

Protection Comments:

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 152

Survey Site Name: SW CORNER OF IDAHO

County: Owyhee

USGS quadrangle: STAR VALLEY KNOLL

Latitude: 420126N Longitude: 1170015W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
016S006W 23 BO NW4NE4

Location:
Extreme SW corner of Idaho. Ca 1.1 miles E of the Oregon border and ca 1.7 miles N of the Nevada border.

Survey Date: First Observed: 1995-07 Last Observed: 1995-07

EORANK:
EORANK Comments:

Population Data:
1995: Plants present on playa. Observation by Boise District BLM personnel.

Habitat Description:
Playa.

Minimum Elevation: 5256 feet Maximum Elevation: feet Size:

Land Owner/Manager:
Owyhee RA

Ownership Comments:
Boise District BLM, Owyhee RA.

Comments:

Protection Comments:
Playa is undisturbed.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 153

Survey Site Name: POWERLINE

County: Elmore

USGS quadrangle: CRATER RINGS SW

Latitude: 430721N Longitude: 115556W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
003S004E 36 BO SW4NW4

Location:

1.5 miles E of Simco Road, ca 2 air miles N of the confluence of Squaw Creek and Canyon Creek. NW side of a powerline. Between Orchard Training Area and the Mountain Home AFB Small Arms Range.

Survey Date: First Observed: 1987 Last Observed: 1987

EORANK:

EORANK Comments:

Population Data:

1987: Subjective estimate of abundance is good. Observation by Boise District BLM personnel.

Habitat Description:

Plays.

Minimum Elevation: 3040 feet Maximum Elevation: feet Size:

Land Owner/Manager:

STATE LAND WITHIN ELMORE COUNTY

Ownership Comments:

State land.

Comments:

Boise District BLM site #80.

Protection Comments:

Management Comments:

Specimens:

LEPIDIUM DAVISII

DAVIS' PEPPERGRASS

Occurrence Number: 154

Survey Site Name: BIGHORN COUNTRY SOUTH

County: Owyhee

USGS quadrangle: BUSTER BUTTE

Latitude: 422148N Longitude: 1154524W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
012S006E 21 BO center S2S2, NW4NE4SE4

Location:

J - P Desert, S of Bighorn Country and E of Sheep Creek. Ca 2.4 to 2.75 air miles N of the confluence of Marys Creek and Sheep Creek. 2 plays.

Survey Date: First Observed: 1995-09-12 Last Observed: 1995-09-12

EORANK: B

EORANK Comments:

Population Data:

1995: 2 plays. Smaller NE playa has ca 500 dormant genets, population age class structure is 1% immature and 99% mature. Larger SW playa has ca 1000 mature dormant genets. Population vigor assessed as good. Observation on a cursory visit by John Doremus, Boise District BLM.

Habitat Description:

2 plays with fine soil and basalt cobbles. Flat, open area with N to NE aspect. Some Atriplex confertifolia at the margins of the NE playa. Species adjacent to the playas include Artemisia tridentata wyomingensis and Atriplex confertifolia.

Minimum Elevation: 4810 feet Maximum Elevation: 4830 feet Size: 700 sq M

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim #5101681307-28.

Protection Comments:
Area is grazed.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 155

Survey Site Name: LOWER RATTLESNAKE CREEK

County: Owyhee

USGS quadrangle: BUSTER BUTTE

Latitude: 421637N Longitude: 1155154W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
013S005E	21	BO	NE4SE4SE4
013S005E	22	BO	SE4NW4SW4

Location:
2 playas ca 1 to 1.2 miles NNE of the confluence of Marys Creek and Rattlesnake Creek. Ca 2 air miles SSW of the Bengochea Place (ruins). Ca 7 air miles S of Grasmere.

Survey Date: First Observed: 1995-08-24 Last Observed: 1995-08-24

EORANK: B
EORANK Comments:

Population Data:
1995: Plants abundant. Ca 1000+ plants at each playa. Observation by Pat Ryan and Steve Jirik, Boise District BLM.

Habitat Description:
2 playas. Species surrounding the playas include *Sitanion hystrix*, *Artemisia tridentata wyomingensis*, and *Poa sandbergii*.

Minimum Elevation: 5250 feet Maximum Elevation: feet Size: 3 + AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim #5101680492-50 and 5101681303-24.

Protection Comments:

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 156

Survey Site Name: BUSTER BUTTE NW

County: Owyhee

USGS quadrangle: BUSTER BUTTE

Latitude: 422205N Longitude: 1155124W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
012S005E 22 BO N2NE4SW4

Location:

Ca 1.2 miles NW of Buster Butte. E of Nit Creek. Ca 1.5 air miles ESE of Grasmere.

Survey Date: First Observed: 1995-08-25 Last Observed: 1995-08-25

EORANK: B
EORANK Comments:

Population Data:

1995: Ca 1000+ plants. Observation by Pat Ryan and Steve Jirik, Boise District BLM.

Habitat Description:

Plays. Surrounding vegetation is *Poa sandbergii*, *Agropyron cristatum*, *Sitanion hystrix*, and *Artemisia tridentata wyomingensis*.

Minimum Elevation: 5110 feet Maximum Elevation: feet Size: 0.5 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim #5101681306-27.

Protection Comments:

Management Comments:

Specimens:

LEPIDIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 157

Survey Site Name: BUSTER BUTTE SE

County: Owyhee

USGS quadrangle: BUSTER BUTTE

Latitude: 421953N Longitude: 1154943W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
013S005E 02 BO NW4NE4NE4

Location:

Ca 1.75 air miles SE of Buster Butte. Ca 4.2 air miles SE of Grasmere. N of Marys Creek and 3.2 air miles W of the confluence of Marys Creek and Sheep Creek.

Survey Date: First Observed: 1995 Last Observed: 1995

EORANK: C
EORANK Comments:

Population Data:

1995: Ca 150+ plants. Observation by Boise District BLM personnel.

Habitat Description:

Plays. Surrounding vegetation is *Sitanion hystrix*, *Artemisia tridentata wyomingensis*, and *Poa sandbergii*.

Minimum Elevation: 5135 feet Maximum Elevation: feet Size:

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:

Boise District BLM, Bruneau RA.

Comments:

Protection Comments:
Signs of cattle use are present.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 158

Survey Site Name: BUSTER BUTTE SOUTH

County: Owyhee

USGS quadrangle: BUSTER BUTTE

Latitude: 421938N Longitude: 1155114W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
013S00SE 03 BO NW4SW4NE4, NW4SE4SW4

Location:
Ca 1.9 to 2.3 air miles S of Buster Butte, NW of Marys Creek. Ca 1.25 to 1.6 air miles NNE of the Bengoechea Place (ruins). Ca 4 air miles SSE of Grasmere. 2 smaller playas near several larger playas.

Survey Date: First Observed: 1995-09-12 Last Observed: 1995-09-26

EORANK: B
EORANK Comments:

Population Data:
1995: 2 small playas. NE playa with ca 2000-5000 plants. SW playa with ca 5000-1000 plants. Plants are dormant and in fruit. Population age class structure is 2% seedlings and 98% mature. Population vigor assessed as good. Observation on cursory visits by John Doremus and Steve Jirik, Boise District BLM.

Habitat Description:
2 playas. *Artemisia tridentata wyomingensis* surrounds both playas.

Minimum Elevation: 5090 feet Maximum Elevation: 5110 feet Size: 2 +- AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim #5101681323-44 and 5101680489-47.

Protection Comments:
The area is grazed, but the playas are undisturbed.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 159

Survey Site Name: BIG BEND OF SHEEP CREEK

County: Owyhee

USGS quadrangle: CAVE DRAW

Latitude: 422659N Longitude: 1154243W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:

Location:

J - P Desert. Just S of the Big Bend of Sheep Creek. 2 miles N of Monument Lake.

Survey Date: First Observed: 1995-09-08 Last Observed: 1995-09-08

EORANK: A

EORANK Comments:

Population Data:

1995: Ca 2000 dormant mature genets. Population vigor assessed as excellent. Observation on a cursory visit by Lynn Miracle, Boise District BLM.

Habitat Description:

Dry plays with clay-textured soil. Bare ground covers ca 50% of the plays. *Chrysothamnus viscidiflorus* is outside the plays.

Minimum Elevation: 4640 feet Maximum Elevation: feet Size: 1 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:

Boise District BLM, Bruneau RA.

Comments:

Water claim #5101680178-18.

Protection Comments:

Management Comments:

Specimens:

LEPIDIUM DAVISII

DAVIS' PEPPERGRASS

Occurrence Number: 160

Survey Site Name: LOWER BIG LAKE DRAW

County: Owyhee

USGS quadrangle: CAVE DRAW

Latitude: 422344N Longitude: 1154337W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
012S006E 11 B0 W2NW4SW4

Location:

E rim of Sheep Creek Canyon. N of Bighorn Country and Big Lake Draw. 2 miles SW of Monument Butte. Ca 1.4 air miles NE of the confluence of Louse Creek and Sheep Creek.

Survey Date: First Observed: 1995-09-08 Last Observed: 1995-09-08

EORANK: B

EORANK Comments:

Population Data:

1995: Ca 3000 mature genets in fruit. Population vigor assessed as good. Observation on a cursory visit by Steve Jirik, Boise District BLM.

Habitat Description:

Dry plays with brown clay-textured soil. Associated species is *Halogeton glomeratus*.

Minimum Elevation: 4690 feet Maximum Elevation: feet Size: 2 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:

Boise District BLM, Bruneau RA.

Comments:

Water claim #5101680173-13.

Protection Comments:
Antelope present in the vicinity of the plays.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 161

Survey Site Name: BIG LAKE DRAW

County: Owyhee

USGS quadrangle: CAVE DRAW

Latitude: 422248N Longitude: 1154235W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
012S006E 14 BO SE4NE4SE4

Location:

J - P Desert, NE side of Big Lake Draw and Bighorn Country. Ca 1.1 miles W of Barinaga Lake and ca 2 air miles E of the confluence of Louse Creek and Sheep Creek.

Survey Date: First Observed: 1995-09-08 Last Observed: 1995-09-08

EORANK: BC

EORANK Comments: Overall site quality is good to fair.

Population Data:

1995: Ca 100+ dormant genets. Population age class structure is 5% seedlings, 5% immature, and 90% mature. Population vigor assessed as fair to good. Observation on a cursory visit by Steve Jirik, Boise District BLM.

Habitat Description:

Plays is very rocky and gravelly with brown silty soil. Ca 90% bare ground. Very dry area with a good source of light. Only *Lepidium davisii* is present on the plays.

Minimum Elevation: 4700 feet Maximum Elevation: feet Size: 0.87 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:

Water claim #5101680171-11.

Protection Comments:
No signs of use.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 162

Survey Site Name: BARINAGA LAKE EAST

County: Owyhee

USGS quadrangle: CAVE DRAW

Latitude: 422248N Longitude: 1153927W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
012S007E 17 BO W2NW4SE4

Location:

J - P Desert, midway between Barinaga Lake and the W rim of the Bruneau Canyon. Ca 1.6 miles E of Barinaga Lake and ca 2 miles SE of Catholic Lake.

Survey Date:

First Observed: 1995-09-09

Last Observed: 1995-09-09

EORANK: C

EORANK Comments:

Population Data:

1995: Ca 1000 mature genets in fruit. Population vigor assessed as good. Observation on a cursory visit by Steve Jirik and Lynn Miracle, Boise District BLM.

Habitat Description:

Playas with clay-textured soil. Ca 50% bare ground. Very dry with good light. Artemisia is the dominant species outside the plays.

Minimum Elevation: 4797 feet Maximum Elevation: feet Size: 0.125 AC

Land Owner/Manager:

BRUNEAU RA

Ownership Comments:

Boise District BLM, Bruneau RA.

Comments:

Water claim #5101680193-33.

Protection Comments:

No signs of use.

Management Comments:

Specimens:

LEPIDIUM DAVISII

DAVIS' PEPPERGRASS

Occurrence Number: 163

Survey Site Name: MONUMENT BUTTE SW

County: Owyhee

USGS quadrangle: CAVE DRAW

Latitude: 422418N Longitude: 1154252W

TOWNRANGE: SECTION:

012S006E 02

012S006E 11

MERIDIAN:

BO

BO

TRSNOTE:

S2SW4SE4

NW4NW4NE4

Location:

J - P Desert, E of Sheep Creek. Ca 1.1 air miles SW of Monument Butte. Ca 2.2 air miles W of Catholic Lake. 2 plays.

Survey Date:

First Observed: 1979-03-24

Last Observed: 1995-09-08

EORANK: C

EORANK Comments:

Population Data:

1995: Ca 1000 mature genets in fruit. Population vigor assessed as good. Observation on a cursory visit by Steve Jirik, Boise District BLM.

Habitat Description:

2 plays with brown clay-silty soil. Dry with good light. Only Lepidium davisii is present on the plays.

Minimum Elevation: 4760 feet Maximum Elevation: feet Size: 2 AC

Land Owner/Manager:

BRUNEAU RA

Ownership Comments:

Boise District BLM, Bruneau RA.

Comments:

Water claim #5101680176-16.

Protection Comments:

Area is grazed, cattle tracks/droppings are evident.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 164

Survey Site Name: MONUMENT LAKE

County: Owyhee

USGS quadrangle: CAVE DRAW

Latitude: 422508N Longitude: 1154245W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
011S006E	35	BO	SW4SE4SE4, SE4SW4SE4
012S006E	02	BO	NE4NW4NE4, NW4NE4NE4

Location:

J - P Desert, Monument Lake. NW of Monument Butte and E of Sheep Creek.

Survey Date: First Observed: 1995-09-08 Last Observed: 1995-09-08

EORANK: C

EORANK Comments:

Population Data:

1995: Ca 200+ mature genets. Population vigor assessed as fair. Surface water present on plays. Observation on a cursory visit by Lynn Miracle, Boise District BLN.

Habitat Description:

Large plays with clay textured soil. Ca 95% bare ground. Dry with good light. Chrysothamnus viscidiflorus is outside the plays.

Minimum Elevation: 4785 feet Maximum Elevation: feet Size: 7 - 10 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLN, Bruneau RA.

Comments:
Water claim #5101680177-17.

Protection Comments:
Area is grazed, cattle tracks/droppings are evident.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 165

Survey Site Name: FIVEMILE LAKE NNE

County: Owyhee

USGS quadrangle: TABLE BUTTE

Latitude: 423155N Longitude: 1154522W

TOWNRANGE:	SECTION:	MERIDIAN:	TRSNOTE:
010S006E	28	BO	center N2

Location:

Blackstone Desert, S of Big Hill. Ca 1.8 air miles NNE of Fivemile Lake and ca 4.5 air miles E of Table Butte.

Survey Date: First Observed: 1995-09-23 Last Observed: 1995-09-23

EORANK: D

EORANK Comments:

Population Data:
1995: Ca 100 dormant mature genets. Population vigor assessed as poor. Area thoroughly surveyed by Jon Nelson,
Boise District BLM.

Habitat Description:
Plants only grow around the gravelly edges of the plays. Dry dirt/clay soil with rocks in the middle. Good
Light. No associated species.

Minimum Elevation: 4440 feet Maximum Elevation: feet Size: 1 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim # 5101681231-34.

Protection Comments:
No apparent use by cows or vehicles.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 166

Survey Site Name: FIVEMILE LAKE NORTH

County: Owyhee

USGS quadrangle: TABLE BUTTE

Latitude: 423143N Longitude: 1154612W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
010S006E 29 BO SW4SE4NE4

Location:
Blackstone Desert, S of Big Hill, ca 1.4 air miles N of Fivemile Lake and ca 4 air miles W of Table Butte.

Survey Date: First Observed: 1995-09-23 Last Observed: 1995-09-23

EORANK: B
EORANK Comments:

Population Data:
1995: Ca 400 mature dormant genets. Population vigor assessed as good. Area thoroughly surveyed by Jon Nelson,
Boise District BLM.

Habitat Description:
Playa with dirt/clay soil. Dry with good light. No associated species.

Minimum Elevation: 4520 feet Maximum Elevation: feet Size: 1 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim # 5101681229-22.

Protection Comments:
Cow use is evident.

Management Comments:

Specimens:

LEPIDIUM DAVISII
DAVIS' PEPPERGRASS
Occurrence Number: 167

Survey Site Name: FIVEMILE LAKE NW

County: Owyhee

USGS quadrangle: TABLE BUTTE

Latitude: 423135N Longitude: 1154717W

TOWNRANGE: SECTION: MERIDIAN: TRSNOTE:
010S006E 30 BO N2SE4

Location:
Blackstone Desert, S of Big Hill. 2 playas ca 1.5 miles NW of Fivemile Lake. Ca 3 air miles E of Table Butte.

Survey Date: First Observed: 1995-09-23 Last Observed: 1995-09-23

EORANK: AB
EORANK Comments: Site quality is excellent at the larger plays and good at the smaller plays.

Population Data:
1995: 2 playas. Larger, eastern plays with ca 3000 genets, population vigor is high. Smaller, western plays with ca 300 genets, population vigor is good. Plants are mature and dormant. Area thoroughly surveyed by Jon Nelson, Boise District BLM.

Habitat Description:
2 dry playas with dirt/clay soil. Larger plays with a rocky/gravelly surface. Dry area with good light. No associated species on the larger plays, but some Artemisia sp., Chrysothamnus sp., and Bromus tectorum at the small plays.

Minimum Elevation: 4550 feet Maximum Elevation: feet Size: 5 AC

Land Owner/Manager:
BRUNEAU RA

Ownership Comments:
Boise District BLM, Bruneau RA.

Comments:
Water claim # 5101682132-25 and 5101681224-17.

Protection Comments:

Management Comments:

Specimens:

Appendix 2

Results of Idaho playa inventory - Mountain Home Desert.

MOUNTAIN HOME DESERT

BIG FOOT BUTTE QUAD

Playa location	Checked	Leda occurrence	CDC occurrence #
T3S R2E S26 NW4	BLM 95, IANG 95	yes	035
T3S R2E S21 NE4	BLM 95	yes	062
T3S R2E S11 NE4	BLM	no	ex029
Wind Butte Lakes T2S R3E S32 NW4	BLM	no	---
Wind Butte lakes T2S R3E S32 NW4	BLM	no	---
T2S R2E S35 NW4	BLM	no	---
T3S R2E S17 NE4	BLM, IANG 95	no	---
T3S R2E S16 SW4	BLM 95	no	---
Tadpole Lake T3S R2E S11 NW4	BLM, IANG 95	no	---
T3S R2E S20 SE4	BLM 95	no	---
T3S R2E S28 NW4	BLM 95	no	---
T3S R2E S21 NW4	IANG 95	no	---
T3S R3E S30 SW4	BLM 95, IANG 95	no	---

BRUNEAU QUAD

T5S R6E S17 SE4	CDC 95	yes	028
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CASTLE BUTTE QUAD

T3S R2E S31 NE4	BLM	no	---
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CHRISTMAS MOUNTAIN QUAD

T2S R2E S13 NE4	BLM	no	---
T2S R2E S12 SW4	BLM	no	---
T2S R2E S11 SE4	BLM	no	---
T2S R2E S11 SE4	BLM	no	---
T2S R2E S2 SW4	BLM	no	---
T2S R2E S5 SE4	IANG 95	no	---
T1S R2E S16 SW4	BLM	no	---

CINDER CONE BUTTE

T3S R5E S20 SE4	BLM 95	yes	057
T3S R4E S28 SE4	IANG 95	yes	058
T2S R4E S34 SE4	BLM 95	no	---
T3S R4E S3 NE4	BLM 95	no	---
T3S R4E S2 SE4	BLM 95	no	---
T3S R4E S2 SE4	BLM 95	no	---
T3S R4E S2 SE4	BLM 95	no	---
T3S R4E S11 NW4	BLM 95	no	---
T3S R4E S10 SW4	BLM 95	no	---
T3S R4E S4 SE4	BLM 95, IANG 95	no	---
T3S R4E S4 SE4	BLM 95, IANG 95	no	---
T3S R4E S4 SW4	BLM 95	no	---
T3S R4E S9 SW4	BLM 95	no	---

CRATER RINGS QUAD

T3S R5E S35 NW4	BLM	yes	059
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CRATER RINGS SE QUAD

T4S R5E S9 NE4	SAIC 90	yes	084
T4S R5E S9 NE4	SAIC 90	yes	084
T4S R5E S4 SE4	SAIC 90	yes	084
T5S R6E S9 NW4	BLM 95	yes	026
T4S R5E S1 SE4	BLM 95	yes	036
T4S R5E S2 SE4	BLM 95	yes	037
T4S R6E S29 NW4	BLM 95	yes	034
T5S R5E S2 SE4	BLM	no	---
T5S R5E S3 NW4	BLM	no	---
T4S R6E S17 NW4	BLM	no	---
T4S R5E S36 SE4	unchecked		
T4S R5E S26 SW4	unchecked		
T4S R5E S26 SW4	unchecked		
T4S R5E S22 NW4	SAIC 90	yes	087

T4S R5E S10 NE4	SAIC 90	yes	085
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CRATER RINGS SW QUAD

T4S R4E S21 NE4	BLM 95	yes	046
T4S R4E S27 SW4	BLM 95	yes	025
T4S R4E S8 SE4	BLM 95	yes	052
T4S R4E S9 N2	BLM 95	yes	044
T4S R4E S16 NW4	BLM 95	yes	024
T5S R5E S6 NE4	BLM 95	yes	033
T4S R5E S30 SW4	BLM 95	yes	064
T4S R5E S31 NW4	BLM 95	yes	064
T4S R4E S2 SW4	BLM 95	yes	042
T4S R4E S21 SW4	BLM 95	yes	106
T4S R4E S3 NW4	BLM 95	yes	043
T4S R4E S12 SW4	BLM 95	yes	045
T4S R4E S13 NW4	BLM 95	yes	045
T3S R4E S33 NE4	IANG 95	yes	060
T3S R4E S33 NE4	IANG 95	yes	060
T3S R4E S33 NE4	IANG 95	no	---
T4S R4E S36 NE4	BLM	no - converted to ag	---
T4S R4E S36 NE4	BLM	no - converted to ag	---
T4S R4E S36 NE4	BLM	no - converted to ag	---
T4S R4E S22 SE4	BLM	yes	047
T4S R4E S17 NE4	BLM	yes	048
T4S R4E S14 SE4	BLM	no	---
T4S R5E S17 SW4	BLM	no	---
T4S R5E S17 SW4	BLM	no	---
T4S R5E S17 SE4	BLM	yes	039
T4S R4E S4 SW4	BLM	no	---
T4S R4E S36 SE4	BLM	yes	023
T4S R4E S36 NW4	BLM	yes	153

DORSEY BUTTE QUAD

T4S R4E S8 NE4	BLM 95	yes	126
T4S R4E S7 NW4	BLM 95, IANG 95	yes	051
T4S R4E S6 SW4	BLM 95	yes	050
T4S R4E S6 SW4	BLM 95	yes	050
T4S R3E S1 NW4	BLM95, IANG 95	yes	089
T4S R3E S1 SE4	BLM 95, IANG 95	yes	022
T4S R3E S1 SE4	BLM 95, IANG 95	yes	022
T4S R3E S1 SE4	BLM 95	no	---
T4S R3E S1 SE4	BLM 95	no	---
T4S R3E S1 SW4	IANG 95	no	---
T4S R3E S1 SE4	BLM 95	no	---
T4S R3E S12 NE4	BLM 95, IANG 95	yes	055
T4S R4E S18 NE4	BLM 95	yes	053
T4S R4E S19 SE4	BLM 95	yes	054
T4S R4E S18 NE4	BLM 95	yes	053
T4S R4E S18 NE4	BLM 95	yes	053
T3S R4E S3 SE4	BLM 95, IANG 95	yes	056
T4S R4E S7 SE4	BLM 95	yes	125
T4S R3E S26NW4	BLM	no	---
T4S R4E S20 NW4	BLM	no	---
T4S R4E S 20 NE4	BLM	no	---
T4S R4E S 20 NE4	BLM	no	---
T4S R4E S8 SW4	BLM	no	---
T3S R4E S31 SE4	BLM	no	---
T4S R3E S2 NW4	BLM	no	---
T4S R3E S2 NW4	BLM	no	---
T4S R3E S9 NE4	BLM	no	---
T4S R3E S5 SE4	BLM	no	---
T4S R4E S5 SW4	BLM 95	yes	049
T4S R4E S8 NW4	BLM 95	no (extirpated)	ex049
T4S R4E S8 NE4	BLM 95	no (extirpated)	ex049

T4S R4E S8 NE4	BLM 95	no (extirpated)	ex049
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GRAND VIEW QUAD

T5S R3E S14 NE4	BLM	no	---
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INITIAL POINT QUAD

T1S R1E S6 SW4	BLM	no	---
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JACKASS BUTTE QUAD

T4S R2E S2 SW4	BLM	no	---
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LITTLE JOE BUTTE QUAD

T3S R3E S23 SE4	BLM	yes	061
T3S R3E S2 NW4	BLM	no	---
T3S R3E S2 NE4	BLM 95	no	---
T2S R4E S32 SE4	BLM, IANG 95	no	---
T2S R4E S31 NE4	BLM, IANG 95	no	---
T2S R4E S30 SE4	BLM, IANG 95	no	---
T2S R4E S30 W2	BLM 95	no	---
T2S R3E S25 NW4	BLM 95	no	---
T2S R3E S24 NW4	BLM 95	no	---
T2S R3E S28 SW4	BLM	no	---

MAYFIELD SE QUAD

T1S R5E S36 NW4	blm	no	---
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MAYFIELD SW QUAD

T1S R4E S3 NW4	BLM	no	---
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MOUNTAIN HOME SOUTH QUAD

T5S R6E S9 NW4	BLM 95	yes	026
T5S R6E S9 NW4	BLM 95	yes	026
T4S R7E S31 SE4	BLM	no - converted to ag	---
T4S R6E S34 NW4	BLM	no	---
T4S R6E S27 NW4	BLM 95	no	---
T4S R6E S27 NW4	BLM 95	no	---

T4S R6E S27 NW4	BLM 95	no	---
T4S R6E S28 NW4	BLM	no	---

ORCHARD QUAD

T2S R3E S1 SE4	BLM	no	---
T2S R3E S1 NW4	BLM	no	---
T1S R3E S37 NE4	BLM	no	---
T1S R3E S23 NW4	BLM	no	---
T1S R3E S21 SE4	BLM	no	---
T1S R3E S1 SW4	BLM	no	---

REVERSE QUAD

T4S R8E S18 SE4	BLM	no	---
T5S R8E S5 SW4	BLM	no	---

WILD HORSE BUTTE QUAD

T3S R2E S30 NW4	BLM	no	---
T3S R1E S4 NW4	BLM	no	---
T2S R1E S27 NE4	BLM	no	---

Appendix 3

Results of Idaho playa inventory - Owyhee Uplands.

OWYHEE UPLANDS (including Bruneau Desert, Salmon Falls Creek, and South Fork Owyhee River distribution centers)

ANTELOPE CREEK QUAD

Playa location	Checked	Leda occurrence	CDC occurrence #
T13S R6E S31 SW4	BLM 95	yes	116
T14S R6E S29 NE4	BLM 95	yes	117
T14S R6E S20 SE4	BLM 95	yes	118

AUSTIN BUTTE QUAD

Rock Lake T9S R6E S34 NE4	Smithman 79, BLM	no	---
T9S R6E S34 NE4	BLM 95	yes	073
Salvador Lake T10S R7E S6 NW4	Smithman 79, BLM	no	---
T10S R7E S18 SE4	BLM 95	yes	088
White Lake T10S R7E S21 SE4	BLM 95	yes	017
T10S R7E S33NW4	BLM 95	yes	011
T10S R7E S33NW4	BLM 95	yes	011
T10S R7E S33NW4	BLM 95	no	---
T10S R7E S31 NE4	BLM 95	yes	002
Big Lake T10S R7E S29NW4	Smithman 79, BLM	no	---
T10S R6E S11 NE4	BLM 95	yes	009
T10S R6E S11NW4	BLM 95	yes	008
T11S R6E S2 NW4	BLM 95	yes	013
T10S R6E S22 SW4	BLM 95	yes	010
T10S R6E S34NW4	BLM 95	yes	121
T10S R6E S34NW4	BLM 95	yes	121
T10S R6E S34 NE4	BLM 95	yes	121
T10S R6E S33 NE4	BLM 95	yes	122

BATTLE CREEK LAKES QUAD

Battle Creek Lakes T13S R1WS26 NE4	CDC 95 (air)	no	---
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Battle Creek Lakes T13S R1WS23 SE4	CDC 95 (air)	no	---
Battle Creek Lakes T13S R1WS27 NE4	CDC 95 (air)	no	---

BEAVER CHARLIE BREAKS QUAD

Oregon Lake T13S R6WS10NW4	CDC 95 (air)	no	---
T13S R6W S11 E2	CDC 95 (air)	no	---
Bull Lake T13S R6W S26NE4	CDC 95 (air)	no	---
T13S R6W S2 NE4	CDC 95 (air)	no	---

BIG HORSE BASIN GAP QUAD

T9S R4E S18 SE4	BLM 95	yes	094
T9S R4E S17 NE4	BLM 95	no	---

BLACKSTONE RESERVOIR QUAD

T11S R6E S4 SE4	BLM 95	yes	066
T11S R5E S26NW4	BLM 95	yes	067
T11S R5E S35 SE4	BLM 95	yes	127
T11S R5E S35 SE4	BLM 95	yes	127
T11S R5E S11 NE4	BLM 95	yes	128
T12S R6E S7 SW4	BLM 95	yes	132
T12S R6E S7 SW4	BLM 95	yes	132
T12S R6E S8 SW4	BLM 95	yes	131
T12S R6E S17NW4	BLM 95	yes	130
T12S 6E S9 SW4	BLM 95	yes	129
T11S R6E S8 NW4	BLM 95	yes	140
T11S R6E S8 NW4	BLM 95	yes	140
T11S R6E S8 SW4	BLM 95	yes	140
T11S R6E S8 SW4	BLM 95	yes	140
T11S R6E S4 SE4	BLM 95	yes	139
T11S R6E S8 SE4	BLM 95	yes	140
T11S R6E S8 SE4	BLM 95	yes	140

T11S R6E S6 NE4	BLM 95	yes	136
T11S R6E S29NW4	BLM 95	yes	138
T11S R5E S21 SE4	BLM 95	yes	133
T11S R5E S21 SE4	BLM 95	yes	133
T11S R5E S13 SW4	BLM 95	yes	134
T11S R5E S13 SW4	BLM 95	yes	134
T11S R5E S24 NE4	BLM 95	yes	135
T11S R6E S19 SW4	BLM 95	yes	137
T11S R5E S11NW4	unchecked		
T11S R5E S22NW4	BLM 95	no	---
T11S R5E S27 SW4	BLM 95	no	---
T11S R5E S36 SW4	unchecked		
T11S R5E S36 SW4	unchecked		
T11S R5E S36 SW4	unchecked		
T11S R5E S36 SW4	unchecked		
T11S R5E S36NW4	unchecked		
T11S R5E S36NW4	unchecked		
T11S R6E S9 SE4	BLM 95	no	---
T11S R6E S16 NE4	unchecked		
T11S R6E S31 SE4	BLM 95	no	---
T11S R6E S31 SW4	BLM 95	no	---
T11S R6E S32 NE4	BLM 95	no	---
T11S R6E S32 NE4	BLM 95	no	---
T12S R6E S13 SW4	unchecked		
T12S R7E S4 SW4	unchecked		
T12S R7E S16 SW4	unchecked		
T12S R7E S8 NW4	BLM 95	no	---

BROKEN WAGON FLAT QUAD

T9S R6E S16 SW4	unchecked		
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BUCKHORN QUAD

T14S R5E S20 SW4	unchecked		
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T15S R4E S3 NE4	BLM 95	no	---
T15S R5E S5 NW4	BLM 95	no	---
T15S R5E S6 NE4	BLM 95	no	---

BULL BASIN CAMP QUAD

T13S R5W S21SW4	BLM 95	no	---
T13S R5W S21SW4	CDC 95 (air)	no	---
T13S R5W S21SW4	CDC 95 (air)	no	---
T13S R5W S21SW4	CDC 95 (air)	no	---
T13S R5W S21 SE4	CDC 95 (air)	no	---
T13S R5W S21 SE4	CDC 95 (air)	no	---
T13S R5W S21 SE4	CDC 95 (air)	no	---
T13S R5W S21 SE4	CDC 95 (air)	no	---
T13S R6W S1 S2 & S12 N2 -numerous	CDC 95 (air)	no	---

BULL CAMP BUTTE QUAD

T16S R3WS25NW4	CDC 95	yes	030
T16S R3WS24NW4	CDC 95	yes	027
T16S R3WS24NW4	CDC 95	yes	027
T16S R3WS13 SW4	CDC 95	yes	027
T16S R3WS13 SW4	CDC 95	yes	027
T16S R3W S20 SE4	unchecked		
T16S R3W S18 SE4	CDC 95	yes	021
T16S R3W S18NE4	CDC 95	yes	021
T16S R3WS18NW4	BERNATAS 93	no	---
T16S R3WS18NW4	BERNATAS 93	no	---
T16S R3WS18NW4	BERNATAS 93	yes	090
T16S R3W S7 SW4	BERNATAS 93	yes	091
T16S R3W S7 SW4	BERNATAS 93	no	---

BUSTER BUTTE QUAD

T13S R5E S21 SE4	BLM 95	yes	155
T13S R5E S22 SW4	BLM 95	yes	155

T13S R5E S24 SW4	BLM 95	yes	086
T12S R5E S22 SW4	BLM 95	yes	156
T13S R6E S9 SE4	BLM 95	yes	078
T13S R6E S16 SE4	BLM 95	yes	079
James Lake T13S R6E S21NW4	BLM 95	yes	079
T13S R6E S21 SE4	BLM 95	yes	077
T13S R6E S21 NE4	BLM 95	yes	077
T13S R6E S21 NE4	BLM 95	yes	077
T13S R6E S21 NE4	BLM 95	yes	077
T12S R6E S21 SW4	BLM 95	yes	154
T12S R6E S21 SW4	BLM 95	yes	154
T13S R6E S17 NE4	BLM 95	yes	038
T13S R5E S3 NE4	BLM 95	yes	158
T13S R5E S3 SW4	BLM 95	yes	158
T12S R5E S33 NE4	BLM 95	yes	040
T12S R5E S21 SE4	BLM 95	yes	155
T13S R6E S18 NE4	BLM	yes	018
T13S R6E S18 NE4	BLM	yes	018
T13S R6E S19 SW4	BLM 95	no	---
T13S R5E S16 SE4	unchecked		
T13S R5E S15 SW4	BLM 95	no	---
T13S R5E S13 SE4	BLM 95	no	---
T13S R5E S10NW4	BLM 95	no	---
T13S R5E S3 SW4	BLM 95	no	---
T13S R5E S3 NE4	BLM 95	no	---
T13S R5E S2 NE4	BLM 95	yes	157
T12S R6E S31 SE4	BLM	no	---
T12S R6E S28 SW4	unchecked		
T12S R5E S36 SW4	unchecked		
T12S R5E S34 SE4	BLM 95	no	---
T12S R5E S25 SE4	BLM 95	no	---

CAVE DRAW QUAD

Monument Lake T12S R6E S2 NE4	BLM 95	yes	164
T12S R6E S2 SE4	BLM 95	yes	163
T12S R6E S11 NE4	BLM 95	yes	163
T12S R7E S17 SE4	BLM 95	yes	162
T12S R6E S14 SE4	BLM 95	yes	161
T12S R6E S11 SW4	BLM 95	yes	160
T11S R6E S23 SE4	BLM 95	yes	159
Catholic Lake T12S R7E S6 SE4	BLM 95	no (extirpated)	ex003
T12S R7E S6 SW4	BLM 95	yes	003
T12S R7E S6 SW4	BLM 95	yes	003
Barinaga Lake T12S R6E S13 SE4	BLM	yes	004
T11S R6E S22 SE4	BLM 95	yes	032
T11S R6E S3 SE4	unchecked		
T11S R6E S11NW4	unchecked		
T11S R6E S28 SE4	unchecked		
T11S R7E S9 NE4	unchecked		
T11S R7E S17NW4	unchecked		
T12S R6E S1 NW4	unchecked		
T12S R6E S1 SW4	unchecked		
T12S R6E S11 SW4	unchecked		
T12S R6E S11 SE4	unchecked		

CLOVER BUTTE SOUTH QUAD

T12S R9E S31 SE4	unchecked		
T12S R9E S31NW4	unchecked		

COWAN RESERVOIR QUAD

T16S R8E S16 SW4	CDC 95	no	---
T15S R8E S17 NE4	CDC 95	no	---
T15S R7ES26 NW4	unchecked		

COYOTE HOLE QUAD

T15S R4W S36 SE4	BERNATAS 93	yes	092
T15S R4W S36 SE4	BERNATAS 93	yes	092
T15S R4W S36 SE4	BERNATAS 93	yes	092
T16S R4W S1 SW4	CDC 95	yes	096
T16S R4W S11SW4	CDC 95	yes	097
T16S R4WS11NW4	CDC 95	yes	097
T16S R4WS11NW4	CDC 95	yes	097
T16S R4WS11NW4	CDC 95	yes	097
T16S R4WS11NW4	CDC 95	yes	097
T16S R4WS14NW4	CDC 95	yes	098
T16S R4WS11NW4	CDC 95	no	---
T15S R4W S34 SE4	CDC 95 (air)	no	---
T15S R5WS25NW4	BLM 95	no	---

CROWBAR GULCH QUAD

T9S R6E S10 NW4	CDC 95	no	---
T9S R7E S17 NE4	Bernatas 91, BLM95	no	---

DISHPAN QUAD

Dishpan T15S R9E S29 SE4	BLM 95	no	---
T15S R9E S33 SE4	BLM 95	no	---
T15S R9E S33 SE4	BLM 95	no	---
Idaho Lake T16S R8E S25NW4	unchecked		
Wilson Lake T16S R8E S23 SW4	unchecked		

FLYING H RANCH QUAD

T15S R2E S4 E2	unchecked		
T15S R2E S10 NE4	unchecked		

FOUR CORNERS QUAD

T16S R2W S6 NW4	BLM 95	no	---
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T16S R2W S25 SE4	CDC 95	no	---
T16S R2W S25 SE4	CDC 95	no	---
T16S R2W S25 SE4	CDC 95	no	---
T16S R2W S25 SE4	CDC 95	no	---
T16S R2W S25 SE4	CDC 95	no	---
T16S R2W S25 SE4	CDC 95	no	---
T16S R2W S25 SE4	CDC 95	no	---
T16S R2W S25 SE4	CDC 95	no	---

GRASMERE QUAD

T12S R5E S17 SE4	BLM 95	yes	114
T11S R5E S28 SW	BLM 95	yes	115
T11S R5E S6 SE4	unchecked		
T11S R5E S28 SE4	BLM 95	no	---
T11S R5E S28 SE4	BLM 95	no	---
T11S R5E S28 SW4	BLM	no	---
T11S R5E S28 SW4	BLM	no	---
T11S R5E S28 SW4	BLM	no	---
T11S R5E S28 SW4	BLM	no	---
T11S R5E S28 SW4	BLM	no	---
T11S R5E S29 NE4	BLM 95	no	---
T12S R5E S6 SW4	BLM 95	no	---
T12S R5E S7 SE4	BLM 95	no	---

GRASMERE RESERVOIR QUAD

T13S R5E S4 NW4	BLM 95	yes	076
T13S R5E S4 NW4	BLM 95	yes	076
T13S R5E S4 NW4	BLM 95	yes	076
T12S R5E S32NW4	BLM 95	yes	093
T12S R4E S28 SE4	BLM 95	no	---
T13S R4E S26NW4	BLM 95	no	---
T13S R4E S27 SW4	BLM 95	no	---
T13S R4E S27 SW4	BLM 95	no	---
T12S R5E S30NW4	BLM 95	no	---

T13S R5E S16 SW4	BLM 95	no	---
T13S R5E S18 SE4	BLM 95	no	---
T13S R5E S8 SE4	BLM	no	---

GRASSY HILLS QUAD

T14S R12E S23SE4	BLM 94, 95	no	---
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GRASSY RIDGE QUAD

T14S R4W S15NE4	Bernatas 92	no	---
T14S R4W S2 SE4	Bernatas 92	no	---
T14S R5W S36 SE4	CDC 95	yes	103
T14S R5W S36 SE4	CDC 95	yes	103
T14S R5W S36 SE4	CDC 95	yes	103
T15S R4W S6 NW4	CDC 95	yes	103
T13S R4W S31SW4	BLM 95	no	---
T14S R4WS21NW4	BLM 95	no	---
T15S R4W S11NE4	BLM 95	yes	142

HILL PASTURE QUAD

T10S R4E S17 SE4	BLM 95	yes	005
T10S R4E S17 SE4	BLM 95	yes	069
T10S R4E S17 NE4	BLM 95	yes	068
T10S R4E S17 SE4	Smithman79, BLM95	no	---

HOLE IN ROCK QUAD

Hole in Rock Lake T9S R4E S10 NE4	Smithman 79, BLM95	no	---
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HOLLISTER SW QUAD

T13S R15E S20SE4	BLM 94	yes	095
T12SR15ES19NW4	BLM 95	no	---

INDIAN HAY MEADOW QUAD

T16S R4E S12 SW4	BLM 95	no	---
T16S R4E S25 SE4	BLM 95	no	---

INDIAN HOT SPRINGS QUAD

Cedar Tree Trail Lakes T13S R7ES30 NW4	CDC 95, BLM 95	yes	108
Cedar Tree Trail Lakes T13S R7E S30 SW4	CDC 95, BLM 95	yes	108
Cedar Tree Trail Lakes T13S R7ES31 NW4	CDC 95, BLM 95	yes	108
T13S R6E S22 SW4	BLM 95	yes	083
T13S R6E S23NW4	BLM 95	yes	001
T13S R6E S27NW4	BLM 95	yes	031
T13S R6E S27NW4	BLM 95	yes	031
T13S R6E S27NW4	BLM 95	yes	031
T13S R6E S27NW4	BLM 95	yes	031
T13S R6E S27NW4	BLM 95	yes	031
Twin Lakes T13S R6E S35NW4	BLM 95	yes	081
T13S R6E S35NW4	BLM 95	yes	081
T13S R6E S35NW4	BLM 95	yes	081
T13S R6E S26 SW4	BLM 95	yes	081
T13S R6E S26 SW4	BLM 95	yes	081
T13S R6E S26 SW4	BLM 95	yes	081
T13S R6E S26 SW4	BLM 95	yes	081
Long Lake T13S R6E S23NW4	BLM 95	yes	001
T13S R6E S22 NE4	BLM 95	yes	002
T13S R6E S27 NE4	BLM 95	yes	082
T13S R6E S27 NE4	BLM 95	yes	082
T13S R6E S27 SE4	BLM 95	yes	082
T13S R6E S26 SE4	BLM 95	yes	081
T13S R6E S26 SE4	BLM 95	yes	081
T13S R6E S26 SE4	BLM 95	yes	081
T13S R6E S23 SW4	BLM 95	yes	080
T13S R6E S23 SW4	BLM 95	yes	080
T13S R6E S22 SE4	BLM 95	yes	080

Twin Lakes T13S R6E S34NW4	Smithman 79, BLM	no	---
T13S R6E S10 SW4	Smithman 79, BLM	no	---
T13S R6E S10 SW4	Smithman 79, BLM	no	---
T13S R6E S1 SW4	Smithman 79, BLM	no	---
T13S R6E S4 NE4	BLM 95	no	---
Big Lake T12S R6E S24	BLM	no	---
T12S R6E S24 SW4	BLM	no	---
T12S R6E S22 SE4	unchecked		
T12S R7E S19 NE4	unchecked		
T12S R7E S19 SE4	unchecked		
T12S R7E S20 SW4	unchecked		
T12S R7E S20NW4	unchecked		

INSIDE LAKES QUAD

T12S R7E S23 SW4	CDC 95, BLM 95	no	---
T12S R7ES26 NW4	CDC 95	no	---
T12S R7E S27 NE4	CDC 95, BLM 95	no	---
T13S R7E S3 SW4	CDC 95	yes	041
T13S R7E S2 NE4	CDC 95	no	---
Inside Lakes T13S R7E S13NW4	CDC 95, BLM 95	yes	107
Inside Lakes T13S R7E S12 SE4	CDC 95, BLM 95	yes	107
Inside Lakes T13S R8E S18NW4	CDC 95, BLM 95	yes	107
Inside Lakes T13S R8E S18 NE4	CDC 95, BLM 95	yes	107
Inside Lakes T13S R8E S30 SW4	CDC 95, BLM 95	no	---
Inside Lakes T13S R7E S18 NE4	CDC 95	yes	107

JUNIPER BASIN QUAD

T15S R1W S34 SE4	BLM 95	no	---
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T16S R1WS29NW4	BLM 95	no	---
T16S R1W S27 SE4	BLM 95	no	---
T16S R1W S27 SE4	BLM 95	no	---

LITTLE BLUE TABLE QUAD

T13S R4E S7 W2	CDC 95 (air)	no	---
T13S R4E S29 NE4	unchecked		
T13S R4E S19 SW4	unchecked		

LOST VALLEY QUAD

T12S R2E S7 SW4	CDC 95 (air)	no	---
T12S R1E S15 NE4	BLM	no	---
T12S R1E S4 NW4	BLM 95	no	---
T12S R1E S4 NW4	BLM 95	no	---

O X LAKE QUAD

T8S R2E S32 NW4	CDC 95 (air)	no	---
Twin Lakes T9S R2E S5 SE4	CDC 95 (air)	no	---
Twin Lakes T9S R2E S9 NW4	CDC 95 (air)	no	---
O X Lake T9S R2E S16 SE4	CDC 95 (air)	no	---

PIUTE BASIN WEST QUAD

T14S R3W S7 SW4	Bernatas 92, BLM95	no	---
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POISON BUTTE QUAD

T15S R9E S4 NE4	needs recheck	---	---
T15S R9E S6 SW4	BLM 95	no	---

RED BASIN QUAD

T13S R4W S21NE4	Bernatas 92, BLM95	no	---
T13S R4W S21NE4	Bernatas 92, BLM95	no	---
T13S R4W S21NE4	Bernatas 92	no	---

RIDDLE QUAD

Dry Lake T15S R4E S7 NW4	unchecked		
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ROSEWORTH NE QUAD

T11S R14E S33SE4 8-10 playas	BLM 95	yes	141
T11S R14ES33SW4 6 playas	BLM 95	yes	141
T11S R14ES21NE4	BLM 95	no	---
T11S R14ES21SE4	BLM 95	no	---
T11S R14ES21SW4	BLM 95	no	---
T11S R14ES20SW4	BLM 95	no	---
T11S R14E S30 NE	BLM 95	no	---

ROSS LAKE QUAD

Ross Lake T15S R1E S2	CDC 95 (air)	no	---
T15S R1E S10 SE4	unchecked		
Rough Lake T14S R2E S32 SW4	CDC 95 (air)	no	---
T14S R2E S31 SE4	CDC 95 (air)	no	---
Mud Lake T14S R2E S30 SW4	CDC 95 (air)	no	---
T14S R1E S31 SE4	unchecked		
Juniper Lake T14S R1E S14 E2	CDC 95 (air)	no	---
Henry Lake T14S R1E S2 SW4	CDC 95 (air)	no	---

SALMON BUTTE QUAD

Playas ACEC T14S R15E S31 NE	Packard et al. 79	yes	019
Playas ACEC T14S R15ES32SW4	Packard et al. 79	yes	020
T13S R15E S31SE4	BLM 95	no	---

SPRING CREEK BASIN QUAD

T15S R5W S12SW4	CDC 95	yes	102
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T15S R5W S11NE4	CDC 95	yes	102
T15S R5W S11NE4	CDC 95	yes	102
T15S R5W S11NE4	CDC 95	yes	102
T15S R5WS11NW4	unchecked		
T15S R5W S2 SW4	unchecked		
T15S R5W S2 NW4	unchecked		
T15S R5W S3 E2	CDC 95 (air)	no	—
T14S R5W S34SW4	unchecked		
T14S R5WS34NW4	unchecked		
T14S R5W S19, 20, 29, 30	unchecked - numerous playas observed from air by CDC 95		
T15S R6W S1 SE4	BLM 95	yes	143
T15S R6W S12SW4	BLM 95	yes	144
T15S R6W S12SW4	BLM 95	yes	144
T15S R6W S12SW4	BLM 95	yes	144
T15S R6W S12SW4	BLM95	yes	144
T15S R5W S6 NE4	BLM 95	no	—

STAR VALLEY QUAD

T15S R5W S14NE4	CDC 95	yes	099
T15S R5W S14NE4	CDC 95	yes	099
T15S R5W S14NE4	CDC 95	yes	099
T15S R5W S14NE4	CDC 95	yes	099
T15S R5W S14NE4	CDC 95	yes	099
T15S R5W S14NE4	CDC 95	yes	099
T15S R5W S14NE4	CDC 95	yes	099
T15S R5W S14NE4	CDC 95	yes	099
T16S R5W S20 SE4	CDC 95	yes	100
T16S R5W S3 SW4	CDC 95	yes	010
T15S R6W S25NE4	CDC 95	no	—
T16S R5W S30NE4	BLM 95	yes	146
T16S R6W S13NE4	BLM 95	yes	145

T16S R6W S13 SE4	BLM 95	yes	145
T16S R5W S4 SE4	BLM 95	yes	149
T16S R5W S4 SW4	BLM 95	yes	148
T16S R5W S5 SW4	BLM 95	yes	147
T16S R5W S5 SW4	BLM 95	yes	147
T16S R5W S5 SE4	unchecked (seen by CDC from air)		
T15S R5W S33 SE4	BLM 95	yes	151
T15S R6W S13 SE4	BLM 95	yes	150
T15S R6W S13SW4	BLM 95	yes	150
T15S R5WS19NW4	BLM 95	no	---
T15S R5W S17SW4	BLM 95	no	---

STAR VALLEY KNOLL QUAD

T15S R6W S34 S2	CDC 95	yes	105
T15S R6W S34 S2	CDC 95	yes	105
T15S R6W S35 SE4	CDC 95	yes	104
T15S R6WS26 NE4	BLM 95	no	---
T16S R6W S23NE4	BLM 95	yes	152

STIFF TREE DRAW QUAD

T11S R7E S1 SW4	CDC 95, BLM 95	no	---
T11S R7E S13 E2	CDC 95, BLM 95	no	---
T12S R7E S11 SE4	BLM 94, BLM 95	no	---
T12S R7E S14 SE4	BLM 94, BLM 95	no	---

SUGARLOAF QUAD

T10S R2E S14 NE4	CDC 95 (air)	no	---
T10S R2E S14 NE4	CDC 95 (air)	no	---
T10S R2E S10NW4	unchecked		
T10S R2E S9 NE4	unchecked		
T10S R2E S9 NE4	unchecked		
T10S R2E S8 SW4	unchecked		
T10S R2E S8 SW4	unchecked		

TABLE BUTTE

T10S R6E S32 SE4	BLM 95	yes	123
T10S R6E S32 SE4	BLM 95	yes	123
T10S R6E S32 SE4	BLM 95	yes	123
T11S R6E S5 NW4	BLM 95	yes	124
T11S R6E S5 NW4	BLM 95	yes	124
T10S R6E S30 SE4	BLM 95	yes	167
T10S R6E S30 SE4	BLM 95	yes	167
T10S R6E S23NW4	BLM 95	yes	012
T10S R6E S28NW4	BLM 95	yes	165
T10S R6E S29 NE4	BLM 95	yes	166
T10S R6E S20NW4	unchecked		

THE ARCH QUAD

T15S R8ES16 NW4	CDC 95	no	---
T14S R8E S33 SW4	CDC 95, BLM 95	no	---
T14S R7E S1 SW4	CDC 95, BLM 95	yes	112
T14S R8E S6 SW4	CDC 95, BLM 95	yes	111
T14S R8E S6 SW4	CDC 95, BLM 95	yes	111
Rocky Lake T14S R7E S15 SW4	CDC 95, BLM 95	yes	113
T15S R7ES10 NW4	CDC 95	no	---
T14S R8E S6 SW4	BLM 95	yes	112

TRIANGLE RESERVOIR QUAD

T7S R2W S14 SW4	CDC 95 (air)	no	---
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TRIGUERO LAKE QUAD

T11S R7E S8 NW4	CDC 95, BLM 95	yes	109
T14S R7E S20 NE4	BLM 95	yes	120
T14S R6E S23 SW4 Upper Twin Lakes	BLM 95	yes	016
T14S R6E S22 SE4 Upper Twin Lakes	BLM 95	yes	015
T14S R5E S36 SE4	BLM 95	yes	074

T14S R7E S31 SW4 Triguero Lake	BLM 95	yes	075
T14S R6E S26 NE4	BLM 95	yes	073
T14S R6E S26 NE4	BLM95	yes	072
T14S R6E S10 NE4	BLM 95	yes	065
T14S R6E S3 NE4	BLM 95	yes	071
T14S R6E S3 NE4	BLM 95	yes	071
T14S R6E S2 NE4 Diamond A Res.?	BLM 95	yes	014
T14S R7E S17NW4	BLM 95	yes	119

TURNER TABLE QUAD

T11S R2E S36 NE4	CDC 95 (air)	no	---
T11S R2E S36NW4	CDC 95 (air)	no	---
T11S R2E S36 SW4	CDC 95 (air)	no	---
T11S R2E S36 SW4	CDC 95 (air)	no	---
T12S R2E S1 NE4	CDC 95 (air)	no	---
T12S R2E S2 SE4	CDC 95 (air)	no	---
T12S R3E S8 SW4	CDC 95 (air)	no	---

WICKAHONEY CROSSING QUAD

T10S R4E S9 SE4	BLM 95	yes	006
T10S R4E S16NW4	BLM	yes	069
T10S R4E S16NW4	unchecked		
T11S R4E S1 NW4	BLM 95	yes	063
T10S R4E S21 SE4	Smithman 79	yes	007

WICKAHONEY POINT QUAD

T12S R3E S8 NW4	CDC95(air),BLM95	no	---
T12S R3E S9 SW4	CDC95(air),BLM95	no	---
T12S R3E S10 SW4	BLM 95	no	---
T12S R3E S14 SE4	CDC95(air),BLM95	no	---
T12S R4E S7 NE4	CDC95(air),BLM95	no	---

WINTER CAMP QUAD

Twin Lakes T10S R7E S14 NE4	CDC 95	yes	110
Twin Lakes T10S R7ES14 NW4	CDC 95	yes	110
T10S R7E S10 SE4	CDC 95	no	---
T10S R7E S14 SW4	CDC95	yes	110

Appendix 4

Occurrence information for Oregon populations of *Lepidium davisii*.

NAME: LEPIDIUM DAVISII
 COMMON NAME: DAVIS' PEPPERGRASS
 EO-CODE: PDBRA1M080*001 LAST OBS: 1986-06-19 FED STATUS: C2
 COUNTY(s): MALHEUR FIRST OBS: 1976 STATE STATUS: PT
 QUAD NAMES: TWELVEMILE RIDGE LAT: 422810N SIZE: 0
 PHYSIOGRAPHIC PROV: BR LONG: 1180205W MINELEV (Feet): 4400
 T-R-S: 035S038E 28,27 QUADCODE: 4211841 MAXELEV (Feet):
 T-R-S COMMENTS: SW4SW4 SEC 28; SE4SE4 SEC 27 PRECISION: S 61
 EO-RANK/COMM: A :
 DIRECTIONS: PLAYA SE OF COYOTE LAKE. NORTH OF WHITEHORSE ROAD.
 DESCRIPTION: HARD CLAY-BOTTOMED PLAYA WHERE WATER STANDS IN WINTER AND SPRING. WET CLAY, WITH LITTLE ALKALI RIME
 VISABLE.
 EO-DATA: PACKARD 1979 BLM UPDATE; ALSO P STOEL 77 SIGHTING (ONHP), PACKARD COLLECTION #76-187, 7/5/76, CIC; AND
 SEYER 1976 SIGHTING (ONHP). VANDERSHAFF AND JOYAL PLAYA SITING, 1986 IN FLOWER, BETWEEN 250-500 PLANTS
 SEEN. APPARENTLY STABLE.
 EOTYPE:
 COMMENTS: JOYAL COLLECTION, 1986, OSC. ALSO SEEN BY MCCAFFERY, 6/11/86.
 ANNUAL OBSERVATION:
 OWNER: SOUTH MALHEUR RA
 OWNER COMM: BLM VALE DISTRICT
 MANAGED AREA: VALE BLM DISTRICT
 JORDAN RESOURCE AREA
 MANAGE COMM:
 PROT COMM: POSSIBLY THREATENED BY WILD HORSE WATERING (S.MACCAFFREY)
 BEST SOURCE: PACKARD P. 1979. BLM-VALE. RTE PL SURVEY 1979 UPDATE. JOYAL & VANDERSCHAFF SITING, JOYAL OSC
 COLLECTION.

NAME: LEPIDIUM DAVISII
 COMMON NAME: DAVIS' PEPPERGRASS
 EO-CODE: PDBRA1M080*002 LAST OBS: 1986-09-10 FED STATUS: C2
 COUNTY(s): MALHEUR FIRST OBS: 1978 STATE STATUS: PT
 QUAD NAMES: PALOMINO LAKE LAT: 425352N SIZE: 4
 PHYSIOGRAPHIC PROV: OU LONG: 1175637W MINELEV (Feet): 4132
 T-R-S: 031S039E 05 QUADCODE: 4211788 MAXELEV (Feet):
 T-R-S COMMENTS: PRECISION: M 1
 EO-RANK/COMM: :
 DIRECTIONS: PALOMINO LAKE
 DESCRIPTION: PLAYA-HARD CLAY, NOW CRACKING; SOME BASALT RUBBLE. PLAYA: ONLY LEDA & HALOGETON, ARTR-ATCO/SIHY
 SURROUNDING. ALSO W/ATSP. (JOYAL, 1985)
 EO-DATA: ON 9-7-85, MOSTLY PAST FRUIT, 1001-10,000 PLANTS OVER 40+ ACRES. 35% IMMATURE AND 60% MATURE AND 5%
 SENESCENET (JOYAL, 1985). ALSO COLLECTED BY PAT PACKARD, #78-256, 8-2-78, CIC. ALSO SEEN IN 1986.
 EOTYPE:
 COMMENTS: PACKARD, 1979 BLM-VALE UPDATE REPORT. ALSO SEEN BY JOYAL IN 1985, BLM VALE SIGHTING REPORT. 1986 NOTES,
 KINDSCHY, BOB.
 ANNUAL OBSERVATION:
 OWNER:
 OWNER COMM: BLM VALE DISTRICT
 MANAGED AREA: VALE BLM DISTRICT
 JORDAN RESOURCE AREA
 MANAGE COMM:
 PROT COMM:
 BEST SOURCE: JOYAL, ELAINE, VALE DISTRICT, BLM

NAME: LEPIDIUM DAVISII
 COMMON NAME: DAVIS' PEPPERGRASS
 EO-CODE: PDBRA1M080*003 LAST OBS: 1991-06-12 FED STATUS: C2
 COUNTY(s): MALHEUR FIRST OBS: 1986 06-12 STATE STATUS: PT
 QUAD NAMES: GRASSY RIDGE WELL LAT: 423745N SIZE: 40
 PHYSIOGRAPHIC PROV: BR LONG: 1180622W MINELEV (Feet): 4175
 T-R-S: 033S037E 36 QUADCODE: 4211861 MAXELEV (Feet):
 T-R-S COMMENTS: SW4 & W2SE4 PRECISION: S 1

EO-RANK/COMM: A :

DIRECTIONS: ABOUT 0.5 MI S OF GRASSY RIDGE (1986). SMALL PLAYA 1/2 MILE N OF ROAD, APPROX 2 1/2 MILES NE OF COYOTE LAKE (1991)

DESCRIPTION: DRY CLAY CRACKED PLAYA (1986). BOTTOM TOPOGRAPHIC POSITION, OPEN LIGHT, DRY CLAY SOIL. INVASION OF IVA AXILANS

EO-DATA: MAYBE 5000 PLANTS IN 40 ACRES. 90% MATURE, 10% UNKNOWN. IN LEAF, BUD & FLOWER. IVA OXILLARIS COVERED 1/3 OF PLAYA. VERY LITTLE LEDA GROWS WITH IT (1986). 1001-10000 PLANTS, IN LEAF, IN BUD, AND IN FLOWER, 85% MATURE, 15% OTHER, OVER 30 ACRE AREA (1991)

EOTYPE:

COMMENTS: 1986 BLM SIGHTING REPORT, MCCAFFREY, CHERYL. 1991 ONHDB SURVEY FORM., JANIS REIMERS, REPORTER

ANNUAL OBSERVATION:

OWNER:

OWNER COMM: BLM BURNS DISTRICT

MANAGED AREA: BURNS BLM DISTRICT
ANDREWS RESOURCE AREA

MANAGE COMM:

PROT COMM: THREATS:? WILD HORSE TRAMPLING (MAY HELP DISSEMINATE SEEDS)

BEST SOURCE: MCCAFFREY, CHERYL; JANIS REIMERS

NAME: LEPIDIUM DAVISII

COMMON NAME: DAVIS' PEPPERGRASS

EO-CODE: PDBRA1M080*004

COUNTY(s): MALHEUR

QUAD NAMES: COYOTE LAKE EAST

PHYSIOGRAPHIC PROV: BR

T-R-S: 035S038E 02,11

T-R-S COMMENTS: SE4SW4 SEC 2; N4 SEC 11

EO-RANK/COMM: :

DIRECTIONS: 5.5 MI SE OF COYOTE "LAKE"

DESCRIPTION: PLAYA LAKE BED, CLAYS

EO-DATA: 11-50 PLANTS, IN FRUIT

EOTYPE:

COMMENTS: 1989 BLM SIGHTING REPORT, KINDSCHY, BOB

ANNUAL OBSERVATION:

OWNER: JORDAN RA

OWNER COMM: VALE DISTRICT BLM

MANAGED AREA: JORDAN RESOURCE AREA
VALE BLM DISTRICT

MANAGE COMM:

PROT COMM:

BEST SOURCE: KINDSCHY, BOB

LAST OBS: 1989-08-07

FIRST OBS: 1989

LAT: 423123N

LONG: 1180023W

QUADCODE: 4211851

FED STATUS: C2

STATE STATUS: PT

SIZE: 20

MINELEV (Feet): 4200

MAXELEV (Feet):

PRECISION: S 2

NAME: LEPIDIUM DAVISII

COMMON NAME: DAVIS' PEPPERGRASS

EO-CODE: PDBRA1M080*005

COUNTY(s): MALHEUR

QUAD NAMES: COYOTE LAKE EAST
ROME STATE AIRPORT

PHYSIOGRAPHIC PROV: BR

T-R-S: 035S038E 02

T-R-S COMMENTS:

EO-RANK/COMM: :

DIRECTIONS: 5.5 MI SE OF COYOTE "LAKE"

DESCRIPTION: PLAYA LAKE BED, CLAYS

EO-DATA: 11-50 PLANTS, IN FRUIT, IN 20 ACRES

EOTYPE:

COMMENTS: 1989 BLM SIGHTING REPORT, KINDSCHY, BOB

ANNUAL OBSERVATION:

OWNER: JORDAN RA

OWNER COMM: VALE DISTRICT BLM

MANAGED AREA: JORDAN RESOURCE AREA

LAST OBS: 1989-08-07

FIRST OBS: 1989

LAT: 423145N

LONG: 1180000W

QUADCODE: 4211851
4211758

FED STATUS: C2

STATE STATUS: PT

SIZE: 20

MINELEV (Feet): 4200

MAXELEV (Feet):

PRECISION: S 3

VALE BLM DISTRICT

MANAGE COMM:
 PROT COMM:
 BEST SOURCE: KINDSCHY, BOB

NAME: LEPIDIUM DAVISII
 COMMON NAME: DAVIS' PEPPERGRASS
 EO-CODE: PDBRA1M080*006
 COUNTY(s): MALHEUR
 QUAD NAMES: WRANGLE BUTTE
 PHYSIOGRAPHIC PROV: OU
 T-R-S: 029S040E 08,17
 T-R-S COMMENTS: SE4SW4 SEC 8; NW4NE4 SEC 17
 EO-RANK/COMM: :
 DIRECTIONS: 3 MI SE OF SADDLE BUTTE
 DESCRIPTION: DESERT PLAYA-BARREN EXCEPT FOR LEPIDIUM DAVISII. LAKE BED SILTS
 EO-DATA: 51-100 IN LEAF AND FRUIT
 EOTYPE:
 COMMENTS: 1989 BLM SIGHTING REPORT, KINDSCHY, BOB
 ANNUAL OBSERVATION:
 OWNER: JORDAN RA
 OWNER COMM: VALE DISTRICT BLM
 MANAGED AREA: JORDAN RESOURCE AREA
 VALE BLM DISTRICT
 MANAGE COMM:
 PROT COMM:
 BEST SOURCE: KINDSCHY, BOB

LAST OBS: 1989-08-07
 FIRST OBS: 1989
 LAT: 430337N
 LONG: 1175038W
 QUADCODE: 4311717

FED STATUS: C2
 STATE STATUS: PT
 SIZE: 40
 MINELEV (Feet): 4000
 MAXELEV (Feet):
 PRECISION: S 1

NAME: LEPIDIUM DAVISII
 COMMON NAME: DAVIS' PEPPERGRASS
 EO-CODE: PDBRA1M080*007
 COUNTY(s): MALHEUR
 QUAD NAMES: WRANGLE BUTTE
 PHYSIOGRAPHIC PROV: OU
 T-R-S: 029S040E 19,20
 T-R-S COMMENTS: SE4NE4 AND NE4SE4 SEC 19; W4 SEC 20
 EO-RANK/COMM: :
 DIRECTIONS: 3 MI SE OF SADDLE BUTTE
 DESCRIPTION: BARREN-DRY LAKE BED; WHITE CLAY AND SILT
 EO-DATA: 51-100 PLANTS IN 40 ACRES IN FRUIT
 EOTYPE:
 COMMENTS: 1989 BLM SIGHTING REPORT, KINDSCHY, BOB (1 REPORT, MAPPED AS 2)
 ANNUAL OBSERVATION:
 OWNER: JORDAN RA
 OWNER COMM: VALE DISTRICT BLM
 MANAGED AREA: JORDAN RESOURCE AREA
 VALE BLM DISTRICT
 MANAGE COMM:
 PROT COMM:
 BEST SOURCE: KINDSCHY, BOB

LAST OBS: 1989-09-28
 FIRST OBS: 1989
 LAT: 430222N
 LONG: 1175122W
 QUADCODE: 4311717

FED STATUS: C2
 STATE STATUS: PT
 SIZE: 40
 MINELEV (Feet): 4000
 MAXELEV (Feet):
 PRECISION: S 2

NAME: LEPIDIUM DAVISII
 COMMON NAME: DAVIS' PEPPERGRASS
 EO-CODE: PDBRA1M080*008
 COUNTY(s): MALHEUR
 QUAD NAMES: WRANGLE BUTTE
 PHYSIOGRAPHIC PROV: OU
 T-R-S: 029S040E 19
 T-R-S COMMENTS: NE4NW4
 EO-RANK/COMM: :
 DIRECTIONS: 3 MI SE OF SADDLE BUTTE
 DESCRIPTION: BARREN DRY LAKE BED, WHITE CLAY AND SILT

LAST OBS: 1989-08-07
 FIRST OBS: 1989
 LAT: 430233N
 LONG: 1175159W
 QUADCODE: 4311717

FED STATUS: C2
 STATE STATUS: PT
 SIZE: 20
 MINELEV (Feet): 4000
 MAXELEV (Feet):
 PRECISION: S 3

EO-DATA: 51-100 PLANTS, IN FRUIT

EOTYPE:

COMMENTS: 1989 BLM SIGHTING REPORT, KINDSCHY, BOB (1 REPORT, MAPPED AS 2)

ANNUAL OBSERVATION:

OWNER: JORDAN RA

OWNER COMM: VALE DISTRICT BLM

MANAGED AREA: JORDAN RESOURCE AREA

VALE BLM DISTRICT

MANAGE COMM:

PROT COMM:

BEST SOURCE: KINDSCHY, BOB

NAME: LEPIDIUM DAVISII

COMMON NAME: DAVIS' PEPPERGRASS

EO-CODE: PDBRA1M080*009

COUNTY(S): MALHEUR

QUAD NAMES: COYOTE LAKE EAST

PHYSIOGRAPHIC PROV: OJ

T-R-S: 034S038E 07

T-R-S COMMENTS: NE4

EO-RANK/COMM: :

DIRECTIONS: SMALL PLAYA APPROX 1 MILE S OF ROAD, 2 MILES NE OF COYOTE LAKE

DESCRIPTION: BOTTOM SLOPE POSITION. PLAYA HABITAT, LEDA COMMUNITY, CLAY SOIL.

EO-DATA: 500+ PLANTS IN LEAF, BUD, AND FLOWER. MATURE.

EOTYPE:

COMMENTS: 1991 BLM SIGHTING REPORT; JANIS REIMERS REPORTER.

ANNUAL OBSERVATION:

OWNER: FEDERAL

OWNER COMM: Andrews

MANAGED AREA: ~~JORDAN~~ RESOURCE AREA

BURNS BLM DISTRICT

MANAGE COMM:

PROT COMM:

BEST SOURCE: REIMERS, JANIS

LAST OBS: 1991-07-11

FIRST OBS: 1991-07-11

LAT: 423645N

LONG: 1180450W

QUADCODE: 4211851

FED STATUS: C2

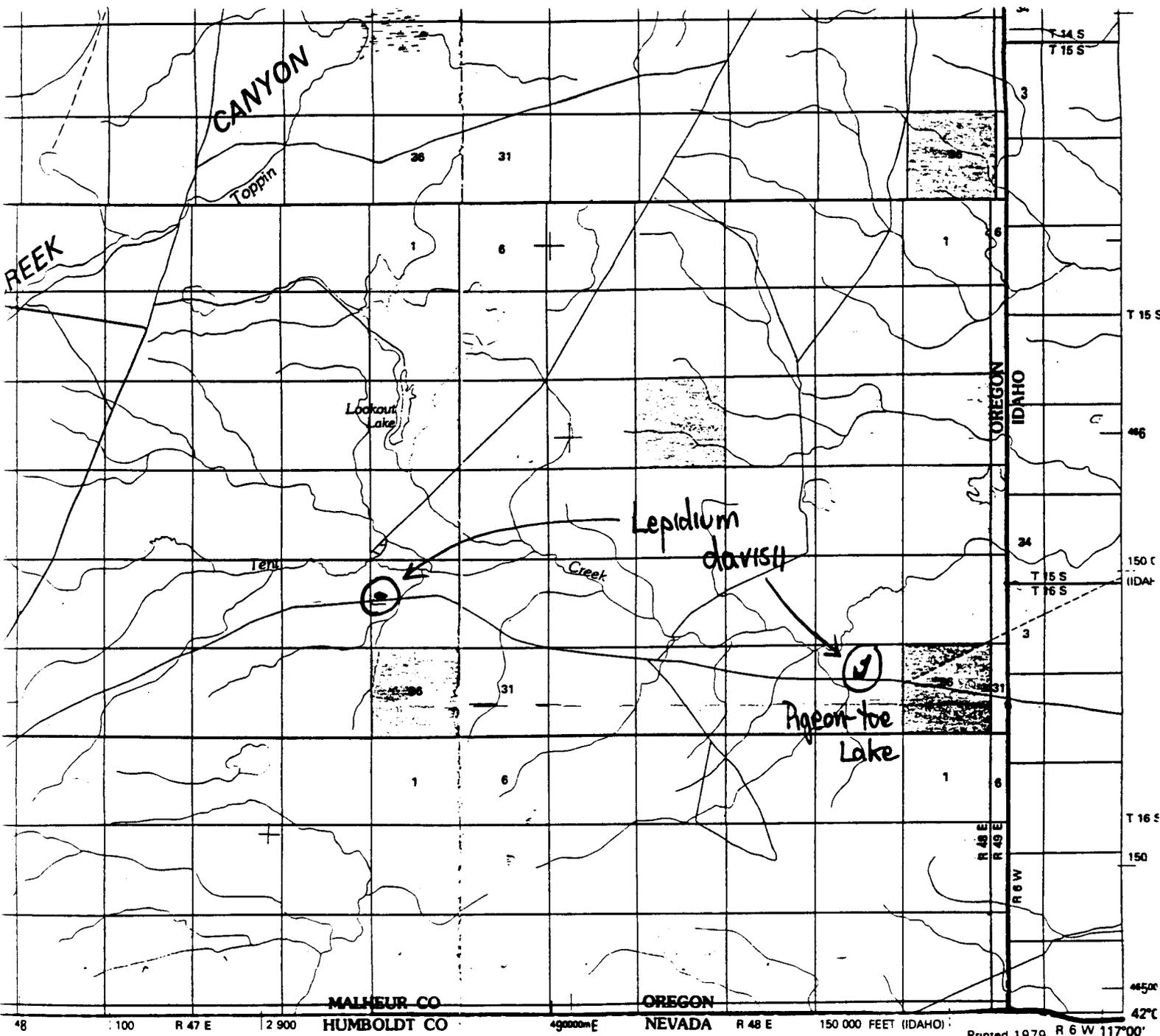
STATE STATUS: PT

SIZE:

MINELEV (Feet): 4170

MAXELEV (Feet):

PRECISION: S 4



LEGEND

- Perennial stream, lake
- Intermittent stream, lake
- Village or locality
- Landmark structure

ROAD CLASSIFICATION

- Primary highway, hard surface
- Secondary highway, hard surface
- Light-duty road, hard or improved surface
- Street or other road
- Trail
- Interstate route ○ U.S. route ○ State route

0.1 ac
20 150 plants

LA ROSA CANYON, OREGON—IDAHO

SW/4 JORDAN VALLEY (NK 11-5) 1:250 000-SCALE MAP
N4200—W11700/30X60

1978

SURFACE MANAGEMENT STATUS

Appendix 5

Occurrence information for the Nevada population of *Lepidium davisii*.

NEVADA RARE PLANT OBSERVATION REPORT

Please enter all information available to you. Use the back for comments and/or a sketch map of the exact location of the rare plant population. Attach a copy of the USGS map showing the precise location of the population.

Species: Lepidium davisii Date of Observation: 95-7-6

Observer(s): Bob Moseley Phone: (208) 334-3402

Address: Idaho Conservation Data Center, PO Box 25, Boise ID 83707

Location (be specific): between Calico Creek and the Little Owyhee River, south of Willow Creek, ca 2.25 miles S of Idaho Border

County: Elko, Nevada T 47N R 45E unsurveyed but appears to be 1/4 of NW 1/4 of Sec. 19

Coordinate or Polygon Identifier (e.g., UTM, Lat-Long, Stand #) _____

Elevations: 5125 to _____ Quad Name: Star Valley Ridge West

Landowner/Manager: BLM

Is this a new location? Unknown No Yes --> please provide CDC occurrence # (e.g., 023) _____

Total # of individuals in population: _____ Actual several Estimated _____
thousand

What was counted (check one)? Genets (genetically distinct individuals) or Ramets (stems of a clonal plant)

Phenology (# individuals or % population): most in flower Vegetative _____ Flower _____ Fruit _____ Dormant _____

Population age class structure: _____ %Seedlings _____ %Immature _____ %Mature _____ %Senescent Unknown

Population area: covers entire playa Assessment of population vigor: _____

Was population thoroughly surveyed or was it a cursory visit? surveyed from air - ca. 50' above ground at low airspeed in fixed-wing aircraft

Compared to your last visit (# of plants, area, vigor, age classes): _____

Habitat description (community, associated species (no abbrev.), substrate/soil, aspect, slope, moisture regime, light regime, natural disturbance regimes):

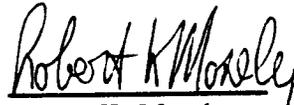
Vernal lake-bed (playa) on volcanic plain. Flat. No water in playa during survey. No associated species; playa surrounded by ~~the~~ vegetation dominated by Artemisia tridentata ssp. wyomingensis.

Current land use, cultural disturbance, possible threats (imminent or nonimminent?): Undisturbed. No reservoir has been dug to retain water for livestock. No evidence of livestock use.

Overall Site Quality: Excellent Good Fair Poor
How was identification made: _____

Collector & #: _____ Herbarium where deposited: _____ Photo? _____
Other knowledgeable individuals: Susan Bernatas

Submitted by:


Robert K. Moseley
Robert K. Moseley
Coordinator/Plant Ecologist
Idaho Conservation Data Center

Approved by:

IDAHO DEPARTMENT OF FISH AND GAME


Cal Groen
Cal Groen, Chief
Natural Resources Policy Bureau



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

BLM/ID/PT-96/006+1150

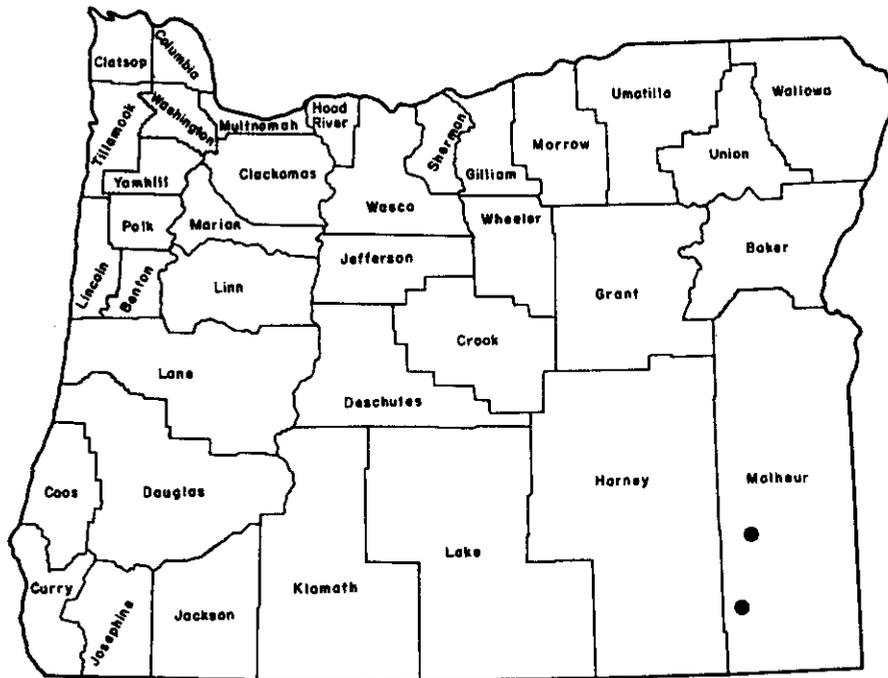


Fig. 91. *Lepidium davisii*. A: Habit, depicting woody base, X 0.8; B: Flower, X 10; C: Fruit (silique), X 10 (drawn from Packard 79-288, CIC).