

INVENTORY OF SENSITIVE SPECIES AND ECOSYSTEMS IN UTAH

**ENDEMIC AND RARE PLANTS OF UTAH:
AN OVERVIEW OF THEIR DISTRIBUTION AND STATUS**

**Central Utah Project Completion Act
Title III, Section 306(b)**

**Utah Reclamation Mitigation and Conservation Commission
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Prepared for

UTAH RECLAMATION MITIGATION AND CONSERVATION COMMISSION

and the

U.S. DEPARTMENT OF THE INTERIOR

Prepared by

UTAH DIVISION OF WILDLIFE RESOURCES

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HOW TO USE THIS REPORT

The main body of this report is a series of annotated checklists that includes all of Utah's endemic and rare plants. This report section provides an explanation of how the lists were developed and also describes the kinds of information that are given for each plant species. An index at the very end of the document provides an alphabetical listing of all of the plants included in the inventory along with the corresponding page numbers where brief accounts of each species can be found.

Basis for Inclusion

Only **vascular plants** -- i.e., the plant groups commonly called ferns, fern allies, gymnosperms (cone-bearing seed plants), and flowering plants -- are included in this inventory. Algae, fungi, lichens, mosses, and liverworts are not vascular plants and are not treated here. The inventory also embraces only those plants that are **native to Utah**. Ornamentals, plants escaped from cultivation, and naturalized plants are not included.

A plant must also be **rare in Utah** to be included in the inventory. While no statistically precise definition of rarity has been developed, it was decided at the beginning of this project that the inventory would target plants that fall into one or more of the following categories:

- Plants known from three or fewer counties in Utah (as reported in *A Utah Flora*, 2nd ed., Welsh et al. 1993).
- Plants known in Utah from 10 or fewer collections (as reported by the same source).
- Plants currently or formerly with some form of protection or review status (i.e., listed or proposed for listing under the federal Endangered Species Act; under review as a candidate for possible ESA listing; listed as Sensitive in USDA Forest Service Region 4; etc.).
- Plants endemic to Utah (i.e., not found outside the political boundaries of the state).

These criteria necessarily include many plants that are rare in Utah but perhaps more common or even widespread outside our state. Later it was decided that plants meeting one or more of the above criteria but known from 50 or more collections in Utah should be eliminated from further consideration as being too abundant. It should also be noted that the use of herbarium collections as an index of rarity is not without its problems (see Barkley 1981, Reveal 1981a, Siddall 1981).

Notes on Plant Nomenclature

The plants in this inventory are presented alphabetically by their **scientific names**. Scientific nomenclature generally follows *A Utah Flora, 2nd ed.* (AUF2, Welsh et al. 1993). In addition, we have made extensive use of recent monographs and taxonomic revisions in defining the nomenclature for this work. If a name other than what appears in AUF2 is used, then the treatment in AUF2 is also provided in the index as a cross-reference. In general, only taxa that have been effectively and validly published at the level of species, subspecies, or variety are included. Excluded are plants referred to by botanists under the taxonomic rank of forma -- which generally consists of relatively trivial vegetative or flower color variants. Sterile or otherwise unstable **hybrids**, as sometimes occur in nature, are not included whether they are named or not.

A few of the plants included on the list have **unpublished names**. These are mostly new names or combinations that are in the process of being published, as indicated by the abbreviation **ined.** following the authority for the name.

Most of the included plants also have a **common name**. These are provided because it is often easier for those of us who are not professional botanists to refer to a plant by a more familiar-sounding name.

For each included species, the technical **family name** is also included. Note that all of these names end with the suffix **-aceae**. For an alphabetical list of plant species by family, see **Appendix C**.

Status Categories for Included Plants

Each of the plants included in the inventory has a **status category** to which it has been assigned on the basis of similarity in rangewide distribution, abundance, and other factors. Although these status assignments are somewhat subjective, they are based on the best information currently available to us. In the case of plants that range outside of Utah, overall distribution and abundance has been evaluated primarily using taxonomic literature and published floristic manuals (Kearney and Peebles 1951; Davis 1952; Cronquist 1955; Hitchcock and Cronquist 1961, 1964; Hitchcock et al. 1959, 1969; Howell and McClintock 1960; Cronquist et al. 1972, 1977, 1984, 1997; Martin and Hutchins 1980, 1981; Kartesz 1987; Barneby 1989; Dorn 1992; Weber and Wittmann 1992, 1996a,b; Hickman 1993; Morin 1993, 1997; Cronquist 1994; Roalson and Allred no date, 1995a,b). The seven basic status categories are defined as follows:

- H Historical.** Plants presumed extinct or at least known only historically throughout their range.
- R Rare.** Plants with known or suspected rangewide viability concern.
- W Watch.** Plants regionally endemic but without rangewide viability concern.

- P** **Peripheral.** Plants rare or uncommon in Utah but more common and widespread outside the state.
- I** **Infrequent.** Plants widely but infrequently distributed in the western U.S. or in the Intermountain region.
- T** **Taxonomic problems.** Plants for which validity as a species, subspecies, or variety has been questioned in the literature by one or more experts.
- D** **Additional data needed.** Plants possibly rare in Utah but for which current information is insufficient for assigning them to one of the other status categories.

Information on the number of plant species in each status category is provided below (see Table 2). The percentages given in the third column of the table indicate the portion of the total native flora in Utah represented by the plants assigned to a particular category.

Table 2. Numerical analysis of plant species by status category.

Status Category	No. of Species & Intraspecific Taxa	% of Total Native Flora
H (Historical)	4	0.1
R (Rare)	243	8.1
W (Watch)	244	8.2
P (Peripheral)	702	23.4
I (Infrequent)	48	1.6
T (Taxonomic problems)	205	N/A
D (Additional data needed)	197	6.6
TOTAL	1643	48.0

For each of the species included in this inventory, the plant's official **federal status** is abbreviated as follows:

- LE** Listed endangered under the federal Endangered Species Act.
- LT** Listed threatened.
- PE** Formally proposed as endangered.
- PT** Formally proposed as threatened.
- C** Plants for which the USFWS currently has on file sufficient information to support the appropriateness of listing as either endangered or threatened. (This category generally includes plants with "C1" status under the old USFWS candidate determination policy.)
- (C2)** Under the former USFWS candidate determination policy, plants under review but with insufficient information to support the appropriateness of listing.
- *** A modifier indicating that the plant is considered possibly extinct.
- +** A modifier indicating that the plant would have been added to the list of Category 2 candidates had the USFWS candidate determination policy not changed.
- (3A)** Under the former USFWS candidate determination policy, plants no longer under review for possible endangered or threatened listing; presumed extinct.
- (3B)** No longer under review; plants taxonomically questionable or invalid.
- (3C)** No longer under review; plants more abundant or widespread than previously believed or not subject to any identifiable threat.
- FS** Plants on USDA Forest Service Region 4 sensitive list (Joslin 1994) and occurring on National Forest lands in Utah.
- BLM** Plants on interim Sensitive list adopted by USDI Bureau of Land Management, Utah State Office (Lamb 1996).

For an alphabetical list of plant species in Utah falling within one or more of these current or former federal status categories, see **Appendix A**.

Also given is the **Utah Natural Heritage Program status rank** in cases where such a rank has already been assigned. As defined in the Natural Heritage Program Operations Manual, a numeric rank (1 through 5) is assigned to indicate the status of a species at both the Global or rangewide level (**G**) and at the State level (**S**). Where appropriate, a Trinomial rank (**T**) is also assigned to indicate the rangewide distribution and abundance at the infraspecific (variety or subspecies) level. These ranks are based primarily on the number of occurrences of the species, along with other factors such as overall abundance, extent of geographic range, population trends, and threats. The range in number of occurrences suggested for each numeric rank is not an absolute guideline, but only the starting point in the ranking process:

- G1 or T1 or S1** Indicates extreme rarity or other factor(s) making the species especially vulnerable to extinction or extirpation (typically 5 or fewer occurrences or very few remaining individuals or acres).
- G2 or T2 or S2** Indicates rarity or other factor(s) making the species very vulnerable to extinction or extirpation (6 to 20 occurrences or few remaining individuals or acres).
- G3 or T3 or S3** Indicates a species that is either very rare and local throughout its range or found locally (even abundantly at some of its locations) within a restricted range, or vulnerable to extinction or extirpation because of other factors (21 to 100 occurrences).
- G4 or T4 or S4** Indicates a species that is widespread, abundant, and apparently secure, though it may be quite rare in parts of its range, especially at the periphery (usually more than 100 occurrences).
- G5 or T5 or S5** Indicates a species that is demonstrably widespread, abundant, and secure, though it may be quite rare in parts of its range.

A range spanning two (or even three) of the numeric ranks denotes a range of uncertainty about the exact status of the species (e.g., **S1S2**); ranges cannot skip more than one rank (e.g., **S1S4** is not allowed). A qualifier of “?” also may be added to a rank to indicate that the rank is inexact. A qualifier of “Q” is added to a rank to denote a taxonomic question.

Additional possible Natural Heritage ranks include:

- GH or TH or SH** Historical: Of historical occurrence throughout its range or within a state, i.e., formerly part of the established biota, with the expectation that it may be rediscovered.
- GX or TX or SX** Extinct (Global) or extirpated (State): Believed to be extinct throughout its range or extirpated in the state with virtually no likelihood that it will be rediscovered.

SR Reported in the state, but occurrence not yet confirmed.

SRF Reported falsely in the state.

Geographic Distribution

The county distribution in Utah of each listed plant is summarized according to the following abbreviations:

Beaver (BEA)	Iron (IRO)	Sevier (SEV)
Box Elder (BOX)	Juab (JUA)	Summit (SUM)
Cache (CAC)	Kane (KAN)	Tooele (TOO)
Carbon (CAR)	Millard (MIL)	Uintah (UIN)
Daggett (DAG)	Morgan (MOR)	Utah (UTA)
Davis (DAV)	Piute (PIU)	Wasatch (WAS)
Duchesne (DUC)	Rich (RIC)	Washington (WSH)
Emery (EME)	Salt Lake (SAL)	Wayne (WAY)
Garfield (GAR)	San Juan (SNJ)	Weber (WEB)
Grand (GRA)	Sanpete (SNP)	

When we indicate that a particular plant occurs in a particular county, we are making a positive statement that is based on the existence of one or more herbarium specimens or a reliable literature citation (rarely on field observations only). The reported county distribution is according to *AUF2* (Welsh et al. 1993) unless otherwise noted. For an alphabetical list of plant species occurring within each county, see **Appendix B**. In referring to herbarium specimens, the collector's name and field collection number is given in *italic* type, and the museums in which the specimen is deposited are indicated in CAPITAL letters using standardized acronyms (see *Index Herbariorum*, Holmgren et al. 1990).

If the plant is also found in one or more neighboring states, then this is indicated using the standard (i.e., U.S. Postal Service) abbreviation for that state. Plants that range more widely in the western United States are so designated by a "+" sign, and those of even broader overall range are indicated by a "++." A question mark "?" is used to express uncertainty of occurrence in a particular county

or state. Parentheses are used in cases where a plant is thought to be extirpated in a particular county or state.

Plants by Family

For an alphabetical list of plant species by family, see **Appendix C**.

Areas for Additional Research

This document should be regarded as a work in progress. For some of the species addressed herein, significant questions regarding distribution and status remain which can only be answered by careful examination of museum specimens, communication with experts, or coordination with botanists in adjoining states; this is particularly true for the 185 taxa that are not currently included in the inventory because of insufficient information.

The document also could be made more useful by the addition of new kinds of information on each listed plant: USGS quadrangles of occurrence for Rare species, occurrence by ecoregion instead of by county, and relevant data on habitat, life form, and blooming period.

It should also be noted that here in Utah we are still very much on the frontier of plant discovery. Field botanists are continuing to find new locations for rare species, and taxonomists are continuing to name and describe new species and varieties in the literature. It is expected that enough new information will eventually accumulate to make a revision of this document necessary.

We encourage, depend on, and enthusiastically invite contributions to this inventory. Such input conceivably could range from reporting a new location or county record for a particular rare plant species to clarifying the overall conservation status or taxonomy of a species either within the state or throughout its range. All suggestions and corrections are welcome and will be fully acknowledged in future editions. Contributions should include the name of the contributor, a complete mailing address, and a phone number. Please send them by regular U.S. mail to:

Utah Natural Heritage Program
Division of Wildlife Resources
P.O. Box 146301
Salt Lake City, UT 84114-6301

APPENDIX A

Plants with Federal Agency Status

LISTED ENDANGERED

Arctomecon humilis
Glaucocarpum suffrutescens
Lepidium barnebyanum
Lesquerella tumulosa
Pediocactus despainii
Phacelia argillacea
Ranunculus aestivalis
Schoenocrambe barnebyi
Sclerocactus wrightiae

LISTED THREATENED

Asclepias welshii
Astragalus montii
Carex specuicola
Cycladenia jonesii
Erigeron maguirei
Pediocactus sileri
Primula maguirei
Schoenocrambe argillacea
Sclerocactus brevispinus
Sclerocactus wetlandicus
Spiranthes diluvialis
Townsendia aprica

PROPOSED ENDANGERED

Pediocactus winkleri

PROPOSED THREATENED

Astragalus desereticus

ESA LISTING CANDIDATES

Astragalus ampullarioides
Astragalus equisolensis
Astragalus holmgreniorum
Castilleja aquariensis
Gilia caespitosa
Penstemon grahamii

Penstemon scariosus var. *albifluvis*

FORMER CATEGORY 2 CANDIDATES

Achnatherum contractum
Allium geyeri var. *chatterleyi*
Allium passeyi
Ambrosia sandersonii
Arabis falcatoria
Arabis vivariensis
Arctomecon californica
Artemisia campestris var. *petiolata*
Astragalus ampullarius
Astragalus anserinus
Astragalus brandegei
Astragalus cronquistii
Astragalus cutleri
Astragalus hamiltonii
Astragalus lentiginosus var. *pohlii*
Astragalus lentiginosus var. *scorpionis*
Astragalus limnocharis var. *limnocharis*
Astragalus limnocharis var. *tabulaeus*
Astragalus oophorus var. *lonchocalyx*
Astragalus sabulosus
Astragalus serpens
Astragalus subcinereus var. *basalticus*
Astragalus uncialis
Astragalus zionis var. *vigulus*
Atriplex canescens var. *gigantea*
Botrychium crenulatum
Botrychium lineare
Botrychium paradoxum
Camissonia atwoodii
Camissonia bairdii
Camissonia exilis
Camissonia gouldii
Carex haysii
Castilleja parvula
Castilleja revealii
Chrysothamnus nauseosus var. *iridis*
Cirsium ownbeyi
Cirsium virginense
Cryptantha cinerea var. *arenicola*

Cryptantha compacta
Cryptantha creutzfeldtii
Cryptantha ochroleuca
Cryptantha rollinsii
Cuscuta indecora ssp. *warneri*
Cymopterus acaulis var. *higginsii*
Cymopterus beckii
Cymopterus minimus
Cypripedium fasciculatum
Dalea flavescens var. *epica*
Draba kassii
Draba pectinipila
Draba sobolifera
Epilobium nevadense
Ericameria crispa
Ericameria zionis
Erigeron canaani
Erigeron carringtoniae
Erigeron cronquistii
Erigeron kachinensis
Erigeron maguirei var. *harrisonii*
Erigeron mancus
Erigeron sionis
Erigeron untermannii
Erigeron zothecinus
Eriogonum aretioides
Eriogonum corymbosum var. *cronquistii*
Eriogonum corymbosum var. *smithii*
Eriogonum lewisii
Eriogonum nummularum var. *ammophilum*
Eriogonum soredium
Frasera gypsicola
Gilia tenuis
Hackelia ibapensis
Hedysarum occidentale var. *canone*
Hymenoxys acaulis var. *nana*
Iris pariensis
Isocoma humilis
Jamesia americana var. *zionis*
Jamesia tetrapetala
Lepidium ostleri
Lesquerella garrettii
Lomatium graveolens var. *clarkii*

Lomatium latilobum
Lygodesmia grandiflora var. *doloresensis*
Lygodesmia grandiflora var. *entrada*
Mentzelia argillosa
Mentzelia goodrichii
Mentzelia multicaulis var. *librina*
Mentzelia shultziorum
Najas caespitosa
Oreoxis trotteri
Pedimelum aromaticum var. *tuhyi*
Pedimelum epipsilum
Pedimelum pariense
Penstemon acaulis var. *acaulis*
Penstemon ammophilus
Penstemon angustifolius var. *dulcis*
Penstemon bracteatus
Penstemon compactus
Penstemon concinnus
Penstemon crandallii var. *atratus*
Penstemon flowersii
Penstemon franklinii
Penstemon gibbensii
Penstemon goodrichii
Penstemon idahoensis
Penstemon leptanthus
Penstemon nanus
Penstemon navajoa
Penstemon parvus
Penstemon pinorum
Penstemon tidestromii
Penstemon wardii
Perityle specuicola
Phacelia utahensis
Phlox opalensis
Platanthera zothecina
Potentilla angelliae
Potentilla cottamii
Primula domensis
Psoralea polydenius var. *jonesii*
Psoralea thompsoniae var. *whitingii*
Senecio castoreus
Senecio fremontii var. *inexpectatus*
Senecio malmstenii

Senecio musiniensis
Silene petersonii
Sphaeralcea caespitosa
Sphaeralcea leptophylla var. *janeae*
Sphaeralcea psoraloides
Sphaeromeria ruthiae
Streptanthus oliganthus
Talinum thompsonii
Thelesperma caespitosum
Thelesperma subnudum var. *alpinum*
Tonestus kingii var. *barnebyana*
Townsendia jonesii var. *lutea*
Trifolium friscanum
Viola frank-smithii
Viola lithion
Xylorhiza cronquistii

CATEGORY 3B NON-CANDIDATES

Arabis sp. nov. ined. "Gray Knolls, Uintah Co."
Asplenium adiantum-nigrum
Astragalus ensiformis var. *gracilior*
Astragalus lentiginosus var. *ursinus*
Carex arapahoensis
Draba burkei
Echinocereus engelmannii var. *purpureus*
Echinocereus triglochidiatus var. *inermis*
Eriogonum brevicaulis var. *nanum*
Eriogonum corymbosum var. *davidsei*
Eriogonum corymbosum var. *humivagans*
Eriogonum grayi
Escobaria missouriensis var. *marstonii*
Fimbristylis thermalis
Gilia mcvickerae
Helianthus deserticola
Hermidium alipes var. *pallidum*
Hymenoxys helenioides
Ligusticum porteri var. *brevilobum*
Opuntia basilaris var. *woodburyi*
Penstemon caespitosus var. *suffruticosus*
Phacelia indecora
Phlox austromontana var. *jonesii*

Phlox grahamii
Polygonum utahense
Silene petersonii var. *minor*

CATEGORY 3C NON-CANDIDATES

Angelica wheeleri
Aquilegia barnebyi
Arabis demissa var. *languida*
Arabis pendulina var. *russeola*
Arabis shockleyi
Asclepias cutleri
Asclepias ruthiae
Astragalus barnebyi
Astragalus callithrix
Astragalus chloödes
Astragalus consobrinus
Astragalus convallarius var. *finitimus*
Astragalus cottamii
Astragalus detritalis
Astragalus duchesnensis
Astragalus ensiformis var. *ensiformis*
Astragalus harrisonii
Astragalus henrimontanensis
Astragalus iselyi
Astragalus lancearius
Astragalus lentiginosus var. *chartaceus*
Astragalus loanus
Astragalus lutosus
Astragalus malacoides
Astragalus monumentalis
Astragalus naturitensis
Astragalus nidularius
Astragalus pardalinus
Astragalus perianus
Astragalus rafaelensis
Astragalus saurinus
Astragalus striatiflorus
Astragalus wetherillii
Astragalus woodruffii
Atriplex gardneri var. *welshii*
Camissonia parryi
Carex curatorum

Castilleja scabrida
Chamaechaenactis scaposa
Cirsium hallii
Cirsium rydbergii
Corydalis caseana ssp. *brachycarpa*
Cryptantha barnebyi
Cryptantha breviflora
Cryptantha elata
Cryptantha grahamii
Cryptantha johnstonii
Cryptantha jonesiana
Cryptantha mensana
Cryptantha paradoxa
Cryptantha semiglabra
Cryptantha stricta
Cymopterus basalticus
Cymopterus coulteri
Cymopterus duchesnensis
Cymopterus evertii
Cymopterus newberryi
Cymopterus purpureus var. *rosei*
Draba asprella var. *zionensis*
Draba maguirei
Draba subalpina
Ericameria cervina
Erigeron abajoensis
Erigeron arenarioides
Erigeron garrettii
Erigeron proselyticus
Erigeron religiosus
Eriogonum batemanii var. *eremicum*
Eriogonum batemanii var. *ostlundii*
Eriogonum brevicaule var. *ephedroides*
Eriogonum brevicaule var. *loganum*
Eriogonum brevicaule var. *viridulum*
Eriogonum clavellatum
Eriogonum corymbosum var. *albiflorum*
Eriogonum corymbosum var. *hylophilum*
Eriogonum corymbosum var. *matthewsiaae*
Eriogonum corymbosum var. *revelianum*
Eriogonum corymbosum var. *thompsoniae*
Eriogonum jamesii var. *rupicola*
Eriogonum lancifolium

Eriogonum lonchophyllum var.
intermontanum
Eriogonum lonchophyllum var. *saurinum*
Eriogonum nummulare var. *nummulare*
Eriogonum panguicense var. *alpestre*
Eriogonum racemosum var. *zionis*
Eriogonum spathulatum var. *natum*
Eriogonum tumulosum
Euphorbia nephradenia
Festuca dasyclada
Gaillardia flava
Geranium marginale
Gutierrezia petradoria
Gutierrezia pomariensis
Hedysarum boreale var. *gremiale*
Heliomeris soliceps
Hesperodoria scopulorum
Heterotheca jonesii
Hymenopappus filifolius var. *tomentosus*
Hymenoxys lapidicola
Lepidium montanum var. *neeseae*
Lepidium montanum var. *stellae*
Lepidium nanum
Lesquerella rubicundula
Linanthus arenicola
Lomatium minimum
Lomatium ravenii
Lupinus jonesii
Lupinus sericeus var. *marianus*
Lygodesmia grandiflora var. *stricta*
Machaeranthera grindelioides var. *depressa*
Mertensia lanceolata var. *coriacea*
Mertensia viridis var. *cana*
Musineon lineare
Nama retrorsum
Oenothera flava var. *acutissima*
Opuntia pulchella
Oxytropis besseyi var. *obnapiformis*
Oxytropis oreophila var. *jonesii*
Parrya nudicaulis
Parthenium ligulatum
Penstemon abietinus
Penstemon acaulis var. *yampaensis*

Penstemon angustifolius var. *vernalensis*
Penstemon atwoodii
Penstemon humilis var. *brevifolius*
Penstemon humilis var. *obtusifolius*
Penstemon leiophyllus
Penstemon leonardii var. *patricus*
Penstemon pseudoputis
Penstemon scariosus var. *garrettii*
Penstemon uintahensis
Peteria thompsoniae
Phacelia anelsonii
Phacelia cephalotes
Phacelia constancei
Phacelia demissa var. *heterotricha*
Phacelia howelliana
Phacelia mammillarensis
Phacelia rafaensis
Phlox cluteana
Phlox gladiformis
Physaria acutifolia var. *purpurea*
Physaria grahamii
Primula specuicola
Proatrisplex pleiantha
Psoralea thompsoniae var. *thompsoniae*
Salix arizonica
Sclerocactus pubispinus
Sclerocactus spinosior
Selaginella utahensis
Senecio dimorphophyllus var. *intermedius*
Sidalcea candida
Thelypodium laxiflorum
Thelypodium sagittatum ssp. *ovalifolium*
Tonestus kingii var. *kingii*
Townsendia mensana
Townsendia minima
Viola charlestonensis
Xylorhiza confertifolia
Yucca toftiae
Zigadenus vaginatus

USDA FOREST SERVICE REGION 4 SENSITIVE SPECIES

Allium geyeri var. *chatterleyi*
Aquilegia flavescens var. *rubicunda*
Aquilegia grahamii
Arabis falcatoria
Artemisia campestris var. *petiolata*
Astragalus anserinus
Astragalus consobrinus
Astragalus diversifolius
Astragalus henrimontanensis
Astragalus jejunus
Astragalus lentiginosus var. *scorpionis*
Astragalus limnocharis var. *limnocharis*
Astragalus limnocharis var. *tabulaeus*
Astragalus uncialis
Astragalus zionis var. *vigulus*
Botrychium crenulatum
Botrychium paradoxum
Castilleja aquariensis
Castilleja parvula
Castilleja revealii
Cryptantha compacta
Cryptantha creutzfeldtii
Cryptantha ochroleuca
Cymopterus beckii
Cymopterus minimus
Cypripedium fasciculatum
Draba burkei
Draba globosa
Draba maguirei
Draba sobolifera
Epilobium nevadense
Ericameria crispa
Erigeron abajoensis
Erigeron carringtoniae
Erigeron cronquistii
Erigeron kachinensis
Erigeron mancus
Erigeron untermannii
Eriogonum aretioides
Eriogonum batemanii var. *ostlundii*

Eriogonum brevicaule var. *desertorum*
Eriogonum brevicaule var. *loganum*
Gilia caespitosa
Hedysarum occidentale var. *canone*
Heterotheca jonesii
Jamesia americana var. *macrocalyx*
Jamesia americana var. *zionis*
Jamesia tetrapetala
Lepidium montanum var. *neeseae*
Lesquerella garrettii
Lomatium latilobum
Mentzelia goodrichii
Najas caespitosa
Papaver radicum ssp. *kluanense*
Pedimelum pariense
Penstemon acaulis var. *acaulis*
Penstemon bracteatus
Penstemon compactus
Penstemon concinnus
Penstemon idahoensis
Penstemon parvus
Penstemon pinorum
Penstemon wardii
Potentilla angelliae
Potentilla cottamii
Salix arizonica
Senecio castoreus
Senecio malmstenii
Senecio musiniensis
Silene petersonii
Sphaeralcea caespitosa
Sphaeromeria capitata
Thelesperma caespitosum
Thelesperma subnudum var. *alpinum*
Tonestus kingii var. *barnebyana*
Townsendia jonesii var. *lutea*
Viola frank-smithii
Viola lithion

USDI BUREAU OF LAND
MANAGEMENT, UTAH STATE OFFICE,
INTERIM SENSITIVE PLANT SPECIES

Allium geyeri var. *chatterleyi*
Allium passeyi
Ambrosia sandersonii
Arabis falcatoria
Arabis vivariensis
Astragalus anserinus
Astragalus cronquistii
Astragalus diversifolius
Astragalus equisolensis
Astragalus ampullarioides
Astragalus hamiltonii
Astragalus holmgreniorum
Astragalus lentiginosus var. *pohlii*
Astragalus oophorus var. *lonchocalyx*
Astragalus sabulosus
Astragalus subcinereus var. *basalticus*
Astragalus uncialis
Atriplex canescens var. *gigantea*
Camissonia bairdii
Camissonia exilis
Camissonia gouldii
Castilleja revealii
Chrysothamnus nauseosus var. *iridis*
Cirsium ownbeyi
Cirsium virginense
Cryptantha compacta
Cryptantha creutzfeldtii
Cuscuta indecora ssp. *warneri*
Cymopterus acaulis var. *higginsii*
Cymopterus beckii
Dalea flavescens var. *epica*
Draba kassii
Epilobium nevadense
Ericameria crispa
Ericameria lignumviridis
Ericameria zionis
Erigeron cronquistii
Erigeron kachinensis
Erigeron sionis

Erigeron zothecinus
Eriogonum corymbosum var. *cronquistii*
Eriogonum corymbosum var. *smithii*
Eriogonum nummulare var. *ammophilum*
Eriogonum racemosum var. *nobilis*
Eriogonum soledium
Frasera gypsicola
Gilia caespitosa
Gilia latifolia var. *imperialis*
Gilia tenuis
Hackelia ibapensis
Hedysarum occidentale var. *canone*
Hymenoxys acaulis var. *nana*
Iris pariensis
Isocoma humilis
Ivesia shockleyi var. *ostleri*
Jamesia americana var. *zionis*
Jamesia tetrapetala
Lepidium integrifolium var. *integrifolium*
Lepidium ostleri
Lomatium graveolens var. *clarkii*
Lomatium latilobum
Lygodesmia grandiflora var. *doloresensis*
Lygodesmia grandiflora var. *entrada*
Mentzelia argillosa
Mentzelia goodrichii
Mentzelia multicaulis var. *librina*
Mentzelia shultziorum
Oreoxis trotteri
Pediocactus winkleri
Pedimelum aromaticum var. *tuhyi*
Pedimelum epipsilum
Penstemon acaulis var. *acaulis*
Penstemon ammophilus
Penstemon angustifolius var. *dulcis*
Penstemon compactus
Penstemon concinnus
Penstemon flowersii
Penstemon franklinii
Penstemon gibbensii
Penstemon goodrichii
Penstemon grahamii
Penstemon idahoensis

Penstemon leptanthus
Penstemon parvus
Penstemon pinorum
Penstemon scariosus var. *albifluvis*
Penstemon wardii
Perityle specuicola
Phacelia utahensis
Platanthera zothecina
Potentilla cottamii
Primula domensis
Psoralea polydenius var. *jonesii*
Sclerocactus brevispinus
Senecio castoreus
Senecio fremontii var. *inexpectatus*
Sphaeralcea caespitosa
Sphaeralcea leptophylla var. *janeae*
Sphaeralcea psoraloides
Talinum thompsonii
Thelesperma caespitosum
Thelesperma subnudum var. *alpinum*
Townsendia jonesii var. *lutea*
Trifolium friscanum
Viola lithion
Xylorhiza cronquistii

APPENDIX B

Plants by County

Populus deltoides ssp. *wislizeni* (D)
Potentilla concinna var. *modesta* (T)
Psoralidium lanceolatum var. *stenophyllum* (T)
Psorothamnus polydenius var. *jonesii* (R)
Psorothamnus thompsoniae var. *thompsoniae* (W)
Schoenocrambe barnebyi (R)
Sclerocactus spinosior (W)
Sclerocactus wrightiae (R)
Senecio dimorphophyllus var. *dimorphophyllus* (T)
Senecio hartianus (D)
Senecio pauperculus (D)
Sphaeralcea psoraloides (R)
Talinum thompsonii (R)
Townsendia aprica (R)

GARFIELD COUNTY

✓ *Acer glabrum* var. *diffusum* (D)
 ✓ *Achnatherum parishii* ssp. *parishii* (D)
 ✓ *Achnatherum scribneri* (D)
 ✓ *Adiantum aleuticum* (P)
 ✓ *Agoseris glauca* var. *agrestis* (T)
 ✓ *Agoseris glauca* var. *cronquistii* (T)
 ✓ *Aletes macedougallii* ssp. *breviradiatus* (W)
 ✓ *Amaranthus powellii* (D)
 ✓ *Andropogon glomeratus* var. *scabriglumis* (P)
 ✓ *Anemone multifida* var. *stylosa* (R)
 ✓ *Antennaria pulcherrima* (P)
 ✓ *Aquilegia flavescens* var. *rubicunda* (R)
 ✓ *Arabis pendulina* var. *russeola* (D)
 ✓ *Arabis schistacea* (W)
 ✓ *Arenaria fendleri* (P)
 ✓ *Arenaria kingii* var. *plateauensis* (T)
 ✓ *Argyrochosma limitanea* ssp. *limitanea* (P)
 ✓ *Artemisia ludoviciana* var. *latiloba* (P)
 ✓ *Asclepias hallii* (W)
 ✓ *Aster foliaceus* var. *apricus* (P)

✓ *Aster welshii* (W)
 ✓ *Astragalus barnebyi* (W)
 ✓ *Astragalus brandegei* (W)
 ✓ *Astragalus consobrinus* (W)
 ✓ *Astragalus flavus* var. *argillosus* (T)
 ✓ *Astragalus hallii* var. *fallax* (P)
 ✓ *Astragalus harrisonii* (W)
 ✓ *Astragalus henrimontanensis* (W)
 ✓ *Astragalus laccoliticus* (R)
 ✓ *Astragalus lentiginosus* var. *ursinus* (T)
 ✓ *Astragalus lentiginosus* var. *wahweapensis* (T)
 ✓ *Astragalus limnocharis* var. *tabulaeus* (R)
 ✓ *Astragalus malacoides* (W)
 ✓ *Astragalus monumentalis* (W)
 ✓ *Astragalus newberryi* var. *escalantinus* (T)
 ✓ *Astragalus newberryi* var. *newberryi* (P)
 ✓ *Astragalus nidularius* (W)
 ✓ *Astragalus pardalinus* (W)
 ✓ *Astragalus perianus* (W)
 ✓ *Astragalus pinonis* (R)
 ✓ *Astragalus serpens* (R)
 ✓ *Astragalus subcinereus* var. *basalticus* (T)
 ✓ *Astragalus wardii* (W)
 ✓ *Astragalus welshii* (R)
 ✓ *Astragalus woodruffii* (W)
 ✓ *Atriplex asterocarpa* (W)
 ✓ *Atriplex wolfii* (D)
 ✓ *Baccharis emoryi* (T)
 ✓ *Baccharis glutinosa* (T)
 ✓ *Botrychium lunaria* (I)
 ✓ *Botrychium paradoxum* (R)
 ✓ *Botrychium simplex* (P)
 ✓ *Bouteloua aristidoides* (P)
 ✓ *Bouteloua simplex* (P)
 ✓ *Bromus frondosus* (D)
 ✓ *Caesalpinia repens* (D)
 ✓ *Carex arapahoensis* (D)
 ✓ *Carex diandra* (P)
 ✓ *Carex oederi* var. *viridula* (P)
 ✓ *Carex subnigricans* (P)
 ✓ *Castilleja aquariensis* (R)

Castilleja parvula (R)	Eriogonum corymbosum var. revealianum (W)
Castilleja revealii (R)	Eriogonum scabrellum (R)
Caulanthus major var. major (P)	Eriogonum subreniforme (W)
Ceanothus greggii var. franklinii (R)	Erodium texanum (P)
Centaureum calycosum (P)	Escobaria missouriensis var. marstonii (D)
Centrostegia thurberi (P)	Eucephalus wasatchensis (W)
Chenopodium rubrum var. humile (I)	Euphorbia nephradenia (R)
Chloracantha spinosa (P)	Festuca dasyclada (W)
Chrysothamnus nauseosus var. bigelovii (P)	Gaillardia parryi (W)
Cirsium calcareum var. calcareum (T)	Galium emeryense ssp. emeryense (T)
Cirsium rydbergii (W)	Geranium marginale (T)
Cirsium scariosum var. thorneae (D)	Geum aleppicum (P)
Cryptantha capitata (W)	Gilia haydenii (W)
Cryptantha cinerea var. arenicola (W)	Gilia latifolia var. imperialis (R)
Cryptantha ochroleuca (R)	Gilia mcvickerae (T)
Cryptantha pterocarya var. cycloptera (P)	Gnaphalium wrightii (P)
Cryptantha wetherillii (W)	Grindelia fastigiata (W)
Cycladenia jonesii (R)	Hesperodoria scopulorum (W)
Cymopterus longilobus (D)	Heterotheca jonesii (R)
Cymopterus minimus (R)	Heterotheca villosa var. villosa (T)
Dalea flavescens var. epica (T)	Heterotheca zionensis (D)
Dichanthelium oligosanthes var. scribnerianum (I)	Hymenoxys helenioides (T)
Draba sobolifera (R)	Ipomopsis arizonica (P)
Draba subalpina (W)	Lemna trisulca (I)
Echinocereus engelmannii var. variegatus (W)	Lepidium montanum var. claronense (R)
Echinocereus triglochidiatus var. inermis (T)	Lepidium montanum var. neeseae (R)
Elatine rubella (I)	Lepidium montanum var. stellae (T)
Elodea canadensis (I)	Lesquerella arizonica (W)
Equisetum variegatum (P)	Lesquerella rubicundula (W)
Ericameria zionis (R)	Leucocrinum montanum (P)
Erigeron abajoensis (D)	Ligusticum porteri var. brevilobum (T)
Erigeron awapensis (R)	Linum australe (P)
Erigeron canus (P)	Lomatium junceum (W)
Erigeron concinnus var. condensatus (I)	Lomatium minimum (W)
Erigeron proselyticus (R)	Lomatium nevadense var. nevadense (P)
Erigeron religiosus (W)	Lupinus kingii var. argillaceus (T)
Eriogonum aretioides (R)	Lupinus polyphyllus var. humicola (D)
Eriogonum corymbosum var. cronquistii (R)	Lupinus sericeus var. marianus (T)
Eriogonum corymbosum var. divaricatum (T)	Machaeranthera bigelovii var. commixta (W)
	Menodora scabra (P)

Mirabilis linearis var. *decipiens* (T)
Muhlenbergia arsenei (D)
Muhlenbergia curtifolia (T)
Muhlenbergia minutissima (I)
Nama retrorsum (W)
Opuntia basilaris var. *heilii* (R)
Opuntia nicholii (W)
Opuntia phaeacantha var. *major* (P)
Oreoxis trotteri (R)
Orthocarpus purpureo-albus (P)
Ostrya knowltonii (W)
Oxytropis oreophila var. *jonesii* (W)
Parthenocissus vitacea (P)
Pediomelum pariense (W)
Penstemon ammophilus (R)
Penstemon atwoodii (W)
Penstemon barbatus var. *barbatus* (T)
Penstemon bracteatus (R)
Penstemon caespitosus var. *desertipicti* (W)
Penstemon caespitosus var. *suffruticosus* (W)
Penstemon laevis (W)
Penstemon linarioides var. *sileri* (T)
Penstemon parvus (R)
Penstemon procerus var. *aberrans* (D)
Penstemon pseudoputus (W)
Penstemon scariosus var. *scariosus* (W)
Petradoria pumila var. *graminea* (T)
Phacelia constancei (W)
Phacelia crenulata var. *angustifolia* (D)
Phacelia mammillarensis (W)
Phacelia pulchella var. *sabulonum* (R)
Phlox austromontana var. *lutescens* (R)
Phlox gladiformis (W)
Physalis hederifolia var. *hederifolia* (P)
Physaria chambersii var. *sobolifera* (T)
Physaria lepidota var. *membranacea* (R)
Physaria newberryi var. *racemosa* (R)
Platanthera zothecina (R)
Pluchea sericea (P)
Poa bolanderi (P)
Polygonum utahense (T)
Potamogeton vaginatus (P)
Potentilla concinna var. *modesta* (T)
Potentilla plattensis (P)
Primula incana (P)
Primula specuicola (W)
Psoralidium junceum (W)
Psoralidium lanceolatum var. *stenophyllum* (T)
Psorothamnus thompsoniae var. *thompsoniae* (W)
Ptelea trifoliata var. *lutescens* (W)
Ranunculus aestivalis (R)
Robinia neomexicana (P)
Rorippa sphaerocarpa (P)
Rosa neomexicana (T)
Sarcostemma cynanchoides var. *hartwegii* (P)
Sclerocactus wrightiae (R)
Senecio hartianus (D)
Senecio malmstenii (R)
Senecio pauperculus (D)
Silene petersonii (W)
Solanum jamesii (P)
Sparganium eurycarpum (I)
Sphaeralcea grossulariifolia var. *moorei* (W)
Sphaeromeria capitata (P)
Spiranthes diluvialis (R)
Streptopus fassettii (D)
Stylocline micropoides (P)
Thelypodium laxiflorum (W)
Thelypodium sagittatum ssp. *ovalifolium* (R)
Thymophylla acerosa (D)
Townsendia minima (W)
Tripterocalyx carneus var. *wootonii* (P)
Verbena macdougallii (P)
Xylorhiza confertifolia (W)
Xylorhiza glabriuscula var. *linearifolia* (R)
Yucca angustissima var. *toftiae* (W)
Yucca baileyi (D)

Cryptantha affinis (P)
Cryptantha ambigua (P)
Cymopterus acaulis var. *parvus* (R)
Cymopterus coulteri (W)
Cymopterus globosus (P)
Cymopterus purpureus var. *rosei* (W)
Dodecatheon redolens (P)
Draba asprella var. *zionensis* (W)
Draba brachystylis (R)
Draba densifolia (P)
Draba globosa (W)
Draba kassii (R)
Draba paysonii var. *treleasei* (D)
Epilobium anagallidifolium (P)
Ericameria obovata (W)
Eriogonum brevicaule var. *cottamii* (T)
Eriogonum brevicaule var. *nanum* (T)
Eriogonum brevicaule var. *wasatchense* (T)
Eriogonum grayi (T)
Eriogonum howellianum (W)
Eriogonum ovalifolium var. *nivale* (P)
Eriogonum umbellatum var. *desereticum* (T)
Eucrypta micrantha (P)
Flaveria campestris (P)
Gayophytum diffusum ssp. *diffusum* (P)
Gilia tenerrima (P)
Gutierrezia petradoria (W)
Hackelia ibapensis (R)
Hydrophyllum capitatum var. *alpinum* (P)
Ipomopsis congesta ssp. *palmifrons* (P)
Ipomopsis depressa (P)
Ivesia gordonii "wasatchensis phase" (T)
Ivesia setosa (W)
Jamesia americana var. *macrocalyx* (R)
Lomatium nudicaule (P)
Lupinus arbustus (P)
Lygodesmia juncea (P)
Machaeranthera grindelioides var. *depressa* (W)
Najas marina (P)
Nitrophila occidentalis (P)
Opuntia pulchella (W)

Penstemon angustifolius var. *dulcis* (R)
Penstemon humilis var. *desereticus* (D)
Penstemon immanifestus (P)
Penstemon leonardii var. *patricus* (R)
Penstemon scariosus var. *scariosus* (W)
Penstemon sepalulus (W)
Penstemon speciosus (P)
Penstemon tidestromii (W)
Perideridia bolanderi (P)
Platanthera stricta (D)
Populus balsamifera ssp. *trichocarpa* (P)
Potentilla cottamii (R)
Potentilla multisecta (W)
Potentilla nivea (I)
Potentilla pensylvanica var. *paucijuga* (T)
Psoralidium lanceolatum var. *stenostachys* (T)
Ribes laxiflorum (P)
Salicornia utahensis (W)
Schoenoplectus nevadensis (P)
Sclerocactus pubispinus (W)
Sclerocactus spinosior (W)
Sedum rosea var. *integrifolium* (P)
Taraxacum ceratophorum (P)
Thelypodium rollinsii (W)
Thelypodium sagittatum ssp. *ovalifolium* (R)
Tonestus kingii var. *barnebyanus* (R)
Tonestus kingii var. *kingii* (W)
Townsendia alpigena var. *alpigena* (P)
Townsendia jonesii var. *lutea* (R)
Trifolium eriocephalum var. *villiferum* (R)
Trifolium longipes var. *hansenii* (T)
Yucca harrimaniae var. *gilbertiana* (T)

KANE COUNTY

Achnatherum parishii ssp. *parishii* (D)
Achnatherum scribneri (D)
Acourtia wrightii (P)
Allium atrorubens var. *atrorubens* (P)

Allium atrorubens var. *cristatum* (W)
Amaranthus acanthochiton (P)
Andropogon glomeratus var. *scabriglumis* (P)
Androsace occidentalis (P)
Aquilegia coerulea var. *pinetorum* (D)
Aquilegia formosa var. *fosteri* (R)
Arabis gracilipes (D)
Arabis pendulina var. *russeola* (D)
Aralia racemosa ssp. *bicrenata* (D)
Arceuthobium abietinum f. sp. *concoloris* (P)
Arenaria kingii var. *plateauensis* (T)
Arenaria macradenia var. *macradenia* (P)
Argyrochosma jonesii (P)
Aristida arizonica (P)
Asclepias fascicularis (T)
Asclepias hallii (W)
Asclepias welshii (R)
Aster ericoides var. *commutatus* (P)
Aster subulatus var. *ligulatus* (P)
Aster welshii (W)
Astragalus ampullarius (W)
Astragalus bryantii (T)
Astragalus emoryanus (P)
Astragalus eremiticus (P)
Astragalus flavus var. *candicans* (T)
Astragalus hallii var. *fallax* (P)
Astragalus lancearius (W)
Astragalus lentiginosus var. *vitreus* (W)
Astragalus lentiginosus var. *wahweapensis* (T)
Astragalus limnocharis var. *limnocharis* (R)
Astragalus malacoides (W)
Astragalus newberryi var. *escalantinus* (T)
Astragalus newberryi var. *newberryi* (P)
Astragalus perianus (W)
Astragalus platytropis (P)
Astragalus striatiflorus (R)
Astragalus wardii (W)
Astragalus welshii (R)
Baccharis emoryi (T)
Baccharis glutinosa (T)
Boerhavia torreyana (P)
Bothriochloa laguroides ssp. *torreyana* (P)
Botrychium simplex (P)
Bouteloua aristidoides (P)
Bromus frondosus (D)
Calamovilfa gigantea (P)
Calochortus kennedyi (P)
Camissonia atwoodii (R)
Camissonia boothii var. *condensata* (P)
Camissonia brevipes var. *brevipes* (P)
Camissonia chamaenerioides (P)
Camissonia claviformis var. *purpurascens* (P)
Camissonia exilis (R)
Camissonia multijuga (D)
Camissonia pterosperma (P)
Canotia holacantha (D)
Carex crawei (P)
Carex curatorum (W)
Carex oederi var. *viridula* (P)
Carex scoparia (P)
Castilleja revealii (R)
Centrostegia thurberi (P)
Ceratoides lanata var. *subspinosa* (P)
Ceratophyllum demersum (I)
Chaenactis fremontii (P)
Chamaesaracha coronopus (P)
Cheilanthes covillei (P)
Cheilanthes parryi (P)
Chloracantha spinosa (P)
Chrysothamnus nauseosus var. *nitidus* (W)
Cirsium rydbergii (W)
Cirsium scariosum var. *thorneae* (D)
Cladium californicum (D)
Cryptantha angustifolia (P)
Cryptantha capitata (W)
Cryptantha cinerea var. *arenicola* (W)
Cryptantha inaequata (P)
Cryptantha nevadensis (P)
Cryptantha ochroleuca (R)
Cryptantha pterocarya var. *cycloptera* (P)

Cryptantha semiglabra (R)	Fimbristylis puberula var. interior (D)
Cryptantha utahensis (P)	Fimbristylis thermalis (D)
Cucurbita foetidissima (P)	Fraxinus velutina (P)
Cycladenia jonesii (R)	Gaillardia parryi (W)
Cymopterus acaulis var. higginsii (R)	Galium proliferum (P)
Cymopterus minimus (R)	Gilia flavocincta ssp. flavocincta (D)
Cymopterus multinervatus (P)	Gilia latifolia var. imperialis (R)
Cyperus schweinitzii (I)	Gilia mcvickerae (T)
Cystopteris reevesiana (P)	Glandularia gooddingii (P)
Cystopteris utahensis (W)	Glossopetalon spinescens var. aridum (P)
Dalea flavescens var. epica (T)	Gnaphalium wrightii (P)
Dalea lanata var. terminalis (P)	Hedeoma nanum ssp. californicum (P)
Dodecatheon pulchellum var. zionense (W)	Hedeoma nanum ssp. nanum (P)
Draba asprella var. zionensis (W)	Heliomeris longifolia var. annua (P)
Draba subalpina (W)	Heliomeris soliceps (R)
Echinocereus engelmannii var. variegatus (W)	Heliotropium curassavicum var. oculatum (P)
Echinocereus triglochidiatus var. inermis (T)	Hesperodoria scopulorum (W)
Equisetum variegatum (P)	Heterotheca jonesii (R)
Ericameria zionis (R)	Heterotheca villosa var. villosa (T)
Erigeron canaani (W)	Heterotheca zionensis (D)
Erigeron canus (P)	Hymenopappus filifolius var. tomentosus (D)
Erigeron proselyticus (R)	Ipomopsis arizonica (P)
Erigeron religiosus (W)	Iris pariensis (H)
Erigeron sionis (W)	Jamesia americana var. zionis (R)
Erigeron zothecinus (R)	Juncus bryoides (P)
Eriogonum corymbosum var. revealianum (W)	Kallstroemia californica (P)
Eriogonum corymbosum var. thompsoniae (W)	Langloisia setosissima (P)
Eriogonum darrovii (R)	Lepidium alyssoides var. junceum (R)
Eriogonum davidsonii (P)	Lepidium montanum var. claronense (R)
Eriogonum insigne (W)	Lepidium montanum var. stellae (T)
Eriogonum jamesii var. rupicola (W)	Lesquerella arizonica (W)
Eriogonum polycladon (P)	Lesquerella rubicundula (W)
Eriogonum racemosum var. zionis (W)	Lesquerella tumulosa (R)
Eriogonum scabrellum (R)	Leucocrinum montanum (P)
Eriogonum subreniforme (W)	Linanthus bigelovii (P)
Escobaria missouriensis var. marstonii (D)	Linum australe (P)
Eucephalus pulcher (W)	Lipocarpha aristulata (I)
Eucrypta micrantha (P)	Lobelia cardinalis ssp. graminea (P)
Euphorbia nephradenia (R)	Lomatium graveolens var. alpinum (P)
	Lomatium minimum (W)

Lupinus caudatus var. *cutleri* (D)
Lupinus jonesii (T)
Lupinus kingii var. *argillaceus* (T)
Lupinus polyphyllus var. *humicola* (D)
Machaeranthera bigelovii var. *commixta* (W)
Machaeranthera gracilis (P)
Menodora scabra (P)
Mentzelia obscura (P)
Menyanthes trifoliata (P)
Mimetanthe pilosa (P)
Mimulus glabratus ssp. *fremontii* (P)
Mirabilis glabra (P)
Monarda pectinata (P)
Muhlenbergia arsenei (D)
Muhlenbergia curtifolia (T)
Muhlenbergia repens (P)
Nama hispidum (P)
Nama retrorsum (W)
Oenothera cavernae (D)
Opuntia aurea (W)
Opuntia nicholii (W)
Opuntia phaeacantha var. *major* (P)
Opuntia polyacantha var. *trichophora* (P)
Orobanche cooperi (P)
Orthocarpus purpureo-albus (P)
Ostrya knowltonii (W)
Parietaria hespera var. *hespera* (P)
Parthenocissus vitacea (P)
Pectis angustifolia (P)
Pectis papposa (P)
Pediocactus sileri (R)
Pediomelum aromaticum var. *barnebyi* (R)
Pediomelum epipsilum (R)
Pediomelum pariense (W)
Pellaea atropurpurea (P)
Pellaea wrightiana (P)
Penstemon ammophilus (R)
Penstemon atwoodii (W)
Penstemon barbatus var. *barbatus* (T)
Penstemon bracteatus (R)
Penstemon caespitosus var. *desertipicti* (W)
Penstemon caespitosus var. *suffruticosus* (W)
Penstemon laevis (W)
Penstemon linarioides var. *sileri* (T)
Penstemon procerus var. *aberrans* (D)
Pentagramma triangularis ssp. *triangularis* (P)
Perityle tenella (W)
Petradoria pumila var. *graminea* (T)
Phacelia affinis (P)
Phacelia cephalotes (W)
Phacelia constancei (W)
Phacelia crenulata var. *angustifolia* (D)
Phacelia cronquistiana (R)
Phacelia howelliana (W)
Phacelia integrifolia (P)
Phacelia lemmonii (P)
Phacelia mammillarensis (W)
Phacelia pulchella var. *atwoodii* (R)
Phacelia pulchella var. *sabulonum* (R)
Phacelia rotundifolia (P)
Phlox austromontana var. *jonesii* (W)
Phlox austromontana var. *lutescens* (R)
Phlox austromontana var. *prostrata* (D)
Phlox gladiformis (W)
Physaria lepidota var. *lepidota* (R)
Physaria lepidota var. *membranacea* (R)
Physaria newberryi var. *racemosa* (R)
Pluchea sericea (P)
Polygonum utahense (T)
Portulaca parvula (D)
Portulaca retusa (D)
Potentilla plattensis (P)
Primula specuicola (W)
Psoralidium junceum (W)
Psoralidium lanceolatum var. *stenophyllum* (T)
Psorothamnus arborescens var. *pubescens* (R)
Psorothamnus thompsoniae var. *thompsoniae* (W)
Ptelea trifoliata var. *lutescens* (W)

Pyrola picta (I)
Ranunculus oreogenes (T)
Redfieldia flexuosa (P)
Reverchonia arenaria (P)
Salix arizonica (R)
Salix eriocephala var. *ligulifolia* (D)
Salix laevigata (P)
Salvia columbariae (P)
Sarcostemma cynanchoides var. *hartwegii* (P)
Scleropogon brevifolius (P)
Selaginella underwoodii (P)
Selaginella utahensis (W)
Senecio hartianus (D)
Senecio malmstenii (R)
Silene petersonii (W)
Silene verecunda ssp. *andersonii* (P)
Sisyrinchium radicum (D)
Sphaeralcea ambigua var. *ambigua* (P)
Sphaeralcea grossulariifolia var. *moorei* (W)
Sphaeromeria ruthiae (R)
Stachys rothrockii (W)
Stephanomeria parryi (P)
Thamnosma montana (P)
Thelypodopsis ambigua var. *erecta* (R)
Thelypodium laxiflorum (W)
Thelypodium sagittatum ssp. *ovalifolium* (R)
Thelypodium wrightii ssp. *wrightii* (P)
Thymophylla acerosa (D)
Tidestromia lanuginosa (P)
Tidestromia oblongifolia (P)
Townsendia minima (W)
Trifolium variegatum (P)
Trifolium wormskioldii var. *arizonicum* (P)
Triodanis perfoliata (D)
Tripterocalyx carneus var. *wootonii* (P)
Viola charlestonensis (W)
Woodsia franciscana (T)
Xylorhiza confertifolia (W)
Xylorhiza cronquistii (T)
Yucca angustissima var. *kanabensis* (W)

Yucca angustissima var. *toftiae* (W)
Yucca baccata var. *vespertina* (T)
Yucca baileyi (D)
Yucca elata var. *utahensis* (W)
Zigadenus vaginatus (R)

MILLARD COUNTY

Acer glabrum var. *diffusum* (D)
Allium atrorubens var. *atrorubens* (P)
Allium parvum (P)
Amsinckia intermedia (D)
Arabis beckwithii (D)
Arabis lignifera (D)
Arabis pendulina var. *russeola* (D)
Arabis shockleyi (W)
Arenaria congesta var. *subcongesta* (P)
Astragalus callithrix (W)
Astragalus platytropis (P)
Astragalus toanus (P)
Astragalus uncialis (R)
Astragalus welshii (R)
Atriplex bonnevillensis (T)
Bergia texana (I)
Camissonia claviformis var. *purpurascens* (P)
Camissonia multijuga (D)
Camissonia pterosperma (P)
Carex deweyana var. *bolanderi* (I)
Castilleja scabrida var. *barnebyana* (W)
Caulanthus pilosus (P)
Centaurium namophilum var. *nevadense* (T)
Ceratophyllum demersum (I)
Chaenactis carphoclinia (P)
Chamaesyce ocellata var. *arenicola* (P)
Cirsium neomexicanum var. *utahense* (D)
Cirsium ownbeyi (W)
Cirsium scariosum var. *thorneae* (D)
Cleomella plocasperma (P)
Collomia tenella (P)
Cryptantha compacta (R)

APPENDIX C

Plants by Family

ACERACEAE

Acer glabrum var. *diffusum* (D)

ADOXACEAE

Adoxa moschatellina (P)

ALISMATACEAE

Echinodorus berteroi (P)

AMARANTHACEAE

Amaranthus acanthochiton (P)

Amaranthus californicus (P)

Amaranthus fimbriatus (P)

Amaranthus palmeri (D)

Amaranthus powellii (D)

Tidestromia lanuginosa (P)

Tidestromia oblongifolia (P)

APIACEAE

Aletes macdougallii ssp. *breviradiatus* (W)

Angelica kingii (P)

Angelica wheeleri (R)

Cymopterus acaulis var. *acaulis* (P)

Cymopterus acaulis var. *higginsii* (R)

Cymopterus acaulis var. *parvus* (R)

Cymopterus basalticus (W)

Cymopterus beckii (R)

Cymopterus coulteri (W)

Cymopterus duchesnensis (W)

Cymopterus evertii (R)

Cymopterus globosus (P)

Cymopterus lapidosus (W)

Cymopterus longilobus (D)

Cymopterus minimus (R)

Cymopterus multinervatus (P)

Cymopterus purpureus var. *jonesii* (R)

Cymopterus purpureus var. *rosei* (W)

Hydrocotyle verticillata (P)

Ligusticum grayi (P)

Ligusticum porteri var. *brevilobum* (T)

Lomatium cous (P)

Lomatium foeniculaceum var. *fimbriatum* (P)

Lomatium graveolens var. *alpinum* (P)

Lomatium graveolens var. *clarkii* (R)

Lomatium junceum (W)

Lomatium latilobum (R)

Lomatium minimum (W)

Lomatium nevadense var. *nevadense* (P)

Lomatium nudicaule (P)

Lomatium ravenii (P)

Lomatium scabrum var. *tripinnatum* (W)

Lomatium triternatum var. *anomalum* (P)

Musineon lineare (W)

Oreoxis bakeri (W)

Oreoxis trotteri (R)

Oxypolis fendleri (P)

Perideridia bolanderi (P)

Podistera eastwoodiae (W)

Yabea microcarpa (P)

APOCYNACEAE

Amsonia tomentosa (D)

Apocynum cannabinum var. *angustifolium* (P)

Apocynum cannabinum var. *cannabinum* (D)

Apocynum sibiricum var. *salignum* (T)

Cycladenia jonesii (R)

ARALIACEAE

Aralia racemosa ssp. *bicrenata* (D)

ASCLEPIADACEAE

Asclepias cutleri (R)

Asclepias engelmanniana (T)

Asclepias erosa (P)

Asclepias fascicularis (T)

Asclepias hallii (W)
Asclepias involucrata (T)
Asclepias rusbyi (D)
Asclepias welshii (R)
Cynanchum utahense (W)
Sarcostemma cynanchoides var. *hartwegii* (P)

ASPLENIACEAE

Asplenium adiantum-nigrum (P)
Asplenium resiliens (P)
Asplenium septentrionale (I)
Asplenium trichomanes-ramosum (D)

ASTERACEAE

Acourtia wrightii (P)
Adenophyllum cooperi (P)
Ageratina occidentalis (P)
Agoseris glauca var. *agrestis* (T)
Agoseris glauca var. *cronquistii* (T)
Agoseris grandiflora (P)
Agoseris heterophylla (I)
Agoseris retrorsa (P)
Ambrosia eriocentra (P)
Ambrosia sandersonii (T)
Amphipappus fremontii var. *spinosus* (P)
Antennaria pulcherrima (P)
Arnica amplexicaulis (P)
Arnica fulgens (P)
Arnica latifolia var. *gracilis* (P)
Arnica nevadensis (T)
Arnica sororia (P)
Artemisia campestris var. *petiolata* (R)
Artemisia longiloba (P)
Artemisia ludoviciana var. *latiloba* (P)
Artemisia norvegica (P)
Artemisia nova var. *duchesnicola* (W)
Artemisia parryi (T)
Artemisia tridentata var. *vaseyana* (sensu stricto) (T)
Artemisia tripartita (P)

Aster ericoides var. *commutatus* (P)
Aster foliaceus var. *apricus* (P)
Aster laevis var. *geyeri* (P)
Aster meritus (P)
Aster subulatus var. *ligulatus* (P)
Aster welshii (W)
Atrichoseris platyphylla (P)
Baccharis emoryi (T)
Baccharis glutinosa (T)
Baccharis sergiloides (P)
Baccharis viminea (T)
Baccharis wrightii (P)
Balsamorhiza hookeri var. *hirsuta* (D)
Balsamorhiza incana (D)
Bebbia juncea var. *aspera* (P)
Brickellia eupatorioides var. *chlorolepis* (P)
Calycoseris parryi (P)
Calycoseris wrightii (P)
Chaenactis carphoclinia (P)
Chaenactis fremontii (P)
Chloracantha spinosa (P)
Chrysothamnus nauseosus var. *bigelovii* (P)
Chrysothamnus nauseosus var. *glareosus* (T)
Chrysothamnus nauseosus var. *iridis* (W)
Chrysothamnus nauseosus var. *mohavensis* (P)
Chrysothamnus nauseosus var. *nitidus* (W)
Chrysothamnus nauseosus var. *psilocarpus* (R)
Chrysothamnus nauseosus var. *salicifolius* (W)
Chrysothamnus nauseosus var. *uintahensis* (T)
Chrysothamnus paniculatus (P)
Chrysothamnus pulchellus var. *baileyi* (P)
Chrysothamnus viscidiflorus var. *latifolius* (T)
Cirsium barnebyi (W)
Cirsium calcareum var. *calcareum* (T)
Cirsium centaureae (P)
Cirsium eatonii var. *harrisonii* (R)
Cirsium hallii (T)
Cirsium murdockii (W)

Cirsium neomexicanum var. *utahense* (D)
Cirsium ownbeyi (W)
Cirsium rothrockii (D)
Cirsium rydbergii (W)
Cirsium scariosum var. *thorneae* (D)
Cirsium scopulorum (P)
Cirsium virginense (R)
Conyza coulteri (P)
Crepis runcinata var. *runcinata* (P)
Dicoria canescens ssp. *canescens* (P)
Encelia farinosa (P)
Enceliopsis argophylla (R)
Ericameria cervina (W)
Ericameria crispa (R)
Ericameria laricifolia (P)
Ericameria lignumviridis (R)
Ericameria obovata (W)
Ericameria watsonii (P)
Ericameria zionis (R)
Erigeron abajoensis (D)
Erigeron arenarioides (W)
Erigeron awapensis (R)
Erigeron bloomeri (P)
Erigeron canaani (W)
Erigeron canus (P)
Erigeron carringtoniae (R)
Erigeron compactus var. *compactus* (W)
Erigeron concinnus var. *condensatus* (I)
Erigeron concinnus var. *subglaber* (D)
Erigeron corymbosus (P)
Erigeron coulteri (P)
Erigeron cronquistii (R)
Erigeron elatior (P)
Erigeron filifolius (P)
Erigeron garrettii (R)
Erigeron goodrichii (W)
Erigeron humilis (P)
Erigeron kachinensis (R)
Erigeron linearis (P)
Erigeron maguirei (R)
Erigeron mancus (R)
Erigeron melanocephalus (P)
Erigeron nanus (D)

Erigeron proselyticus (R)
Erigeron pumilus var. *gracilior* (P)
Erigeron religiosus (W)
Erigeron sionis (W)
Erigeron untermannii (R)
Erigeron zothecinus (R)
Eriophyllum lanatum var. *integrifolium* (P)
Eriophyllum lanosum (P)
Eucephalus pulcher (W)
Eucephalus wasatchensis (W)
Filago californica (P)
Flaveria campestris (P)
Gaillardia aristata (P)
Gaillardia arizonica (P)
Gaillardia flava (W)
Gaillardia parryi (W)
Geraea canescens (P)
Glyptopleura setulosa (P)
Gnaphalium wrightii (P)
Grindelia fastigiata (W)
Grindelia laciniata (R)
Gutierrezia petradoria (W)
Gutierrezia pomariensis (W)
Helianthus deserticola (T)
Heliomeris longifolia var. *annua* (P)
Heliomeris soliceps (R)
Hesperodoria scopulorum (W)
Heterotheca fulcrata var. *amplifolia* (P)
Heterotheca jonesii (R)
Heterotheca pumila (T)
Heterotheca villosa var. *foliosa* (T)
Heterotheca villosa var. *nana* (P)
Heterotheca villosa var. *pedunculata* (P)
Heterotheca villosa var. *villosa* (T)
Heterotheca zionensis (D)
Hieracium fendleri (P)
Hulsea heterochroma (P)
Hymenoclea salsola var. *salsola* (P)
Hymenopappus filifolius var. *eriopodus* (W)
Hymenopappus filifolius var. *tomentosus* (D)
Hymenoxys acaulis var. *nana* (R)
Hymenoxys helenioides (T)

Hymenoxys lapidicola (R)
Hymenoxys lemmonii (W)
Hymenoxys subintegra (D)
Hymenoxys torreyana (P)
Ionactis alpina (P)
Isocoma humilis (H)
Lepidospartum latisquamum (P)
Lygodesmia grandiflora var. *doloresensis* (T)
Lygodesmia grandiflora var. *entrada* (R)
Lygodesmia grandiflora var. *stricta* (T)
Lygodesmia juncea (P)
Machaeranthera asteroides var. *glandulosa* (P)
Machaeranthera bigelovii var. *commixta* (W)
Machaeranthera canescens var. *glabra* (P)
Machaeranthera gracilis (P)
Machaeranthera grindelioides var. *depressa* (W)
Machaeranthera parviflora (P)
Machaeranthera pinnatifida var. *gooddingii* (P)
Machaeranthera pinnatifida var. *paradoxa* (W)
Malacothrix coulteri (P)
Malacothrix stebbinsii (P)
Monoptilon bellidiforme (P)
Nothocalais troximoides (P)
Oreostemma alpigenum var. *haydenii* (D)
Palafoxia arida (P)
Parthenium incanum (P)
Pectis angustifolia (P)
Pectis papposa (P)
Perityle emoryi (P)
Perityle specuicola (R)
Perityle tenella (W)
Petasites sagittatus (P)
Petradoria pumila var. *graminea* (T)
Peucephyllum schottii (P)
Platyschkuhria integrifolia var. *oblongifolia* (R)
Platyschkuhria integrifolia var. *ourolepis*

(W)
Pluchea odorata (P)
Pluchea sericea (P)
Porophyllum gracile (P)
Psathyrotes ramosissima (P)
Psilocarphus brevissimus (P)
Psilostrophe cooperi (P)
Psilostrophe tagetina (P)
Pyrrocoma crocea (P)
Pyrrocoma hirta (P)
Pyrrocoma racemosa var. *paniculata* (P)
Pyrrocoma racemosa var. *sessiliflora* (P)
Rafinesquia californica (P)
Rafinesquia neomexicana (P)
Rudbeckia laciniata var. *ampla* (P)
Rudbeckia occidentalis var. *montana* (D)
Senecio bigelovii var. *hallii* (P)
Senecio castoreus (R)
Senecio dimorphophyllus var. *dimorphophyllus* (T)
Senecio dimorphophyllus var. *intermedius* (R)
Senecio dimorphophyllus var. *paysonii* (D)
Senecio fremontii var. *inexpectatus* (R)
Senecio hartianus (D)
Senecio hydrophiloides (P)
Senecio malmstenii (R)
Senecio musiniensis (R)
Senecio pauperculus (D)
Senecio serra var. *admirabilis* (D)
Senecio streptanthifolius var. *oödes* (D)
Solidago gigantea (P)
Solidago spectabilis (P)
Sphaeromeria capitata (P)
Sphaeromeria ruthiae (R)
Stenotus armerioides var. *gramineus* (W)
Stenotus falcatus (D)
Stephanomeria parryi (P)
Stephanomeria tenuifolia var. *uintaensis* (R)
Stylocline intertexta (P)
Stylocline micropoides (P)
Stylocline psilocarphoides (P)
Syntrichopappus fremontii (P)

Tanacetum douglasii (T)
Taraxacum ceratophorum (P)
Tetradymia axillaris var. *longispina* (P)
Thelesperma caespitosum (R)
Thelesperma megapotamicum (P)
Thelesperma subnudum var. *alpinum* (R)
Thymophylla acerosa (D)
Tonestus kingii var. *barnebyanus* (R)
Tonestus kingii var. *kingii* (W)
Townsendia alpigena var. *alpigena* (P)
Townsendia alpigena var. *caelilimensis* (W)
Townsendia aprica (R)
Townsendia condensata (D)
Townsendia jonesii var. *lutea* (R)
Townsendia mensana (W)
Townsendia minima (W)
Townsendia nuttallii (W)
Townsendia scapigera (P)
Uropappus lindleyi (P)
Xylorhiza confertifolia (W)
Xylorhiza cronquistii (T)
Xylorhiza glabriuscula var. *glabriuscula* (P)
Xylorhiza glabriuscula var. *linearifolia* (R)
Xylorhiza tortifolia var. *tortifolia* (P)

AZOLLACEAE

Azolla mexicana (P)

BERBERIDACEAE

Berberis fendleri (D)

BETULACEAE

Betula X utahensis (T)
Ostrya knowltonii (W)

BIGNONIACEAE

Chilopsis linearis ssp. *arcuata* (P)

BORAGINACEAE

Amsinckia intermedia (D)
Cryptantha affinis (P)
Cryptantha alpicola (D)
Cryptantha ambigua (P)
Cryptantha angustifolia (P)
Cryptantha barnebyi (W)
Cryptantha caespitosa (W)
Cryptantha capitata (W)
Cryptantha cinerea var. *abortiva* (P)
Cryptantha cinerea var. *arenicola* (W)
Cryptantha compacta (R)
Cryptantha creutzfeldtii (R)
Cryptantha decipiens (P)
Cryptantha dumetorum (P)
Cryptantha elata (R)
Cryptantha flaccida (T)
Cryptantha grahamii (W)
Cryptantha humilis var. *nana* (W)
Cryptantha inaequata (P)
Cryptantha interrupta (W)
Cryptantha johnstonii (R)
Cryptantha jonesiana (W)
Cryptantha longiflora (W)
Cryptantha nevadensis (P)
Cryptantha ochroleuca (R)
Cryptantha paradoxa (W)
Cryptantha pterocarya var. *cycloptera* (P)
Cryptantha racemosa (P)
Cryptantha scoparia (P)
Cryptantha semiglabra (R)
Cryptantha spiculifera (P)
Cryptantha stricta (W)
Cryptantha utahensis (P)
Cryptantha wetherillii (W)
Hackelia ibapensis (R)
Hackelia patens var. *harrisonii* (W)
Heliotropium curassavicum var. *oculatum* (P)
Mertensia lanceolata var. *coriacea* (T)
Mertensia viridis var. *cana* (T)
Pectocarya anisocarpa (T)

Pectocarya heterocarpa (P)
Pectocarya platycarpa (P)
Pectocarya setosa (P)
Plagiobothrys arizonicus (P)
Plagiobothrys jonesii (P)
Plagiobothrys kingii var. *harknessii* (D)
Plagiobothrys tenellus (P)
Tiquilia canescens (P)

BRASSICACEAE

Arabis beckwithii (D)
Arabis columbiana (D)
Arabis demissa var. *languida* (W)
Arabis divaricarpa (D)
Arabis exilis (P)
Arabis falcatoria (R)
Arabis fendleri var. *spatifolia* (D)
Arabis glabra var. *furcatipilis* (R)
Arabis gracilipes (D)
Arabis hirsuta var. *glabrata* (P)
Arabis holboellii var. *consanguinea* (D)
Arabis holboellii var. *secunda* (D)
Arabis lasiocarpa (W)
Arabis lemmonii var. *drepanoloba* (D)
Arabis lignifera (D)
Arabis nuttallii (P)
Arabis pendulina var. *russeola* (D)
Arabis puberula (P)
Arabis pulchra var. *duchesnensis* (R)
Arabis schistacea (W)
Arabis shockleyi (W)
Arabis sp. nov. ined. "Gray Knolls, Uintah Co." (T)
Arabis vivariensis (W)
Athysanus pusillus (P)
Cardamine breweri var. *breweri* (P)
Cardamine cordifolia var. *incana* (D)
Cardamine oligosperma var. *oligosperma* (P)
Caulanthus cooperi (P)
Caulanthus major var. *major* (P)
Caulanthus pilosus (P)
Cusickiella douglasii (P)

Descurainia incisa ssp. *paysonii* (D)
Descurainia incisa ssp. *viscosa* (I)
Descurainia pinnata var. *glabra* (P)
Draba asprella var. *zionensis* (W)
Draba brachystylis (R)
Draba crassa (P)
Draba cuneifolia var. *integrifolia* (P)
Draba densifolia (P)
Draba fladnizensis var. *pattersonii* (R)
Draba globosa (W)
Draba incerta (P)
Draba juniperina (W)
Draba kassii (R)
Draba lonchocarpa var. *exigua* (T)
Draba burkei (R)
Draba maguirei (R)
Draba paysonii var. *treleasei* (D)
Draba pectinipila (T)
Draba ramulosa (R)
Draba sobolifera (R)
Draba spectabilis var. *spectabilis* (W)
Draba subalpina (W)
Draba ventosa (W)
Glaucocarpum suffrutescens (R)
Guillenia lasiophylla (P)
Halimolobos virgata (P)
Lepidium alyssoides var. *alyssoides* (D)
Lepidium alyssoides var. *eastwoodiae* (D)
Lepidium alyssoides var. *junceum* (R)
Lepidium barnebyanum (R)
Lepidium crenatum (D)
Lepidium densiflorum var. *macrocarpum* (D)
Lepidium densiflorum var. *pubicarpum* (P)
Lepidium dictyotum (P)
Lepidium fremontii (P)
Lepidium huberi (R)
Lepidium integrifolium var. *heterophyllum* (R)
Lepidium integrifolium var. *integrifolium* (R)
Lepidium montanum var. *alpinum* (R)
Lepidium montanum var. *claronense* (R)

Lepidium montanum var. *neeseae* (R)
Lepidium montanum var. *stellae* (T)
Lepidium nanum (W)
Lepidium ostleri (R)
Lepidium ramosissimum var. *bourgeauanum* (D)
Lesquerella arizonica (W)
Lesquerella fendleri (P)
Lesquerella garrettii (R)
Lesquerella goodrichii (R)
Lesquerella hemiphsaria var. *hemiphsaria* (W)
Lesquerella hemiphsaria var. *lucens* (R)
Lesquerella multiceps (W)
Lesquerella parvula (W)
Lesquerella prostrata (D)
Lesquerella rubicundula (W)
Lesquerella tenella (P)
Lesquerella tumulosa (R)
Lesquerella utahensis (W)
Parrya nudicaulis (P)
Physaria acutifolia var. *purpurea* (R)
Physaria chambersii var. *sobolifera* (T)
Physaria grahamii (R)
Physaria lepidota var. *lepidota* (R)
Physaria lepidota var. *membranacea* (R)
Physaria newberryi var. *racemosa* (R)
Physaria repanda (R)
Physaria stylosa (R)
Rorippa sinuata (I)
Rorippa sphaerocarpa (P)
Schoenocrambe argillacea (R)
Schoenocrambe barnebyi (R)
Streptanthus oliganthus (T)
Thelypodopsis ambigua var. *erecta* (R)
Thelypodopsis aurea (W)
Thelypodium flexuosum (D)
Thelypodium laxiflorum (W)
Thelypodium milleflorum (P)
Thelypodium rollinsii (W)
Thelypodium sagittatum ssp. *ovalifolium* (R)
Thelypodium wrightii ssp. *wrightii* (P)

Thlaspi montanum var. *fendleri* (T)
Thysanocarpus curvipes (P)

BUDDLEJACEAE

Buddleja utahensis (P)

CACTACEAE

Echinocereus engelmannii var. *purpureus* (T)
Echinocereus engelmannii var. *variegatus* (W)
Echinocereus triglochidiatus var. *inermis* (T)
Echinocereus triglochidiatus var. *mojavensis* (P)
Escobaria missouriensis var. *marstonii* (D)
Escobaria vivipara var. *desertii* (W)
Escobaria vivipara var. *vivipara* (P)
Ferocactus cylindraceus var. *lecontei* (P)
Mammillaria tetrancistra (P)
Opuntia acanthocarpa var. *acanthocarpa* (D)
Opuntia acanthocarpa var. *coloradensis* (P)
Opuntia aurea (W)
Opuntia basilaris var. *basilaris* (P)
Opuntia basilaris var. *heilii* (R)
Opuntia basilaris var. *treleasei* (T)
Opuntia basilaris var. *woodburyi* (T)
Opuntia chlorotica (D)
Opuntia echinocarpa (P)
Opuntia erinacea var. *ursina* (T)
Opuntia fragilis var. *brachyarthra* (D)
Opuntia martiniana (T)
Opuntia nicholii (W)
Opuntia phaeacantha var. *discata* (T)
Opuntia phaeacantha var. *major* (P)
Opuntia phaeacantha var. *phaeacantha* (P)
Opuntia pinkavae (W)
Opuntia polyacantha var. *trichophora* (P)
Opuntia pulchella (W)
Opuntia whipplei var. *multigeniculata* (T)
Pediocactus despainii (R)
Pediocactus sileri (R)

Pediocactus simpsonii var. *minor* (T)
Pediocactus winkleri (R)
Sclerocactus blainei (R)
Sclerocactus brevispinus (R)
Sclerocactus johnsonii (W)
Sclerocactus pubispinus (W)
Sclerocactus spinosior (W)
Sclerocactus wetlandicus (R)
Sclerocactus whipplei (W)
Sclerocactus wrightiae (R)

CALLITRICHACEAE

Callitriche anceps (T)
Callitriche heterophylla (I)

CAMPANULACEAE

Campanula uniflora (P)
Downingia laeta (P)
Lobelia cardinalis ssp. *graminea* (P)
Nemacladus glanduliferus var. *orientalis* (P)
Porterella carnulosa (P)
Triodanis perfoliata (D)

CAPPARACEAE

Cleome serrulata var. *angusta* (D)
Cleomella palmeriana var. *goodrichii* (R)
Cleomella plocasperma (P)

CAPRIFOLIACEAE

Lonicera ciliosa (D)
Sambucus racemosa var. *melanocarpa* (D)
Symphoricarpos occidentalis (P)
Symphoricarpos oreophilus var. *parishii* (P)

CARYOPHYLLACEAE

Achyronychia cooperi (P)
Alsianthe macrantha (D)
Arenaria aculeata (P)

Arenaria congesta var. *cephaloidea* (T)
Arenaria congesta var. *lithophila* (D)
Arenaria congesta var. *subcongesta* (P)
Arenaria fendleri (P)
Arenaria hookeri var. *desertorum* (D)
Arenaria kingii var. *glabrescens* (D)
Arenaria kingii var. *kingii* (D)
Arenaria kingii var. *plateauensis* (T)
Arenaria macradenia var. *macradenia* (P)
Cerastium nutans (D)
Loeflingia squarrosa var. *artemisiarum* (D)
Lychnis apetala var. *montana* (P)
Minuartia pusilla (P)
Silene parryi (T)
Silene petersonii (W)
Silene verecunda ssp. *andersonii* (P)
Stellaria crassifolia var. *crassifolia* (P)
Stellaria longifolia (I)
Stellaria nitens (P)
Stellaria obtusa (P)

CELASTRACEAE

Canotia holacantha (D)
Mortonia utahensis (P)

CERATOPHYLLACEAE

Ceratophyllum demersum (I)

CHENOPODIACEAE

Atriplex asterocarpa (W)
Atriplex bonnevillensis (T)
Atriplex canescens var. *gigantea* (R)
Atriplex cornuta (D)
Atriplex gardneri var. *gardneri* (P)
Atriplex gardneri var. *welshii* (W)
Atriplex hymenelytra (P)
Atriplex lentiformis (P)
Atriplex minuticarpa (W)
Atriplex navajoensis (D)
Atriplex obovata (P)

Atriplex robusta (T)
Atriplex saccaria var. *caput-medusae* (D)
Atriplex tooelensis (T)
Atriplex torreyi (P)
Atriplex wolfii (D)
Ceratoides lanata var. *ruinina* (R)
Ceratoides lanata var. *subspinoso* (P)
Chenopodium graveolens var.
neomexicanum (P)
Chenopodium rubrum var. *humile* (I)
Monolepis pusilla (P)
Nitrophila occidentalis (P)
Proatriplex pleiantha (W)
Salicornia utahensis (W)

CONVOLVULACEAE

Calystegia longipes (W)
Calystegia sepium var. *angulata* (P)
Convolvulus equitans (P)

CONVOLVULACEAE

Cornus sericea var. *occidentalis* (T)

CRASSULACEAE

Crassula aquatica (P)
Dudleya pulverulenta var. *arizonica* (P)
Sedum rosea var. *integrifolium* (P)

CROSSOSOMATAACEAE

Glossopetalon spinescens var. *aridum* (P)

CUCURBITACEAE

Cucurbita foetidissima (P)

CUSCUTACEAE

Cuscuta applanata (P)
Cuscuta cephalanthi (I)

Cuscuta cuspidata (P)
Cuscuta glabrior (P)
Cuscuta indecora ssp. *warneri* (H)
Cuscuta megalocarpa (P)

CYPERACEAE

Bolboschoenus fluviatilis (I)
Carex alma (P)
Carex arapahoensis (D)
Carex atherodes (P)
Carex atosquama (P)
Carex backii (P)
Carex bebbii (P)
Carex bigelovii (T)
Carex bipartita (P)
Carex breweri var. *paddoensis* (D)
Carex brunnescens (P)
Carex capitata (P)
Carex crawei (P)
Carex curatorum (W)
Carex deweyana var. *bolanderi* (I)
Carex diandra (P)
Carex foetida var. *vernacula* (P)
Carex hassei (T)
Carex haysii (R)
Carex jonesii (P)
Carex lasiocarpa (P)
Carex leporinella (P)
Carex leptalea (P)
Carex limnophila (P)
Carex limosa (P)
Carex livida (P)
Carex luzulina (P)
Carex microglochin (P)
Carex misandra (P)
Carex multicostata (P)
Carex nelsonii (P)
Carex neurophora (P)
Carex oederi var. *viridula* (P)
Carex paysonis (P)
Carex perglobosa (D)
Carex pyrenaica (P)

Carex retrorsa (P)
Carex scoparia (P)
Carex scopulorum (P)
Carex sheldonii (D)
Carex specuicola (R)
Carex stenoptila (D)
Carex stipata (I)
Carex subfusca (P)
Carex subnigricans (P)
Cladium californicum (D)
Cyperus acuminatus (I)
Cyperus rivularis (P)
Cyperus schweinitzii (I)
Cyperus strigosus (P)
Eleocharis bella (P)
Eleocharis obtusa (I)
Eriophorum altaicum var. *neogaeum* (P)
Eriophorum angustifolium (P)
Fimbristylis puberula var. *interior* (D)
Fimbristylis thermalis (D)
Kobresia myosuroides (P)
Kobresia simpliciuscula (P)
Lipocarpha aristulata (I)
Schoenoplectus nevadensis (P)
Schoenoplectus saximontanus (P)
Schoenoplectus subterminalis (D)
Scirpus pallidus (I)
Trichophorum cespitosum (P)

DRYOPTERIDACEAE

Athyrium alpestre var. *americanum* (P)
Cystopteris bulbifera (P)
Cystopteris reevesiana (P)
Cystopteris sp. nov. ined. (T)
Cystopteris tenuis (P)
Cystopteris utahensis (W)
Gymnocarpium dryopteris (P)
Polystichum kruckebergii (P)
Woodsia franciscana (T)
Woodsia oregana (sensu stricto) (P)
Woodsia scopulina ssp. *laurentiana* (P)

ELAEAGNACEAE

Elaeagnus commutata (P)

ELATINACEAE

Bergia texana (I)
Elatine brachysperma (D)
Elatine californica (P)
Elatine rubella (I)

EPHEDRACEAE

Ephedra fasciculata (P)
Equisetum variegatum (P)

ERICACEAE

Arctostaphylos pringlei ssp. *pringlei* (P)

EUPHORBIACEAE

Chamaesyce ocellata var. *arenicola* (P)
Chamaesyce revoluta (P)
Chamaesyce setiloba (P)
Croton californicus (P)
Croton setigerus (P)
Croton texensis var. *texensis* (P)
Euphorbia exstipulata (P)
Euphorbia nephradenia (R)
Euphorbia palmeri (D)
Reverchonia arenaria (P)
Tragia ramosa (P)

FABACEAE

Acacia greggii (P)
Astragalus adanus (T)
Astragalus alpinus (P)
Astragalus amphioxys var. *modestus* (D)
Astragalus ampullarioides (R)
Astragalus ampullarius (W)
Astragalus anserinus (R)

Astragalus aretioides (P)
Astragalus barnebyi (W)
Astragalus beckwithii var. *weiserensis* (P)
Astragalus bisulcatus var. *bisulcatus* (T)
Astragalus bodinii (P)
Astragalus brandegei (W)
Astragalus bryantii (T)
Astragalus callithrix (W)
Astragalus calycosus var. *mancus* (T)
Astragalus calycosus var. *monophyllidius* (T)
Astragalus calycosus var. *scaposus* (P)
Astragalus canadensis var. *brevidens* (P)
Astragalus canadensis var. *canadensis* (P)
Astragalus ceramicus var. *filifolius* (T)
Astragalus chamaemeniscus (W)
Astragalus chloödes (W)
Astragalus consobrinus (W)
Astragalus convallarius var. *finitimus* (W)
Astragalus cottamii (W)
Astragalus cronquistii (R)
Astragalus cutleri (R)
Astragalus desereticus (R)
Astragalus desperatus var. *petrophilus* (W)
Astragalus detritalis (W)
Astragalus diversifolius (W)
Astragalus emoryanus (P)
Astragalus ensiformis var. *ensiformis* (W)
Astragalus ensiformis var. *gracilior* (T)
Astragalus equisolensis (R)
Astragalus eremiticus (P)
Astragalus filipes (P)
Astragalus flavus var. *argillosus* (T)
Astragalus flavus var. *candicans* (T)
Astragalus flexuosus var. *flexuosus* (P)
Astragalus gilviflorus (P)
Astragalus hallii var. *fallax* (P)
Astragalus hamiltonii (R)
Astragalus harrisonii (W)
Astragalus henrimontanensis (W)
Astragalus holmgreniorum (R)
Astragalus iodanthus (P)
Astragalus iselyi (R)

Astragalus jejunus (W)
Astragalus kentrophyta var. *jessiae* (P)
Astragalus laccoliticus (R)
Astragalus lancearius (W)
Astragalus lentiginosus var. *chartaceus* (T)
Astragalus lentiginosus var. *fremontii* (P)
Astragalus lentiginosus var. *platyphyllidius* (T)
Astragalus lentiginosus var. *pohlii* (R)
Astragalus lentiginosus var. *scorpionis* (W)
Astragalus lentiginosus var. *stramineus* (W)
Astragalus lentiginosus var. *ursinus* (T)
Astragalus lentiginosus var. *vitreus* (W)
Astragalus lentiginosus var. *wahweapensis* (T)
Astragalus limnocharis var. *limnocharis* (R)
Astragalus limnocharis var. *tabulaeus* (R)
Astragalus loanus (R)
Astragalus lutosus (W)
Astragalus malacoides (W)
Astragalus miser var. *tenuifolius* (W)
Astragalus missouriensis var. *amphibolus* (W)
Astragalus montii (R)
Astragalus monumentalis (W)
Astragalus naturitensis (R)
Astragalus nelsonianus (W)
Astragalus newberryi var. *escalantinus* (T)
Astragalus newberryi var. *newberryi* (P)
Astragalus nidularius (W)
Astragalus oophorus var. *lonchocalyx* (R)
Astragalus pardalinus (W)
Astragalus perianus (W)
Astragalus pinonis (R)
Astragalus piscator (R)
Astragalus platytropis (P)
Astragalus praelongus var. *lonchopus* (W)
Astragalus pubentissimus var. *peabodianus* (T)
Astragalus purshii var. *glareosus* (P)
Astragalus raphaelensis (W)
Astragalus robbinsii var. *minor* (P)
Astragalus sabulosus var. *sabulosus* (R)

Astragalus sabulosus var. *vehiculus* (R)
Astragalus saurinus (W)
Astragalus serpens (R)
Astragalus striatiflorus (R)
Astragalus subcinereus var. *basalticus* (T)
Astragalus toanus (P)
Astragalus uncialis (R)
Astragalus wardii (W)
Astragalus welshii (R)
Astragalus wetherillii (W)
Astragalus woodruffii (W)
Astragalus zionis var. *vigulus* (R)
Caesalpinia repens (D)
Dalea flavescens var. *epica* (T)
Dalea lanata var. *terminalis* (P)
Hedysarum boreale var. *gremiale* (T)
Hedysarum occidentale var. *canone* (T)
Hedysarum occidentale var. *occidentale* (P)
Lathyrus eucosmus (P)
Lathyrus lanzwertii var. *leucanthus* (P)
Lotus humistratus (P)
Lotus rigidus (P)
Lotus wrightii (P)
Lupinus arbustus (P)
Lupinus argenteus var. *fulvomaculatus* (D)
Lupinus argenteus var. *hillii* (P)
Lupinus argenteus var. *palmeri* (P)
Lupinus argenteus var. *parviflorus* (P)
Lupinus caudatus var. *cutleri* (D)
Lupinus concinnus var. *orcuttii* (P)
Lupinus flavoculatus (P)
Lupinus jonesii (T)
Lupinus kingii var. *argillaceus* (T)
Lupinus latifolius ssp. *leucanthus* (R)
Lupinus lepidus var. *aridus* (P)
Lupinus polyphyllus var. *ammophilus* (W)
Lupinus polyphyllus var. *humicola* (D)
Lupinus sericeus var. *marianus* (T)
Lupinus sparsiflorus (P)
Oxytropis besseyi var. *obnapiformis* (D)
Oxytropis besseyi var. *ventosa* (W)
Oxytropis borealis var. *viscida* (P)
Oxytropis campestris var. *cusickii* (P)
Oxytropis deflexa var. *pulcherrima* (R)
Oxytropis multiceps (P)
Oxytropis oreophila var. *jonesii* (W)
Parryella filifolia (P)
Pediomelum aromaticum var. *aromaticum* (R)
Pediomelum aromaticum var. *barnebyi* (R)
Pediomelum aromaticum var. *tuhyi* (R)
Pediomelum epipsilum (R)
Pediomelum mephiticum (W)
Pediomelum pariense (W)
Pediomelum retrorsum (P)
Prosopis glandulosa var. *torreyana* (P)
Prosopis odorata (P)
Psoralidium junceum (W)
Psoralidium lanceolatum var. *stenophyllum* (T)
Psoralidium lanceolatum var. *stenostachys* (T)
Psorothamnus arborescens var. *pubescens* (R)
Psorothamnus polydenius var. *jonesii* (R)
Psorothamnus polydenius var. *polydenius* (P)
Psorothamnus thompsoniae var. *thompsoniae* (W)
Psorothamnus thompsoniae var. *whitingii* (R)
Robinia neomexicana (P)
Sophora nuttalliana (P)
Thermopsis rhombifolia (P)
Trifolium beckwithii (P)
Trifolium eriocephalum var. *villiferum* (R)
Trifolium friscanum (R)
Trifolium longipes var. *hansenii* (T)
Trifolium variegatum (P)
Trifolium wormskioldii var. *arizonicum* (P)
Trifolium wormskioldii var. *wormskioldii* (I)
Vicia americana var. *minor* (P)

FAGACEAE

Quercus gambelii var. *bonina* (T)

FUMARIACEAE

Corydalis caseana ssp. *brachycarpa* (R)

GARRYACEAE

Garrya flavescens (P)

GENTIANACEAE

Centaurium calycosum (P)

Centaurium namophilum var. *nevadense* (T)

Frasera gypsicola (R)

Lomatogonium rotatum ssp. *tenuifolium* (P)

GERANIACEAE

Erodium texanum (P)

Geranium bicknellii (P)

Geranium carolinianum (I)

Geranium marginale (T)

GROSSULARIACEAE

Ribes laxiflorum (P)

HALORAGACEAE

Myriophyllum verticillatum (P)

HYDROCHARITACEAE

Elodea canadensis (I)

Elodea longivaginata (P)

HYDROPHYLLACEAE

Emmenanthe penduliflora (P)

Eucrypta micrantha (P)

Hesperochiron californicus (P)

Hydrophyllum capitatum var. *alpinum* (P)

Hydrophyllum fendleri var. *fendleri* (P)

Nama hispidum (P)

Nama retrorsum (W)

Nemophila parviflora var. *austiniae* (P)

Phacelia affinis (P)

Phacelia anelsonii (R)

Phacelia argillacea (R)

Phacelia austromontana (P)

Phacelia cephalotes (W)

Phacelia coerulea (P)

Phacelia constancei (W)

Phacelia crenulata var. *angustifolia* (D)

Phacelia cronquistiana (R)

Phacelia cryptantha (P)

Phacelia curvipes (P)

Phacelia demissa var. *heterotricha* (T)

Phacelia demissa var. *minor* (W)

Phacelia franklinii (P)

Phacelia glandulosa (T)

Phacelia howelliana (W)

Phacelia indecora (R)

Phacelia integrifolia (P)

Phacelia ivesiana var. *glandulifera* (P)

Phacelia laxiflora (R)

Phacelia lemmonii (P)

Phacelia lutea var. *scopulina* (P)

Phacelia mammillarensis (W)

Phacelia orbicularis (T)

Phacelia palmeri (W)

Phacelia peirsoniana (P)

Phacelia petrosa (T)

Phacelia pulchella var. *atwoodii* (R)

Phacelia pulchella var. *pulchella* (D)

Phacelia pulchella var. *sabulonum* (R)

Phacelia rotundifolia (P)

Phacelia sericea var. *sericea* (D)

Phacelia tetramera (P)

Phacelia utahensis (R)

Phacelia vallis-mortae (P)

Tricardia watsonii (P)

HYPERICACEAE

Hypericum anagalloides (P)

IRIDACEAE

Iris pariensis (H)

Sisyrinchium douglasii var. *inflatum* (P)

Sisyrinchium halophilum (P)

Sisyrinchium radiculatum (D)

ISOËTACEAE

Isoëtes echinospora (P)

Isoëtes howellii (P)

Isoëtes melanopoda (P)

Isoëtes occidentalis (P)

JUNCACEAE

Juncus bryoides (P)

Juncus castaneus (P)

Juncus ensifolius (P)

Juncus filiformis (P)

Juncus macrophyllus (D)

Juncus regelii (P)

Juncus tweedyi (D)

Juncus vaseyi (D)

KRAMERIACEAE

Krameria erecta (P)

Krameria grayi (P)

LAMIACEAE

Hedeoma nanum ssp. *californicum* (P)

Hedeoma nanum ssp. *nanum* (P)

Monarda fistulosa var. *menthifolia* (P)

Monarda pectinata (P)

Monardella odoratissima var. *parvifolia* (T)

Physostegia parviflora (P)

Salazaria mexicana (P)

Salvia columbariae (P)

Salvia dorrii ssp. *argentea* (T)

Scutellaria antirrhinoides (P)

Scutellaria nana var. *sapphirina* (W)

Stachys rothrockii (W)

Teucrium canadense var. *occidentale* (I)

LEMNACEAE

Lemna gibba (I)

Lemna trisulca (I)

Lemna turionifera (D)

Lemna valdiviana (I)

Spirodela polyrrhiza (I)

Wolffia borealis (P)

LENTIBULARIACEAE

Utricularia intermedia (P)

Utricularia minor (P)

LILIACEAE

Agave utahensis var. *utahensis* (W)

Allium atropurpureum var. *atropurpureum* (P)

Allium atropurpureum var. *cristatum* (W)

Allium campanulatum (T)

Allium geyeri var. *chatterleyi* (R)

Allium geyeri var. *tenerum* (D)

Allium lemmonii (P)

Allium parvum (P)

Allium passeyi (R)

Calochortus ambiguus (P)

Calochortus bruneaunis (P)

Calochortus eurycarpus (P)

Calochortus kennedyi (P)

Leucocrinum montanum (P)

Nolina microcarpa (P)

Streptopus fassettii (D)

Yucca angustissima var. *avaria* (R)

Yucca angustissima var. *kanabensis* (W)

Yucca angustissima var. *toftiae* (W)

Yucca baccata var. *vespertina* (T)

Yucca baileyi (D)
Yucca brevifolia (P)
Yucca elata var. *utahensis* (W)
Yucca harrimaniae var. *gilbertiana* (T)
Yucca harrimaniae var. *sterilis* (R)
Yucca schidigera (P)
Zigadenus vaginatus (R)
Zigadenus venenosus var. *gramineus* (P)

LINACEAE

Linum australe (P)
Linum lewisii var. *alpicola* (D)

LOASACEAE

Eucnide urens (P)
Mentzelia argillosa (W)
Mentzelia goodrichii (R)
Mentzelia humilis (T)
Mentzelia laciniata (T)
Mentzelia marginata (W)
Mentzelia multicaulis var. *librina* (R)
Mentzelia nitens (T)
Mentzelia obscura (P)
Mentzelia pumila (D)
Mentzelia shultziorum (R)
Mentzelia thompsonii (W)
Mentzelia tricuspid (P)
Petalonyx nitidus (P)
Petalonyx parryi (W)

LYCOPODIACEAE

Lycopodium annotinum (D)

LYTHRACEAE

Lythrum californicum (P)

MALVACEAE

Abutilon parvulum (P)

Eremalche exilis (P)
Sphaeralcea ambigua var. *ambigua* (P)
Sphaeralcea caespitosa (R)
Sphaeralcea digitata (T)
Sphaeralcea grossulariifolia var. *moorei* (W)
Sphaeralcea leptophylla var. *janeae* (R)
Sphaeralcea psoraloides (R)
Sphaeralcea rusbyi var. *rusbyi* (D)

MARSILEACEAE

Marsilea oligospora (P)

MARTYNIACEAE

Proboscidea parviflora (P)

MENYANTHACEAE

Menyanthes trifoliata (P)

NAJADACEAE

Najas caespitosa (H)
Najas guadalupensis (I)
Najas marina (P)

NYCTAGINACEAE

Abronia argillosa (W)
Abronia mellifera (P)
Abronia nana var. *harrisii* (T)
Abronia villosa (P)
Boerhavia torreyana (P)
Hermidium alipes var. *pallidum* (T)
Mirabilis bigelovii var. *retrorsa* (P)
Mirabilis glabra (P)
Mirabilis linearis var. *decipiens* (T)
Mirabilis multiflora var. *multiflora* (D)
Mirabilis multiflora var. *pubescens* (P)
Selinocarpus diffusus (D)
Selinocarpus nevadensis (W)
Tripterocalyx carneus var. *wootonii* (P)

NYMPHAEACEAE

Nuphar lutea ssp. *polysepala* (I)

OLEACEAE

Fraxinus cuspidata ssp. *macropetala* (D)

Fraxinus velutina (P)

Menodora scabra (P)

Menodora spinescens (P)

ONAGRACEAE

Camissonia andina (P)

Camissonia atwoodii (R)

Camissonia bairdii (D)

Camissonia boothii var. *condensata* (P)

Camissonia boothii var. *desertorum* (T)

Camissonia boothii var. *villosa* (D)

Camissonia brevipes ssp. *pallidula* (P)

Camissonia brevipes var. *brevipes* (P)

Camissonia chamaenerioides (P)

Camissonia claviformis var. *aurantiaca* (P)

Camissonia claviformis var. *claviformis* (T)

Camissonia claviformis var. *cruciformis* (T)

Camissonia claviformis var. *purpurascens* (P)

Camissonia exilis (R)

Camissonia gouldii (R)

Camissonia multijuga (D)

Camissonia parryi (W)

Camissonia pterosperma (P)

Camissonia pusilla (P)

Camissonia refracta (P)

Chamerion latifolium (P)

Epilobium anagallidifolium (P)

Epilobium densiflorum (P)

Epilobium glaberrimum var. *fastigiatum* (P)

Epilobium glaberrimum var. *glaberrimum* (P)

Epilobium nevadense (R)

Epilobium oregonense (D)

Epilobium palustre (P)

Epilobium pygmaeum (P)

Gayophytum diffusum ssp. *diffusum* (P)

Gayophytum humile (P)

Oenothera caespitosa var. *macroglottis* (P)

Oenothera cavernae (D)

Oenothera deltoides var. *decumbens* (W)

Oenothera deltoides var. *deltoides* (P)

Oenothera flava var. *acutissima* (W)

Oenothera pallida var. *latifolia* (P)

Oenothera pallida var. *runcinata* (D)

Oenothera pallida var. *trichocalyx* (P)

Oenothera primiveris var. *bufonis* (P)

Oenothera villosa var. *villosa* (D)

OPHIOGLOSSACEAE

Botrychium crenulatum (W)

Botrychium echo (T)

Botrychium hesperium (W)

Botrychium lanceolatum (I)

Botrychium lineare (D)

Botrychium lunaria (I)

Botrychium minganense (I)

Botrychium multifidum (P)

Botrychium paradoxum (R)

Botrychium pinnatum (P)

Botrychium simplex (P)

Botrychium virginianum (P)

ORCHIDACEAE

Coeloglossum viride ssp. *bracteatum* (P)

Cypripedium calceolus var. *pubescens* (P)

Cypripedium fasciculatum (R)

Listera borealis (P)

Listera cordata (D)

Lysiella obtusata (P)

Platanthera hyerborea var. *gracilis* (P)

Platanthera sparsiflora var. *ensifolia* (D)

Platanthera stricta (D)

Platanthera zothecina (R)

Spiranthes diluvialis (R)

OROBANCHACEAE

- Orobanche cooperi* (P)
- Orobanche multiflora* (T)

PAEONIACEAE

- Paeonia brownii* (P)

PAPAVERACEAE

- Arctomecon californica* (D)
- Arctomecon humilis* (R)
- Eschscholzia californica* ssp. *mexicana* (P)
- Eschscholzia glyptosperma* (P)
- Eschscholzia minutiflora* (P)
- Papaver radicum* ssp. *kluanense* (T)
- Platystemon californicus* (P)

PHILADELPHACEAE

- Fendlera rupicola* (P)
- Jamesia americana* var. *macrocalyx* (R)
- Jamesia americana* var. *zionis* (R)
- Jamesia tetrapetala* (R)

PLANTAGINACEAE

- Plantago elongata* (P)
- Plantago major* var. *pachyphylla* (D)
- Plantago maritima* (D)
- Plantago virginica* (D)

POACEAE

- Achnatherum contractum* (W)
- Achnatherum lemmonii* (P)
- Achnatherum nevadense* (T)
- Achnatherum occidentale* ssp. *pubescens* (D)
- Achnatherum parishii* ssp. *parishii* (D)
- Achnatherum scribneri* (D)
- Achnatherum thurberianum* (P)
- Agrostis idahoensis* (D)

- Agrostis mertensii* (D)
- Agrostis oregonensis* (D)
- Alopecurus alpinus* (P)
- Andropogon glomeratus* var. *scabriglumis* (P)
- Aristida arizonica* (P)
- Aristida purpurea* var. *nealleyi* (D)
- Aristida purpurea* var. *purpurea* (D)
- Aristida purpurea* var. *wrightii* (D)
- Bothriochloa laguroides* ssp. *torreyana* (P)
- Bouteloua aristidoides* (P)
- Bouteloua curtipendula* var. *curtipendula* (D)
- Bouteloua hirsuta* (P)
- Bouteloua simplex* (P)
- Bouteloua trifida* (P)
- Bouteloua uniflora* (D)
- Bromus ciliatus* (D)
- Bromus frondosus* (D)
- Bromus pumpellianus* (D)
- Bromus vulgaris* (P)
- Calamagrostis montanensis* (D)
- Calamagrostis rubescens* (P)
- Calamovilfa gigantea* (P)
- Dichanthelium lanuginosum* var. *thermale* (T)
- Dichanthelium oligosanthes* var. *scribnerianum* (I)
- Elymus multisetus* (D)
- Eriochloa acuminata* (D)
- Festuca dasyclada* (W)
- Festuca ovina* var. *arizonica* (P)
- Festuca rubra* (D)
- Festuca sororia* (D)
- Helictotrichon mertonianum* (D)
- Hordeum pusillum* var. *pubens* (D)
- Imperata brevifolia* (P)
- Leersia oryzoides* (I)
- Leptochloa mucronata* (P)
- Leptochloa uninervia* (D)
- Leymus salina* ssp. *salmonis* (W)
- Leymus simplex* (R)
- Leymus triticoides* var. *pubescens* (T)
- Melica porteri* (P)

Muhlenbergia arsenei (D)
Muhlenbergia curtifolia (T)
Muhlenbergia depauperata (D)
Muhlenbergia filiculmis (D)
Muhlenbergia glomerata (P)
Muhlenbergia mexicana (I)
Muhlenbergia microsperma (P)
Muhlenbergia minutissima (I)
Muhlenbergia polycaulis (T)
Muhlenbergia repens (P)
Panicum bulbosum (D)
Panicum hallii (P)
Paspalum distichum (P)
Pleuraphis rigida (P)
Poa agassizensis (D)
Poa arctica ssp. *aperta* (D)
Poa bolanderi (P)
Poa cusickii ssp. *pallida* (D)
Poa lettermanii (P)
Poa pattersonii (I)
Poa stenantha (D)
Puccinellia simplex (P)
Redfieldia flexuosa (P)
Schizachne purpurascens (P)
Scleropogon brevifolius (P)
Spartina pectinata (D)
Sporobolus airoides var. *wrightii* (T)
Sporobolus asper (P)
Sporobolus pulvinatus (P)
Sporobolus texanus (P)
Trisetum canescens (P)
Trisetum spicatum ssp. *montanum* (T)
Vulpia microstachys var. *pauciflora* (D)
Vulpia octoflora var. *glauca* (D)

POLEMONIACEAE

Allophyllum gilioides ssp. *violaceum* (D)
Collomia tenella (P)
Collomia tinctoria (P)
Eriastrum eremicum (P)
Gilia brecciarum ssp. *brecciarum* (D)
Gilia caespitosa (R)

Gilia capillaris (P)
Gilia clokeyi (D)
Gilia filiformis (P)
Gilia flavocincta ssp. *flavocincta* (D)
Gilia haydenii (W)
Gilia latifolia var. *imperialis* (R)
Gilia latifolia var. *latifolia* (P)
Gilia mcvickerae (T)
Gilia ophthalmoides (D)
Gilia scopulorum (P)
Gilia stellata (P)
Gilia tenerrima (P)
Gilia tenuis (R)
Gilia transmontana (P)
Gymnosteris parvula (P)
Ipomopsis arizonica (P)
Ipomopsis congesta ssp. *palmifrons* (P)
Ipomopsis depressa (P)
Ipomopsis spicata ssp. *spicata* (P)
Ipomopsis spicata ssp. *tridactyla* (R)
Langloisia setosissima (P)
Linanthus arenicola (D)
Linanthus aureus (P)
Linanthus bigelovii (P)
Linanthus demissus (P)
Linanthus dichotomus (P)
Linanthus harknessii (P)
Loeseliastrum schottii (P)
Phlox austromontana var. *jonesii* (W)
Phlox austromontana var. *lutescens* (R)
Phlox austromontana var. *prostrata* (D)
Phlox cluteana (W)
Phlox gladiiformis (W)
Phlox grahamii (T)
Phlox griseola (W)
Phlox hoodii var. *hoodii* (T)
Phlox opalensis (W)
Phlox tumulosa (W)
Polemonium brandegei (P)
Polemonium micranthum (P)

POLYGALACEAE

Polygala acanthoclada (P)

POLYGONACEAE

Centrostegia thurberi (P)

Chorizanthe rigida (P)

Eriogonum aretioides (R)

Eriogonum baileyi (P)

Eriogonum batemanii var. *eremicum* (W)

Eriogonum batemanii var. *ostlundii* (W)

Eriogonum brachypodum (P)

Eriogonum brevicaule var. *cottamii* (T)

Eriogonum brevicaule var. *desertorum* (W)

Eriogonum brevicaule var. *ephedroides* (W)

Eriogonum brevicaule var. *loganum* (R)

Eriogonum brevicaule var. *nanum* (T)

Eriogonum brevicaule var. *promiscuum* (R)

Eriogonum brevicaule var. *wasatchense* (T)

Eriogonum cernuum var. *viminale* (P)

Eriogonum clavellatum (W)

Eriogonum contortum (W)

Eriogonum corymbosum var. *albiflorum* (W)

Eriogonum corymbosum var. *cronquistii* (R)

Eriogonum corymbosum var. *davidsei* (T)

Eriogonum corymbosum var. *divaricatum* (T)

Eriogonum corymbosum var. *erectum* (T)

Eriogonum corymbosum var. *humivagans* (T)

Eriogonum corymbosum var. *hylophilum* (R)

Eriogonum corymbosum var. *matthewsiae* (R)

Eriogonum corymbosum var. *revelianum* (W)

Eriogonum corymbosum var. *smithii* (R)

Eriogonum corymbosum var. *thompsoniae* (W)

Eriogonum corymbosum var. *velutinum* (T)

Eriogonum darrovii (R)

Eriogonum davidsonii (P)

Eriogonum esmeraldense (P)

Eriogonum fasciculatum var. *polifolium* (P)

Eriogonum grayi (T)

Eriogonum grayi var. *maguirei* (T)

Eriogonum grayi var. *stansburyense* (T)

Eriogonum heermannii var. *subspinosum* (R)

Eriogonum heermannii var. *sulcatum* (W)

Eriogonum howellianum (W)

Eriogonum insigne (W)

Eriogonum jamesii var. *higginsii* (R)

Eriogonum jamesii var. *rupicola* (W)

Eriogonum lancifolium (T)

Eriogonum leptophyllum (W)

Eriogonum lewisii (T)

Eriogonum lonchophyllum var. *intermontanum* (T)

Eriogonum lonchophyllum var. *saurinum* (W)

Eriogonum marcusii (T)

Eriogonum nidularium (P)

Eriogonum nummulare var. *ammophilum* (R)

Eriogonum nutans (W)

Eriogonum ovalifolium var. *nivale* (P)

Eriogonum panguicense var. *alpestre* (T)

Eriogonum pharnaceoides var. *cervinum* (R)

Eriogonum polycladon (P)

Eriogonum pusillum (P)

Eriogonum racemosum var. *nobile* (R)

Eriogonum racemosum var. *zionis* (W)

Eriogonum scabrellum (R)

Eriogonum soledium (R)

Eriogonum spathulatum var. *natum* (R)

Eriogonum subreniforme (W)

Eriogonum thomasii (P)

Eriogonum trichopes (P)

Eriogonum tumulosum (W)

Eriogonum umbellatum var. *desereticum* (T)

Eriogonum wrightii (P)

Oxytheca perfoliata (P)

Polygonum minimum (P)

Polygonum utahense (T)
Pterostegia drymarioides (P)

POLYPODIACEAE

Polypodium glycyrrhiza (P)
Polypodium hesperium (I)

PORTULACACEAE

Calyptridium monandrum (P)
Calyptridium parryi (D)
Claytonia cordifolia (P)
Claytonia parviflora ssp. *utahensis* (T)
Lewisia brachycalyx (D)
Lewisia triphylla (P)
Montia linearis (P)
Portulaca parvula (D)
Portulaca retusa (D)
Talinum thompsonii (R)

POTAMOGETONACEAE

Potamogeton epihydrus ssp. *nuttallii* (P)
Potamogeton filiformis var. *alpinus* (P)
Potamogeton foliosus var. *fibrillosus* (R)
Potamogeton friesii (P)
Potamogeton illinoensis (P)
Potamogeton latifolius (D)
Potamogeton natans (I)
Potamogeton robbinsii (P)
Potamogeton strictifolius (P)
Potamogeton vaginatus (P)
Potamogeton zosteriformis (P)

PRIMULACEAE

Androsace chamaejasme var. *carinata* (P)
Androsace filiformis (P)
Androsace occidentalis (P)
Dodecatheon dentatum var. *utahense* (R)
Dodecatheon pulchellum var. *zionense* (W)
Dodecatheon redolens (P)

Lysimachia ciliata (P)
Lysimachia thyrsiflora (P)
Primula domensis (R)
Primula incana (P)
Primula maguirei (R)
Primula specuicola (W)
Samolus parviflorus (I)

PTERIDACEAE

Adiantum aleuticum (P)
Argyrochosma jonesii (P)
Argyrochosma limitanea ssp. *limitanea* (P)
Aspidotis densa (P)
Cheilanthes covillei (P)
Cheilanthes gracillima (P)
Cheilanthes parryi (P)
Cheilanthes wootonii (P)
Cryptogramma stelleri (P)
Pellaea atropurpurea (P)
Pellaea glabella ssp. *occidentalis* (P)
Pellaea wrightiana (P)
Pentagramma triangularis ssp. *triangularis* (P)

PYROLACEAE

Chimaphila menziesii (P)
Pyrola picta (I)

RANUNCULACEAE

Anemone multifida var. *stylosa* (R)
Anemone multifida var. *tetonensis* (D)
Anemone parviflora (P)
Anemone patens var. *multifida* (P)
Anemone piperi (D)
Aquilegia barnebyi (W)
Aquilegia chrysantha (P)
Aquilegia coerulea var. *pinetorum* (D)
Aquilegia desertorum (P)
Aquilegia flavescens var. *rubicunda* (R)
Aquilegia formosa var. *fosteri* (R)

Aquilegia grahamii (R)
Caltha leptosepala var. *biflora* (T)
Clematis columbiana var. *tenuiloba* (T)
Delphinium geyeri (P)
Delphinium parishii ssp. *parishii* (P)
Myosurus apetalus var. *borealis* (P)
Myosurus minimus (I)
Ranunculus aestivalis (R)
Ranunculus aquatilis var. *hispidulus* (P)
Ranunculus aquatilis var. *longirostris* (T)
Ranunculus eschscholtzii var. *eximius* (P)
Ranunculus eschscholtzii var. *trisectus* (D)
Ranunculus flabellaris (P)
Ranunculus gelidus ssp. *grayi* (P)
Ranunculus glaberrimus var. *glaberrimus* (P)
Ranunculus gmelinii var. *hookeri* (P)
Ranunculus gmelinii var. *limosus* (P)
Ranunculus oreogenes (T)
Ranunculus pedatifidus var. *affinis* (P)
Ranunculus pygmaeus (P)
Ranunculus ranunculinus (D)
Thalictrum dasycarpum (P)
Thalictrum occidentale (D)
Thalictrum polycarpum (D)
Thalictrum venulosum (P)
Trautvetteria caroliniensis var. *occidentalis* (I)

RHAMNACEAE

Ceanothus greggii var. *franklinii* (R)
Ceanothus greggii var. *vestitus* (P)
Rhamnus alnifolia (P)

ROSACEAE

Amelanchier alnifolia var. *cusickii* (P)
Cercocarpus ledifolius var. *ledifolius* (P)
Chamaerhodos erecta var. *parviflora* (P)
Crataegus chrysocarpa (D)
Crataegus douglasii var. *duchesnensis* (R)
Crataegus erythropoda (P)
Crataegus succulenta var. *occidentalis* (D)

Geum aleppicum (P)
Ivesia arizonica var. *arizonica* (W)
Ivesia gordonii "wasatchensis phase" (T)
Ivesia setosa (W)
Ivesia shockleyi var. *ostleri* (R)
Ivesia utahensis (R)
Physocarpus monogynus (T)
Potentilla angelliae (R)
Potentilla bipinnatifida (D)
Potentilla concinna var. *modesta* (T)
Potentilla cottamii (R)
Potentilla diversifolia var. *perdissecta* (T)
Potentilla drummondii var. *breweri* (D)
Potentilla drummondii var. *bruceae* (T)
Potentilla glandulosa var. *micropetala* (T)
Potentilla glandulosa var. *pseudorupestris* (D)
Potentilla multisecta (W)
Potentilla nivea (I)
Potentilla palustris (P)
Potentilla pensylvanica var. *paucijuga* (T)
Potentilla plattensis (P)
Potentilla rivalis (I)
Prunus emarginata (P)
Prunus valida (T)
Purshia glandulosa (P)
Rosa manca (D)
Rosa neomexicana (T)
Rubus neomexicanus (P)

RUBIACEAE

Galium coloradoense (W)
Galium emeryense ssp. *emeryense* (T)
Galium emeryense ssp. *protoscabriusculum* (T)
Galium hypotrichium ssp. *nevadense* (T)
Galium magnifolium (T)
Galium mexicanum var. *asperulum* (P)
Galium munzii ssp. *ambivalens* (T)
Galium munzii ssp. *munzii* (T)
Galium proliferum (P)
Galium stellatum var. *eremicum* (P)

Galium watsonii (T)
Galium wrightii (P)
Houstonia rubra (P)

RUTACEAE

Ptelea trifoliata var. *lutescens* (W)
Ptelea trifoliata var. *pallida* (D)
Thamnosma montana (P)

SALICACEAE

Populus balsamifera ssp. *trichocarpa* (P)
Populus deltoides ssp. *wislizeni* (D)
Salix arizonica (R)
Salix candida (D)
Salix commutata (T)
Salix eriocephala var. *ligulifolia* (D)
Salix eriocephala var. *mackenziana* (T)
Salix exigua ssp. *interior* (T)
Salix exigua var. *exigua* (T)
Salix laevigata (P)
Salix melanopsis (P)
Salix planifolia var. *planifolia* (T)
Salix wolfii var. *idahoensis* (T)

SAURURACEAE

Anemopsis californica (P)

SAXIFRAGACEAE

Micranthes nidifica (P)
Saxifraga adscendens var. *oregonensis* (P)
Saxifraga bronchialis var. *austromontana* (P)
Saxifraga cernua (P)
Saxifraga hirculus (P)
Saxifraga serpyllifolia var. *chrysantha* (W)
Telesonix jamesii var. *heucheriformis* (P)

SCROPHULARIACEAE

Antirrhinum filipes (P)

Besseyia alpina (P)
Besseyia wyomingensis (P)
Castilleja aff. *pilosa* (D)
Castilleja aquariensis (R)
Castilleja leonardii (T)
Castilleja nana (P)
Castilleja occidentalis (P)
Castilleja parvula (R)
Castilleja revealii (R)
Castilleja scabrida var. *barnebyana* (W)
Cordylanthus kingii var. *densiflorus* (W)
Gratiola neglecta (I)
Maurandya antirrhiniflora (P)
Mimetanthe pilosa (P)
Mimulus bigelovii var. *cuspidatus* (P)
Mimulus breweri (P)
Mimulus cardinalis (P)
Mimulus glabratus ssp. *fremontii* (P)
Mimulus glabratus ssp. *utahensis* (D)
Mimulus parryi (W)
Mimulus primuloides (P)
Mohavea breviflora (P)
Orthocarpus purpureo-albus (P)
Orthocarpus tolmiei ssp. *holmgreniorum* (W)
Pedicularis contorta (P)
Pedicularis parryi var. *purpurea* (D)
Pedicularis procera (P)
Penstemon abietinus (R)
Penstemon acaulis var. *acaulis* (R)
Penstemon acaulis var. *yampaensis* (T)
Penstemon ammophilus (R)
Penstemon angustifolius var. *dulcis* (R)
Penstemon angustifolius var. *vernalensis* (W)
Penstemon atwoodii (W)
Penstemon barbatus var. *barbatus* (T)
Penstemon barbatus var. *trichander* (W)
Penstemon bracteatus (R)
Penstemon breviculus (W)
Penstemon caespitosus var. *desertipicti* (W)
Penstemon caespitosus var. *suffruticosus* (W)

Penstemon cleburnei (W)
Penstemon compactus (R)
Penstemon concinnus (W)
Penstemon crandallii var. *atratus* (W)
Penstemon crandallii var. *crandallii* (P)
Penstemon cyananthus var. *subglaber* (W)
Penstemon deustus var. *pedicellatus* (P)
Penstemon duchesnensis (R)
Penstemon flowersii (R)
Penstemon franklinii (R)
Penstemon gibbensii (R)
Penstemon goodrichii (R)
Penstemon grahamii (R)
Penstemon humilis var. *desereticus* (D)
Penstemon humilis var. *obtusifolius* (W)
Penstemon idahoensis (R)
Penstemon immanifestus (P)
Penstemon laevis (W)
Penstemon lentus var. *albiflorus* (W)
Penstemon lentus var. *lentus* (W)
Penstemon leonardii var. *higginsii* (W)
Penstemon leonardii var. *patricus* (R)
Penstemon leptanthus (T)
Penstemon linarioides var. *sileri* (T)
Penstemon marcusii (R)
Penstemon nanus (W)
Penstemon navajoa (R)
Penstemon parvus (R)
Penstemon petiolatus (W)
Penstemon pinorum (R)
Penstemon platyphyllus (W)
Penstemon procerus var. *aberrans* (D)
Penstemon pseudoputus (W)
Penstemon rydbergii var. *rydbergii* (D)
Penstemon saxosorum (D)
Penstemon scariosus var. *albifluvis* (R)
Penstemon scariosus var. *cyanomontanus* (R)
Penstemon scariosus var. *scariosus* (W)
Penstemon sepalulus (W)
Penstemon speciosus (P)
Penstemon strictiformis (W)
Penstemon thompsoniae var. *desperatus* (T)

Penstemon tidestromii (W)
Penstemon uintahensis (W)
Penstemon wardii (W)
Veronica catenata (P)

SELAGINELLACEAE

Selaginella scopulorum (P)
Selaginella underwoodii (P)
Selaginella utahensis (W)

SIMMONDSIACEAE

Simmondsia chinensis (P)

SOLANACEAE

Chamaesaracha coronopus (P)
Lycium cooperi (P)
Petunia parviflora (P)
Physalis crassifolia (P)
Physalis hederifolia var. *hederifolia* (P)
Physalis lobata (P)
Solanum jamesii (P)

SPARGANIACEAE

Sparganium eurycarpum (I)
Sparganium natans (P)

URTICACEAE

Boehmeria cylindrica (D)
Parietaria hespera var. *hespera* (P)
Urtica dioica var. *procera* (P)

VALERIANACEAE

Valeriana arizonica (P)

VERBENACEAE

Aloysia wrightii (P)

Glandularia gooddingii (P)
Phyla cuneifolia (P)
Phyla lanceolata (P)
Verbena gracilis (T)
Verbena macdougalii (P)

VIOLACEAE

Viola beckwithii (P)
Viola charlestonensis (W)
Viola clauseniana (R)
Viola frank-smithii (R)
Viola lithion (R)
Viola praemorsa ssp. flavovirens (D)
Viola purpurea ssp. atriplicifolia (T)
Viola sororia var. sororia (D)

VISCACEAE

Arceuthobium abietinum f. sp. concoloris
(P)
Phoradendron californicum (P)

VITACEAE

Parthenocissus vitacea (P)
Vitis arizonica (P)

ZYGOPHYLLACEAE

Fagonia laevis (P)
Kallstroemia californica (P)
Kallstroemia parviflora (P)