

DISPLAY COPY

Do not remove

COLORADO'S NATURAL HERITAGE:

RARE AND IMPERILED
ANIMALS, PLANTS, AND NATURAL COMMUNITIES



MAY 1995

VOLUME 1, NO 1

COLORADO'S NATURAL HERITAGE:

**RARE AND IMPERILED
ANIMALS, PLANTS, AND NATURAL COMMUNITIES**

**MAY 1995
VOLUME 1, NO 1**

Colorado Natural Heritage Program

College of Natural Resources
103 Natural Resources
Fort Collins, Colorado 80523
(303) 491-1309
FAX: (303) 491-0279

May 2, 1995

Dear Interested Party:

The state of Colorado is widely known for its rich natural values. In this, the fastest growing state in the West, one can still find vast expanses of plains, forests, and canyons. Most Coloradoans remember that the vibrant economy in Colorado was built on the State's natural heritage and remains heavily dependent on it today. This statewide understanding of the importance of Colorado's natural diversity was best stated by the voters in their overwhelming support of an amendment to protect that heritage - Great Outdoors Colorado. Fulfilling the mission of conserving the State's natural heritage will require a suite of conservation tools; this publication is one of those tools.

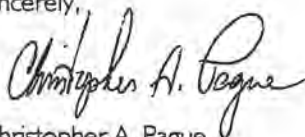
The Colorado Natural Heritage Program is proud to produce an updated list of the rare and imperiled plants, animals, and natural communities of Colorado. More than three years and numerous consultations have gone into the development of this updated list. But many more years of work were invested in this system by others before us, particularly the Colorado Natural Areas Program and The Nature Conservancy. More recently, a developing partnership with the Colorado Division of Wildlife has greatly aided our understanding of the State's vertebrates. I believe that this list will be helpful in establishing conservation priorities for Colorado.

How does this list help? The first intent of this list is to provide, in one place, a list of all species that are believed to be imperiled in Colorado. This includes plants, animals (vertebrates and invertebrates), and the most significant natural communities. The second purpose is to provide the user with a relative degree of imperilment for each species, indicated by global and state rarity ranks. Finally, we hope this publication will provide a priority list for persons collecting data in the field. These are the species and communities for which conservation information is most needed.

This natural heritage list is meant to update and replace the List of Plants of Special Concern, formerly produced by the Colorado Natural Areas Program. We have included many invertebrate species (with more to come), especially those of the better-studied groups. We have also included the most imperiled natural communities to assist in the identification of ecosystems in peril. Finally, this list is meant to supplement the threatened and endangered species lists of the Colorado Division of Wildlife and the U. S. Fish and Wildlife Service, and the sensitive species lists of the BLM and USFS.

That leads me to the whole purpose of this list - to get ahead of the need to list species or even communities as endangered. Time is important. Many species that are still common today are experiencing significant population declines. It is critical that all of the citizens of Colorado work together to protect the State's natural heritage. It is our hope that this list will provide assistance and a means of monitoring our success.

Sincerely,



Christopher A. Pague
Director

Acknowledgments

The Colorado Natural Heritage Program is grateful to the following who thoughtfully invested their time, energy, and knowledge to ensure the Natural Heritage list content is as up-to-date and accurate as possible:

For plants:

The CO Rare Plant Technical Committee, especially Carol Spurrier (BLM), and Andy Kratz (USFS), Janet Coles of the CO Natural Areas Program, Betsy Neely and Alan Carpenter of the CO Program of The Nature Conservancy, William Weber, Tom Ranker and Tim Hogan of the University of CO Herbarium, Bill Jennings, Ron Hartman of the Rocky Mountain Herbarium, Carol Dawson and Mark Minton of the Denver Botanic Gardens, Lucy Jordan and the U.S. Fish and Wildlife Service, Larry Morse and staff at the Nature Conservancy's Home Office, numerous biologists of the U.S. Forest Service, and all participants in the Adopt-a-Rare Plant Program.

For vertebrates:

Dave Armstrong of the University of CO Museum, Geoff Hammerson and other experts at The Nature Conservancy's Eastern Regional Office and throughout the Natural Heritage Network, numerous biologists at the CO Division of Wildlife, Steve Corn and the National Biological Service, Hugh Kingery of the Breeding Bird Atlas Project, Dick Roth, John Verner, Rick Metzger, and other numerous biologists of the U.S. Forest Service, Robert Righter and Robert Andrews, and Rick Adams.

For invertebrates:

Boris Kondratieff, Paul Opler, and Mary Alice Evans at Colorado State University, Shi-Kuei Wu of the University of CO Museum, Ray Standford, and Mike Weismann.

For natural communities:

Lisa Engelking, Marion Reid, and Patrick Bourgeron of The Nature Conservancy's Western Regional Office, Barry Johnston, Jeff Redders and numerous ecologists of the U.S. Forest Service, the CO Riparian Association, CO Riparian Task Force, William Baker, Sue Galatowitsch, and David Cooper.

For general support:

Great Outdoors! CO, CO Department of Natural Resources, CO Natural Areas Program, CO Division of Wildlife, U.S. Forest Service Rocky Mountain Region II, University of CO, CO State University, The Nature Conservancy, Jane Ragel and John Smith, U.S. Fish and Wildlife Service, Environmental Protection Agency, Denver Water Board, Bureau of Land Management, National Park Service, Park County, Jefferson County, Douglas County, City of Boulder, Department of Energy, Air Force Academy, CO Native Plant Society, and Tom Andrews.

The status of CO's biodiversity cannot be adequately known without reference to our biological libraries, the museums and herbaria: University of CO Museum and Herbarium, Denver

Museum of Natural History, CO State University Herbarium and C.P. Gillette Museum of Anthropod Diversity, Rocky Mountain Herbarium, Adams State College Herbarium, Fort Lewis College Herbarium, CO College Herbarium, Brigham Young University Herbarium, Utah State University, Kathryn Kalmbach Herbarium, Ray Stanford Lepidoptera Collection, University of Kansas Herbarium, University of Nebraska Herbarium, University of Northern CO Herbarium and Museum, and University of Southern CO Herbarium.

Special thanks to the CSU Student Chapter of the Society of Conservation Biology, and the myriad of individual interns and volunteers who have contributed to various aspects of CNHP's operations, including field surveys, museum and herbarium canvassing, mapping and data processing, GIS, administrative functions, community classification, plant and animal rarity ranking, natural history species abstracts, and much, much more. Your time and effort have truly been invaluable to the success of the Colorado Natural Heritage Program.

The Colorado Natural Heritage Program is pleased to introduce its new logo. Cover Art provided by Lee Grunau.

TABLE OF CONTENTS

Chapter 1.	Introduction	1
	Colorado's Natural Heritage	1
	What is Biological Diversity	2
	Colorado's Natural Heritage Program	3
	The Natural Heritage Ranking System	4
	Legal Designations	7
	Comments Welcome - Help Needed	9
Chapter 2.	Rare and Imperiled Vertebrates	10
	Notes	10
	Amphibian List	12
	Bird List	13
	Fish List	17
	Mammal List	19
	Reptile List	22
Chapter 3.	Rare and Imperiled Invertebrates	23
	Notes	23
	Insect List	25
	Non-Insect List	32
Chapter 4.	Rare and Imperiled Plants	33
	Notes	33
	Plant List	34
Chapter 5.	Rare and Imperiled Natural Communities	50
	Notes	50
	Natural Communities List	52
Appendix 1.	Plant Name Synonyms	55
Appendix 2.	Field Forms	58

Chapter I. Introduction

Colorado's Natural Heritage

Just as ancient artifacts and historic buildings represent our cultural heritage, a diversity of plant and animal species and their habitats represent our "natural heritage." Colorado's natural heritage encompasses a wide variety of ecosystems: from tallgrass prairie and shortgrass high plains to alpine cirques and rugged peaks, from canyon lands and sagebrush deserts to dense subalpine spruce-fir forests and wide-open tundra.

These widely diversified habitats are determined by water availability, temperature extremes, altitude, geologic history, and land use history. The species that inhabit each of these ecosystems have adapted to the specific set of conditions found there. But because human influence today touches every part of the Colorado environment, we are responsible for understanding our impacts and carefully planning our actions to preserve our natural heritage for future generations.

Some generalist species, like house finches or mule deer, have flourished over the last century, having adapted to habitats altered by humans. However, many other species are specialized to survive in vulnerable Colorado habitats, among them are Bell's twinpod, the wolverine, and the peregrine falcon. These species have special requirements for survival which are threatened by competition from non-native species and incompatible land management. Many of these have become rare not only in Colorado, but throughout their range of distribution, some existing in less than five populations in the entire world! The decline of these specialized species often indicates disruptions that could permanently alter entire ecosystems. Thus, recognition of rare and imperiled species is crucial to maintaining Colorado's diverse natural heritage.

Colorado is inhabited by some 670 vertebrate species, and tens of thousands of invertebrate species. In addition, there are approximately 3,100 species of vascular plants and 1,200 nonvasculars. Finally, there are more than 450 recognized plant associations that represent terrestrial ecosystems. It is this rich natural heritage that has provided the basis for Colorado's diverse economy. Some components of this heritage have always been rare, others have become imperiled with human-induced changes in the landscape. This document identifies the most rare and imperiled elements of Colorado's biological diversity.

What is Biological Diversity?

Protecting biological diversity has become an important management issue for many natural resource professionals. Biological diversity at its most basic level includes the full range of species on Earth, from species such as bacteria, viruses, and protists, through multicellular kingdoms of plants, animals, and fungi. At finer levels of organization, biological diversity includes the genetic variation within species, both among geographically separated populations and among individuals within single populations. On a wider scale, diversity includes variations in the biological communities in which species live, the ecosystems in which communities exist, and the interactions among these levels. All levels are necessary for the continued survival of species and natural communities, and all are important for the well-being of humans. It stands to reason that natural diversity should be of concern to all people.

The biological diversity of an area can be described at four levels:

1. Genetic Diversity -- the genetic variation within a population and among populations of a plant or animal species. The genetic makeup of a species is variable between populations of a species within its geographic range. Loss of a population results in a loss of genetic diversity for that species and a reduction of total biological diversity for the region. This unique genetic information cannot be reclaimed.
2. Species Diversity -- the total number and abundance of plant and animal species and subspecies in an area.
3. Community Diversity -- the variety of natural communities or ecosystems within that area. These communities may be diagnostic or even endemic to an area. It is within these ecosystems that all life dwells.
4. Landscape Diversity -- the type, condition, pattern, and connectedness of natural communities or ecosystems within a landscape. Fragmentation of landscapes, loss of connections and migratory corridors, and loss of natural communities all result in a loss of biological diversity for a region. Humans and the results of their activities are integral parts of most landscapes.

The conservation of natural diversity must include all levels of diversity: genetic, species, community, and landscape. Each level is dependent on the other levels and inextricably linked. In addition, and all too often omitted, humans are also linked to all levels of this hierarchy. We at the Colorado Natural Heritage Program believe that a healthy natural and human environment go hand in hand, and that recognition of the most imperiled elements is an important step in comprehensive conservation planning.

The Natural Heritage Ranking System

Information is gathered by CNHP on Colorado's plants, animals, and natural communities. Each of these species and natural communities is considered an element of natural diversity, or simply an element. Each element is assigned a rank that indicates its relative degree of imperilment on a five-point scale (e.g., 1 = extremely rare/imperiled, 5 = abundant/secure). The primary criterion for ranking elements is the number of occurrences, i.e., the number of known distinct localities or populations. This factor is weighted more heavily because, all other factors being equal, an element found in one place is more imperiled than something found in twenty-one places. Also of importance are the size of the geographic range, the number of individuals, trends in both population and distribution, identifiable threats, and the number of already protected occurrences. However, the emphasis remains on the number of occurrences, such that ranks are an index of known biological rarity.

Element rarity ranks are assigned both in terms of the element's degree of imperilment within Colorado (its State or S-rank) and the element's imperilment over its entire range (its Global or G-rank). Taken together, these two ranks give an instant picture of the degree of imperilment of an element. CNHP actively collects, maps, and electronically processes specific occurrence information for elements considered extremely imperiled to imperiled (S1 - S3). Those with a ranking of S3S4 are "watchlisted," meaning that specific occurrence data are collected and periodically analyzed to determine whether more active tracking is warranted. Watchlisted species are noted in the lists by an asterisk (*) next to the species name. A complete description of each of the Natural Heritage ranks is provided in Tables IA and IB.

This single rank system works readily for all species except those that are migratory. Those animals that migrate may spend only a portion of their life cycles within the state. In these cases, it is necessary to distinguish between breeding, non-breeding, and resident species. As noted in Table I, ranks followed by a "B", e.g., S1B, indicate that the rank applies only to the status of breeding occurrences. Similarly, ranks followed by an "N", e.g., S4N, refer to nonbreeding status, typically during migration and winter. Elements without this notation are believed to be year-round residents within the state.

Table 1A Definition of Natural Heritage Global Rarity Ranks
These ranks should not be interpreted as legal designations.

Global Rank (G): Based on the range-wide status of a species.

- G1 Critically imperiled globally because of extreme rarity (5 or fewer occurrences, or very few remaining individuals), or because of some factor of its biology making it especially vulnerable to extinction. (Critically endangered throughout its range).
 - G2 Imperiled globally because of rarity (6 to 20 occurrences), or because of other factors demonstrably making it very vulnerable to extinction throughout its range. (Endangered throughout its range).
 - G3 Very rare or local throughout its range or found locally in a restricted range (21 to 100 occurrences). (Threatened throughout its range).
 - G4 Apparently secure globally, though it might be quite rare in parts of its range, especially at the periphery.
 - G5 Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.
 - GX Presumed extinct.
 - G#? Indicates uncertainty about an assigned global rank.
 - GU Unable to assign rank due to lack of available information.
 - GQ Indicates uncertainty about taxonomic status.
 - G#T# Trinomial rank (T) is used for subspecies or varieties. These taxa are ranked on the same criteria as G1-G5.
-

Table 1B Definition of Natural Heritage State Rarity Ranks
 These ranks should not be interpreted as legal designations.

State rank (S): Based on the status of a species in an individual state. S ranks may differ between states based on the relative abundance of a species in each state.

- S1 Critically imperiled in state because of extreme rarity (5 or fewer occurrences, or very few remaining individuals), or because of some factor of its biology making it especially vulnerable to extirpation from the state. (Critically endangered in state).
- S2 Imperiled in state because of rarity (6 to 20 occurrences), or because of other factors demonstrably making it very vulnerable to extirpation from the state. (Endangered or threatened in state).
- S3 Rare in state (21 to 100 occurrences).
- S#B Refers to the breeding season imperilment of elements that are not permanent residents.
- S#N Refers to the non-breeding season imperilment of elements that are not permanent residents. Where no consistent location can be discerned for migrants or non-breeding populations, a rank of SZN is used.
- SZ Migrant whose occurrences are too irregular, transitory, and/or dispersed to be reliably identified, mapped, and protected.
- SH Historically known from the state, but not verified for an extended period, usually > 15 years; this rank is used primarily when inventory has been attempted recently.
- SX Presumed extirpated from state.
- S#? Indicates uncertainty about an assigned state rank.
- SU Unable to assign rarity rank, often because of low search effort or cryptic nature of the element.
- SA Accidental in the state.
- SR Reported to occur in the state, but unverified.
- S? Unranked; some evidence that species may be imperiled, but awaiting formal rarity ranking.

Legal Designations

Natural Heritage rarity ranks should not be interpreted as legal designations. Although most species protected under state or federal endangered species laws are extremely rare, not all rare species receive legal protection. Legal status is designated by either the U.S. Fish and Wildlife Service under the Endangered Species Act or by the Colorado Division of Wildlife under Colorado Statutes 33-2-105 Article 2. In addition, the U.S. Forest Service recognizes some species as "Sensitive," as does the Bureau of Land Management. Table 2 defines the special status assigned by these agencies and provides a key to the abbreviations used by CNHP.

Table 2. Federal and State Agency Special Designations

Federal Status:

1. U.S. Fish and Wildlife Service (58 Federal Register 51147, 1993)

- LE Endangered; taxa formally listed as endangered.
- LT Threatened; taxa formally listed as threatened.
- P Proposed E or T; taxa formally proposed for listing as endangered or threatened.
- C1 Notice of Review, Category 1: taxa for which substantial biological information exists on file to support proposing to list as endangered or threatened.
- C2 Notice of Review, Category 2: taxa for which current information indicates that proposing to list as endangered or threatened is possible, but appropriate or substantial biological information is not on file to support an immediate rulemaking.
- C2* Taxa believed to be possibly extirpated in the wild.
- 3A Taxa for which the USFWS has persuasive evidence of extinction.
- 3B Names that based on current taxonomic knowledge do not represent taxa meeting the Endangered Species Act's definition of a species.
- 3C Notice of Review, Category 3C: taxa that have proven to be more abundant or widespread than was previously believed, and/or those that are not subject to any identifiable threat.

2. U.S. Forest Service (Forest Service Manual 2670.5) (noted by the Forest Service as "S")

- FS: Sensitive: those plant and animal species identified by the Regional Forester for which population viability is a concern as evidenced by:
 - a. Significant current or predicted downward trends in population numbers or density.
 - b. Significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution.

3. Bureau of Land Management (BLM Manual 6840.06D) (noted by BLM as "S")

- BLM: Sensitive: those species found on public lands, designated by a State Director, that could easily become endangered or extinct in a state. The protection provided for sensitive species is the same as that provided for C1 and C2 candidate species.

State Status:

1. Colorado Division of Wildlife

- E Endangered
 - T Threatened
 - SC Special Concern
-

Comments Welcome - Help Needed!

CNHP is responsible for accurate state ranking of species and natural communities in Colorado. In addition, we play an important role as a member of the Natural Heritage Network in determining the global rankings for all elements whose range extends into Colorado. All ranks can change with new information; we depend on experts, agency personnel, naturalists, and others to submit occurrence information on species and natural communities found on this listing, and to otherwise comment on ranks and status. Examples of CNHP Plant and Animal Survey Forms are provided in Appendix 2 .

We may be contacted by mail at the following address:

Colorado Natural Heritage Program
103 Natural Resources Building
Colorado State University
Fort Collins, Colorado 80523

To contact us by phone, area code 970:

Botany :	Susan Spackman	491-2992
Zoology :	Mike Sherman	491-3342
Ecology :	Steve Kettler	491-2998
Chief Scientist:	Chris Pague	491-1309
Info. Management:	Katie Pague	491-2847
Info. Requests:	Lee Grunau	491-2847
Administration:	Elizabeth Powell	491-1309
Facsimile:	Main Office	491-3349
Facsimile:	Admin. Office	491-0279

Thank you for your assistance! We look forward to working with you.

Chapter 2. Rare and Imperiled Vertebrates

Notes:

Seasonal Ranks:

Migratory animals such as birds and bats are highly mobile and often are not year-round residents in Colorado. It is therefore necessary to distinguish between a species' status during different seasons. Such seasonal differences in status are indicated by following the rank with either "B" for breeding season status, or "N" for non-breeding season status.

When an animal is considered to be rare or imperiled during the breeding season (including most migratory birds on this list), only breeding occurrences are actively tracked. In the case of breeding birds, occurrences must include reasonable indications of breeding activity such as pairs, nest building, feeding young, etc.

Subspecies:

In order to simplify the list, subspecies are generally indicated only if more than one subspecies occurs in Colorado, and if at least one of these subspecies is considered rare or imperiled. However, subspecies which receive special designation from government agencies such as USFWS are also indicated.

References:

The scientific and common names used here follow widely accepted standard references for each taxa. However, the taxonomy of most groups is dynamic, and the most recent revisions may not be reflected in the standard sources. In these cases, the most recent references are used. Furthermore, when references specific to Colorado differ from the standard references for taxonomy, the name given in the Colorado reference is listed here.

Amphibians:

Frost, D. R., 1985. *Amphibian Species of the World: A Taxonomic and Geographic Reference*. Allen Press, Inc., and The Associates of Systematics Collections, Lawrence, KS. 732 pp.

Subspecies follow:

Collins, J. T., et al. 1990. *Standard and Current Scientific Names for North American Amphibians and Reptiles*, 3d ed. Society for the Study of Amphibians and Reptiles. Herp. Circ. No. 19. 41 pp.

Birds:

American Ornithologist's Union. 1983. Checklist of North American Birds, 6th ed. Allen Press, Lawrence, Kansas. 877 pp. (and subsequent revisions).

Subspecies follow:

American Ornithologist's Union. 1957. Checklist of North American Birds, 5th ed. Port City Press, Inc., Baltimore, MD.

Fish:

Robins, R. C., et al. 1991. Common and Scientific Names of Fishes from the United States and Canada. 5th ed. American Fisheries Society Special Publication No. 20. 183 pp.

Woodling, John. 1985. Colorado's Little Fish, A Guide to the Minnows and Other Lesser Known Fishes in the State of Colorado. Colorado Division of Wildlife, Denver, CO. 77 pp.

Oncorhynchus subspecies follow:

Smith, G. R. and R. F. Stearley. The Classification and Scientific Names of Rainbow and Cutthroat Trout. Fisheries (Bethesda). 14(1).

Mammals:

Wilson, D. E. and D. M. Reeder, eds. 1993. Mammal Species of the World: A Taxonomic and Geographic Reference. 2nd ed. Smithsonian Institution, Washington, DC. 1206 pp.

Fitzgerald, J. P., C. A. Meaney, and D. M. Armstrong. 1994. Mammals of Colorado. University Press of Colorado, Niwot, Colorado. 467 pp.

Subspecies follow:

Hall, E. R. 1981. The Mammals of the North America, 2nd ed. John Wiley & Sons, New York. 1181 +pp.

Reptiles:

Collins, J. T., et al. 1990. Standard Common and Current Scientific Names for North American Amphibians and Reptiles, 3d ed. Society for the Study of Amphibians and Reptiles. Herp. Circ. No. 19. 41 pp.

RARE AND IMPERILED AMPHIBIANS

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
<i>ACRIS CREPITANS BLANCHARDI</i>	BLANCHARD'S CRICKET FROG	G5T5	S2		SC	
<i>BUFO BOREAS POP 1</i>	BOREAL TOAD (SOUTHERN ROCKY MOUNTAIN POPULATION)	G5T2Q	S1	C1	E	FS
<i>BUFO DEBILIS INSIDIOR</i>	WESTERN GREEN TOAD	G5T5	S1		SC	
<i>BUFO PUNCTATUS*</i>	RED-SPOTTED TOAD*	G5	S3S4		SC	
<i>GASTROPHRYNE OLIVACEA</i>	GREAT PLAINS NARROWMOUTH TOAD	G5	S1		SC	
<i>HYLA ARENICOLOR</i>	CANYON TREEFROG	G5	S2		SC	
<i>RANA PIPIENS*</i>	NORTHERN LEOPARD FROG*	G5	S3S4		SC	FS
<i>RANA SYLVATICA</i>	WOOD FROG	G5	S3		T	FS
<i>SCAPHIOPUS COUCHII</i>	COUCH'S SPADEFOOT	G5	S1		SC	
<i>SCAPHIOPUS INTERMONTANUS</i>	GREAT BASIN SPADEFOOT	G5	S2		SC	
<i>SCAPHIOPUS MULTIPLICATUS*</i>	NEW MEXICO SPADEFOOT*	G5	S3S4		SC	

RARE AND IMPERILED BIRDS

COMMON NAME	SCIENTIFIC NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
AMERICAN BITTERN*	<i>BOTAURUS LENTIGINOSUS *</i>	G4	S3S4B,SZN			FS
AMERICAN PEREGRINE FALCON	<i>FALCO PEREGRINUS ANATUM</i>	G3	S2B,SZN	LE	T	
AMERICAN REDSTART	<i>SETOPHAGA RUTICILLA</i>	G5	S17B,SZN			
AMERICAN WHITE PELICAN	<i>PELECANUS ERYTHORRHYNCHOS</i>	G3	S1B,SZN		SC	
ARCTIC PEREGRINE FALCON	<i>FALCO PEREGRINUS TUNDRIUS</i>	G4T4	S2N		T	
BALD EAGLE	<i>HALIAEETUS LEUCOCEPHALUS</i>	G4	S1B,S3N	LT	T	
BARROW'S GOLDENEYE	<i>BUCEPHALA ISLANDICA</i>	G5	S2B,SZN		SC	
BELL'S VIREO	<i>VIREO BELLII</i>	G5	S2B			
BENDIRE'S THRASHER	<i>TOXOSTOMA BENDIREI</i>	G5	S1B			
BLACK SWIFT	<i>CYPSELOIDES NIGER</i>	G4	S2B			FS
BLACK TERN*	<i>CHLIDONIAS NIGER *</i>	G4	S3S4B,SZN	C2		FS
BLACK-BILLED CUCKOO	<i>COCCYZUS ERYTHROPTALMUS</i>	G5	S2B			
BLACK-CROWNED NIGHT-HERON	<i>NYCTICORAX NYCTICORAX</i>	G5	S3B,SZN			
BLACK-NECKED STILT	<i>HIMANTOPUS MEXICANUS</i>	G5	S3B,SZN			
BLACK-THROATED SPARROW	<i>AMPHISPIZA BILINEATA</i>	G5	S3B,SZN			
BOBOLINK	<i>DOLICHONYX ORYZIVORUS</i>	G5	S3B,SZN			
BOREAL OWL	<i>AEGOLIUS FUNEREUS</i>	G5	S2			FS
BUFFLEHEAD	<i>BUCEPHALA ALBEOLA</i>	G5	S1B,SZN			
BURROWING OWL*	<i>ATHENE CUNICULARIA *</i>	G5	S3S4B	C2		FS
CANVASBACK	<i>AYTHYA VALISINERIA</i>	G5	S2B,SZN			
CAROLINA WREN	<i>THRYOTHORUS LUDOVICIANUS</i>	G5	S1			
CASPIAN TERN	<i>STERNA CASPIA</i>	G5	SUB,SZN			
CASSIN'S KINGBIRD*	<i>TYRANNUS VOCIFERANS*</i>	G5	S3S4B,SZN			
CEDAR WAXWING	<i>BOMBYCILLA CEDRORUM</i>	G5	S3B,S5N			
CHESTNUT-COLLARED LONGSPUR	<i>CALCARIUS ORNATUS</i>	G5	S2B,SZN			
CHESTNUT-SIDED WARBLER	<i>DENDROICA PENNSYLVANICA</i>	G5	S2B,SZN			

RARE AND IMPERILED BIRDS

COMMON NAME	SCIENTIFIC NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
COLUMBIAN SHARP-TAILED GROUSE	<i>TYMPANUCHUS PHASIANELLUS COLUMBIANUS</i>	G4T2	S2	C2		FS
COOPER'S HAWK*	<i>ACCIPITER COOPERII*</i>	G4	S3S4B,S4N			
CURVE-BILLED THRASHER*	<i>TOXOSTOMA CURVIROSTRE*</i>	G5	S3S4			
DICKCISSEL	<i>SPIZA AMERICANA</i>	G5	S3B			
EARED GREBE*	<i>PODICEPS NIGRICOLLIS*</i>	G5	S3S4B,SZN			
EASTERN BLUEBIRD	<i>SIALIA SIALIS</i>	G5	S2B,SZN			
EASTERN MEADOWLARK	<i>STURNELLA MAGNA</i>	G5	S1?B			
EASTERN PHOEBE	<i>SAYORNIS PHOEBE</i>	G5	S3B,SZN			
EASTERN YELLOW-BILLED CUCKOO	<i>COCCYZUS AMERICANUS AMERICANUS</i>	G5TU	S3B			
EVENING GROSBEAK	<i>COCCOTHRAUSTES VESPERTINUS</i>	G5	S2S3B,S5N			
FERRUGINOUS HAWK	<i>BUTEO REGALIS</i>	G4	S3B,S5N	C2	SC	FS
FIELD SPARROW	<i>SPIZELLA PUSILLA</i>	G5	S1B,SZN			
FORSTER'S TERN	<i>STERNA FORSTERI</i>	G5	S2B			
GOLDEN EAGLE*	<i>AQUILA CHRYSAETOS*</i>	G5	S3S4B,S4N			
GRACE'S WARBLER	<i>DENDROICA GRACIAE</i>	G5	S3B			
GRASSHOPPER SPARROW*	<i>AMMODRAMUS SAVANNARUM *</i>	G5	S3S4B,SZN			
GRAY CATBIRD*	<i>DUMETELLA CAROLINENSIS*</i>	G5	S3S4B,SZN			
GRAY VIREO	<i>VIREO VICINIOR</i>	G5	S2B			
GREAT BLUE HERON	<i>ARDEA HERODIAS</i>	G5	S3B,SZN			
GREAT EGRET	<i>CASMERODIUS ALBUS</i>	G5	S1B			
GREATER PRAIRIE-CHICKEN	<i>TYMPANUCHUS CUPIDO PINNATUS</i>	G4TU	S3		T	FS
GREATER SANDHILL CRANE	<i>GRUS CANADENSIS TABIDA</i>	G5T2	S2B,S4N		T	FS
GREEN-BACKED HERON	<i>BUTORIDES STRIATUS</i>	G5	S3B,SZN			
HARLEQUIN DUCK	<i>HISTRIONICUS HISTRIONICUS</i>	G5	SHB,SAN	C2		FS
HEPATIC Tanager	<i>PIRANGA FLAVA</i>	G5	S1B			
HOODED MERGANSER	<i>LOPHODYTES CUCULLATUS</i>	G5	S1B,SZN			
HOODED WARBLER	<i>WILSONIA CITRINA</i>	G5	SUB,SZN			
INDIGO BUNTING*	<i>PASSERINA CYANEA*</i>	G5	S3S4B,SZN			
INTERIOR LEAST TERN	<i>STERNA ANTILLARUM ATHALASSOS</i>	G4T2Q	S1B	LE		

RARE AND IMPERILED BIRDS

COMMON NAME	SCIENTIFIC NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
LADDER-BACKED WOODPECKER	<i>PICOIDES SCALARIS</i>	G5	S3			
LEAST BITTERN	<i>IXOBRYCHUS EXILIS</i>	G5	S2B,SZN			
LEAST FLYCATCHER	<i>EMPIDONAX MINIMUS</i>	G5	S1B,SZN			
LESSER PRAIRIE-CHICKEN	<i>TYMPANUCHUS PALLIDICINCTUS</i>	G3	S2		T	FS
LITTLE BLUE HERON	<i>EGRETTA CAERULEA</i>	G5	S1B,SZN			
LOGGERHEAD SHRIKE	<i>LANIUS LUDOVICIANUS</i>	G4	S3B,SZN			FS
LONG-BILLED CURLEW	<i>NUMENIUS AMERICANUS</i>	G5	S2B,SZN	3C	SC	FS
LONG-EARED OWL*	<i>ASIO OTUS*</i>	G5	S3S4B,SZN			
MARSH WREN	<i>CISTOTHORUS PALUSTRIS</i>	G5	S3B,SZN			
MCCOWN'S LONGSPUR	<i>CALCARIUS MCCOWNII</i>	G5	S1B,SZN			
MERLIN	<i>FALCO COLUMBARIUS</i>	G5	S1B,S4N			FS
MEXICAN SPOTTED OWL	<i>STRIX OCCIDENTALIS LUCIDA</i>	G3T3	S1B	LT	T	
MISSISSIPPI KITE	<i>ICTINIA MISSISSIPPIENSIS</i>	G5	S1B,SZN			
MOUNTAIN PLOVER	<i>CHARADRIUS MONTANUS</i>	G3	S2B,SZN	C2	SC	FS
NORTHERN CARDINAL	<i>CARDINALIS CARDINALIS</i>	G5	S1B,SZN			
NORTHERN GOSHAWK*	<i>ACCIPITER GENTILIS*</i>	G5	S3S4B,S4N	C2		FS
NORTHERN HARRIER*	<i>CIRCUS CYANEUS*</i>	G5	S3S4B,S4N			
OLIVE-SIDED FLYCATCHER*	<i>CONTOPUS BOREALIS*</i>	G5	S3S4B			FS
ORCHARD ORIOLE*	<i>ICTERUS SPURIUS*</i>	G5	S3S4B			
OSPREY	<i>PANDION HALIAETUS</i>	G5	S1B,SZN			FS
OVENBIRD	<i>SEIURUS AUROCAPILLUS</i>	G5	S2B			
PIPING PLOVER	<i>CHARADRIUS MELODUS</i>	G3	S1B,SZN	LT	T	
PLAINS SHARP-TAILED GROUSE	<i>TYMPANUCHUS PHASIANELLUS JAMESI</i>	G5T5	S1		E	
PRAIRIE FALCON*	<i>FALCO MEXICANUS*</i>	G5	S3S4B,S4N			
PURPLE MARTIN	<i>PROGNE SUBIS</i>	G5	S3B			FS
RED-BELLIED WOODPECKER*	<i>MELANERPES CAROLINUS*</i>	G5	S3S4B,SZN			
RED-EYED VIREO	<i>VIREO OLIVACEUS</i>	G5	S3B,SZN			
RED-HEADED WOODPECKER*	<i>MELANERPES ERYTHROCEPHALUS*</i>	G5	S3S4B,SZN			
RING-BILLED GULL	<i>LARUS DELAWARENSIS</i>	G5	SHB,SZN			

RARE AND IMPERILED BIRDS

COMMON NAME	SCIENTIFIC NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
ROSE-BREASTED GROSBEAK	<i>PHEUCTICUS LUDOVICIANUS</i>	G5	S1B			
RUFFED GROUSE	<i>BONASA UMBELLUS</i>	G5	S1?			
RUFIOUS-CROWNED SPARROW	<i>AIMOPHILA RUFICEPS</i>	G5	S2			
SAGE SPARROW	<i>AMPHISPIZA BELLI</i>	G5	S3B,SZN			
SAVANNAH SPARROW*	<i>PASSERCULUS SANDWICHENSIS*</i>	G5	S3S4B,SZN			
SCISSOR-TAILED FLYCATCHER	<i>TYRANNUS FORFICATUS</i>	G5	S1B			
SCOTT'S ORIOLE	<i>ICTERUS PARISORUM</i>	G5	S2B			
SHARP-SHINNED HAWK*	<i>ACCIPITER STRIATUS*</i>	G5	S3S4B,S4N			
SHORT-EARED OWL	<i>ASIO FLAMMEUS</i>	G5	S2B,SZN			
SNOW GOOSE*	<i>CHEN CAERULESCENS*</i>	G5	S3S4N			
SNOWY EGRET	<i>EGRETTA THULA</i>	G5	S2B,SZN			
SORA*	<i>PORZANA CAROLINA*</i>	G5	S3S4B,SZN			
SOUTHWESTERN WILLOW FLYCATCHER	<i>EMPIDONAX TRAILLII EXTIMUS</i>	G5T2	SR	LE		FS
THREE-TOED WOODPECKER*	<i>PICOIDES TRIDACTYLUS*</i>	G5	S3S4			FS
TURKEY VULTURE	<i>CATHARTES AURA</i>	G5	S3B,SZN			
UPLAND SANDPIPER	<i>BARTRAMIA LONGICAUDA</i>	G5	S3B,SZN			FS
VAUX'S SWIFT	<i>CHAETURA VAUXI</i>	G5	SUB			
VEERY*	<i>CATHARUS FUSCESCENS*</i>	G5	S3S4B,SZN			
WESTERN SNOWY PLOVER	<i>CHARADRIUS ALEXANDRINUS NIVOSUS</i>	G4T3	S1B,SZN	3C	SC	FS
WESTERN YELLOW-BILLED CUCKOO	<i>COCCYZUS AMERICANUS OCCIDENTALIS</i>	G5T3	S1B			FS
WHITE-FACED IBIS	<i>PLEGADIS CHIHI</i>	G5	S2B,SZN	C2		FS
WHITE-WINGED CROSSBILL	<i>LOXIA LEUCOPTERA</i>	G5	S1B,SZN			
WHOOPING CRANE	<i>GRUS AMERICANA</i>	G1	SA	LE	E	
WILLET	<i>CATOPTROPHORUS SEMIPALMATUS</i>	G5	S1B,SZN			
YELLOW-CROWNED NIGHT-HERON	<i>NYCTANASSA VIOLACEA</i>	G5	S1B,SZN			

RARE AND IMPERILED FISH

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
<i>CARPIODES CARPIO</i>	RIVER CARPSUCKER	G5	S2			
<i>CATOSTOMUS LATIPINNIS</i> *	FLANNELMOUTH SUCKER*	G3G4	S3S4		SC	
<i>CATOSTOMUS PLATYRHYNCHUS</i> *	MOUNTAIN SUCKER*	G5	S3S4		SC	
<i>CATOSTOMUS PLEBEIUS</i>	RIO GRANDE SUCKER	G4	S1		E	
<i>COTTUS BELDINGI</i>	PAIUTE SCULPIN	G5	S2			
<i>COUESIUS PLUMBEUS</i>	LAKE CHUB	G5	S1			
<i>ETHEOSTOMA CRAGINI</i>	ARKANSAS DARTER	G3	S2	C1	T	FS
<i>ETHEOSTOMA EXILE</i>	IOWA DARTER	G5	S2		SC	
<i>ETHEOSTOMA NIGRUM</i>	JOHNNY DARTER	G5	S3			
<i>ETHEOSTOMA SPECTABILE</i>	PLAINS ORANGETHROAT DARTER	G4?	S2		SC	
<i>FUNDULLUS SCIADICUS</i>	PLAINS TOPMINNOW	G4	S2	C2	SC	FS
<i>GILA CYPHA</i>	HUMPBACK CHUB	G1	S1	LE	E	
<i>GILA ELEGANS</i>	BONYTAIL CHUB	G1	S1	LE	E	
<i>GILA PANDORA</i>	RIO GRANDE CHUB	G3	S1		SC	
<i>GILA ROBUSTA</i>	ROUNDTAIL CHUB	G3	S2	C2	SC	
<i>HYBOGNATHUS HANKINSONI</i>	BRASSY MINNOW	G5	S3			
<i>HYBOGNATHUS PLACITUS</i>	PLAINS MINNOW	G5	SH	C2	SC	
<i>HYBOPSIS GRACILIS</i>	FLATHEAD CHUB	G5	S3			FS
<i>MACRHYBOPSIS AESTIVALIS</i>	SPECKLED CHUB	G5	SX	C2		FS
<i>NOCOMIS BIGUTTATUS</i>	HORNYHEAD CHUB	G5	SX			
<i>NOTROPIS BLENNIUS</i>	RIVER SHINER	G5	S1		SC	
<i>NOTROPIS CORNUTUS</i>	COMMON SHINER	G5	S2		SC	
<i>NOTURUS FLAVUS</i>	STONECAT	G5	S1		SC	
<i>ONCORHYNCHUS CLARKI MACDONALDI</i>	YELLOWFIN CUTTHROAT TROUT	G4TX	SX			
<i>ONCORHYNCHUS CLARKI PLEURITICUS</i>	COLORADO RIVER CUTTHROAT TROUT	G5T2T3	S2	C2	SC	FS
<i>ONCORHYNCHUS CLARKI STOMIAS</i>	GREENBACK CUTTHROAT TROUT	G5T2	S2	LT	T	
<i>ONCORHYNCHUS CLARKI VIRGINALIS</i>	RIO GRANDE CUTTHROAT TROUT	G5T2	S2		SC	FS
<i>PERCINA MACROLEPIDA</i>	BIGSCALE LOGPERCH	G5	S1			
<i>PHENACOBIVUS MIRABILIS</i>	SUCKERMOUTH MINNOW	G5	S3		SC	
<i>PHOXINUS EOS</i>	NORTHERN REDBELLY DACE	G5	S1		SC	

RARE AND IMPERILED FISH

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
<i>PHOXINUS ERYTHROGASTER</i>	SOUTHERN REDBELLY DACE	G5	S1		SC	FS
<i>PTYCHOCHEILUS LUCIUS</i>	COLORADO SQUAWFISH	G1	S1	LE	E	
<i>XYRAUCHEN TEXANUS</i>	RAZORBACK SUCKER	G1	S1	LE	E	

RARE AND IMPERILED MAMMALS

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FEDERAL STATUS	STATE STATUS	FED SENS
<i>AMMOSPERMOPHILUS LEUCURUS CINNAMOMEUS</i>	WHITE-TAILED ANTELOPE SQUIRREL SUBSP.	G5T?	S1S2			
<i>AMMOSPERMOPHILUS LEUCURUS PENNIPES</i>	WHITE-TAILED ANTELOPE SQUIRREL SUBSP.	G5T?	S1S2			
<i>BLARINA HYLOPHAGA</i>	ELLIOT'S SHORT-TAILED SHREW	G5	S1			
<i>CANIS LUPUS</i>	GRAY WOLF	G4	SX	LE	E	
<i>CONEPATUS MESOLEUCUS</i>	HOG-NOSED SKUNK	G5	S1			
<i>DIPODOMYS ORDII EVEXUS</i>	ORD'S KANGAROO RAT SUBSP.	G5T?	S2			
<i>DIPODOMYS ORDII LONGIPES</i>	ORD'S KANGAROO RAT SUBSP.	G5T?	S1			
<i>DIPODOMYS ORDII MONTANUS</i>	ORD'S KANGAROO RAT SUBSP.	G5T?	S3			
<i>DIPODOMYS ORDII NEXILIS</i>	ORD'S KANGAROO RAT SUBSP.	G5T?	S1			
<i>DIPODOMYS ORDII PRISCUS</i>	ORD'S KANGAROO RAT SUBSP.	G5T?	S3			
<i>DIPODOMYS ORDII SANRAFAELI</i>	ORD'S KANGAROO RAT SUBSP.	G5T?	S2			
<i>EUDERMA MACULATUM</i>	SPOTTED BAT	G4	S2	C2		FS
<i>FELIS LYNX CANADENSIS</i>	LYNX	G5	S1	C2	E	FS
<i>GULO GULO</i>	WOLVERINE	G4	S1	C2	E	FS
<i>LAGURUS CURTATUS</i>	SAGEBRUSH VOLE	G5	S2			
<i>LASIURUS BOREALIS</i>	RED BAT	G5	S2B			
<i>LUTRA CANADENSIS *</i>	RIVER OTTER*	G5	S3S4		E	
<i>LUTRA CANADENSIS SONORA</i>	SOUTHWESTERN OTTER	G5T1	SH	C2		
<i>MARMOTA FLAVIVENTRIS NOTIOROS</i>	WET MOUNTAINS MARMOT	G5T2	S2			FS
<i>MARMOTA FLAVIVENTRIS OBSCURA</i>	YELLOW-BELLIED MARMOT SUBSP.	G5T?	S3			
<i>MICROTUS MEXICANUS</i>	MEXICAN VOLE	G5	S1			
<i>MICROTUS PENNSYLVANICUS FINITIS</i>	MEADOW VOLE SUBSP.	G5T?	S1			
<i>MUSTELA NIGRIPES</i>	BLACK-FOOTED FERRET	G1	SH	LE	E	
<i>MYOTIS CALIFORNICUS *</i>	CALIFORNIA MYOTIS*	G5	S3S4			
<i>MYOTIS THYSANODES *</i>	FRINGED MYOTIS*	G5	S3S4	C2		
<i>MYOTIS YUMANENSIS</i>	YUMA MYOTIS	G5	S3	C2		
<i>NEOTOMA ALBIGULA BREVICAUDA</i>	WHITE-THROATED WOODRAT SUBSP.	G5T?	S2			

RARE AND IMPERILED MAMMALS

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FEDERAL STATUS	STATE STATUS	FED SENS
<i>NEOTOMA CINEREA RUPICOLA</i>	BUSHY-TAILED WOODRAT SUBSP.	G5T?	S2			
<i>NEOTOMA FLORIDANA</i> *	EASTERN WOODRAT*	G5	S3S4			
<i>NEOTOMA LEPIDA</i>	DESERT WOODRAT	G5	S1			
<i>NEOTOMA MICROPUS</i>	SOUTHERN PLAINS WOODRAT	G5	S3			
<i>NOTIOSOREX CRAWFORDI</i>	DESERT SHREW	G5	S3?			
<i>NYCTINOMOPS MACROTIS</i>	BIG FREE-TAILED BAT	G5	S1?	C2		
<i>PEROGNATHUS FASCIATUS CALLISTUS</i>	OLIVE-BACKED POCKET MOUSE SUBSP.	G5T?	S1S2			
<i>PEROGNATHUS FLAVESCENS RELICTUS</i>	PLAINS POCKET MOUSE SUBSP.	G5TH	SH			
<i>PEROGNATHUS FLAVUS HOPIENSIS</i>	SILKY POCKET MOUSE SUBSP.	G5T?	S1			
<i>PEROGNATHUS FLAVUS SANLUISI</i>	SILKY POCKET MOUSE SUBSP.	G5T?	S3			
<i>PEROGNATHUS PARVUS</i>	GREAT BASIN POCKET MOUSE	G5	S1			
<i>PEROMYSCUS BOYLII UTAHENSIS</i>	BRUSH MOUSE SUBSP.	G5T?	S2			
<i>PLECOTUS TOWNSENDII PALLESCENS</i>	TOWNSEND'S BIG-EARED BAT SUBSP.	G4T4	S3	C2		
<i>REITHRODONTOMYS MEGALOTIS MEGALOTIS</i>	WESTERN HARVEST MOUSE SUBSP.	G5T?	S1			
<i>REITHRODONTOMYS MONTANUS MONTANUS</i>	PLAINS HARVEST MOUSE SUBSP.	G5TH	SH			
<i>SCALOPUS AQUATICUS</i>	EASTERN MOLE	G5	S3			
<i>SIGMODON HISPIDUS</i>	HISPID COTTON RAT	G5	S3			
<i>SOREX HOYI MONTANUS</i>	PYGMY SHREW	G5T2T3	S1			FS
<i>SOREX MERRIAMI</i>	MERRIAM'S SHREW	G5	S3			
<i>SOREX NANUS</i>	DWARF SHREW	G5	S3			FS
<i>SPERMOPHILUS LATERALIS WORTMANI</i>	GOLDEN-MANTLED GROUND SQUIRREL SUBSP.	G5TU	S1			
<i>SPERMOPHILUS SPILOSOMA CRYPTOSPILOTUS</i>	SPOTTED GROUND SQUIRREL SUBSP.	G5T?	S1			
<i>SPILOGALE PUTORIUS INTERRUPTA</i>	PLAINS SPOTTED SKUNK	G4T?	S2	C2		
<i>TADARIDA BRASILIENSIS</i>	BRAZILIAN FREE-TAILED BAT	G5	S1			
<i>TAMIAS DORSALIS</i>	CLIFF CHIPMUNK	G5	S2			
<i>TAMIAS MINIMUS CARYI</i>	LEAST CHIPMUNK SUBSP.	G5T?	S3			

RARE AND IMPERILED MAMMALS

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FEDERAL STATUS	STATE STATUS	FED SENS
<i>TAXIDEA TAXUS BERLANDIERI</i>	BADGER SUBSP.	G5T?	S 1			
<i>THOMOMYS BOTTAE HOWELLI</i>	BOTTA'S POCKET GOPHER SUBSP.	G5T?	S 1			
<i>THOMOMYS BOTTAE PERVAGUS</i>	BOTTA'S POCKET GOPHER SUBSP.	G5T3	S2			
<i>THOMOMYS BOTTAE RUBIDUS</i>	BOTTA'S POCKET GOPHER SUBSP.	G5T?	S 1			
<i>THOMOMYS TALPOIDES AGRESTIS</i>	PLAINS POCKET GOPHER SUBSP.	G5T?	S3			
<i>THOMOMYS TALPOIDES MACROTIS</i>	PLAINS POCKET GOPHER SUBSP.	G5T?	S 1			
<i>URSUS ARCTOS</i>	GRIZZLY BEAR	G4	SX	LT	E	
<i>VULPES MACROTIS</i>	KIT FOX	G5	S 1?		SC	
<i>VULPES VELOX</i>	SWIFT FOX	G3	S3?	C2		FS
<i>ZAPUS HUDSONIUS PREBLEI</i>	PREBLE'S MEADOW JUMPING MOUSE	G5T2	S 1 S2	C2	SC	FS

RARE AND IMPERILED REPTILES

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	USFS SENS
<i>ARIZONA ELEGANS</i> *	GLOSSY SNAKE*	G5	S3S4			
<i>COLUBER CONSTRICTOR MORMON</i>	WESTERN YELLOWBELLY RACER	G5T5	S2S3			
<i>DIADOPHIS PUNCTATUS</i>	RINGNECK SNAKE	G5	S2			
<i>ELAPHE GUTTATA</i> *	CORN SNAKE*	G5	S3S4			
<i>ELUMECES MULTIVIRGATUS GAIGEAEE</i> *	VARIABLE SKINK*	G5T4	S3S4			
<i>GAMBELIA WISLIZENII</i>	LONGNOSE LEOPARD LIZARD	G5	S2			
<i>KINOSTERNON FLAVESCENS</i>	YELLOW MUD TURTLE	G5	S1			FS
<i>LAMPROPELTIS GETULA</i>	COMMON KINGSSNAKE	G5	S1			
<i>LAMPROPELTIS TRIANGULUM TAYLORI</i>	UTAH MILK SNAKE	G5T4	S2			
<i>LEPTOTYPHLOPS DULCIS</i>	TEXAS BLIND SNAKE	G5	SH			FS
<i>OPHEODRYS VERNALIS</i> *	SMOOTH GREEN SNAKE*	G5	S3S4			
<i>PHRYNOSOMA CORNUTUM</i>	TEXAS HORNED LIZARD	G5	S2	C2		FS
<i>RHINOCHAILUS LECONTEI</i>	LONGNOSE SNAKE	G5	S1			
<i>SCELOPORUS MAGISTER</i>	DESERT SPINY LIZARD	G5	S2			
<i>SCELOPORUS UNDULATUS TRISTICHUS</i>	SOUTHERN PLATEAU LIZARD	G5T5	S2			
<i>SISTRURUS CATENATUS</i>	MASSASAUGA	G4	S3			
<i>SONORA SEMIANNULATA</i>	GROUND SNAKE	G5	S2			
<i>TANTILLA HOBARTSMITHI</i>	SOUTHWESTERN BLACKHEAD SNAKE	G5	S1			
<i>THAMNOPHIS PROXIMUS</i>	WESTERN RIBBON SNAKE	G5	SH			
<i>TROPIDOCOLONION LINEATUM</i>	LINED SNAKE	G5	S3			FS

Chapter 3. Rare and Imperiled Invertebrates

Notes:

Subspecies:

In order to simplify the list, subspecies are generally indicated only if more than one subspecies occurs in Colorado, and if at least one of these subspecies is considered rare or imperiled. However, subspecies which receive special designation from government agencies such as USFWS are also indicated.

References:

Tiger Beetles (Family Cicindelidae):

Boyd, H. P. and Associates. 1982. Checklist of Cicindelidae, the Tiger Beetles. Plexus Publishing, Marlton, NJ. 31 pp.

Rumpp, N. L. 1986. Two new tiger beetles of the genus *Cicindela* from the western United States (Cicindelidae: Coleoptera). Bull. S. California Acad. Sci. vol. 85, pp. 139-151.
[*Cicindela scutellaris yampae*]

Butterflies and Moths (Order Lepidoptera):

Miller, J. Y. 1992. The Common Names of North American Butterflies. Smithsonian Institution Press, Washington, DC. 177 pp.

Hodges, R. W. et al. 1983. Checklist of the Lepidoptera of America North of Mexico. E. W. Classey Ltd. and the Wedge Entomological Research Foundation, Washington, DC. 284 pp.

Dragonflies and Damselflies (Order Odonata):

Dunkle, S. W. and D. R. Paulson. 1989. Draft List of Odonata. (from an upcoming Special Publication by AFS: Common and Scientific Names of Aquatic Insects from America North of Mexico (in prep.) American Fisheries Society Spec. Publ.)

Ants (Order Hymenoptera):

Gregg, R. F. 1963. The Ants of Colorado with Reference to their Ecology, Taxonomy, and Geographic Distribution. University of Colorado Press, Boulder, Colorado.

Mollusks:

Turgeon, D. D., et al. 1988. Common and Scientific Names of Aquatic Invertebrates from the United States and Canada: Mollusks. American Fisheries Society Spec. Publ. No. 16. 277 pp.

Wu, Shi-Kuei. 1989. Colorado Freshwater Mollusks. University of Colorado Museum. 117 pp.

Crayfish (Order Decapoda):

Bobbs, Norton H. Jr. 1989. An Illustrated Checklist of the American Crayfishes (Decapoda: Astacidae, Cambaridae, & Parastacidae). Smithsonian Contributions to Zoology 480. Smithsonian Institution Press, Washington, DC. 236 pp.

RARE AND IMPERILED INVERTEBRATES (INSECTS)

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
ORDER: COLEOPTERA						
<i>CICINDELA CIRCUMPICTA JOHNSONII</i>	A TIGER BEETLE	G5T5	S3			
<i>CICINDELA DECEMNOTATA</i>	A TIGER BEETLE	G4	S1?			
<i>CICINDELA DUODECIMGUTTATA</i>	A TIGER BEETLE	G5	S3?			
<i>CICINDELA FORMOSA GIBSONI</i>	A TIGER BEETLE	G5T5	S1			
<i>CICINDELA HIRTICOLLIS CORPUSCULA</i>	A TIGER BEETLE	G5T2T3	SU			
<i>CICINDELA LENGI VERSUTA</i>	A TIGER BEETLE	G5T5	S2?			
<i>CICINDELA LEPIDA</i>	LITTLE WHITE TIGER BEETLE	G4	S3			
<i>CICINDELA LIMBATA LIMBATA</i>	A TIGER BEETLE	G5T5	S2			
<i>CICINDELA MACRA MACRA</i>	A TIGER BEETLE	G5T5	S1?			
<i>CICINDELA MARUTHA</i>	A TIGER BEETLE	G5	S3?			
<i>CICINDELA NEBRASKANA</i>	A TIGER BEETLE	G5	S1?			
<i>CICINDELA NIGROCOERULEA BOWDITCHI</i>	A TIGER BEETLE	G5T4	S3			
<i>CICINDELA OBSOLETA SANTAFLARAE</i>	A TIGER BEETLE	G5T5	S1?			
<i>CICINDELA SCUTELLARIS YAMPAE</i>	A TIGER BEETLE	G5T1	S1			
<i>CICINDELA SPLENDIDA SPLENDIDA</i>	A TIGER BEETLE	G5T5	S1?			
<i>CICINDELA THEATINA</i>	SAN LUIS DUNES TIGER BEETLE	G1	S1			
<i>CICINDELA TOGATA GLOBICOLLIS</i>	A TIGER BEETLE	G5T5	S2?			
ORDER: HYMENOPTERA						
<i>APHAENOGASTER HUACHUCANA</i>	AN ANT	G2?	S?			
<i>FORMICA LAEVICEPS</i>	AN ANT	G3	S2			
<i>LEPTOTHORAX FURUNCULUS</i>	AN ANT	GU	S1			
<i>LEPTOTHORAX OBLIQUICANTHUS</i>	AN ANT	GU	S1			
<i>STIGMATOMMA PALLIPES</i>	AN ANT	G5	S1			
<i>SYMPHEIDOLE ELECEBRA</i>	AN ANT	G1?	S1			

RARE AND IMPERILED INVERTEBRATES (INSECTS)

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
ORDER: LEPIDOPTERA						
<i>ACRONICTA ALBARUFA</i>	BARRENS DAGGERMOTH	G3G4	SH	C2		FS
<i>ADELPHA BREDOWII</i>	SISTER	G5	S3			
<i>AGAPEMA HOMOGENA</i>	A GIANT SILK WORM MOTH	G?	S2			
<i>AMBLYSCIRTES EOS</i>	EOS ROADSIDE SKIPPER	G4	S3			
<i>AMBLYSCIRTES NYSA</i>	NYSA ROADSIDE SKIPPER	G4G5	S1			
<i>AMBLYSCIRTES SIMIUS</i>	SIMIUS ROADSIDE SKIPPER	G?	S3			
<i>AMPHION FLORIDENSIS</i>	NESSUS SPHINX MOTH	G5	S3			
<i>ANCYLOXYPHA NUMITOR</i>	LEAST SKIPPERLING	G5	S1S2			
<i>ATLIDES HALEBUS</i>	GREAT PURPLE HAIRSTREAK	G5	S2			
<i>ATRYTONE AROGOS</i>	AROGOS SKIPPER	G4	S2			
<i>ATRYTONOPSIS HIANNA</i>	DUSTED SKIPPER	G4	S2			
<i>AUTOMERIS IO</i> *	IO MOTH*	G5	S3S4			
<i>BOLORIA ACROCHEMA</i>	UNCOMPANIED FRITILLARY	G1	S1	LE		
<i>BOLORIA CHARICLEA</i>	ARCTIC FRITILLARY	G5	S1			
<i>BOLORIA SELENE SABULOCOLLIS</i>	SANDHILL FRITILLARY	G5T2	S1S2			
<i>CALLOPHRYS AFFINIS</i> *	GREEN-WINGED HAIRSTREAK*	G4	S3S4			
<i>CALLOPHRYS COMSTOCKI</i>	COMSTOCK'S HAIRSTREAK	G3	S1			
<i>CELASTRINA NEGLECTAMAJOR</i>	APPALACHIAN BLUE	G4	S1?			
<i>CERATOMIA AMYNTOR</i> *	ELM SPHINX MOTH*	G4G5	S3S4			
<i>CERATOMIA UNDULOSA</i>	WAVED SPHINX MOTH	G3	S3			
<i>CERCYONIS MEADII ALAMOSA</i>	ALAMOSA SATYR BUTTERFLY	G5T4?	S2	3C		
<i>CHLOSYPNE NEUMOEGENI</i>	NEUMOEGEN'S CHECKER-SPOT	G3G4	S1			
<i>COLORADIA DORIS</i> *	A BUCKMOTH*	G?	S3S4			
<i>COLORADIA LUSKI</i>	A BUCKMOTH	G?	S1?			
<i>COPAEODES AURANTIACUS</i>	ORANGE SKIPPERLING	G5	S?			
<i>DECODES STEVENSI</i>	STEVEN'S TORTRICID MOTH	G?	S1	C2		FS
<i>DOA AMPLA</i>	A MOTH	G?	S1			
<i>EREBIA THEANO</i>	THEANO ALPINE	G4	S3			
<i>ERYNNIS BAPTISIAE</i>	WILD INDIGO DUSKY WING	G5	S1			

RARE AND IMPERILED INVERTEBRATES (INSECTS)

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
<i>ERYNNIS MARTIALIS</i>	MOTTLED DUSKY WING	G4	S2S3			
<i>ETHMIA MONACHELLA</i>	LOST ETHMIID MOTH	GH	SH	C2		FS
<i>EUMORPHA ACHEMON</i> *	ACHEMON SPHINX MOTH*	G?	S3S4			
<i>EUPHILOTES RITA COLORADENSIS</i>	COLORADO BLUE	G4T4?	S2S3			
<i>EUPHILOTES RITA EMMELI</i>	DESERT BUCKWHEAT BLUE	G4T2	S1			
<i>EUPHILOTES SPALDINGI</i>	SPALDING'S BLUE	G3G4	S2S3?			
<i>EUPHYES BIMACULA</i>	TWO-SPOTTED SKIPPER	G4	S1			
<i>EUPROSERPINUS WIESTI</i>	WIEST'S SPHINX MOTH	G3G4	S1?	3C		
<i>EURYSTRYMON FAVONIUS ONTARIO</i>	NORTHERN HAIRSTREAK	G4T4	S1			
<i>GRAMMIA SP. 1</i>	A TIGER MOTH	G?	S?			
<i>HEMILEUCA DIANA</i>	A BUCKMOTH	G?	S2			
<i>HEMILEUCA EGLANTERINA</i> *	A BUCKMOTH*	G?	S3S4			
<i>HEMILEUCA HERA</i> *	A BUCKMOTH*	G?	S3S4			
<i>HEMILEUCA MAGNIFICA</i>	A BUCKMOTH	G3	S1			
<i>HEMILEUCA OLIVIAE</i>	A BUCKMOTH	G?	S1			
<i>HESPERIA LEONARDUS MONTANA</i>	PAWNEE MONTANE SKIPPER	G4T1	S1	LT		
<i>HESPERIA OTTOE</i>	OTTOE SKIPPER	G3?	S2			
<i>HESPEROPSIS LIBYA</i>	MOHAVE SOOTY-WING	G5	S2			
<i>HYALOPHORA CECROPIA</i> *	CECROPIA MOTH*	G5	S3S4			
<i>HYLES GALLII</i>	GALIUM SPHINX MOTH	G?	S3?			
<i>INCISALIA FOTIS</i>	EARLY ELFIN	G3	S2S3?			
<i>INCISALIA MOSSI</i>	MOSS'S ELFIN	G4	S2S3			
<i>LYCAEIDES IDAS</i>	NORTHERN BLUE	G5	S2S3			
<i>LYCAENA EDITHA</i>	EDITH'S COPPER	G5	S2S3			
<i>LYCAENA PHLAEAS</i>	AMERICAN COPPER	G5	SH			
<i>MANDUCA QUINQUEMACULATA</i> *	FIVE-SPOTTED HAWK MOTH*	G?	S3S4			
<i>MANDUCA SEXTA</i>	CAROLINA SPHINX MOTH	G5	S3?			
<i>MEGISTO CYMELA</i>	LITTLE WOOD SATYR	G5Q	S1			
<i>NYMPHALIS CALIFORNICA</i> *	CALIFORNIA TORTOISE SHELL*	G5	S3S4			
<i>OARISMA EDWARDSII</i>	EDWARD'S SKIPPERLING	G4	S3			

RARE AND IMPERILED INVERTEBRATES (INSECTS)

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
<i>OCHLODES YUMA</i>	YUMA SKIPPER	G5	S2S3?			
<i>OENEIS ALBERTA</i>	ALBERTA ARCTIC	G5	S3			
<i>OENEIS JUTTA REDUCTA</i>	ROCKY MOUNTAIN ARCTIC JUTTA	G5TU	S1			
<i>OENEIS POLIXENES</i>	POLIXENES ARCTIC	G5	S3			
<i>OENEIS TAYGETE</i>	WHITE-WEINED ARCTIC	G5?	S3			
<i>PACHYSPHINX MODESTA</i>	MODEST SPHINX MOTH	G?	S3?			
<i>PAPILIO BAIRDII</i> *	BAIRD'S SWALLOWTAIL*	G4	S3S4			
<i>PAPILIO GLAUCUS</i>	EASTERN TIGER SWALLOWTAIL	G5	S3			
<i>PAPILIO INDRA MINORI</i>	SHORT-TAILED BLACK SWALLOWTAIL	G5TU	S1S2			
<i>PAPILIO ZELICAON NITRA</i> *	NITRA SWALLOWTAIL*	G5T5	S3S4			
<i>PARATRYTONE SNOWI</i>	SNOW'S SKIPPER	G3G4	S3			
<i>PHAEOSTRYMON ALCESTIS</i>	SOAPBERRY HAIRSTREAK	G4	S2?			
<i>PHOLISORA MEXICANA</i>	MEXICAN SOOTY WING	GU	S2			
<i>PHRAGMATOBIA ASSIMILANS</i>	LARGE RUBY TIGER MOTH	G5	S?			
<i>PHYCIODES BATESII</i>	TAWNY CRESCENT	G3G4	SU	C2		FS
<i>PHYCIODES MYLITTA</i>	MYLITTA CRESCENTSPOT	G5	S2S3			
<i>POANES HOBOMOK WETONA</i>	HOBOMOK SKIPPER	G5T3?	S2			
<i>POLITES MYSTIC</i> *	LONG DASH*	G5	S3S4			
<i>POLITES ORIGENES</i> *	CROSS-LINE SKIPPER*	G5	S3S4			
<i>PROSERPINUS JUANITA</i> *	A SPHINX MOTH*	G?	S3S4			
<i>PYRGUS RURALIS</i>	TWO-BANDED SKIPPER	G4	S3			
<i>PYRGUS XANTHUS</i>	XANTHUS SKIPPER	G3G4	S3			
<i>SAGENOSOMA ELSA</i>	A SPHINX MOTH	G?	S1?			
<i>SANDIA MACFARLANDI</i>	SANDIA HAIRSTREAK	G4	S1			
<i>SATYRIUM FULIGINOSUM</i>	SOOTY GOSSAMER WING	G4	S3			
<i>SATYRODES EURYDICE FUMOSA</i>	SMOKY EYED BROWN BUTTERFLY	G5T3T4	S1	3C		
<i>SMERINTHUS SALICETI</i>	A SPHINX MOTH	G?	S1			
<i>SPEYERIA CYBELE CYBELE</i>	GREAT SPANGLED FRILLARY	G5T5	S1			
<i>SPEYERIA EGLEIS</i>	EGLEIS FRILLARY	G5	S2			

RARE AND IMPERILED INVERTEBRATES (INSECTS)

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
<i>SPEYERIA HYDASPE</i>	HYDASPE FRITILLARY	G5	S2			
<i>SPEYERIA IDALIA</i>	REGAL FRITILLARY	G3	S1	C2		FS
<i>SPEYERIA NOKOMIS NOKOMIS</i>	GREAT BASIN SILVERSPOT BUTTERFLY	G4T2	S1	C2		
<i>SPHINX DOLLII</i>	A SPHINX MOTH	G?	S2?			
<i>SPHINX DRUPIFERARUM</i>	WILD CHERRY SPHINX MOTH	G4	S2			
<i>SPHINX PERELEGANS</i>	A SPHINX MOTH	G?	S1?			
<i>SPHINX SEPARATA</i>	A SPHINX MOTH	G?	S1?			
<i>STINGA MORRISONI *</i>	MORRISON'S SKIPPER*	G?	S3S4			
<i>YVRETTA RHESUS</i>	RHESUS SKIPPER	G4	S2S3			
<i>ZESTUSA DORUS</i>	SHORT-TAILED ARIZONA SKIPPER	G4	S1			
ORDER: ODONATA						
<i>AESHNA CALIFORNICA</i>	CALIFORNIA DARNER	G5	SU			
<i>AESHNA CONSTRICTA</i>	LANCE-TAILED DARNER	G5	S1?			
<i>AESHNA EREMITA</i>	LAKE DARNER	G5	S1?			
<i>AESHNA JUNCEA</i>	SEDGE DARNER	G5	S3?			
<i>AESHNA PERSEPHONE</i>	PERSEPHONE'S DARNER	G3	SU			
<i>AESHNA VERTICALIS</i>	GREEN-STRIPED DARNER	G5	SU			
<i>ANOMALAGRION HASTATUM</i>	CITRINE FORKTAIL	G5	S1			
<i>ARCHILESTES GRANDIS</i>	GREAT SPREADWING	G5	S3			
<i>ARGIA ALBERTA</i>	PAIUTE DANCER	G5	S2?			
<i>ARGIA APICALIS</i>	BLUE-FRONTED DANCER	G5	S3?			
<i>ARGIA FUMIPENNIS VIOLACEA</i>	A DAMSELFLY	G5T5	S2?			
<i>ARGIA LUGENS</i>	SOOTY DANCER	G5	S1?			
<i>ARGIA NAHUANA</i>	AZTEC DANCER	G5	S2?			
<i>ARGIA FLANA</i>	HIGHLAND DANCER	G5	S1?			
<i>ARGIA SEDULA</i>	BLUE-RINGED DANCER	G5	S2			
<i>CALOPTERYX AEQUABILIS</i>	RIVER JEWELWING	G5	SH			
<i>CALOPTERYX MACULATA</i>	EBONY JEWELWING	G5	S1			
<i>CELITHEMIS EPONINA</i>	HALLOWEEN PENNANT	G5	SU			
<i>CORDULEGASTER DORSALIS</i>	PACIFIC SPIKETAIL	G5	S1			

RARE AND IMPERILED INVERTEBRATES (INSECTS)

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
<i>CORDULIA SHURTLEFFI</i>	AMERICAN EMERALD	G5	S1?			
<i>ENALLAGMA ANNA</i>	RIVER BLUET	G5	S2?			
<i>ENALLAGMA ANTENNATUM</i>	RAINBOW BLUET	G5	S2?			
<i>ENALLAGMA BASIDENS</i>	DOUBLE-STRIPED BLUET	G5	S1			
<i>ENALLAGMA VESPERUM</i>	VESPER BLUET	G5	S1			
<i>ERPETO GOMPHUS DESIGNATUS</i>	EASTERN RINGTAIL	G5	S2			
<i>GOMPHUS EXTERNUS</i>	PLAINS CLUBTAIL	G5	S2			
<i>GOMPHUS GRASLINELLUS</i>	PRONGHORN CLUBTAIL	G5	SU			
<i>GOMPHUS INTRICATUS</i>	BRIMSTONE CLUBTAIL	G4	S2			
<i>GOMPHUS MILITARIS</i>	FLAME-TIPPED CLUBTAIL	G5	S2			
<i>HESPERAGRION HETERO DOXUM</i>	PAINTED DAMSEL	G5	S1			
<i>ISCHNURA BARBERI</i>	DESERT FORKTAIL	G4	SU			
<i>ISCHNURA DEMORSA</i>	MEXICAN FORKTAIL	G5	S2?			
<i>ISCHNURA DENTICOLLIS</i>	BLACK-FRONTED FORKTAIL	G5	SU			
<i>LESTES FORCIPATUS</i>	SWEETFLAG SPREADWING	G5	S1			
<i>LESTES RECTANGULARIS</i>	SLENDER SPREADWING	G5	S2			
<i>LIBELLULA COMPOSITA</i>	BLEACHED SKIMMER	G3	SU			
<i>LIBELLULA NODISTICTA</i>	HOARY SKIMMER	G3	S1			
<i>LIBELLULA SATURATA</i>	FIRECRACKER SKIMMER	G5	S1			
<i>LIBELLULA SEMIFASCIATA</i>	PAINTED SKIMMER	G5	SU			
<i>PACHYDIPLAX LONGIPENNIS *</i>	BLUE DASHER*	G5	S3S4			
<i>PERITHEMIS TENERA</i>	EASTERN AMBERWING	G5	S1?			
<i>PROGOMPHUS OBSCURUS</i>	COMMON SANDDRAGON	G5	S1S2			
<i>SOMATOCHLORA ENSIGERA</i>	LEMON-FACED EMERALD	G4	S1			
<i>SOMATOCHLORA HUDSONICA</i>	HUDSONIAN EMERALD	G5	S2S3			
<i>SOMATOCHLORA MINOR</i>	OCELLATED EMERALD	G5	S1			
<i>SYMPETRUM COSTIFERUM</i>	SAFFRON-BORDERED MEADOWFLY	G5	S1?			
<i>SYMPETRUM MADIDUM</i>	RED-VEINED MEADOWFLY	G4	S1			
<i>SYMPETRUM SEMICINCTUM</i>	BAND-WINGED MEADOWFLY	G5	SU			
<i>SYMPETRUM VICINUM</i>	YELLOW-LEGGED MEADOWFLY	G5	S?			

RARE AND IMPERILED INVERTEBRATES (INSECTS)

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
<i>TETRAGONEURA PETECHIALIS</i>	STRIPE-WINGED BASKETTAIL	G4	S2			

RARE AND IMPERILED INVERTEBRATES (NON-INSECTS)

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
ORDER: DECAPODA						
<i>ORCONECTES NEGLECTUS</i>	A CRAYFISH	G4	S2			
ORDER: GASTROPODA						
<i>FERRISSIA FRAGILIS</i>	FRAGILE ANCYLID	G?	SH			
<i>FERRISSIA WALKERI</i>	CLOCHE ANCYLID	G?	S3			
<i>LYMNAEA STAGNALIS</i>	SWAMPY LYMNAEA	G5	S2			
<i>PHYSA CUPREONITENS</i>	HOT SPRINGS PHYSA	G?	S2			
<i>PHYSA SKINNERI</i>	GLASS PHYSA	G?	S2			
<i>PHYSA UTAHENSIS</i>	BANDED PHYSA	G?	S1	C2		
<i>PROMENETUS EXACUOUS</i>	SHARP SPRITE	G?	S2			
<i>PROMENETUS UMBILICATELLUS</i>	UMBILICATE SPRITE	G?	S3			
<i>VALVATA SINCERA</i>	MOSSY VALVATA	G?	S3			
ORDER: PULMONATA						
<i>ACROLOXUS COLORADENSIS</i>	ROCKY MOUNTAIN CAPSHELL	G?	S2	C2	SC	FS
ORDER: UNIONOIDA						
<i>ANODONTA GRANDIS</i>	GIANT FLOATER	G5	S1			
<i>ANODONTOIDES FERUSSACIANUS</i>	CYLINDRICAL PAPERSHELL	G5	S2			
<i>UNIOMERUS TETRALASMUS</i>	PONDHORN	G4	S1			

Chapter 4. Rare and Imperiled Plants

Notes:

Nomenclature follows Weber and Wittmann (1992) and Kartesz (1994). Where the nomenclature of these references do not overlap, both names are provided.

Please see Appendix I for a cross-reference between Weber plant names and Kartesz plant names.

Name References:

Weber, W.A. and R.C. Wittmann. 1992. *Catalog of the Colorado Flora*. University of Colorado Press, Niwot, Colorado. 215 pp.

Kartesz, J.T. 1994. *A Synonymized Checklist of the Vascular Flora of the United States, Canada, and Greenland*. Second edition. Timber Press, Inc., Portland, Oregon. Volume 1: 622 pp., Volume 2: 816 pp.

RARE AND IMPERILED PLANTS

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
<i>ABUTILON INCANUM</i>	HOARY MALLOW	G5	S1			
<i>ACER GRANDIDENTATUM</i>	BIGTOOTH MAPLE	G4	S1			
<i>ACORUS CALAMUS</i>	SWEET FLAG	G5	S1			
<i>ADIANTUM ALEUTICUM</i>	ALEUTIAN MAIDENHAIR FERN	G5?	S1			
<i>ADIANTUM CAPILLUS-VENERIS</i>	SOUTHERN MAIDEN-HAIR	G5	S2			
<i>AGASTACHE FOENICULUM</i>	LAVENDER HYSOP	G4G5	S1			
<i>ALETES HUMILIS</i>	LARIMER ALETES	G2G3	S2S3	C2		FS
<i>ALETES MACDOUGALII SSP BREVIRADIATUS</i>	MESA VERDE ALETES	G3G4TQ	S1			
<i>ALETES SESSILIFLORUS</i>	NEW MEXICO FALSE CARROT	G3?	SU			
<i>ALLIUM NEVADENSE</i>	NEVADA ONION	G4	S1			
<i>ALLIUM SCHOENOPRASUM</i>	WILD CHIVES	G5	S1			
<i>AMBROSIA LINEARIS</i>	PLAINS RAGWEED	G2	S2	C2		FS
<i>AMORPHA NANA</i>	DWARF WILD INDIGO	G5	S2S3			
<i>AMSONIA JONESII</i>	JONES BLUE STAR	G4	S1			
<i>ANAGALLIS MINIMA</i>	CHAFFWEED	G5	S1			
<i>ANEMONE VIRGINIANA VAR RIPARIA =ANEMONE RIPARIA</i>	WHITE-FLOWERED ANEMONE	G5T4T5	SH			
<i>APIOS AMERICANA</i>	AMERICAN GROUNDNUT	G5	S2			
<i>AQUILEGIA CHRYSANTHA VAR RYDBERGII</i>	GOLDEN COLUMBINE	G4T3	SH	3C		
<i>AQUILEGIA MICRANTHA VAR MANCOSANA</i>	MANCOS COLUMBINE	G5TXO	SH	3B		
<i>AQUILEGIA SAXIMONTANA</i>	ROCKY MOUNTAIN COLUMBINE	G3	S3	3C		
<i>ARABIDOPSIS SALSUGINEA =THELLUNGIELLA SALSUGINEA</i>	SALT-LICK MUSTARD	GU	S1			
<i>ARABIS FENDLERI VAR SPATIFOLIA</i>	A FENDLER ROCK-CRESS	G5T3	S1			
<i>ARABIS FERNALDIANA VAR FERNALDIANA =BOECHERA FERNALDIANA</i>	PARK ROCKCRESS	G3G4T3	S2	C2		
<i>ARALIA RACEMOSA</i>	AMERICAN SPIKENARD	G5	S1			
<i>ARISTIDA BASIRAMEA</i>	FORKTIP THREE-AWN	G5	S1			

RARE AND IMPERILED PLANTS

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
<i>ARMERIA MARITIMA</i> SSP <i>SIBIRICA</i> = <i>ARMERIA SCABRA</i> SSP <i>SIBIRICA</i>	SEA PINK	G5T5	S1			FS
<i>ARNICA ANGUSTIFOLIA</i> SSP <i>TOMENTOSA</i> = <i>ARNICA</i> <i>ALPINA</i> VAR <i>TOMENTOSA</i>	ALPINE ARNICA	G5T5	S1			
<i>ARTEMISIA PYGMAEA</i> = <i>SERIPHIDIUM PYGMAEUM</i>	PIGMY SAGEBRUSH	G4	S1			
<i>ASCLEPIAS INVOLUCRATA</i>	DWARF MILKWEED	G5	S1			
<i>ASCLEPIAS MACROTIS</i>		G4	S2			
<i>ASCLEPIAS OENOTHEROIDES</i>		G4G5	S1			
<i>ASCLEPIAS UNCIALIS</i>	DWARF MILKWEED	G1G2	S1	C2		FS
<i>ASPLENIUM</i> <i>ADIANTUM-NIGRUM</i>	BLACK SPLEENWORT	G5	S1			
<i>ASPLENIUM PLATYNEURON</i>	EBONY SPLEENWORT	G5	S1			
<i>ASPLENIUM RESILIENS</i>	BLACK-STEMMED SPLEENWORT	G5	S1			
<i>ASPLENIUM</i> <i>SEPTENTRIONALE</i> *	GRASS-FERN*	G3G4	S3S4			
<i>ASPLENIUM</i> <i>TRICHOMANES-RAMOSUM</i>	GREEN SPLEENWORT	G4	S1S2			
<i>ASTER ALPINUS</i> VAR <i>VIERHAPPERI</i>	ALPINE ASTER	GUTU	S1			
<i>ASTER PERELEGANS</i> = <i>EUCEPHALUS</i> <i>PERELEGANS</i>	NUTTALL ASTER	G5	S1			
<i>ASTRAGALUS ANISUS</i>	GUNNISON MILKVETCH	G3	S2	C2		FS
<i>ASTRAGALUS ARETIOIDES</i> = <i>OROPHACA ARETIOIDES</i>	CUSHION OROPHACA	G4	S1			BLM
<i>ASTRAGALUS ARGOPHYLLUS</i> VAR <i>MARTINII</i>	MEADOW MILKVETCH	G5T4	S2			
<i>ASTRAGALUS BODINII</i>	BODIN MILKVETCH	G4	S2			
<i>ASTRAGALUS BRANDEGEI</i>	BRANDEGEE MILKVETCH	G5	S1S2	C2		BLM
<i>ASTRAGALUS CIBARIUS</i>	BROWSE MILKVETCH	G4	S1			
<i>ASTRAGALUS CRONQUISTII</i>	CRONQUIST MILKVETCH	G2	S2	C2		
<i>ASTRAGALUS DEBEQUAEUS</i>	DEBEQUE MILKVETCH	G2	S2	C2		
<i>ASTRAGALUS DETERIOR</i>	CLIFF-PALACE MILKVETCH	G2	S2	C2		
<i>ASTRAGALUS DETRITALIS</i>	DEBRIS MILKVETCH	G3	S2			BLM

RARE AND IMPERILED PLANTS

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
<i>ASTRAGALUS DUCHESNENSIS</i>	DUCHESNE MILKVETCH	G3	S1S2			
<i>ASTRAGALUS GILVIFLORUS</i> = <i>OROPHACA TRIPHYLLIA</i>	PLAINS MILKVETCH	G5	S1			
<i>ASTRAGALUS HAMILTONII</i> = <i>ASTRAGALUS LONCHOCARPUS</i> VAR <i>HAMILTONII</i>	HAMILTON MILKVETCH	G1	S1	C2		
<i>ASTRAGALUS HUMILLIMUS</i>	MANCOS MILKVETCH	G1	S1	LE		
<i>ASTRAGALUS HYALINUS</i> = <i>OROPHACA HYALINA</i>	SUMMER OROPHACA	G4	S1?			
<i>ASTRAGALUS JEJUNUS</i>	STARVLING MILKVETCH	G3	S1			BLM
<i>ASTRAGALUS LENTIGINOSUS</i> VAR <i>CHARTACEUS</i>	SAN PITCH VALLEY MILK-VETCH	G5T4	S1	3C		
<i>ASTRAGALUS LINIFOLIUS</i>	GRAND JUNCTION MILKVETCH	G2	S2			
<i>ASTRAGALUS LITOSUS</i> *	DRAGON MILKVETCH*	G4	S3S4			BLM
<i>ASTRAGALUS MICROCYMBUS</i>	SKIFF MILKVETCH	G1	S1	C2		
<i>ASTRAGALUS MOLYBDENUS</i>	LEADVILLE MILKVETCH	G3	S2	C2		FS
<i>ASTRAGALUS MUSINIENSIS</i>	FERRON MILKVETCH	G3	S1			BLM
<i>ASTRAGALUS NATURITENSIS</i>	NATURITA MILKVETCH	G2	S2S3			BLM
<i>ASTRAGALUS NELSONIANUS</i>	NELSON MILKVETCH	G3	S1			BLM
<i>ASTRAGALUS OOCALYCIS</i>	ARBOLES MILKVETCH	G4	S3			
<i>ASTRAGALUS OSTERHOUTII</i>	OSTERHOUT MILKVETCH	G1	S1	LE		
<i>ASTRAGALUS PISCATOR</i>	FISHER TOWERS MILKVETCH	G1?	S1			
<i>ASTRAGALUS PLATTENSIS</i>	PLATTE RIVER MILKVETCH	G5	S1			
<i>ASTRAGALUS PROXIMUS</i>	AZTEC MILKVETCH	G4	S2	C2		FS
<i>ASTRAGALUS RAFAELENSIS</i>	SAN RAFAEL MILKVETCH	G3	S1			
<i>ASTRAGALUS RIPLEYI</i>	RIPLEY MILKVETCH	G3?	S2	C2		FS
<i>ASTRAGALUS SCHMOLLIAE</i>	SCHMOLL MILKVETCH	G1	S1	C2		
<i>ASTRAGALUS SESQUIFLORUS</i>	SANDSTONE MILKVETCH	G3	S1?			BLM
<i>ASTRAGALUS TORTIPES</i>		G1	S1			
<i>ASTRAGALUS WETHERILLII</i>	WETHERILL MILKVETCH	G3	S3	3C		BLM
<i>ASTRAGALUS WOOTONII</i> = <i>ASTRAGALUS WOOTONII</i> VAR <i>WOOTONII</i>	WOOTON MILKVETCH	G5	S1?			
<i>BETULA PAPYRIFERA</i>	PAPER BIRCH	G5	S1			
<i>BOTRYCHIUM CAMPESTRE</i>	PRAIRIE MOONWORT	G2	S1			FS

RARE AND IMPERILED PLANTS

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
<i>BOTRYCHIUM ECHO</i>	REFLECTED MOONWORT	G2	S2			FS
<i>BOTRYCHIUM HESPERIUM</i>	WESTERN MOONWORT	G3	S2			
<i>BOTRYCHIUM LANCEOLATUM</i> VAR <i>LANCEOLATUM</i> = <i>BOTRYCHIUM</i> <i>LANCEOLATUM</i>	LANCE-LEAVED MOONWORT	G5T4	S2			
<i>BOTRYCHIUM LINEARE</i>		G1	S1	C2		FS
<i>BOTRYCHIUM LUNARIA</i>	MOONWORT	G5	S2			
<i>BOTRYCHIUM MINGANENSE</i>	MINGAN MOONWORT	G4	S2			
<i>BOTRYCHIUM MULTIFIDUM</i> = <i>BOTRYCHIUM MULTIFIDUM</i> SSP <i>COULTERI</i>	LEATHERY GRAPE FERN	G5	S1			
<i>BOTRYCHIUM PALLIDUM</i>	PALE MOONWORT	G2	S2	C2		FS
<i>BOTRYCHIUM PINNATUM</i>	NORTHERN MOONWORT	G4?	S1			
<i>BOTRYCHIUM SIMPLEX</i>	LEAST MOONWORT	G5	S1			
<i>BOTRYCHIUM VIRGINIANUM</i> = <i>BOTRYCHIUM VIRGINIANUS</i> SSP <i>EUROPAEUS</i>	RATTLESNAKE FERN	G5	S1			
<i>BRAYA GLABELLA</i>	ARCTIC BRAYA	G5	S1			FS
<i>BRAYA HUMILIS</i>	ALPINE BRAYA	G4	S2			
<i>BUPLEURUM AMERICANUM</i> = <i>BUPLEURUM TRIRADIATUM</i> SSP <i>ARCTICUM</i>	THOROUGHWAX	G5	S1			
<i>CALOCHORTUS FLEXUOSUS</i>	WEAK-STEMMED MARIPOSA LILY	G4	S1			
<i>CAMISSONIA ANDINA</i>	MOUNTAIN CAMISSONIA	G4	S1			
<i>CAREX CAPITATA</i> SSP <i>ARCTOGENA</i>	ROUND-HEADED SEDGE	G5T4?	S1			
<i>CAREX CONCINNA</i>	LOW NORTHERN SEDGE	G4G5	S1			
<i>CAREX CRAWEI</i>	CRAWE SEDGE	G5	S1			
<i>CAREX DIANDRA</i>		G5	S1			
<i>CAREX GRAVIDA</i> VAR <i>LUNELLIANA</i>	HEAVY SEDGE	G5TU	SU			
<i>CAREX LASIOCARPA</i>	SLENDER SEDGE	G5	S1			
<i>CAREX LEPTALEA</i>	BRISTLE-STALK SEDGE	G5	S1			
<i>CAREX LIMOSA</i>	MUD SEDGE	G5	S2			
<i>CAREX LIVIDA</i>	LIVID SEDGE	G5	S1			FS
<i>CAREX MOLESTA</i>		G4	S1			
<i>CAREX OREOCHARIS</i>	A SEDGE	G3	S1			

RARE AND IMPERILED PLANTS

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
<i>CAREX PECKII</i>	PECK SEDGE	G4G5	S1?			
<i>CAREX RETRORSA</i>		G5	S1			
<i>CAREX SARTWELLII</i>		G4	S1			
<i>CAREX SAXIMONTANA</i>	ROCKY MOUNTAIN SEDGE	G5	S1			
<i>CAREX SCIRPOIDEA</i>	CANADIAN SINGLE-SPIKE SEDGE	G5	S1			
<i>CAREX SYCHNOCEPHALA</i>	MANY-HEADED SEDGE	G4	S1?			
<i>CAREX TENUIFLORA</i>	SLENDER-FLOWER SEDGE	G5	S1			
<i>CAREX TORREYI</i>	TORREY SEDGE	G4	S1			
<i>CAREX VIRIDULA</i>	GREEN SEDGE	G5?	S1			
<i>CASTILLEJA PUBERULA</i>		G2G4	S?			
<i>CEANOETHUS MARTINII</i>	UTAH MOUNTAIN LILAC	G3	S1			
<i>CENTAURIUM EXALTATUM</i>	GREAT BASIN CENTAURY	G5	S1			
<i>CHEILANTHES EATONII</i>	EATON'S LIP FERN	G5?	S2			
<i>CHEILANTHES WOOTONII</i>	WOOTON'S LIP FERN	G5	S1			
<i>CHENOPodium CYCLOIDES</i>	SANDHILL GOOSEFOOT	G3?	S1?	C2		FS
<i>CHIONOPHILA JAMESII</i> *	ROCKY MOUNTAIN SNOWLOVER*	G4?	S3S4			
<i>CIRSIIUM OWNBEYI</i>	OWNBEY THISTLE	G3	S2	C2		
<i>CIRSIIUM PERPLEXANS</i>	ROCKY MOUNTAIN THISTLE	G3	S1			
<i>CLEOME MULTICAULIS</i>	SLENDER SPIDERFLOWER	G2	S2	C2		
<i>COLLOMIA GRANDIFLORA</i>	SHOWY COLLOMIA	G5	S2			
<i>COMARUM PALUSTRE</i>	MARSH CINQUEFOIL	G5	S1S2			
<i>CONIMITELLA WILLIAMSII</i>	WILLIAMS BISHOP'S CAP	G3	S1			
<i>CONOPHOLIS ALPINA VAR MEXICANA</i>	SQUAW-ROOT	G5T5	S1			
<i>CORYDALIS CASEANA SSP BRANDEGEI</i>	SIERRA CORYDALIS	G5T2T3	S2			
<i>CRATAEGUS CHRYSOCARPA</i>	YELLOW HAWTHORN	G5	S1S2			
<i>CREPIS NANA =ASKELLIA NANA</i>	DWARF HAWKSBEARD	G5	S2			
<i>CRYPTANTHA APERTA =OREOCARYA APERTA</i>	GRAND JUNCTION CAT'S-EYE	GX	SX	C2*		
<i>CRYPTANTHA BREVIFLORA =OREOCARYA BREVIFLORA</i>	SHORT-FLOWER CRYPTANTH	G4	S1	3C		
<i>CRYPTANTHA CAESPITOSA =OREOCARYA CAESPITOSA</i>	TUFTED CRYPTANTH	G3	S2			BLM

RARE AND IMPERILED PLANTS

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
<i>CRYPTANTHA CANA</i> = <i>OREOCARYA CANA</i>	MOUNTAIN CAT'S-EYE	G5	S2			
<i>CRYPTANTHA ELATA</i> = <i>OREOCARYA ELATA</i>	TALL CRYPTANTH	G3	S2			
<i>CRYPTANTHA LONGIFLORA</i> = <i>OREOCARYA LONGIFLORA</i>	LONG-FLOWER CAT'S-EYE	G3	S?			
<i>CRYPTANTHA MENSANA</i> = <i>OREOCARYA MENSANA</i>	CARBON CRYPTANTH	G3	S1			
<i>CRYPTANTHA OSTERHOUTII</i> = <i>OREOCARYA OSTERHOUTII</i>	OSTERHOUT CRYPTANTH	G3	S1S2			BLM
<i>CRYPTANTHA ROLLINSII</i> = <i>OREOCARYA ROLLINSII</i>	ROLLINS CRYPTANTH	G4	S2	C2		BLM
<i>CRYPTOGRAMMA STELLERI</i>	SLENDER ROCK-BRAKE	G5	S2			
<i>CYMOPTERUS DUCHESNENSIS</i>	UINTA BASIN SPRING-PARSLEY	G3	S1			BLM
<i>CYPRIPEDIUM FASCICULATUM</i>	PURPLE LADY'S-SLIPPER	G4	S3	C2		FS
<i>CYPRIPEDIUM PUBESCENS</i> = <i>CYPRIPEDIUM CALCEOLUS</i> <i>SSP PARVIFLORUM</i>	YELLOW LADY'S-SLIPPER	G5	S2			
<i>CYSTOPTERIS MONTANA</i>	MOUNTAIN BLADDER FERN	G5	S1			
<i>CYSTOPTERIS UTAHENSIS</i>		G3?	S1			
<i>DIMORPHOCARPA WISLIZENI</i>	SPECTACLE-POD	G5	S1			
<i>DRABA BOREALIS</i>	NORTHERN ROCKCRESS	G4	S2			
<i>DRABA CRASSA</i>	THICK-LEAF WHITLOW-GRASS	G3	S2			
<i>DRABA EXLINGUICULATA</i>	CLAWLESS DRABA	G3	S2			
<i>DRABA FLADNIZENSIS</i>	ARCTIC DRABA	G4	S2S3			
<i>DRABA GLOBOSA</i>	ROCKCRESS DRABA	G3G4	S1			
<i>DRABA GRAMINEA</i>	SAN JUAN WHITLOW-GRASS	G2	S2			
<i>DRABA GRAYANA</i>	GRAY'S PEAK WHITLOW-GRASS	G2	S2			
<i>DRABA INCERTA</i>	YELLOWSTONE WHITLOW-GRASS	G5	S1			
<i>DRABA LONCHOCARPA</i> VAR <i>LONCHOCARPA</i> = <i>DRABA LONCHOCARPA</i>		G4T3	S3			
<i>DRABA MACOUNII</i>	MACOUN DRABA	G3	SU			
<i>DRABA OLIGOSPERMA</i>	WOODS DRABA	G3	S1			
<i>DRABA PORSILDII</i>	PORSILD DRABA	G3	S1			
<i>DRABA RECTIFRUCTA</i>	MOUNTAIN WHITLOW-GRASS	G3	S2			

RARE AND IMPERILED PLANTS

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
<i>DRABA SMITHII</i>	SMITH WHITLOW-GRASS	G3	S2	C2		FS
<i>DRABA SPECTABILIS</i> VAR <i>OXYLOBA</i> = <i>DRABA SPECTABILIS</i>		G3T3Q	S3			
<i>DRABA STREPTOBRACHIA</i>	COLORADO DIVIDE WHITLOW-GRASS	G3	S3			
<i>DRABA VENTOSA</i>	TUNDRA DRABA	G3	S1			
<i>DROSERA ROTUNDFOLIA</i>	ROUNDLEAF SUNDEW	G5	S2			FS
<i>DRYOPTERIS EXPANSA</i>	SPREADING WOOD FERN	G5	S1			
<i>ECHINOCEREUS</i> <i>REICHENBACHII</i> VAR <i>PERBELLUS</i>		G4T?	SU			
<i>ELEOCHARIS WOLFII</i>		G4G5	S1	C2		
<i>ENCELIOPSIS NUDICAULIS</i>	NAKEDSTEM	G5	S1			
<i>ENNEAPOGON DESVAUXII</i>	SPIKE PAPPUSGRASS	G5	S1			
<i>EPIPACTIS GIGANTEA</i>	HELLEBORINE	G4	S2			FS
<i>EQUISETUM VARIEGATUM</i> SPP. <i>VARIEGATUM</i>		G5T?	S1S2			
<i>ERIGERON ELATOR</i>	TALL FLEABANE	G3	S3			
<i>ERIGERON HUMILIS</i>	LOW FLEABANE	G4	S1			
<i>ERIGERON KACHINENSIS</i>	KACHINA DAISY	G2	S1	C2		
<i>ERIGERON LANATUS</i>	WOOLLY FLEABANE	G4	S1			FS
<i>ERIGERON</i> <i>MELANOCEPHALUS</i>	BLACK-HEAD FLEABANE	G3	S3			
<i>ERIGERON PHILADELPHICUS</i>	PHILADELPHIA FLEABANE	G5	S3			
<i>ERIGERON PINNATISECTUS</i>	PINNATE FLEABANE	G3	S3			
<i>ERIGERON WILKENII</i>	WILKEN FLEABANE	G1G2	S1	C2		
<i>ERIOGONUM ACAULE</i>	SINGLE-STEMMED WILD BUCKWHEAT	G3	S1			BLM
<i>ERIOGONUM BRANDEGEI</i>	BRANDEGEE WILD BUCKWHEAT	G2	S2	C1		FS
<i>ERIOGONUM CLAVELLATUM</i>	COMB WASH BUCKWHEAT	G3	S1			
<i>ERIOGONUM COLORADENSE</i>	COLORADO WILD BUCKWHEAT	G3	S2			BLM
<i>ERIOGONUM CONTORTUM</i>	GRAND BUCKWHEAT	G3	S2			
<i>ERIOGONUM EPHEDROIDES</i>	EPHEDRA BUCKWHEAT	G3	S1			BLM
<i>ERIOGONUM LEPTOCLADON</i> VAR <i>LEPTOCLADON</i>	SAND BUCKWHEAT	G5T?	S1			

RARE AND IMPERILED PLANTS

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
<i>ERIOGONUM LEPTOCLADON</i> <i>VAR RAMOSISSIMUM</i>	EASTWOOD SAND BUCKWHEAT	G5T5	S1			
<i>ERIOGONUM</i> <i>LONCHOPHYLLUM VAR</i> <i>SAURINUM</i> <i>=ERIOGONUM SAURINUM</i>	DINOSAUR BUCKWHEAT	G4T3	S1			
<i>ERIOGONUM PALMERIANUM</i>	PALMER BUCKWHEAT	G4	S1			
<i>ERIOGONUM PAUCIFLORUM</i> <i>VAR PAUCIFLORUM</i>	FEW-FLOWERED WILD BUCKWHEAT	G5T4	S1			
<i>ERIOGONUM FELINOPHILUM</i>	CLAY-LOVING WILD BUCKWHEAT	G2	S2	LE		
<i>ERIOGONUM TUMULOSUM</i>	WOODSIDE BUCKWHEAT	G3	S2			BLM
<i>ERIOGONUM VIRIDULUM</i>	DUCHESNE BUCKWHEAT	G4Q	S1			BLM
<i>ERIOPHORUM ALTAICUM VAR</i> <i>NEOGAEUM</i>	ALTAI COTTONGRASS	G4T?	S2			FS
<i>ERIOPHORUM GRACILE</i>	SLENDER COTTONGRASS	G5	S2			
<i>EUSTOMA RUSSELLIANUM</i> <i>=EUSTOMA GRANDIFLORUM</i>	SHOWY PRAIRIE GENTIAN	G5	S3			
<i>EUTREMA PENLANDII</i> <i>=EUTREMA EDWARDSII SSP</i> <i>PENLANDII</i>	PENLAND ALPINE FEN MUSTARD	G1	S1	LT		BLM
<i>FESTUCA CAMPESTRIS</i>	BIG ROUGH FESCUE	G4?	S?			
<i>FESTUCA DASYCLADA</i> <i>=ARGILLOCHLOA</i> <i>DASYCLADA</i>	UTAH FESCUE	G3	S3			
<i>FESTUCA HALLII</i>	HALL FESCUE	G3	S1			FS
<i>FRASERA COLORADENSIS</i>	COLORADO GREEN GENTIAN	G2	S2	C2		FS
<i>FRITILLARIA PUDICA</i>	YELLOW BELL	G5	S1			
<i>GAURA NEOMEXICANA SSP</i> <i>COLORADENSIS</i>	COLORADO BUTTERFLY WEED	G4T2	S1	C1		FS
<i>GAURA NEOMEXICANA SSP</i> <i>NEOMEXICANA</i>	NEW MEXICO BUTTERFLY WEED	G5T5	S1			
<i>GENTIANELLA TORTUOSA</i>	UTAH GENTIAN	G3	S1			BLM
<i>GILIA CAPILLARIS =GILIA</i> <i>SINISTRA</i>	LEFT-HAND GILIA	G4	S1			
<i>GILIA PENSTEMONOIDES</i>	BLACK CANYON GILIA	G3	S2S3	3C		FS
<i>GILIA STENOXYRSA</i>	NARROW-STEM GILIA	G3	S1			BLM
<i>GOODYERA REPENS</i>	DWARF RATTLESNAKE-PLANTAIN	G5	S2			
<i>GUTIERREZIA POMARIENSIS</i>	ORCHARD SNAKEWEED	G2	S2			

RARE AND IMPERILED PLANTS

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
<i>HACKELIA GRACILENTA</i>	MESA VERDE STICKSEED	G2	S2	C2		
<i>HEDYOTIS NIGRICANS</i>	NARROWLEAF BLUET	G5	SU			
<i>HERRICKIA HORRIDA</i>	CANADIAN RIVER SPINY ASTER	G3	S1	C2		
<i>HEUCHERA RICHARDSONII</i>	RICHARDSON ALUM-ROOT	G5	S1			
<i>HEUCHERA RUBESCENS</i>	RED ALUM-ROOT	G4	SH			
<i>HYMENOXYIS HELENOIDES</i> = <i>PICARDENIA HELENOIDES</i>	INTERMOUNTAIN BITTERWEED	G3Q	S1			
<i>HYPOXIS HIRSUTA</i>	YELLOW STARGRASS	G5	S1			
<i>ILIAMNA CRANDALLII</i>		G?	SU			
<i>ILIAMNA GRANDIFLORA</i>		G3?Q	SU			
<i>IPOMOPSIS AGGREGATA</i> <i>SSP WEBERI</i>	RABBIT EARS GILIA	G5T2?	S1S2	C2		FS
<i>IPOMOPSIS CONGESTA</i> <i>SSP</i> <i>CREBRIFOLIA</i>	COMPACT GILIA	G5T3	S1			
<i>IPOMOPSIS MULTIFLORA</i>	MANY-FLOWERED GILIA	G4?	S1			
<i>IPOMOPSIS POLYANTHA</i>	PAGOSA GILIA	G1	S1	C2		FS
<i>IPOMOPSIS SPICATA</i> <i>SSP</i> <i>CAPITATA</i>	GLOBE GILIA	G4?T2	S2			
<i>ISOETES ECHINOSPORA</i>		G5?	S2			
<i>ISOETES ECHINOSPORA</i> <i>SSP</i> <i>MURICATA</i> = <i>ISOETES SETACEA</i> <i>SSP</i> <i>MURICATA</i>	SPINY-SPORED QUILLWORT	G5?T5?	S2			
<i>ISOETES OCCIDENTALIS</i>		G4G5	S1S2			
<i>JUNCUS BRACHYCEPHALUS</i>	SMALL-HEADED RUSH	G5	S1			
<i>JUNCUS BREVICAUDATUS</i>	NARROW-PANICLED RUSH	G5	S1			
<i>JUNCUS BRYOIDES</i>	MINUTE RUSH	G4	S1			
<i>JUNCUS TWEEDYI</i>	TWEEDY RUSH	G3	S1?			
<i>JUNCUS VASEYI</i>	VASEY BULRUSH	G3G5	S1			
<i>KRIGIA BIFLORA</i>	TWO-FLOWERED DWARF DANDELION	G5	S1			
<i>LESQUERELLA CONGESTA</i>	DUDLEY BLUFFS BLADDERPOD	G1	S1	LT		
<i>LESQUERELLA PARVIFLORA</i>	PICEANCE BLADDERPOD	G3	S3			
<i>LESQUERELLA PRUINOSA</i>	PAGOSA BLADDERPOD	G2	S2	C2		FS
<i>LEWISIA REDIVIVA</i>	BITTERROOT	G5	S2			
<i>LEWISIA TRIPHYLLA</i> = <i>EROCALLIS TRIPHYLLA</i>	DWARF SPRING BEAUTY	G4?	S2			

RARE AND IMPERILED PLANTS

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
<i>LIATRIS LANCIFOLIA</i>	GAY-FEATHER	G4	S1			
<i>LIATRIS LIGULISTYLIS</i>	GAY-FEATHER	G5?	S1S2			
<i>LIGUSTICUM TENUIFOLIUM</i> = <i>LIGUSTICUM FILICINUM</i> VAR <i>TENUIFOLIUM</i>	SLENDER-LEAF LIGUSTICUM	G5	S1?			
<i>LILIUM PHILADELPHICUM</i>	WOOD LILY	G5	S3			
<i>LINUM KINGII</i> = <i>MESYNIOPSIS KINGII</i>	YELLOW FLAX	G5	SU			
<i>LISTERA BOREALIS</i>	NORTHERN TWAYBLADE	G4	S2			
<i>LISTERA CONVALLARIOIDES</i>	BROAD-LEAVED TWAYBLADE	G5	S2			
<i>LOMATIUM BICOLOR</i> VAR <i>BICOLOR</i>	WASATCH BISCUITROOT	G4T3Q	S1			
<i>LOMATIUM BICOLOR</i> VAR <i>LEPTOCARPUM</i>	OREGON BISCUITROOT	G4T?Q	S2			
<i>LOMATIUM CONCINNUM</i>	COLORADO DESERT-PARSLEY	G2	S2	C2		
<i>LOMATIUM EASTWOODIAE</i> = <i>ALETES EASTWOODIAE</i>	EASTWOOD DESERT-PARSLEY	G3	S2S3			BLM
<i>LOMATIUM FOENICULACEUM</i> SSP <i>MACDOUGALII</i>	DESERT-PARSLEY	G5T4T5	S1			
<i>LOMATIUM LATILOBUM</i> = <i>ALETES LATILOBUS</i>	CANYONLANDS LOMATIUM	G1	S1	C2		
<i>LOMATIUM NUTTALLII</i> = <i>ALETES NUTTALLII</i>	DOG PARSLEY	G3	S1			
<i>LUPINUS CRASSUS</i>	PAYSON LUPINE	G2	S2	C2		
<i>LYCOPODIUM ALPINUM</i> = <i>DIPHASIASTRUM ALPINUM</i>		G5	S1S2			
<i>LYCOPODIUM ANNOTINUM</i> VAR <i>PUNGENS</i> = <i>LYCOPODIUM DUBIUM</i>	STIFF CLUBMOSS	G?Q	SU			
<i>LYGODESMIA</i> <i>DOLORESENSIS</i>	DOLORES SKELETONPLANT	G1Q	S1	C2		
<i>LYSIMACHIA THYRSIFLORA</i> = <i>NAUMBURGIA</i> <i>THYRSIFLORA</i>	TUFTED LOOSESTRIFE	G5	SH			
<i>MACHAERANTHERA</i> <i>COLORADOENSIS</i> VAR <i>BRANDEGEI</i>		G2?T?	SU			
<i>MACHAERANTHERA</i> <i>COLORADOENSIS</i> VAR <i>COLORADOENSIS</i>		G2?T?	SU			
<i>MALAXIS BRACHYPODA</i> = <i>MALAXIS MONOPHYLLOS</i> SSP <i>BRACHYPODA</i>	WHITE ADDER'S-MOUTH	G4	S1	C2		FS

RARE AND IMPERILED PLANTS

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
<i>MENTZELIA ARGILLOSA</i> = <i>NUTTALLIA ARGILLOSA</i>	ARAPIEN STICKLEAF	G2?	S2	C2		
<i>MENTZELIA CHRYSANTHA</i> = <i>NUTTALLIA CHRYSANTHA</i>	GOLDEN BLAZING STAR	G1?Q	S1			
<i>MENTZELIA DENSA</i> = <i>NUTTALLIA DENSA</i>	ARKANSAS CANYON STICKLEAF	G2	S2	3C		
<i>MIMULUS EASTWOODIAE</i>	EASTWOOD MONKEY-FLOWER	G3	S1S2			BLM
<i>MIMULUS GEMMIPARUS</i>	WEBER MONKEY-FLOWER	G2	S2	C2		FS
<i>MINUARTIA NUTTALLII</i> = <i>MINUOPSIS NUTTALLII</i>	NUTTALL SANDWORT	G5	S1			BLM
<i>MIRABILIS DECUMBENS</i> = <i>OXYBAPHUS DECUMBENS</i>	GREAT PLAINS FOUR-O'CLOCK	G5	S1			
<i>MIRABILIS ROTUNDIFOLIA</i> = <i>OXYBAPHUS ROTUNDIFOLIUS</i>	ROUND-LEAF FOUR-O'CLOCK	G1G2	S1S2	C2		
<i>MUHLENBERGIA DEPAUPERATA</i>	SIXWEEKS MUHLY	G5	S1			
<i>MUHLENBERGIA GLOMERATA</i>	MARSH MUHLY	G4	SU			
<i>MYOSURUS CUPULATUS</i>	HORSESHOE MOUSETAIL	G4	SU			
<i>NAMA DENSUM</i>		G5	S1			
<i>NAMA DICHOTOMUM</i>	LIVEMORE FIDDLELEAF	G4	SH			
<i>NAMA HISPIDUM</i>	ROUGH FIDDLELEAF	G4	S1			
<i>NEOPARRYA LITHOPHILA</i> = <i>ALETES LITHOPHILUS</i>	ROCK-LOVING NEOPARRYA	G2	S2			FS
<i>NOLINA TEXANA</i>	TEXAS BEARGRASS	G5	S1			
<i>NOTHOLAENA STANDLEYI</i> = <i>CHEILANTHES STANLEYI</i>	STANDLEY'S CLOAK FERN	G4	S1			
<i>OENOTHERA ACUTISSIMA</i>	NARROW-LEAF EVENING PRIMROSE	G2	S2			
<i>OENOTHERA HARRINGTONII</i>	ARKANSAS VALLEY EVENING PRIMROSE	G3	S1S2			
<i>OENOTHERA KLEINII</i>	WOLF CREEK EVENING PRIMROSE	GXQ	SX	C2*		
<i>ONOCLEA SENSIBILIS</i>	SENSITIVE FERN	G5	SH			
<i>OOONOPSIS FOLIOSA VAR MONOCEPHELA</i> = <i>OOONOPSIS FOLIOSA</i>	SINGLE-HEAD GOLDENWEED	G2T2	S2	3C		
<i>OREOXIS HUMILIS</i>	PIKES PEAK SPRING PARSLEY	G1	S1			
<i>ORYZOPSIS CONTRACTA</i>	AN INDIAN RICEGRASS	G2	SU	C2		

RARE AND IMPERILED PLANTS

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
<i>OXYTROPIS NANA</i> VAR <i>OENAPIIFORMIS</i> = <i>OXYTROPIS BESSEYI</i> VAR <i>OENAPIIFORMIS</i>	BESSEY LOCOWEED	G5T3	S3	3C		
<i>OXYTROPIS PARRYI</i>	PARRY OXYTROPE	G5	S1			
<i>PAPAVER LAPPONICUM</i> SSP <i>OCCIDENTALE</i> = <i>PAPAVER KLUANENSE</i> <i>OCCIDENTALE</i>	ALPINE POPPY	G3Q	S2			
<i>PARNASSIA KOTZEBUEI</i>	KOTZEBUE GRASS-OF-PARNASSUS	G4	S1			
<i>PARTHENIUM ALPINUM</i> = <i>BOLOPHYTA ALPINA</i>	WYOMING FEVERFEW	G2	S1			FS
<i>PARTHENIUM LIGULATUM</i> = <i>BOLOPHYTA LIGULATA</i>	LIGULATE FEVERFEW	G3	S2			BLM
<i>PARTHENIUM TETRANEURIS</i> = <i>BOLOPHYTA TETRANEURIS</i>	ARKANSAS RIVER FEVERFEW	G2	S2	C2		
<i>PEDIOCACTUS KNOWLTONII</i>	KNOWLTON CACTUS	G1	S1	LE		
<i>PEDIOMELUM AROMATICUM</i>	PARADOX BREADROOT	G3	S2			BLM
<i>PEDIOMELUM</i> <i>MEGALANTHUM</i>	LARGE-FLOWERED BREADROOT	G3	S3			
<i>PELLAEA ATROPURPUREA</i>	PURPLE CLIFF-BRAKE	G5	S2S3			
<i>PELLAEA BREWERI</i>	BREWER'S CLIFF-BRAKE	G5	S2			
<i>PELLAEA GLABELLA</i> SSP <i>SIMPLEX</i> = <i>PELLAEA SUKSDORFIANA</i>	SMOOTH CLIFF-BRAKE	G5T1?	S2?			
<i>PELLAEA TRUNCATA</i>	SPINY CLIFF-BRAKE	G5	S4			
<i>PELLAEA WRIGHTIANA</i>	WRIGHT'S CLIFF-BRAKE	G5	S2			
<i>PENSTEMON BREVICULUS</i>	LITTLE PENSTEMON	G3	S2			
<i>PENSTEMON</i> <i>CYATHOPHORUS</i>	MIDDLE PARK PENSTEMON	G3G4	S2			
<i>PENSTEMON DEBILIS</i>	PARACHUTE PENSTEMON	G1	S1	C2		
<i>PENSTEMON DEGENERI</i>	DEGENER BEARDTONGUE	G2	S2	3C		FS
<i>PENSTEMON ERIANTHERUS</i>	CRESTED BEARDTONGUE	G4	SU			
<i>PENSTEMON FREMONTII</i> VAR <i>GLABRESCENS</i>		G3T?	S?			
<i>PENSTEMON GIBBENSII</i>	GIBBEN'S BEARDTONGUE	G1	S1	C2		
<i>PENSTEMON GRAHAMII</i>	GRAHAM BEARDTONGUE	G2	S2	C1		
<i>PENSTEMON HARRINGTONII</i>	HARRINGTON BEARDTONGUE	G3	S3	C2		FS
<i>PENSTEMON LARICIFOLIUS</i>	LARCH-LEAF BEARDTONGUE	G4	S1			

RARE AND IMPERILED PLANTS

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
<i>PENSTEMON LARICIFOLIUS</i> <i>SSP EXILIFOLIUS</i>	LARCH-LEAF BEARDTONGUE	G4T3	S1			
<i>PENSTEMON LENTUS</i>	ABAJO PENSTEMON	G4	S2			
<i>PENSTEMON MENSARUM</i>	GRAND MESA PENSTEMON	G3	S3	C2		
<i>PENSTEMON OSTERHOUTII</i>		G2G3	S2S3			
<i>PENSTEMON PARVIFLORUS</i>	SMALL-FLOWER BEARDTONGUE	GX	SH	C2*		
<i>PENSTEMON PENLANDII</i>	PENLAND BEARDTONGUE	G1	S1	LE		
<i>PENSTEMON RADICOSUS</i>	MATROOT PENSTEMON	G5	S1			
<i>PENSTEMON RETRORSUS</i>	ADOBE BEARDTONGUE	G3	S3	C2		
<i>PENSTEMON SCARIOSUS</i>	PLATEAU PENSTEMON	G4	S2S3			
<i>PENSTEMON SCARIOSUS</i> <i>VAR ALBIFLUVIS</i>	WHITE RIVER PENSTEMON	G4T2	S1	C1		
<i>PENSTEMON SCARIOSUS</i> <i>VAR CYANOMONTANUS</i>	PLATEAU PENSTEMON	G4T?	S2S3			
<i>PENSTEMON UTAHENSIS</i>	UTAH PENSTEMON	G4	S1			
<i>PENSTEMON YAMPAENSIS</i> = <i>PENSTEMON ACAULIS</i> <i>VAR</i> <i>YAMPAENSIS</i>	YAMPA BEARDTONGUE	G3Q	S3	3C		
<i>PHACELIA CONSTANCEI</i>	CONSTANCE PHACELIA	G4	S1			
<i>PHACELIA FORMOSULA</i>	NORTH PARK PHACELIA	G1	S1	LE		
<i>PHACELIA INCANA</i>	HOARY PHACELIA	G3G4	S1			
<i>PHACELIA INTEGRIFOLIA</i>	PHACELIA	G4	S1			
<i>PHACELIA SCOPULINA</i> <i>VAR</i> <i>SUBMUTICA</i> = <i>PHACELIA SUBMUTICA</i>	DEBEQUE PHACELIA	G4T2	S2	C1		FS
<i>PHIPPSIA ALGIDA</i>	SNOW GRASS	G5	S2			
<i>PHLOX CARYOPHYLLA</i>	PAGOSA PHLOX	G4	S3			
<i>PHYSARIA BELLII</i>	BELL'S TWINPOD	G2	S2	C2		
<i>PHYSARIA OBCORDATA</i>	PICEANCE TWINPOD	G2	S2	LT		
<i>PLATANThERA</i> <i>SPARSIFLORA</i> <i>VAR</i> <i>ENSIFOLIA</i>	CANYON BOG-ORCHID	G4T3	S2			
<i>PLATANThERA ZOTHECINA</i> = <i>LIMNORCHIS ZOTHECINA</i>	ALCOVE BOG ORCHID	G2	S1	C2		
<i>POLIOMINTHA INCANA</i>	PURPLE SAGE	G5	S1			
<i>POLYPODIUM HESPERIUM</i>		G5	S1S2			
<i>POLYSTICHUM SCOPULINUM</i>	CRAG HOLLY FERN	G5	S1			

RARE AND IMPERILED PLANTS

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
<i>PORTULACA HALIMOIDES</i> = <i>PORTULACA PARVULA</i>	DWARF PURSLANE	G?	S1			
<i>POTAMOGETON DIVERSIFOLIUS</i>	WATERTHREAD PONDWEED	G5	SU			
<i>POTENTILLA AMBIGENS</i>	SOUTHERN ROCKY MOUNTAIN CINQUEFOIL	G3	S1S2			
<i>POTENTILLA EFFUSA</i> VAR <i>RUPINCOLA</i> = <i>POTENTILLA RUPINCOLA</i>	ROCKY MOUNTAIN CINQUEFOIL	G?T1	S2	C2		FS
<i>PRIMULA EGALIKSENSIS</i>	GREENLAND PRIMROSE	G4	S2			FS
<i>PROATRIPLEX PLEIANTHA</i> = <i>ATRIPLEX PLEIANTHA</i>	MANCOS SALTBUSH	G3	S1	3C		
<i>PROSOPIS GLANDULOSA</i>	MESQUITE	G5?	S1			
<i>PTILAGROSTIS MONGHOLICA</i> SSP <i>PORTERI</i> = <i>PTILAGROSTIS PORTERI</i>	PORTER FEATHERGRASS	G2T?	S2	C2		FS
<i>PYROLA PICTA</i>	PICTURELEAF WINTERGREEN	G4G5	S2			
<i>RANUNCULUS KARELINII</i> = <i>RANUNCULUS GELIDUS</i> SSP <i>GRAYI</i>	TUNDRA BUTTERCUP	G4	S2			
<i>RHODODENDRON ALBIFLORUM</i> = <i>AZALEASTRUM ALBIFLORUM</i>	WHITE-FLOWERED AZALEA	G4	S2			
<i>RIBES AMERICANUM</i>	AMERICAN CURRANT	G5	S1			
<i>RORIPPA COLORADENSIS</i>	COLORADO WATERCRESS	GX	SX	C2*		
<i>ROOTALA RAMOSIOR</i>	TOOTH CUP	G5	S1?			
<i>RUBUS ARCTICUS</i> SSP <i>ACAULIS</i> = <i>CYLACTIS ARCTICA</i> SSP <i>ACAULIS</i>	NAGOON BERRY	G5T5	S1			FS
<i>SAGITTARIA CALYCINA</i> SSP <i>CALYCINA</i> = <i>SAGITTARIA MONTEVIDENSIS</i> SSP <i>CALYCINA</i>		G5T5?	S1			
<i>SALIX CANDIDA</i>	HOARY OR SILVER WILLOW	G5	S2			
<i>SALIX LANATA</i> SSP <i>CALCICOLA</i>	LIME-LOVING WILLOW	G4T4	S1			FS
<i>SALIX MYRTILLIFOLIA</i>	LOW BLUEBERRY WILLOW	G5	S1			FS
<i>SALIX SERISSIMA</i>	AUTUMN WILLOW	G4	S1			FS
<i>SAPINDUS SAPONARIA</i> VAR <i>DRUMMONDII</i> = <i>SAPINDUS DRUMMONDII</i>	SOAPBERRY	G5T5	S1			

RARE AND IMPERILED PLANTS

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
<i>SAUSSUREA WEBERI</i>	WEBER SAUSSUREA	G3Q	S2			
<i>SAXIFRAGA CESPITOSA</i> SSP <i>MONTICOLA</i> = <i>MUSCARIA MONTICOLA</i>	TUNDRA SAXIFRAGE	G5T5	S1			
<i>SAXIFRAGA FOLIOLOSA</i> = <i>SPATULARIA FOLIOLOSA</i>	LEAFY SAXIFRAGE	G4	S1			
<i>SCIRPUS PUMILUS</i> = <i>TRICHOPHORUM PUMILUM</i>	LITTLE BULRUSH	G5	S1			FS
<i>SCIRPUS SAXIMONTANUS</i> = <i>SCHOENOPLECTUS SAXIMONTANUS</i>	ROCKY MOUNTAIN BULRUSH	G5	S1			
<i>SCLEROCACTUS GLAUCUS</i>	UINTA BASIN HOOKLESS CACTUS	G3	S3	LT		
<i>SCLEROCACTUS MESA-VERDAE</i>	MESA VERDE CACTUS	G2	S2	LT		
<i>SELAGINELLA SELAGINOIDES</i>	NORTHERN SPIKE-MOSS	G5	SU			
<i>SELAGINELLA WEATHERBIANA</i> *	WEATHERBY'S SPIKE-MOSS*	G3G4	S3S4			
<i>SENECIO DIMORPHOPHYLLUS</i> VAR <i>INTERMEDIUS</i> = <i>PACKERA DIMORPHOPHYLLA</i> SSP <i>INTERMEDIA</i>	DIFFERENT GROUNDSEL	G4T2	S1			
<i>SENECIO PAUCIFLORUS</i> = <i>PACKERA PAUCIFLORA</i>	FEW-FLOWERED RAGWORT	G4G5	S1S2			
<i>SISYRINCHIUM DEMISSUM</i>	BLUE-EYED GRASS	G5	S2			
<i>SISYRINCHIUM PALLIDUM</i>	PALE BLUE-EYED GRASS	G2G3	S2	C2		
<i>SMILAX LASIONEURA</i> *	CARRION-FLOWER*	G5	S3S4			
<i>SOLIDAGO PTARMICOIDES</i> = <i>UNAMIA ALBA</i>	PRAIRIE GOLDENROD	G5	S2S3			
<i>SPHAEROMERIA CAPITATA</i>	ROCK-TANSY	G3	S1			BLM
<i>SPIRANTHES DILUVIALIS</i>	UTE LADIES' TRESSES	G2	S2	LT		
<i>SPOROBOLUS FLEXUOSUS</i>	MESA DROPSEED	G5	S1S2			
<i>STELLARIA IRRIGUA</i>	ALTAI CHICKWEED	G4?	S2			
<i>STIPA RICHARDSONII</i>	RICHARDSON NEEDLEGRASS	G5	SU			
<i>SUBULARIA AQUATICA</i>		G5	S1			
<i>SULLIVANTIA HAPEMANII</i> VAR <i>PURPUSII</i>	HANGING GARDEN SULLIVANTIA	G3T3	S3			FS BLM
<i>THALICTRUM HELIOPHILUM</i>	SUN-LOVING MEADOWRUE	G3	S3			

RARE AND IMPERILED PLANTS

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FED STATUS	STATE STATUS	FED SENS
<i>THAMNOSMA TEXANA</i>	DUTCHMAN'S BREECHES	G5	SH			
<i>TOWNSENDIA STRIGOSA</i>	STRIGOSE EASTER-DAISY	G4	S1			BLM
<i>TRIFOLIUM ANDINUM</i>	MOUNTAIN CLOVER	G3	S1			BLM
<i>TRIFOLIUM KINGII</i>	KING CLOVER	G4	S1			
<i>TRILLIUM OVATUM</i>	WESTERN WAKE-ROBIN	G4?	S2			
<i>UTRICULARIA OCHROLEUCA</i>	NORTHERN BLADDERWORT	G4	S1?			
<i>VIOLA PEDATIFIDA</i>	PRAIRIE VIOLET	G5	S2			
<i>VIOLA SELKIRKII</i>	SELKIRK VIOLET	G5?	SH			FS
<i>WOODSIA NEOMEXICANA</i>		G4?	S2			
<i>WOODSIA PLUMMERAE</i>	PLUMMER'S CLIFF FERN	G5	SU			
<i>ZIGADENUS VAGINATUS</i> = <i>ANTICLEA VAGINATA</i>	ALCOVE DEATH CAMAS	G2	S2			

Chapter 5. Rare and Imperiled Natural Communities

Notes:

The Colorado Natural Heritage Program collects information on rare and imperiled communities, as well as high quality examples of common native communities. The presence of only rare and imperiled communities on this list does not diminish the importance of inventorying and tracking high quality examples of common communities.

In various Natural Heritage Program literature, the following terms may appear: "plant community," "plant association," and "natural community." These terms all denote "a plant community of definite floristic composition, presenting a uniform physiognomy, and growing in uniform habitat conditions" (Third International Botanical Congress 1910). As used here, the plant association concept applies to existing vegetation regardless of successional status.

Plant association naming conventions are as follows:

- a) Diagnostic upper canopy level species are named first. A dash (-) indicates that the next named species occurs within the same vegetation layer. A slash (/) indicates a change to a different layer.
- b) Parentheses are placed around named species when that species is not always present within a plot classified as a particular plant association. Species not in parentheses are assumed to have high constancy within that plant association.
- c) Plant nomenclature follows Kartesz (1994), except in cases where the taxonomic status of a taxon compels use of Weber and Wittmann (1992).

References:

Bourgeron, P.S. and L.D. Engelking. eds. 1994. A Preliminary Vegetation Classification of the Western United States. Unpublished report prepared by the Western Heritage Task Force for The Nature Conservancy, Boulder, CO.

Kartesz, J.T. 1994. A Synonymized Checklist of the Vascular Flora of the United States, Canada, and Greenland. Second edition. Timber Press, Inc., Portland, Oregon. Volume 1: 622 pp., Volume 2: 816 pp.

Third Botanical Congress. 1910. Rapport sur la nomenclature phytogéographique. (Phytogéographische Nomenklatur.) Actes III Congr. Int. Bot. Bruxelles 1-131-164.

Weber, W.A. and R.C. Wittmann. 1992. Catalog of the Colorado Flora. University of Colorado Press. Niwot, Colorado. 215 pp.

RARE AND IMPERILED NATURAL COMMUNITIES

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK
<i>ABIES CONCOLOR-PICEA PUNGENS-POPULUS ANGUSTIFOLIA/ACER GLABRUM</i>	MONTANE RIPARIAN FORESTS	G1	S1
<i>ACER NEGUNDO-POPULUS ANGUSTIFOLIA/CORNUS SERICEA</i>	NARROWLEAF COTTONWOOD RIPARIAN FORESTS	G2	S2
<i>ACER NEGUNDO/BETULA OCCIDENTALIS</i>	BOXELDER/RIVER BIRCH	G1	S1
<i>AMELANCHIER UTAHENSIS/PSEUDOROEGNERIA SPICATA</i>	MIXED MOUNTAIN SHRUBLANDS	G2G3	S2S3
<i>ANDROPOGON GERARDII-SCHIZACHYRIUM SCOPARIUM</i>	XERIC TALLGRASS PRAIRIES	G2	S2
<i>ANDROPOGON GERARDII-SORGHASTRUM NUTANS</i>	WET PRAIRIES	G1	S1?
<i>ANDROPOGON GERARDII-SPOROBOLUS HETEROLEPIS</i>	XERIC TALLGRASS PRAIRIES	G2	S2?
<i>ANDROPOGON HALLII PHASE SCHIZACHYRIUM SCOPARIUM</i>	NORTHERN SANDHILL PRAIRIES	G2	S2
<i>ANDROPOGON HALLII-CALAMOVILFA LONGIFOLIA</i>	NORTHERN SANDHILL PRAIRIES	G2	S2
<i>ARTEMISIA CANA/FESTUCA THURBERI</i>	WESTERN SLOPE SAGEBRUSH SHRUBLANDS	G2G3	S2S3
<i>ARTEMISIA FILIFOLIA/ANDROPOGON HALLII</i>	NORTHERN SANDHILL PRAIRIES	G2	S2
<i>ARTEMISIA TRIDENTATA TRIDENTATA/LEYMUS CINEREUS WEST</i>	SAGEBRUSH BOTTOMLAND SHRUBLANDS	G2G3	S1S2
<i>ARTEMISIA TRIDENTATA TRIDENTATA/PASCOPYRUM SMITHII</i>	SAGEBRUSH BOTTOMLAND SHRUBLANDS	G2G3	S2S3
<i>ATRIPLEX CONFERTIFOLIA/ORYZOPSIS HYMENOIDES</i>	COLD DESERT SHRUBLANDS	G2	S2
<i>ATRIPLEX CONFERTIFOLIA/STIPA COMATA</i>	COLD DESERT SHRUBLANDS	G1G2	S1S2
<i>ATRIPLEX GARDNERI/LEYMUS SALINUS</i>	GARDNER'S MAT SALT BUSH SHRUBLANDS	G2?	S2?
<i>BETULA OCCIDENTALIS/MESIC FORB</i>	FOOTHILLS RIPARIAN SHRUBLAND	G2G3	S2
<i>BOUTELOUA GRACILIS-BUCHLOE DACTYLOIDES</i>	SHORTGRASS PRAIRIE	G2?	S2?
<i>CERCOCARPUS MONTANUS/STIPA COMATA</i>	MIXED FOOTHILL SHRUBLANDS	G2	S2
<i>DANTHONIA PARRYI</i>	MONTANE GRASSLANDS	G2?	S2?
<i>FESTUCA IDAHOENSIS-GERANIUM VISCOSISSIMUM</i>	MONTANE GRASSLANDS	G2G3	S2S3
<i>JUNIPERUS SCOPULORUM/ARTEMISIA TRIDENTATA</i>	FOOTHILLS PINYON-JUNIPER WOODLANDS	G2	SR
<i>JUNIPERUS SCOPULORUM/CERCOCARPUS MONTANUS</i>	FOOTHILLS PINYON-JUNIPER WOODLANDS/SCARP WOODLANDS	G2	S2
<i>JUNIPERUS SCOPULORUM/PURSHIA TRIDENTATA</i>	FOOTHILLS PINYON-JUNIPER WOODLANDS	G2	S2
<i>MUHLENBERGIA FILICULMIS</i>	MONTANE GRASSLANDS	G2	S2
<i>MUHLENBERGIA MONTANA-STIPA COMATA</i>	MONTANE GRASSLANDS	G2	S2

RARE AND IMPERILED NATURAL COMMUNITIES

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK
<i>ORYZOPSIS HYMENOIDES</i> SHALE BARREN	WESTERN SLOPE GRASSLANDS	G2	S2
<i>PICEA ENGELMANNII/TRIFOLIUM DASYPHYLLUM</i>	TIMBERLINE FORESTS	G2	S2
<i>PICEA PUNGENS-POPULUS ANGUSTIFOLIA/ALNUS INCANA-LONICERA INVOLUCRATA</i>	MIXED DECIDUOUS-EVERGREEN MONTANE RIPARIAN FOREST	G2	S2
<i>PICEA PUNGENS/AMELANCHIER ALNIFOLIA-CORNUS SERICEA</i>	MONTANE RIPARIAN FORESTS	G2Q	S2?
<i>PINUS ARISTATA/RIBES MONTIGENUM</i>	UPPER MONTANE WOODLANDS	G2G4	S1
<i>PINUS ARISTATA/TRIFOLIUM DASYPHYLLUM</i>	UPPER MONTANE WOODLANDS	G2	S2
<i>PINUS EDULIS-(JUNIPERUS MONOSPERMA)/STIPA SCRIBNERI</i>	FOOTHILLS PINYON-JUNIPER WOODLANDS	G2G3	S1?
<i>PINUS EDULIS/QUERCUS X PAUCILOBA</i>	FOOTHILLS PINYON-JUNIPER WOODLANDS	G2?	S2
<i>PINUS EDULIS/STIPA COMATA</i>	XERIC WESTERN SLOPE PINYON-JUNIPER WOODLANDS	G2	S2
<i>PINUS PONDEROSA/CERCOCARPUS MONTANUS/ANDROPOGON GERARDII</i>	FOOTHILLS PONDEROSA PINE SCRUB WOODLANDS	G2	S2?
<i>PINUS PONDEROSA/LEUCOPOA KINGII</i>	FOOTHILLS PONDEROSA PINE SAVANNAS	G2	S2
<i>PINUS PONDEROSA/ORYZOPSIS HYMENOIDES</i>	WESTERN SLOPE PONDEROSA PINE WOODLANDS	G1	S1
<i>PINUS PONDEROSA/QUERCUS X PAUCILOBA</i>	FOOTHILLS PONDEROSA PINE SCRUB WOODLANDS	G2	S1S2
<i>POA NERVOSA-STIPA LETTERMANII</i>	MONTANE GRASSLANDS	G2	S2?
<i>POPULUS ANGUSTIFOLIA-(PICEA PUNGENS)/ALNUS INCANA-CORNUS SERICEA</i>	MONTANE RIPARIAN FORESTS	G2	S2
<i>POPULUS ANGUSTIFOLIA-PICEA PUNGENS/ALNUS INCANA</i>	MONTANE RIPARIAN FORESTS	G2	S2
<i>POPULUS ANGUSTIFOLIA/RHUS TRILOBATA</i>	NARROWLEAF COTTONWOOD/SKUNKBRUSH	G2	S2
<i>POPULUS ANGUSTIFOLIA/SALIX LIGULIFOLIA-SHEPHERDIA ARGENTEA</i>	NARROWLEAF COTTONWOOD RIPARIAN FORESTS	G1	S1
<i>POPULUS DELTOIDES SSP MONOLIFERA/DISTICHLIS SPICATA</i>	PLAINS COTTONWOOD RIPARIAN FORESTS	G2	S2
<i>POPULUS DELTOIDES SSP WISLIZENII/RHUS TRILOBATA</i>	FREMONT'S COTTONWOOD RIPARIAN FORESTS	G2	S2
<i>POPULUS DELTOIDES-SALIX AMYGDALOIDES/SALIX EXIGUA</i>	PLAINS COTTONWOOD RIPARIAN FORESTS	G2G3	S1
<i>POPULUS TREMULOIDES/ACER GLABRUM</i>	MONTANE RIPARIAN FORESTS	G1 G2	S1S2
<i>POPULUS TREMULOIDES/CEANOTHUS VELUTINUS</i>	ASPEN FORESTS	G2G3	S2S3
<i>POPULUS TREMULOIDES/LIGULARIA BIGELOVII</i>	ASPEN WETLAND FORESTS	G2G3	S2S3

RARE AND IMPERILED NATURAL COMMUNITIES

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK
<i>POPULUS TREMULOIDES/RIBES MONTIGENUM</i>	MONTANE RIPARIAN FORESTS	G2	S2
<i>POTAMOGETON DIVERSIFOLIUS</i> PLUNGE POOL WETLAND	GREAT PLAINS FLOATING/SUBMERGENT PALUSTRINE WETLANDS	G1	S1
<i>PSEUDOROEGNERIA SPICATA</i>	WESTERN SLOPE GRASSLANDS	G2?	S2?
<i>PSEUDOROEGNERIA SPICATA-POA FENDLERIANA</i>	WESTERN SLOPE GRASSLANDS	G2G3	S2S3
<i>PSEUDOTSUGA MENZIESII/PACHISTIMA MYRSINITES</i>	LOWER MONTANE FORESTS	G2G3	S2S3
<i>PURSHIA TRIDENTATA/MUHLENBERGIA MONTANA</i>	MIXED FOOTHILL SHRUBLANDS	G2	S2
<i>PURSHIA TRIDENTATA/STIPA COMATA</i>	MIXED FOOTHILL SHRUBLANDS	G1G2	S1S2
<i>RIBES CEREUM/LEYMUS AMBIGUUS</i>	MIXED FOOTHILL SHRUBLANDS	G2	S2?
<i>SALICORNIA RUBRA</i>	WESTERN SLOPE SALT MEADOWS	G2	S1?
<i>SALIX DRUMMONDIANA-SALIX PLANIFOLIA/CALAMAGROSTIS CANADENSIS</i>	LOWER MONTANE WILLOW CARRS	G2	S2
<i>SALIX DRUMMONDIANA/CALAMAGROSTIS CANADENSIS</i>	LOWER MONTANE WILLOW CARRS	G2	S2
<i>SCHIZACHYRIUM SCOPARIUM</i>	LOESS PRAIRIES	G1?	S1?
<i>SENECIO TRIANGULARIS</i> ALPINE WETLAND	ALPINE WETLANDS	G2?	SU
<i>SPOROBOLUS AIROIDES</i>	GREAT PLAINS SALT MEADOWS	G2?	SU
<i>STIPA COMATA - EAST</i>	GREAT PLAINS MIXED GRASS PRAIRIES	G2	S2
<i>STIPA NEOMEXICANA</i>	GREAT PLAINS MIXED GRASS PRAIRIES	G2	S2
<i>STIPA COMATA - WEST</i>	WESTERN SLOPE GRASSLANDS	G2	S2

Appendix I. Plant Name Synonyms

Weber Name	Kartesz Name
<i>Aletes eastwoodiae</i>	<i>Lomatium eastwoodiae</i>
<i>Aletes latilobus</i>	<i>Lomatium latilobum</i>
<i>Aletes lithophilus</i>	<i>Neoparrya lithophila</i>
<i>Aletes nuttallii</i>	<i>Lomatium nuttallii</i>
<i>Anemone riparia</i>	<i>Anemone virginiana</i> var <i>riparia</i>
<i>Anticlea vaginata</i>	<i>Zigadenus vaginatus</i>
<i>Argillochloa dasyclada</i>	<i>Festuca dasyclada</i>
<i>Armeria scabra</i> ssp <i>sibirica</i>	<i>Armeria maritima</i> ssp <i>sibirica</i>
<i>Arnica alpina</i> var <i>tomentosa</i>	<i>Arnica angustifolia</i> ssp <i>tomentosa</i>
<i>Askellia nana</i>	<i>Crepis nana</i>
<i>Astragalus lonchocarpus</i> var <i>hamiltonii</i>	<i>Astragalus hamiltonii</i>
<i>Astragalus wootonii</i> var <i>wootonii</i>	<i>Astragalus wootonii</i>
<i>Atriplex pleiantha</i>	<i>Proatriplex pleiantha</i>
<i>Azaleastrum albiflorum</i>	<i>Rhododendron albiflorum</i>
<i>Boechea fernaldiana</i>	<i>Arabis fernaldiana</i> var <i>feraldiana</i>
<i>Bolophyta alpina</i>	<i>Parthenium alpinum</i>
<i>Bolophyta ligulata</i>	<i>Parthenium ligulatum</i>
<i>Bolophyta tetraeuris</i>	<i>Parthenium tetraeuris</i>
<i>Botrychium lanceolatum</i>	<i>Botrychium lanceolatum</i> var <i>lanceolatum</i>
<i>Botrychium multifidum</i> ssp <i>coulteri</i>	<i>Botrychium multifidum</i>
<i>Botrypus virginianus</i> ssp <i>europaeus</i>	<i>Botrychium virginianum</i>
<i>Bupleurum triradiatum</i> ssp <i>arcticum</i>	<i>Bupleurum americanum</i>
<i>Cheilanthes stanleyi</i>	<i>Notholaena sandleyi</i>
<i>Cylactis arctica</i> ssp <i>acaulis</i>	<i>Rubus arcticus</i> ssp <i>acaulis</i>
<i>Cypripedium calceolus</i> ssp <i>parviflorum</i>	<i>Cypripedium pubescens</i>
<i>Diphasiastrum alpinum</i>	<i>Lycopodium alpinum</i>
<i>Draba lonchocarpa</i>	<i>Draba lonchocarpa</i> var <i>lonchocarpa</i>
<i>Draba spectabilis</i>	<i>Draba spectabilis</i> var <i>oxyloba</i>
<i>Eriogonum saurinum</i>	<i>Eriogonum lonchophyllum</i> var <i>saurinum</i>
<i>Erocallis triphylla</i>	<i>Lewisia triphylla</i>
<i>Eucephaius perelegans</i>	<i>Aster perelegans</i>
<i>Eustoma grandiflorum</i>	<i>Eustoma russellianum</i>
<i>Eutrema edwardsii</i> ssp <i>penlandii</i>	<i>Eutrema penlandii</i>
<i>Gilia sinistra</i>	<i>Gilia capillaris</i>
<i>Isoetes setacea</i> ssp <i>muricata</i>	<i>Isoetes echinospora</i> ssp <i>muricata</i>

Weber Name

Ligusticum filicinum var *tenuifolium*
Limnorchis zothecina
Lycopodium dubium
Malaxis monophyllos ssp *brachypoda*
Mesyropsis kingii
Minuopsis nuttallii
Muscaria monticola
Naumburgia thyrsoiflora
Nuttallia argillosa
Nuttallia chrysantha
Nuttallia densa
Oonopsis foliosa
Oreocarya aperta
Oreocarya breviflora
Oreocarya caespitosa
Oreocarya cana
Oreocarya elata
Oreocarya longiflora
Oreocarya mensana
Oreocarya osterhoutii
Oreocarya rollinsii
Orophaca aretioides
Orophaca hyalina
Orophaca triphyllia
Oxybaphus decumbens
Oxybaphus rotundifolius
Oxytropis besseyi var *obnapiformis*
Packera dimorphophylla ssp *intermedia*

Packera pauciflora
Papaver kluanense
Pellaea suksdorfiana
Penstemon acaulis var *yampaensis*
Phacelia submutica
Picardenia helenioides
Portulaca parvula
Potentilla rupincola
Ptilagrostis porteri
Ranunculus gelidus ssp *grayi*
Sagittaria montevidensis ssp *calycina*
Sapindus drummondii

Kartesz Name

Ligusticum tenuifolium
Platanthera zothecina
Lycopodium annotinum var *pungens*
Malaxis brachypoda
Linum kingii
Minuartia nuttallii
Saxifraga cespitosa ssp *monticola*
Lysimachia thyrsoiflora
Mentzelia argillosa
Mentzelia chrysantha
Mentzelia densa
Oonopsis foliosa var *monocephala*
Cryptantha aperta
Cryptantha breviflora
Cryptantha caespitosa
Cryptantha cana
Cryptantha elata
Cryptantha longiflora
Cryptantha mensana
Cryptantha osterhoutii
Cryptantha rollinsii
Astragalus aretioides
Astragalus hyalinus
Astragalus gliviflorus
Mirabilis decumbens
Mirabilis rotundifolia
Oxytropis nana var *obnapiformis*
Senecio dimorphophyllus var *intermedius*
Senecio pauciflorus
Papaver lapponicum ssp *occidentale*
Pellaea glabella ssp *simplex*
Penstemon yampaensis
Phacelia scopulina var *submutica*
Hymenoxys helenioides
Portulaca halimoides
Potentilla effusa var *rupincola*
Ptilagrostis mongholica ssp *porteri*
Ranunculus karelinii
Sagittaria calycina ssp *calycina*
Sapindus saponaria var *drummondii*

Weber Name

Schoenoplectus saximontanus
Seriphidium pygmaeum
Spatularia foliolosa
Thellungiella salsuginea
Trichophorum pumilum
Unamia alba

Kartesz Name

Scirpus saximontanus
Artemisia pygmaea
Saxifraga foliolosa
Arabidopsis salsuginea
Scirpus pumilus
Solidago ptarmicoides

Appendix 2. Field Forms

ANIMAL SPECIES OF SPECIAL CONCERN SURVEY FORM COLORADO NATURAL HERITAGE PROGRAM

C/O COLORADO STATE UNIVERSITY*103 NATURAL RESOURCES BUILDING*FT. COLLINS, CO 80523*(303)491-2844

DATE OF SURVEY: ___/___/___

OBSERVER(S) _____

TAXONOMY:

SCIENTIFIC NAME: _____

COMMON NAME _____

LOCATION: (Attach a copy of pertinent 7.5' or 15' topographic map section with locations of populations/subpopulations outlined, one map for each sensitive species described)

SITE NAME: _____

COUNTY: _____ USGS QUADRANGLE: _____

TOWNSHIP: _____ RANGE: _____ SECTION: _____ 1/4 SEC.: _____

ADDITIONAL T/R/S, SECTIONS OR 1/4 SECs.: _____

UTM ZONE AND COORDINATES _____

ELEVATION (at population center (and range of population if known)): _____

NATIONAL FOREST/BLM DISTRICT: _____ F.S. DISTRICT/BLM RESOURCE AREA _____

LAND OWNERSHIP/MANAGEMENT (if not USFS/BLM): _____

DIRECTIONS TO SITE (refer to roads, access routes, trails, geographic features, etc.):

HABITAT:

VEGETATION STRUCTURE WITHIN POPULATION AREA:

TOTAL TREE COVER (%) _____ TOTAL SHRUB COVER (%) _____

TOTAL FORB COVER (%) _____ TOTAL GRAMINOID COVER (%) _____

TOTAL MOSS/LICHEN COVER (%) _____ TOTAL BARE GROUND COVER _____

ASSOCIATED PLANT COMMUNITY: (list dominant species currently present, include age structure if known):

HABITAT TYPE: _____

ADDITIONAL ASSOCIATED PLANT SPECIES: _____

TIME OF DAY _____ WEATHER _____

ASPECT (S, SE, NNW, etc.): _____ % SLOPE _____ SLOPE SHAPE (concave, convex, straight, etc.) _____

LIGHT EXPOSURE (open, shaded, partial shade, etc.): _____

TOPOGRAPHIC POSITION (crest, upslope, midslope, lowerslope, bottom, etc.): _____

MOISTURE: (dry, moist, saturated, inundated, seasonal seepage, etc.) _____

PARENT MATERIAL: _____

GEOMORPHIC LAND FORM (e.g. glaciated mountain slopes and ridges, alpine glacial valley, rolling uplands, breaklands, alluvial-colluvial-lacustrine (floodplains, terraces, etc.), rockslides)

SOILTEXTURE: _____

EVIDENCE OF THREATS AND DISTURBANCE: (be specific; effects on population viability) _____

SPECIAL MANAGEMENT CONSIDERATIONS: _____

POPULATION SIZE:

ESTIMATED NUMBER OF INDIVIDUALS (exact count, if feasible) _____

NUMBER OF SUB POPULATIONS (if applicable): _____

SIZE OF AREA COVERED BY POPULATION (estimate or measured acres): _____

BIOLOGY:

PHENOLOGICAL CONDITION: (larvae, adults, breeding, fledging, metamorphosing, etc.): _____

EVIDENCE AND EXTENT OF PARASITISM? (e.g. pollinators): _____

EVIDENCE OF DISEASE, PREDATION OR INJURY? _____

REPRODUCTIVE SUCCESS (evidence of reproduction and success): _____

BEHAVIORAL NOTES: _____

DOCUMENTATION:

POPULATION DOCUMENTED VIA: Specimen ___ Sight ___ Tracks/Sign ___ Songs/Calls ___ Road kill ___ Photo ___ Verbal ___

IF PHOTOGRAPH TAKEN (indicate photographer and repository): _____

IF SPECIMEN TAKEN (list collector, collection number, and repository): _____

IDENTIFICATION (list name of person making determination, and/or name of paper or book used): _____

ECODATA PLOT NUMBER (attach photocopied data sheets): _____

COMMENTS:

PLANT SPECIES OF SPECIAL CONCERN SURVEY FORM
COLORADO NATURAL HERITAGE PROGRAM

C/O COLORADO STATE UNIVERSITY*103 NATURAL RESOURCES BUILDING*FT. COLLINS, CO 80523*(303)491-2844

DATE OF SURVEY: ___/___/___

OBSERVER(S) _____

TAXONOMY:

SCIENTIFIC NAME: _____ COMMON NAME _____

LOCATION: (Attach a copy of pertinent 7.5' or 15' topographic map section with locations of populations/subpopulations outlined, one map for each sensitive species described)

SURVEY SITE NAME: _____

COUNTY: _____ USGS QUADRANGLE: _____

TOWNSHIP: _____ RANGE: _____ SECTION: _____ 1/4 SEC.: _____

ADDITIONAL T/R/S, SECTIONS OR 1/4 SECS.: _____

UTM ZONE AND COORDINATES _____

ELEVATION (at population center (and range of population if known)): _____

NATIONAL FOREST/BLM DISTRICT: _____ F.S. DISTRICT/BLM RESOURCE AREA _____

LAND OWNERSHIP/MANAGEMENT (if not USFS/BLM): _____

DIRECTIONS TO SITE (refer to roads, trails, geographic features, etc.): _____

HABITAT:

VEGETATION STRUCTURE WITHIN POPULATION AREA:

TOTAL TREE COVER (%) _____ TOTAL SHRUB COVER (%) _____

TOTAL FORB COVER (%) _____ TOTAL GRAMINOID COVER (%) _____

TOTAL MOSS/LICHEN COVER (%) _____ TOTAL BARE GROUND COVER _____

ASSOCIATED PLANT COMMUNITY: (list dominant species currently present, include age structure if known):

HABITAT TYPE: _____

ADDITIONAL ASSOCIATED PLANT SPECIES: _____

ASPECT (S, SE, NNW, etc.): _____ % SLOPE _____ SLOPE SHAPE (concave, convex, straight, etc.) _____

LIGHT EXPOSURE (open, shaded, partial shade, etc.): _____

TOPOGRAPHIC POSITION (crest, upperslope, midslope, lowerslope, bottom, etc.): _____

MOISTURE: (dry, moist, saturated, inundated, seasonal seepage, etc.) _____

PARENT MATERIAL: _____

GEOMORPHIC LAND FORM (e.g. glaciated mountain slopes and ridges, alpine glacial valley, rolling uplands, breaklands, alluvial-colluvial-lacustrine (floodplains, terraces, etc.), rockslides):

SOIL TEXTURE: _____

EVIDENCE OF THREATS AND DISTURBANCE: (be specific; effects on populations viability)

POPULATION SIZE:

ESTIMATED NUMBER OF INDIVIDUALS (or exact count, if feasible; if plants are spreading vegetatively, indicate number of aerial stems) _____

NUMBER OF SUB POPULATIONS (if applicable): _____

SIZE OF AREA COVERED BY POPULATION (acres):

BIOLOGY:

PHENOLOGY (percentage flowering, fruiting, vegetative): _____

ANY SYMBIOTIC OR PARASITIC RELATIONSHIPS? (e.g. pollinators): _____

EVIDENCE OF DISEASE, PREDATION OR INJURY? _____

REPRODUCTIVE SUCCESS (evidence of seed dispersal and establishment): _____

DOCUMENTATION:

PHOTOGRAPH TAKEN? (if so, indicate photographer and repository): _____

SPECIMEN TAKEN? (if so, list collector, collection number, and repository): _____

IDENTIFICATION (list name of person making determination, and/or name of flora or book used): _____

ECODATA PLOT NUMBER (attach photocopied data sheets): _____

COMMENTS:

NATURAL COMMUNITIES OF SPECIAL CONCERN FORM

COLORADO NATURAL HERITAGE PROGRAM

103 NATURAL RESOURCES BUILDING, COLLEGE OF NATURAL RESOURCES, COLORADO STATE UNIVERSITY,
FORT COLLINS, COLORADO, 80523

DATE OF SURVEY ____/____/____

OBSERVER(S): _____

ADDRESS/PHONE #: _____

WORK LOCATION/POSITION TITLE (Forest/District/Resource Area Of Observation(s): _____

COMMUNITY SCIENTIFIC NAME (2-3 Dominant Species): _____

COMMUNITY COMMON NAME: _____

LOCATION: (Attach a copy of pertinent 7.5' or 15' topographic map section with location of community outlined. One map for each community described.)

USGS QUADRANGLE: _____ COUNTY: _____

TOWNSHIP: _____ RANGE: _____ SECTION(S): _____ 1/4 SECTION: _____

ADDITIONAL T/R/S INFORMATION: _____

MINIMUM ELEVATION (lowest point of community): _____ MAXIMUM ELEVATION: _____

NATIONAL FOREST/BLM DISTRICT: _____ F.S. DISTRICT/ BLM RESOURCE AREA: _____

LAND OWNERSHIP/MANAGEMENT (if not USFS/ BLM): _____

FOREST STAND OR ALLOTMENT NAME/#: _____

DIRECTIONS TO SITE (refer to roads, trails, geographic features): _____

COMMUNITY DESCRIPTION:

DOMINANT SPECIES IN COMMUNITY (write a description of dominant species in upper, mid, and lower stratum, include age/class structure and spatial distribution):

COMMUNITY VEGETATION STRUCTURE:

TOTAL TREE COVER (%): _____ TOTAL SHRUB COVER (%): _____

TOTAL FORB COVER (%): _____ TOTAL GRAMINOID COVER (%): _____

TOTAL MOSS/LICHEN COVER (%): _____ TOTAL BARE GROUND COVER (%): _____

TOTAL EXOTIC SPECIES COVER (%): _____

ADDITIONAL SPECIES IN COMMUNITY:

ADJACENT COMMUNITIES (use a separate form for surrounding comm. of special concern): _____

ASPECT (S, SE, NNW, etc.): _____ %SLOPE: _____ SLOPE SHAPE (concave, convex, flat): _____

TOPOGRAPHIC POSITION (crest, upperslope, midslope, lowerslope, valley bottom etc.): _____

GEOGRAPHIC LAND FORM (e.g. glaciated mountain slopes and ridges, alpine glacial valley, rolling uplands, breaklands, alluvial-colluvial-lacustrine (floodplains, terraces etc.)).

PARENT MATERIAL: _____

SOIL TEXTURE: _____ EST. DEPTH TO BEDROCK: _____

MOISTURE (dry, moist, inundated, seasonal seepage etc.): _____

COMMUNITY SIZE (estimate number of acres or extent (e.g., 50m x 2km)): _____

EVIDENCE OF THREATS AND DISTURBANCE (be specific about type of disturbance or threat and impacts on community structure and function): _____

COMMUNITY CONDITION (evidence of reproduction and natural processes, evidence of disease or herbivory): _____

DOCUMENTATION:

PHOTOGRAPH(S) TAKEN? (if so list photographer, mark photo location(s) on attached map, photo number, and repository): _____

SPECIMENS TAKEN? (if so list the species collected, collector, collection number, and repository) _____

DATA/ PLOT NUMBER (attach a copy of data sheets): _____

COMMENTS: