A checklist of the vascular flora of Canyon de Chelly National Monument, Apache County, Arizona¹

Glenn Rink²,³
Northern Arizona University, Department of Biological Sciences, PO Box 5640, Flagstaff, AZ 86001

Rink, G. (Northern Arizona University, Department of Biological Sciences, PO Box 5640, Flagstaff, AZ 86001). J. Torrey Bot. Soc. 132: 510–532. 2005—A total of 243 new species records, 60 new generic records, and 11 new family records were documented for Canyon de Chelly National Monument, bringing the known flora of the Monument to 771 species. This work is part of an inventory carried out throughout the National Park Service as part of the Natural Resource Challenge, a legislative and administrative mandate. Four species are on or proposed for the Navajo Nation Endangered Species List. Additions to the flora include Carex speccicolana, a Listed Threatened species, and Zigadenus vaginatus, both on the Navajo Endangered Species List. Astragalus chuskanaus, Cirsium chellyense, Lupinus caudatus subsp. cutleri, and a white-flowered form of Mertensia oblongifolia are endemic to the Monument and surrounding area.

Key words: Arizona, biological inventory, Canyon de Chelly, flora, rare plants

The purpose of this project was to voucher the flora of Canyon de Chelly National Monument, adding as many new records as possible. This work was completed as part of an inventory effort carried out throughout the National Park Service (NPS) as part of the Natural Resource Challenge, a legislative and administrative mandate. National Park Service researchers (Stuart et al. 2000) estimated that 60 percent of the plant species in Canyon de Chelly were already known. Canyon de Chelly is within the San Juan River drainage, the subject of an ongoing cataloguing effort (Heil and O’Kane 2003).

Canyon de Chelly National Monument, part of the Navajo Reservation, in Apache County, northeastern Arizona (Fig. 1) was established in 1931 to protect significant Anasazi archaeological resources. The Monument encompasses 400 square kilometers (131 square miles) between longitudes 109° 08’ and 109° 33’ N and latitudes 35° 59’ and 36° 18’ W. Canyon de Chelly and its side canyons are incised into the northern portion of the Defiance Plateau at the western edge of the Chuska Mountains (Barnes 1984) on the Colorado Plateau. Spectacular cliffs result from a resistant cap of Shinarump Conglomerate (shale, coarse sandstone and conglomerate) over the more easily eroded De Chelly Sandstone (Pierce 1967, Vandiver 1937). Fine-grained Supai Sandstone, exposed at canyon bottoms in mid-canyon reaches, acts as an aquiclude, blocking the downward flow of water, causing springs and seeps at the surface (Cooley et al. 1969). Thus, the nature of the geologic layers cause water to become available for agriculture, leading to the canyon’s attraction to humans. Volcanic basalts and talus cover small areas at the east end of the Monument. The mouth of the canyon lies at 1680 m (5500 ft) above sea level while upper slopes reach 2320 m (7600 ft). Canyon de Chelly, Canyon del Muerto (a northern tributary), and Monument Canyon (a southern tributary) make up the canyon complex. The mouth of the canyon is a flat sandy wash margined with low cliff walls set apart by 0.2 to 1 km. Upstream, in much of the canyon system, the slopes and cliff walls attain heights of 250–350 meters (800–1200 ft). Four tributaries enter the canyon complex, draining watersheds of the Chuska Mountains. Tsaile Creek in Canyon del Muerto and Wheatfields, Whiskey, and Crystal Creeks in Canyon de Chelly are perennial most years.

¹Funding from the National Park Service Inventory and Monitoring Project. The Navajo Nation and the Navajo National Heritage Program made this project possible for me.

²Address for correspondence: 801 West Birch, Flagstaff, AZ 86001; E-mail: glenn_rink@hotmail.com.

³Daniela Roth of the Navajo Natural Heritage Program and Anne Cully of the National Park Service helped with project planning and permits. Canyon de Chelly National Monument staff, especially Ailema Benally, Christiansen Blacksheep, Gwen Gallenstein, Wilson Hunter, Scott Travis, Tom Workman, and William Yazzie helped with permits and logistics. Richard Halse supplied his field notes. Many others helped in the field. Tina Ayers, Marc Baker, Robert Dorn, Miriam Colson Fritts, H. David Hammond, Ken Heil, Max Licher, Nancy Morin, Daniela Roth, Andrew Salywon, Randy Scott, Stanley Welsh, and Michael Windham helped determine specimens. Tina Ayers, H. David Hammond, Steve O’Kane, Daniela Roth, Randy Scott and an anonymous referee reviewed the manuscript. This project was undertaken to partially fulfill the requirements of a Master of Science degree at Northern Arizona University. Flagstaff.

Received for publication May 8, 2005, and in revised form January 31, 2005.
Canyon de Chelly is in USDA Climate Zone 6 (USDA 2003). Precipitation is quite variable, but averages 246.1mm (9.65 in) per year at the visitor center near the mouth of the canyon. Upper elevations receive more precipitation than the lower canyons. July and August are the wettest months, with thunderstorms and cloudbursts that are highly variable in distribution; one area will receive a heavy rain while an adjacent area remains dry (Green and Sellers 1964, Sellers 1974).

The canyons have a long history of human disturbance. Betancourt and Davis (1984) found maize and Cleome pollen in a 3120 BP packrat midden near the junction of Canyon del Muerto and Canyon de Chelly suggesting an early arrival of agriculture in the canyons. Canyon de Chelly is perhaps most well-known for its Pueblo Period (AD1100–1300) cliff dwellings. Dine (Navajo people) probably began using the Canyon de Chelly area during the 1700s (Andrews 1985). Canyon de Chelly has been an important home and agricultural area, and played a significant role as a Dine refuge from both Spanish and American invaders during the late 1700s through the 1800s (Grant 1978). Hill (1938) and Jett and Spencer (1981) documented ditch agriculture in the mid 1800s, a practice that continues in the lower canyons. Fruit orchards date from the early 1700s (Jett 1974, 1977, 1979). In the last few decades, agriculture, grazing, tree planting, erosion control features, motor vehicle travel, and tourism have severely impacted the lower canyons. Upper canyons have been less severely affected. Human settlement, logging, chaining of woodlands, grazing, fuel wood gathering, and some dry-land farming have disturbed rim areas. Tsaile Reservoir, built at the head of Canyon del Muerto in 1963, submerges a small part of the Monument and alters the flow regime of Tsaile Creek (Brugge and Wilson 1976). The diversion for Wheatfields Lake alters the flow regime of Wheatfields Creek above Canyon de Chelly. The US Soil Erosion Service, in concert with the National Park Service, planted thousands of riparian trees, including native willow (Salix spp.) and cottonwood (Populus spp.), as well as exotic saltcedar (Tamarix spp.) and Russian olive (Elaeagnus angustifolia), in the canyon bottoms to alter channel geomorphology to increase the size of arable areas, to reduce erosion at archeological sites and to reduce sediment contribution to Chinle Wash (Brugge and Wilson 1976). These plantings began in the 1930s and have severely altered the hydrologic and geomorphic regime of the canyon bottoms.
resulting in a rapid transformation of the riparian community that continues to this day (Rink 2003). Canyon de Chelly National Monument is the third most-visited park in the region, after Grand Canyon National Park and Glen Canyon National Recreation Area (Etsitty 1994). Tourism severely impacts park administrative areas, which support dense stands of exotic plants such as Russian olive (Acroptilon repens), cheat grass (Bromus tectorum), barley (Hordeum murinum), sweetclover (Melilotus spp.), and Russian thistle (Salsola spp.). Areas surrounding White House Ruin, Antelope House Ruin, and Mummy Cave Ruin, the three most-visited tourist sites, and the roads to these sites are severely trampled and compacted.

Vegetation ranges from desert scrub and grassland at lower elevations to ponderosa pine (Pinus ponderosa) forests and dense stands of sagebrush (Artemisia tridentata) at upper elevations. Piñon-juniper (Pinus edulis—Juniperus osteosperma) woodland and riparian vegetation communities thrive within this range (Halse 1973, Dennis 1975). Douglas-fir (Pseudotsuga menziesii) and aspen (Populus tremuloides) stands grow on north-facing slopes within the canyons at elevations as low as 1830 m (6000 ft). Piñon-juniper communities are more extensive than any other community type (Harlan and Dennis 1976). Both, the ratio of piñon to juniper and overall cover increase with elevation. Sagebrush occupied 9% of the land above 1900 m (6200 ft) in the 1970s. Upper canyon talus communities include box elder (Acer negundo), Gambel oak (Quercus gambelii), mockorange (Dieria rupicola), Utah juniper, piñon pine, and rabbitbrush (Chrysothamnus spp.), prevalent in the lower canyons, or columbine (Aquilegia micrantha) and monkeyflower (Mimulus eastwoodiae), prevalent throughout.

H. E. Bailey and R. Halse were the most important botanical collectors in the Monument during the 1900s. H. E. Bailey (Bailey and Bailey 1941) collected Canyon de Chelly specimens, now at JEPS, while working on the Vegetation Type Map Survey of U.S. National Parks in 1936. Halse (1973) spent 60 days in the field working for the Antelope House Project (Morris 1985) and catalogued 474 botanical entities, including 44 collected by Harlan and Dennis (1976) during their plant geography work at Canyon de Chelly (ARIZ). Halse collected in all of the main canyons at least once, but spent much of his time in lower Canyon del Muerto, close to Antelope House. Later plant collectors included N. Hand (ASC and Canyon de Chelly Herbarium (CACH), D. Demaree (CACH), D. Lindsay and F. Ranzoni (VAS), V.O. Mayes (Mayes and Rominger, 1994 (ASC)), D. Roth of the Navajo Nation Natural Heritage Program (NAVA), and K. Heil (SJNM).

Methods. Where appropriate, I followed the standards for floras as identified by Palmer et al. (1995). The area surveyed was within Canyon de Chelly National Monument as shown on US Geological Survey topographic maps, with boundaries roughly one-half-mile back from the rims of the canyons (Brugge and Wilson 1976; Fig. 2). I documented botanical entities by both database searches and by field collecting, spending 68 days during 2001–2003 (April–November) purposefully searching for rare, exotic, and new plant records. Another 42 days were spent on other projects in the area with plant collecting as a secondary objective. I gave particular attention to riparian areas; steep slopes and cliffs; sand dunes, shale, limestone, and salty sub-
vouchers are curated at ASC, CACH, NAVA, UNM and SJNM. The ASC database at www.nau.edu/~deaver/database.htm contains information related to these collections.

Results. Plants documented for the Monument now include 93 families, 381 genera, 771 species, eight subspecies, 14 varieties, and five hybrids; a total of 797 subgeneric taxa. These numbers reflect subspecific entities only in cases when another subspecific entity within that species was already in the checklist. For example, Asclepias asperula (Decne.) Woods, consists of two subspecies, ssp. asperula (Decne.) Woods. and ssp. capricornu (Woods.) Woods. in Canyon de Chelly, one added to the species count and one in addition to the subspecies count as per Heil and O’Kane (2003). One hybrid was also included in the species count because neither parent is known for the area.

Database searches at ARIZ, ASC, SJNM, NAVA, MNA, UNM, WAAC, and CACH revealed 46 new records. Prior to the addition of specimens from this work, numbers of Canyon de Chelly specimens at each of these herbaria were: ARIZ, 497, database 50% complete as of March, 2002; ASC, 28, database 10% complete as of March, 2003; CACH, 438, database complete; MNA, 22, database 75% complete as of February, 2003; NAVA, 22, database complete; SJNM, 76, database complete; UNM, five, database 60% complete as of February, 2003. WAAC databases include about 2500 plant specimens related to Canyon de Chelly, including taxa not vouched elsewhere. Unfortunately provenience was not recorded for most of their specimens, and many are not from Canyon de Chelly. Eleven families, 60 genera, 243 species, three subspecies, seven varieties, and three hybrids were added from 1335 collections.

Discussion. Precipitation at the Canyon de Chelly Visitor Center was 166.6 mm during 2001 and 138.9 mm during 2002, as compared to an average of 241.6 mm. The year 2002 was the driest on record. Drought during the survey probably reduced the likelihood for some species to be seen, but it also allowed for the detection of others that may not have been noted during wetter times. Cacti often bloom more profusely during dry years (D. Pinkava, Arizona State University, pers. comm.) For instance, I noticed Opuntia X viridiflora where a knowledgeable local observer had never seen it bloom before, despite having visited the spot regularly over the course of 60 years. Had the plant not been in bloom, I am sure I would not have noticed it.

New records in families and groups deliberately sought are as follows: Boraginaceae-3, Cactaceae-3, Chenopodiaceae-7, Cyperaceae-18, Juncaceae-3, Poaceae-52, aquatics-13, horticultural introductions-15. Twenty-three new records were found during April and October, months when botanists don’t often collect. Eleven new records occurred on substrates that are rare within the Monument, eight in sand dunes, three on shales. I found 14 new records in hanging gardens, 44 in disturbed areas, 68 in little-visited side canyons, and 91 in riparian areas. I found 90 new records during only 12 days of collecting in the uppermost canyons, the most productive areas for finding new botanical entities. After discounting horticultural introductions, seven percent of the new records were of exotics, less than the percentage (10.4) of exotics now known for the Monument. I did not find nearly 100 of the 543 previously recorded subgeneric taxa and I saw 107 of the 254 new records only once. To
Subgeneric taxa accumulation was derived by noting the period of the first known collection (as indicated by collector, shown in the checklist preamble) of each subgeneric taxon.

me, this suggests that many botanical entities at Canyon de Chelly are widely scattered or uncommon (in either time or space). Only 125 of the 771 species in the checklist are trees or shrubs which are easily detectable and identifiable all year long. The remaining 646 are herbaceous perennials and annuals that for much of their life cycle are undetectable root crowns or seeds. Low detectability presents difficulties for inventory work in the desert southwest where annuals and herbaceous perennials dominate floras. Figure 3 shows the accumulation of subgeneric taxa from 1930 through 2003. Subgeneric taxa accumulation was derived by noting the period of the first known collection (as indicated by collector, shown in the checklist preamble) of each subgeneric taxon. Halse’s (1973), my own, and H.E. Bailey’s collections have made the most significant contributions to the checklist.

Four plants on the Navajo Endangered Species List (NESL 2001) have been found at the Monument. *Carex specuicola (ESA Listed Threatened (Federal Register Vol. 50, No 89, 19370–19374), NESL G3, threatened) and *Zygadenus vaginatus (NESL proposed G4, candidate (2005)) were found only in hanging gardens. *Allium gooddingii (NESL G3, threatened) and *Cystopteris utahensis (NESL G4 candidate) have been found only in riparian areas. *Allium gooddingii has not been found since 1973, and is currently considered extirpated at Canyon de Chelly (D. Roth, Navajo Natural Heritage Program, 2005, pers. comm.) *Astragalus chuskanus and a white-flowered population of *Mertensia oblongifolia, both endemic to the Chuska Mountains and Sonsela Buttes, are now vouchered for the Monument. *Cirsium chellyense, the most common thistle in and around Canyon de Chelly, and *Lupinus caudatus subsp. cutleri are also endemic to the Monument and surrounding area. Native people probably imported *Juglans major for its edible nuts and dye, *Nolina microcarpa and *Proboscidea parviflora for weaving materials, and *Opuntia X viridiflora for its attractive flowers (Elmore 1943; Whiting 1939). The floras of the two main canyon systems are generally similar, however 80 botanical entities within the Monument have only been found in Canyon de Chelly and its tributaries. Another 60 have only been found in the Canyon del Muerto system. More collecting will yield broader ranges within the Monument, but many botanical entities seem to be restricted to one canyon or the other. *Woodia neomexicana, *Aralia racemosa, *Ratibida columnifera, Senecio wootonii, *Astragalus chuskanus, *Menodora scabra, *Parnassia palustris var. parviflora, *Besseya arizonica, *Penstemum virgatus, *Echanteda flavescens, and *Sorghastrum nutans are apparently limited to the Canyon de Chelly system. *Picea pungens, *Chamaecodina scaposa, *Ranunculus longirostris, *R. macounii, *Carex specuicola, *Allium bisceptrum var. palmeri, *A. gooddingii, and *Torreyochloa pallida are apparently limited to the Canyon del Muerto system.

**Literature Cited**


Annotated Checklist of Vascular Plants of Canyon de Chelly National Monument

I arranged this checklist alphabetically by family within the following orders: Pteridophyta, Pinophyta, Magnoliopsida, and Liliopsida. Both scientific names and common names follow Integrated Taxonomic Information System (ITIS 2003). Annotational abbreviations as follows: native (N) vs exotic (E) (follows ITIS), I chose (from ITIS) the single common name that seemed most appropriate, horticultural introduction (H) (pers. obs.);

Abundance follows Palmer, et al. (1995) as follows: 5, Abundant, dominant or codominant in one or more common habitats; 4, Frequent, widely scattered but not difficult to find; 3, Infrequent, difficult to find with few individuals or colonies but found in several locations; 2, Rare, very difficult to find and limited to one or very few locations or uncommon habitats; 1, Absent, not found but found in a previous survey from the same or similar sites or was otherwise suspected to occur. Distribution; cyn=canyon, CdM=Cyn del Muerto, CdC=Cyn de Chelly, hg=hanging garden, h rep= Halse reported, jct= confluence of CdC & CdM, MC=Monument Cyn, T=Thunderbird Lodge, VC= NPS visitor center, WH=White House Ruin. Specimen citations include a code (as follows) for the collector, and their collection number, where available. Citations (Collectors (herbarium where most of their specimens are located, their period of activity)); B=Bailey (JEPS, 1935), Ba= Barr (ARIZ, 1960–1971), Bu=Burgess (ARIZ, CACH, early 1970s), C=Cronyn (CACH, Western Museum Laboratories (WML), late 1930s–1940), Cu=Cutler Goodman, & Payson (CACH, WML, late 1930s), D=Dennis (ARIZ, CACH, early 1970s), De= Demaree (CACH, 1950s–1960), F=Farmer (University of New Mexico (UNM), 1935), Ha=Halse (ASC, CACH, early 1970s), H=Ham (ASC, CACH, 1969), H=Hevly (ASC, 1970s), H=Hevly (ASC, 1970s), H=Hevly (ASC, 1970s), K=King (ARIZ, 1938), L=Lindsay (VAS, 1960s), M=Mason (ASC, 1938), R=Ranzoni (VAS, 1960s), R=Roth (NAVA, ASC, 1990s to 2000s), V=Van Devender (ARIZ, 1999), W=Western Area Archeological Center, Tucson (WAAC specimen labels often don’t include collector name, but were collected in the early 1970s related to the Antelope House Project.) Where no collection number is given, that collection number is unknown. Exhaustive citations are given in Rink (2003).

Aspleniaceae

Asplenium resiliens Kunze. BLACKSTEM Spleenwort, N, 2, rock crannies, lower canyons, h11

Dryopteridaceae

Cystopteris fragilis (L.) Bernh. BRITTLE BLADDERFERN, N, 0, cracks in walls of upper CdM, h329
Cystopteris reevesiana Lellinger. REEVE’S BLADDERFERN, N, 1, cliffs above pool in upper MC, r505
Cystopteris tennesseensis Shaver. TENNESSEE BLADDERFERN, N, 0, Tse Taa Ruins, upper CdM, h 192
Cystopteris tenuis (Michx.) Desv. BRITTLE BLADDERFERN, N, 1, cliffs above pool in upper MC, r505

Equisetaceae

Equisetum arvense L. WESTERN HORESETAIL, N, 3, upper cyns & rims, h192
Equisetum hyemale L. HORESETAIL, N, 1, Black Rock Cyn, h193
Equisetum laevigatum A. Braun. HORESETAIL, N, 0, h rep as common through-out, B356
Equisetum variegatum Schleich. ex F. Weber & D.M.H. Mohr. VARIEGATED HORESETAIL, N, 1, dry sandy areas, r127

Pteridaceae

Adiantum capillus-veneris L. MAIDENHAIR FERN, N, 3, seeps in lower cyns, h411
Cheilanthes feesi T. Moore. SLENDER LIPFERN, N, 3, dry cliffs, B225

Selaginellaceae

Selaginella mutica D.C. Eat. ex Underwood. BLUNT-TAILF SPIKEMOSS, N, 3, dry cliffs & slopes, H

Cupressaceae

Juniperus osteosperma (Torr.) Little. UTAH JUNIPER, N, 5, through-out, B237
Juniperus monosperma (Engelm.) Sarg. ONE-SEED JUNIPER, N, 2, perhaps common through-out, m(ASC)
Juniperus scopulorum Sarg. ROCKY MOUNTAIN JUNIPER, N, 4, upper cyns, h787
Juniperus scopulorum var. viridiflora D. Hill. (Rehder, 1987) WESTERN RED CEDAR, H, 1, T, r1563
Platycladus orientale (L.) Franco. ORIENTAL ARBORVITAE, H, 1, T, r1559

Ephedraceae
Ephedra cutleri Peebles. CUTLER’S EPHEDRA, N, 3, probably common at sandy sites, B
Ephedra torreyana Wats. TORREY EPHEDRA, N, 0, perhaps common, undercollected, B234
Ephedra viridis Coville. MORMON TEA, N, 4, lower cyns & rims, B247

Pinaceae
Picea engelmannii Parry ex Engelm. ENGELMANN SPRUCE, H, 1, T-bird Lodge, rl955
Picea pungens Engelm. BLUE SPRUCE, N, 1, upper CdM, h755
Pinus edulis Engelm. PINYON PINE, N, 5, through-out, B236
Pinus ponderosa P. & C. Lawson. PONDEROSA PINE, N, 5, middle cyns & upper CdM, 787
Pseudotsuga menziesii (Mirbel) Franco. DOUGLAS FIR, N, 5, upper & middle cyns, B235

Aceraceae
Acer glabrum Torr. ROCKY MOUNTAIN MAPLE, N, 3, upper cyns, r496
Acer negundo L. BOX ELDER, N, 5, through-out, hr10

Amaranthaceae
Amaranthus albus L. PIGWEED, N, 2, disturbed sites, h749
Amaranthus blitoides S. Wats. PROSTATE PIGWEED, E, 3, disturbed sites through-out, h114
Amaranthus hybridus L. SMOOTH AMARANTH, N, 0, h rep as common on cyn floor, h690
Amaranthus palmeri S. Wats. PALMER AMARANTH, N, 0, probably common, upper CdM, r1001
Amaranthus powellii S. Wats. POWELL AMARANTH, N, 0, Wheatfields Canyon, h533
Amaranthus retroflexus L. REDROOT AMARANTH, E, 2, dist. sites, upper cyns & rims, r885

Anacardiaceae
Rhus trilobata Nutt. SKUNK BUSH, N, 3, through-out, h22
Toxicodendron rydbergii (Small) Greene. POISON IVY, N, 3, through-out cyns, B361

Apiaceae
Aletes macdougalii Coult. & Rose. MACDOUGAL’S ALETS, N, 3, <6500’, hg and ledges, h46
Cicuta douglasii (DC.) Coult. & Rose. WATER HEMLOCK, N, 0, h rep. as common in upper CdM, h465a

Conioselinum scopulorum (Gray) Coult. and Rose. ROCKY MOUNTAIN HEMLOCK PARSLEY, N, 0, h rep. as common in upper CdM, h675
Cymopterus aculeatus var. fendleri (Gray) Goodrich. FENDLER’S SPRING PARSLEY, N, 3, lower cyns and rims, C
Cymopterus bulbosus A. Nels. BULBOUS SPRING PARSLEY, N, 2, rim of MC and near T, r195
Cymopterus purpurascens (Gray) M.E. Jones. UTAH SPRING PARSLEY, N, 1, upper cyns & rims 6000’, C
Cymopterus purpureus S. Wats. PURPLE SPRING PARSLEY, N, 2, upper rims >7000’, r364
Ligusticum porteri Coult. & Rose. PORTER’S LIGUSTICUM N, 1, upper cyns, h rep as common, h270
Lomatium nevadense var. nevadense (Wats.) Coult. & Rose. NEVADA BISCUITROOT, N, 2, upper CdM & CdC, r153
Lomatium nevadense var. parishii (Coult. & Rose) Jepson. PARISH BISCUITROOT, N, 0, upper rims, C
Oxypolis fendleri (Gray) Heller. FENDLER’S COWBANE, N, 0, upper CdM, h645
Pseudocymopterus montanus (Gray) Coult. & Rose. FALSE SPRING PARSLEY, N, 2, upper slopes and cyns, H

Apocynaceae
Apocynum cannabinum L. DOGBANE, N, 2, upper cyns, h674

Araliaceae
Aralia racemosa L. AMERICAN SPIKENARD, N, 2, upper CdC & Black Rock Cyn., r882

Asclepiadaceae
Asclepias asperula subsp. asperula (Decne.) WOODSON ANTELOPE HORNS, N, 2, lower cyns & rims, B305
Asclepias asperula subsp. capricornu (Decne.) Woodson. ANTELOPE HORNS, N, 0, lower cyns & rims, R
Asclepias engelmannii Woodson. ENGELMANN’S MILKWEED, N, 0, Baby Trail, lower CdM, h424
Asclepias involucrata Engelm. DWARF MILKWEED, N, 1, upper CdM & upper MC, h706
Asclepias subverticillata (Gray) Vail. WHORLED MILKWEED, N, 3, through-out, De
Asclepias tuberosa L. BUTTERFLY WEED, N, 2, upper CdM & upper MC, h280

Asteraceae
Achillea millefolium var. occidentalis DC. YARROW, N, 4, >6000’, h
Acroptilon repens (L.) DC. RUSSIAN Knapweed, E, 5, disturbed sites through-out, H
Ageratina herbacea (Gray) King & H.E. Robins. FRA GRANT SNAKEROOT, N, 2, upper cyn slopes, h706
Agoseris glauca (Pursh) Raf. PALE DANDELION, N, 1, rim >7200’, r542
Almutaster pauciflorus (Nutt.) A. & D. Lov. MARSH ASTER, N, 3, riparian, r1055
Ambrosia cantharica Hook. BURSAGE, N, 3, disturbed sites through-out, h726

This content downloaded from 134.114.107.52 on Wed, 25 Apr 2018 15:46:14 UTC
All use subject to http://about.jstor.org/terms
Ambrosia artesimisifolia L. RAGWEED, N, 1, CdC, r1023
Antennaria marginata Greene. WHITE MARGIN
PUSSYTOES, N, 2, rocky slopes through-out, h122
Antennaria parvifolia Nutt. LITTLE LEAF PUSSY-
TOES, N, 2, slopes >6000’, h930
Antennaria rosulata Rydb. KAIBAB PUSSYTOES, N,
3, sage flats >7000’, h359
Arnica chamissonis var. andina (Nutt.) Ediger &
Barkl. CHAMISSO ARNICA, N, 1, upper CdM,
h777
Artemisia campestris var. scouleriana (Hook.) Cronq.
ARTEMISIA, N, 4, >6000’, h121
Artemisia filifolia Torr. SAND SAGEBRUSH, N, 1,
Artemisia dracunculus L. FALSE TARRAGON, N,
Artemisia carruthii Wood ex Carruth. CARRUTH’S
Artemisia bigelovii Gray. BIGELOW SAGE, N, 4,
Artemisia biennis Willd. BIENNIAL WORMWOOD,
Artemisia arbuscula Nutt. LOW SAGEBRUSH, N, 4,
Arnica chamissonis var. andina (Nutt.) Ediger &
Antennaria rosulata Rydb. KAIBAB PUSSYTOES, N,
Antennaria marginata Greene. WHITE MARGIN
PUSSYTOES, N, 2, rocky slopes through-out, h122
Antennaria parvifolia Nutt. LITTLE LEAF PUSSY-
TOES, N, 2, slopes >6000’, h930
Antennaria rosulata Rydb. KAIBAB PUSSYTOES, N,
3, sage flats >7000’, h359
Arnica chamissonis var. andina (Nutt.) Ediger &
Barkl. CHAMISSO ARNICA, N, 1, upper CdM,
h777
Artemisia campestris var. scouleriana (Hook.) Cronq.
ARTEMISIA, N, 4, >6000’, h121
Artemisia filifolia Torr. SAND SAGEBRUSH, N, 1,
Artemisia dracunculus L. FALSE TARRAGON, N,
Artemisia carruthii Wood ex Carruth. CARRUTH’S
Artemisia bigelovii Gray. BIGELOW SAGE, N, 4,
Artemisia biennis Willd. BIENNIAL WORMWOOD,
Artemisia arbuscula Nutt. LOW SAGEBRUSH, N, 4,
Arnica chamissonis var. andina (Nutt.) Ediger &
Antennaria rosulata Rydb. KAIBAB PUSSYTOES, N,
Antennaria marginata Greene. WHITE MARGIN
PUSSYTOES, N, 2, rocky slopes through-out, h122
Antennaria parvifolia Nutt. LITTLE LEAF PUSSY-
TOES, N, 2, slopes >6000’, h930
Antennaria rosulata Rydb. KAIBAB PUSSYTOES, N,
3, sage flats >7000’, h359
Arnica chamissonis var. andina (Nutt.) Ediger &
Barkl. CHAMISSO ARNICA, N, 1, upper CdM,
h777
Artemisia campestris var. scouleriana (Hook.) Cronq.
ARTEMISIA, N, 4, >6000’, h121
Artemisia filifolia Torr. SAND SAGEBRUSH, N, 1,
Artemisia dracunculus L. FALSE TARRAGON, N,
Artemisia carruthii Wood ex Carruth. CARRUTH’S
Artemisia bigelovii Gray. BIGELOW SAGE, N, 4,
Artemisia biennis Willd. BIENNIAL WORMWOOD,
Artemisia arbuscula Nutt. LOW SAGEBRUSH, N, 4,
Arnica chamissonis var. andina (Nutt.) Ediger &
Antennaria rosulata Rydb. KAIBAB PUSSYTOES, N,
Antennaria marginata Greene. WHITE MARGIN
PUSSYTOES, N, 2, rocky slopes through-out, h122
Antennaria parvifolia Nutt. LITTLE LEAF PUSSY-
TOES, N, 2, slopes >6000’, h930
Antennaria rosulata Rydb. KAIBAB PUSSYTOES, N,
3, sage flats >7000’, h359
Arnica chamissonis var. andina (Nutt.) Ediger &
Barkl. CHAMISSO ARNICA, N, 1, upper CdM,
h777
Artemisia campestris var. scouleriana (Hook.) Cronq.
ARTEMISIA, N, 4, >6000’, h121
Artemisia filifolia Torr. SAND SAGEBRUSH, N, 1,
Artemisia dracunculus L. FALSE TARRAGON, N,
Artemisia carruthii Wood ex Carruth. CARRUTH’S
Artemisia bigelovii Gray. BIGELOW SAGE, N, 4,
Artemisia biennis Willd. BIENNIAL WORMWOOD,
Artemisia arbuscula Nutt. LOW SAGEBRUSH, N, 4,
Arnica chamissonis var. andina (Nutt.) Ediger &
Antennaria rosulata Rydb. KAIBAB PUSSYTOES, N,
Antennaria marginata Greene. WHITE MARGIN
PUSSYTOES, N, 2, rocky slopes through-out, h122
Antennaria parvifolia Nutt. LITTLE LEAF PUSSY-
TOES, N, 2, slopes >6000’, h930
Antennaria rosulata Rydb. KAIBAB PUSSYTOES, N,
3, sage flats >7000’, h359
Arnica chamissonis var. andina (Nutt.) Ediger &
Barkl. CHAMISSO ARNICA, N, 1, upper CdM,
h777
Artemisia campestris var. scouleriana (Hook.) Cronq.
ARTEMISIA, N, 4, >6000’, h121
Artemisia filifolia Torr. SAND SAGEBRUSH, N, 1,
Artemisia dracunculus L. FALSE TARRAGON, N,
Artemisia carruthii Wood ex Carruth. CARRUTH’S
Artemisia bigelovii Gray. BIGELOW SAGE, N, 4,
Artemisia biennis Willd. BIENNIAL WORMWOOD,
Artemisia arbuscula Nutt. LOW SAGEBRUSH, N, 4,
Arnica chamissonis var. andina (Nutt.) Ediger &
Antennaria rosulata Rydb. KAIBAB PUSSYTOES, N,
Antennaria marginata Greene. WHITE MARGIN
PUSSYTOES, N, 2, rocky slopes through-out, h122
Antennaria parvifolia Nutt. LITTLE LEAF PUSSY-
TOES, N, 2, slopes >6000’, h930
Antennaria rosulata Rydb. KAIBAB PUSSYTOES, N,
3, sage flats >7000’, h359
Arnica chamissonis var. andina (Nutt.) Ediger &
Barkl. CHAMISSO ARNICA, N, 1, upper CdM,
h777
Artemisia campestris var. scouleriana (Hook.) Cronq.
ARTEMISIA, N, 4, >6000’, h121
Artemisia filifolia Torr. SAND SAGEBRUSH, N, 1,
Artemisia dracunculus L. FALSE TARRAGON, N,
Artemisia carruthii Wood ex Carruth. CARRUTH’S
Artemisia bigelovii Gray. BIGELOW SAGE, N, 4,
Artemisia biennis Willd. BIENNIAL WORMWOOD,
Artemisia arbuscula Nutt. LOW SAGEBRUSH, N, 4,
Arnica chamissonis var. andina (Nutt.) Ediger &
Antennaria rosulata Rydb. KAIBAB PUSSYTOES, N,
Antennaria marginata Greene. WHITE MARGIN
PUSSYTOES, N, 2, rocky slopes through-out, h122
Antennaria parvifolia Nutt. LITTLE LEAF PUSSY-
TOES, N, 2, slopes >6000’, h930
Antennaria rosulata Rydb. KAIBAB PUSSYTOES, N,
3, sage flats >7000’, h359
Arnica chamissonis var. andina (Nutt.) Ediger &
Barkl. CHAMISSO ARNICA, N, 1, upper CdM,
h777
Artemisia campestris var. scouleriana (Hook.) Cronq.
ARTEMISIA, N, 4, >6000’, h121
Artemisia filifolia Torr. SAND SAGEBRUSH, N, 1,
Artemisia dracunculus L. FALSE TARRAGON, N,
Artemisia carruthii Wood ex Carruth. CARRUTH’S
Artemisia bigelovii Gray. BIGELOW SAGE, N, 4,
Artemisia biennis Willd. BIENNIAL WORMWOOD,
Artemisia arbuscula Nutt. LOW SAGEBRUSH, N, 4,
Erigeron pumilus Nutt. LOW DAISY, N, 2, mid cyns, r389
Erigeron speciosus var. macranthus (Nutt.) Cronq. ASPEN DAISY, N, 3, upper cyns, riparian, h473
Erigeron speciosus var. speciosus (Lindl.) DC. ASPEN DAISY, N, 3, upper cyns, riparian, r725
Eurybia radulina (Gray) Nesom. ROUGHLEAFASTER, H, 1, T, r1404
Gaillardia pinnatifida Torr. BLANKETFLOWER, N, 3, lower cyns & rims, h188
Gnaphalium exilifolium A. Nels. SLENDER CUDWEEDE, N, 0, Tsai Lake spillow, W
Gnaphalium palustre Nutt. CUDWEEDE, N, 1, riparian through-out, r873
Grindelia nuda var. aphanactis (Rydb.) Nesom. RAYLESS CUDWEEDE, N, 3, through-out, B350
Grindelia squarrosa var. serrulata (Rydb.) CURLY-CUDWEEDE, N, 0, near Antelope House Ruin, h654
Gutierrezia microcephala (DC.) Gray. THREADLEAF CUDWEEDE, N, 0, Spider Rock Overlook, R480
Gutierrezia sarothrae (Pursh) Britt. & Rusby. BROOM CUDWEEDE, N, 5, through-out, De
Helianthella microcephala (Gray) Gray. PURPLE-DISK HELIANTHELLA, N, 4, through-out, h716
Helianthus annuus L. ANNUAL SUNFLOWER, E, 2, through-out, esp. lower cyn rims, R144
Helianthus petiolaris Nutt. PRAIRIE SUNFLOWER, N, 2, disturbed sites through-out, h550
Helianthus lessiiflorus Nutt. SHOWY GOLDENEYE, N, 2, >6500', r730
Heterotheca villosa (Pursh) Shinn. HAIRY GOL
Hymenopappus filifolius var. lugens Hook. YELLOW CUTCUTLEAF, N, 5, through-out, B310
Hymenopappus filiformis var. lugens Hook. YELLOW CUTCUTLEAF, N, 5, through-out, h204
Hymenopappus mexicanus Gray. Mexican WOOL-LYWHITE, N, 1, upper MC, r958
Hymenoxys richardsonii var. floribunda (Gray) Parker. FALSE THREADLEAF, N, 1, upper cyns & rims, W
Heliumovis multiflora Nutt. SHOWY GOLDENEYE, N, 2, >6500', r730
Hymenoxys richardsonii var. floribunda (Gray) Parker. FALSE THREADLEAF, N, 1, upper cyns & rims, W
Iva xanthifolia Nutt. HORSEWEED, N, 0, near Antelope House Ruin, h725
Lactuca serriola L. WILD LETTUCE, E, 2, through-out, esp. lower cyn rims, h480
Lactuca tatarica var. pulchella (Pursh) Breitung. ANNUAL CUDWEEDE, N, 1, upper CdM, h816
Lactuca tatarica var. pulchella (Pursh) Breitung. ANNUAL CUDWEEDE, N, 1, upper CdM, h666
Lactuca viridula (Gray) H. & A. SKELETONPLANT, N, 1, upper MC, r489
Lactuca viridula (Gray) H. & A. SKELETONPLANT, N, 1, upper MC, r489
Lactuca serriola L. WILD LETTUCE, E, 2, through-out, esp. lower cyn rims, B350
Lactuca serriola L. WILD LETTUCE, E, 2, through-out, esp. lower cyn rims, B350
Lactuca serriola L. WILD LETTUCE, E, 2, through-out, esp. lower cyn rims, B350
Lactuca serriola L. WILD LETTUCE, E, 2, through-out, esp. lower cyn rims, B350
Lactuca serriola L. WILD LETTUCE, E, 2, through-out, esp. lower cyn rims, B350
Lactuca serriola L. WILD LETTUCE, E, 2, through-out, esp. lower cyn rims, B350
Lactuca serriola L. WILD LETTUCE, E, 2, through-out, esp. lower cyn rims, B350
Lactuca serriola L. WILD LETTUCE, E, 2, through-out, esp. lower cyn rims, B350
Lactuca serriola L. WILD LETTUCE, E, 2, through-out, esp. lower cyn rims, B350
Lactuca serriola L. WILD LETTUCE, E, 2, through-out, esp. lower cyn rims, B350
Lactuca serriola L. WILD LETTUCE, E, 2, through-out, esp. lower cyn rims, B350
Lactuca serriola L. WILD LETTUCE, E, 2, through-out, esp. lower cyn rims, B350
Lactuca serriola L. WILD LETTUCE, E, 2, through-out, esp. lower cyn rims, B350
Lactuca serriola L. WILD LETTUCE, E, 2, through-out, esp. lower cyn rims, B350
Symphyotrichum falcatum var. falcatum (Lindl.) Nesom. WHITE PRAIRIE ASTER, N, 3, through-out, H
Symphyotrichum laeve var. laeve (L.) A. & D. L?ve. SMOOTH BLUE ASTER, N, 1, upper cyns, r1314
Symphyotrichum lanceolatum var. hesperium (Gray) Nesom. WHITE PANICLE ASTER, N, 3, mid–upper cyn, h
Symphyotrichum praeltum var. praeltum (Poir.) Nesom. WILLOWLEAF ASTER, N, 0,? , h450
Taraxacum laevigatum (Willd.) DC. ROCK DANDELION, E, 4, through-out, h28
Taraxacum officinale Weber. DANDELION, N, 0, Battle Cove Ruin, h692
Tetradymia canescens DC. GRAY HORSEBRUSH, N, 2, upper cyn slopes, D
Tetraneuris ivesiana Greene. IVES' FOUR-NERVE DAISY, N, 3, rims through-out, B249
Thelesperma megapotamicum (Spreng.) Kuntz. HOPI TEA GREENTHREAD, N, 2, mid-lower cyns through-out, h392
Thelesperma nectarium Gray. WHITE PANICLE ASTER, N, 3, mid-lower cyns through-out, h28
Thelesperma nectarium var. hesperium (Gray) Nesom. WHITE PANICLE ASTER, N, 3, mid-lower cyns through-out, h392
Thelesperma praeltum var. praeltum (Poir.) Nesom. WILLOWLEAF ASTER, N, 0,? , h450
Thelesperma salicifolium (Nutt.) B. & R. SMOOTH BLUE ASTER, N, 1, upper cyns, H
Thelesperma subnudum Gray. NAVAJO TEA, N, 2, mid-lower cyns and rims, R484
Townsendia exscapa (Richards.) Porter. STEMMLESS TOWNSEND DAISY, N, 0,? , m
Townsendia incana Nutt. HOARY TOWNSEND DAISY, N, 3, through-out, high slopes, h7
Townsendia strigosa Nutt. HOARY TOWNSEND DAISY, N, 0, dunes near VC, h781
Tragopogon dubius Scop. GOAT'S BEARD, E, 2, through-out, h rep. as common at head of CdM, h267
Verbesina encelioides subsp. exauriculata (Robins. & Greem.) J.R. Coleman. GOLDEN CROWN BEARD, E, 2, through-out, C
Verbesina microptera DC. TEXAS CROWNBEARD, N, ? , W49057
Wyethia scabra Hook. MULES-EARS, N, 1, mesa top, R482
Xanthium strumarium var. canadense (P. Mill.) Torr. & Gray. CANADA COCKLEBURR, N, 4, through-out, riparian, h409

Berberidaceae
Mahonia repens (Lindl.) G. Don. CREEPING BARBERRY, N, 3, through-out, high slopes, h7

Betulaceae
Alnus incana subsp. tenuifolia (Nutt.) Breitung. THIN-LEAF ALDER, N, 2, upper cyns, riparian, r577
Alnus oblongifolia Torr. ARIZONA ALDER, N, 2, upper cyns, riparian, h272
Betula occidentalis Hook. WATER BIRCH, N, 3, upper cyns, riparian, h272b

Bignoniaceae
Catalpa bignonioides Walt. SOUTHERN CATALPA, H, 1, Draper Ranch, end of road in CdM, B36

Boraginaceae
Cryptantha bakeri (Greene) Payson. BAKER CATSEYE, N, 2, upper cyn rims >6900', h rep as common through-out, h112
Cryptantha cinerea var. cinerea (Greene) Cronq. BOWNUT CRYPTANTHA, N, 3, rky slopes & rip, upper cyns, H
Cryptantha cinerea var. jamesii Cronq. JAMES CATSEYE, N, probably mis IDed, Cronquist et al. (1984) say var. jamesii doesn’t occur here, h887
Cryptantha confertiflora (Greene) Payson. BASIN YELLOW CRYPTANTHA, N, 2, lower cyn rims, r394
Cryptantha crustisepala (Torr. & Gray) Greene. DEERTONGUE, N, 2, lower cyns, B319
Cryptantha fendleri (Gray) Greene. FENDLER'S CRYPTANTHA, N, 1, Wheatfields Cr., r830
Cryptantha flavens (Nels.) Payson. PLATEAU YELLOW CATSEYE, N, 2, lower sandy rims, K
Cryptantha fulvouscens (Wats.) Pays. TAWNY CATSEYE, N, 2, lower rims, B215
Cryptantha gracilis Osterh. NARROWSTEM CATSEYE, N, 3, lower cyns & rims, D
Cryptantha pteroacarpa (Torr.) Greene. WINGNUT CRYPTANTHA, N, 2, mid-lower cyns, D
Lappula occidentalis var. cupulata (Gray) Higgins. FLAT-SPINE SHEEPBERRY, N, 0, NPS housing area, D
Lappula occidentalis var. occidentalis (S. Wats.) Greene. DESERT STICKSEED, N, 3, through-out, B318
Lithospermum incisum Lehm. FRINGED PUCCOON, N, 2, lower cyns, D
Lithospermum multiforum Torr. ex Gray. MANY-FLOWERED STONESEED, N, 2, through-out, h318
Mertensia oblongifolia (Nutt.) G. Don. OBLONG-GLEAF BLUEBELLS, N, 2, Whiskey Cr, Black Rock Cyn, white-flowered form is endemic to Chuska Mtms/Canyon de Chelly area; r435

Brassicaceae
Alyssum alyssoides (L.) L. PALE ALYSSUM, E, 0, NPS housing area, h50
Alyssum minus (L.) Rothm. ALYSSUM, E, 3, through-out, r183
Arabis fendleri (S. Wats.) Greene. FENDLER'S ROCKCRESS, N, 3, through-out, r158
Arabis perennans S. Wats. PERENNIAL ROCKCRESS, N, 0, through-out, Arbis is in revision, A. fendleri & A. perennans are often confused. Some of Halse’s A. perennans specimens at UA may have been annotated to an unknown taxon (P. Jenkins (ARIZ), pers comm), D
Arabis pulchra var. pullens M. E. Jones. PALE ROCKCRESS, N, 1, Battle Cove Ruin, r290
Camelina microcarpa Andrzej. FALSE FLAX, E, 2, through-out, D
Capsella bursa-pastoris (L.) Medic. SHEPHERD’S PURSE, E, 2, lower cyn, H rep. as through-out, D
Cardamine cordifolia Gray. HEARTLEAF BITTERCRESS, N, 1, Wheatfields Cr, r1328
Chorispora tenella (Pallas) DC. BLUE MUSTARD, E, 3, disturbed sites, lower cyns, h218
Descaria incana subsp. viscosa (Ryd.) MOUNTAIN TANSY MUSTARD, N, 0, upper CdM, h486
Descaria pinnata subsp. halictorum (Cockerell) Detting. WESTERN TANSY MUSTARD, N, 3, disturbed sites, lower cyns, B
Descurainia pinnata subsp. ochroleuca (Woot.) Detling. WESTERN TANSY MUSTARD, N, 3, lower cys, probably same taxon as D. p. subsp. halictorum, B341

Descurainia sophia (L.) Webb ex Prantl. FLAXWEED TANSY MUSTARD, N, 3, low er cys, probably same taxon as D. p. subsp. halictorum, B341

Draba cuneifolia var. cuneifolia Nutt. ex Torr. & Gray. WEDGELEAF DRABA, DR, 3, through-out, h19

Draba nemorosa L. WOODLAND DRABA, N, 2 upper Black Rock and MC; r437

Draba petrophila var. petrophila Greene. SANTA RITA MOUNTAIN DRABA, N, 1, horse trail into Coyote/Wheatfield s; r594

Erysimum capitatum (Dougl. ex Hook.) Greene. WESTERN WALLFLOWER, N, 2 through-out cys, riparian, D

Erysimum repandum L. REPAND WALLFLOWER, E, 0, NPS housing area, h778

Lepidium densiflorum Schrad. PEPPERWEED, N, 3, mid-lower cys, B317

Lepidium montanum Nutt. MOUNTAIN PEPPERWEED, N, 0, lower cys, probably var. jonesii, D

Lepidium montanum var. jonesii (Rydb.) Hitch. JONES PEPPERWEED, N, 2, lower cys, r281

Rorippa sinuata (Nutt.) Hitchcock. SPREADING YELLOWCRESS, N, 1, dry cattle tanks nr park housing, rl959

Rorippa sphaerocarpa (Gray) Britt. ROUNDFRUIT YELLOWCRESS, N, 1, upper CdM and MC, h633

Sisymbrium altissimum L. TUMBLE MUSTARD, E, 3, lower cys, Ha

Stanleya pinnata (Pursh) Britt. DESERT PRINCE’S PLUME, N, 3, upper cys, h820

Streptanthella longirostris (Wats.) Rydb. LONGBEAK FIDDLE MUSTARD, N, 3, lower cys & rims, h313

Cactaceae

Echinocereus triglochidiatus var. mojavensis (Engelm. & Bigelow) L. Benson MOHAVE HEDGEHOG CACTUS, N, 3, through-out, r385

Escobaria vivipara var. vivipara (Nutt.) Buxbaum. SPINYSTAR, N, 3, rims >6800’, h822

Opuntia erinacea Engelm. & Bigelow ex Engelm. GRIZZLYBEAR PRICKLYPEAR, N, 4, lower cys, r310

Opuntia fragilis (Nutt.) Haw. FRAGILE CACTUS, N, 2 upper cys & rims, r1045

Opuntia macrorhiza var. macrorhiza (Engelm. & Bigelow) Britt. MOUNTAIN PRICKLYPEAR, N, 1, upper cys, h820

Opuntia phaeacantha Engelm. BROWNSPINE PRICKLYPEAR, N, 4, lower cys, Bu763

Opuntia polyacantha var. polyacantha Haw. HAIRSPINE PRICKLYPEAR, N, 3, lower cys, B373

Opuntia whipplei Engelm. & Bigelow. WHIPPLE’S CHOLLA, N, 4, through-out, B116

Opuntia X viridiflora Britt. & Rose (pro sp.) RAT-TAIL CHOLLA, H, 1, fence line at Standing Cow Ruin, CdM; r1290

Sclerocactus whipplei (Engelm. & Bigelow) Britton. WHIPPLE’S FISHHOOK CACTUS, N, 2, lower cys & rims, Bu761

Campanulaceae

Campanula parryi Gray. HAREBELL, N, 3, upper most cys and hgs, h460

Cannabinaceae

Humulus lupulus var. lupuloides E. Small. ARIZONA HOPS, N, 2, lower cys, h481

Capparaceae

Cleome serrulata Pursh. ROCKY MOUNTAIN BEE-PLANT, N, 4, lower cys, B274

Caprifoliaceae

Lonicera korolkowii Stapf. BLUELEAF HONEY-SUCKLE, H, 1, T, r1141

Symphoricarpos oreophilus Gray. MOUNTAIN SNOWBERRY, N, 3, slopes, upper cys, h934

Caryophyllaceae

Arenaria eastwoodiae var. eastwoodiae Rydb. EASTWOOD SANDWORT, N, 2, sandy soils, lower slopes, Ha

Arenaria eastwoodiae var. adenophora Kearney & Peebles. EASTWOOD SANDWORT, N, 0, Battle Cove Ruin, h116

Arenaria fendleri var. fendleri Gray. FENDLER’S SANDWORT, N, 2, upper cys, r837

Arenaria fendleri var. brevifolia (Maguire) Maguire. FENDLER’S SANDWORT, N, 3, slopes through-out, h397

Arenaria lanuginosa subsp. saxosa (Gray) Maguire. SPREADING SANDWORT, N, 2, cys through-out, W

Arenaria serpyllifolia L. THYMELEAF SANDWORT, E, 0, near Sliding House Overlook, H

This content downloaded from 134.114.107.52 on Wed, 25 Apr 2018 15:46:14 UTC
All use subject to http://about.jstor.org/terms
Cerastium beeringianum Cham. & Schlecht. CHICKWEED, N, 1, upper CdM, r1355
Cerastium fontanum subsp. vulgare (Hartman) Greuter & Burdet. BIG CHICKWEED, E, 2, CdM, h290
Cerastium glomeratum Thuiill. STICKY CHICKWEED, E, 1, upper CdM; r631
Pseudostellaria janesii (Torr.) W.A. Weber & R.L. Hartman. STICKY STARWORT, N, 2, upper cyns, h274
Silene antirrhina L. CATCHFLY, N, 1, Wheatfields Cyn, r586
Silene laciniata Cav. CARDINAL CATCHFLY, N, 2, upper cyns, h515
Silene menziesii Hook. MENZIE’S CATCHFLY, N, 2, upper cyns, r499
Spergularia salina J.& K. Presl. SALT SANDSPUR, N, 1, WH Ruins & cyn mouth, B325
Paxistima myrsinites (Pursh) Raf. BOXLEAF, N, 1, Nest Mtn., r535
Ceratophyllum demersum L. COMMON HORNWORT, N, 2, upper CdM & MC, aquatic, r524
Atriplex argentea Nutt. SILVERSCALE SALTBUSH, N, 0, De 42795
Atriplex canescens (Pursh) Nutt. FOURWING SALT BUSH, N, 4, lower cyns & rims, R134
Atriplex confertifolia (Torr. & Frem.) S. Wats. SHADSCALE, N, 4, lower cyns & rims, B349
Atriplex obovata Moq. MOUND SALTBUSH, N, 0, lower cyns & rims, h602
Atriplex rosea L. REDSCALE SALTBUSH, N, 0, h rep as common at mouth of Far Spiral Cyn, h738
Bassia hyssopifolia (Pallas) Kuntz. SMOTHER WEED, E, 1, below ject., h
Chenopodium album L. LAMBSQUARTERS, N, 2?, Bat Cyn above falls, r923
Chenopodium berlandieri Moq. NETSEED LAMBSQUARTERS, N, 3, through-out, h130
Chenopodium botrys L. JERUSALEM OAK, E, 1, below ject., r789
Chenopodium fremontii S. Wats. FREMONT GOOSEFOOT, N, 2, through-out, r736
Chenopodium glaucum L. OAK-LEAF GOOSEFOOT, E, 0, Wheatfields Cyn, h528
Chenopodiumgraveolens Willd. FETID GOOSEFOOT, N, 2, through-out, r1000
Chenopodium leptophyllum (Moq.) Nutt. ex S. Wats. NARROWLEAF GOOSEFOOT, N, 3, through-out, r787
Chenopodium rubrum L. RED GOOSEFOOT, N, 2, lower cyns, H
Corispermum americanum var. americanum (Nutt.) Nutt. AMERICAN BUGSEED, N, 3, lower cyns, r1474
Cycloloma atriplicifolium (Spreng.) Coul. WINGED PIGWEED, N, 2, lower cyns, r788
Kochia scoparia (L.) Schrad. KOCHIA, E, 3, disturbed sites, lower cyns, R4
Krascheninnikovia lanata (Pursh) A.D.J. Meeuse & Smit. WINTERFAT, N, 3, lower cyns, R135
Monolepis nuttalliana (Schult.) Greene NUTTALL’S POVERTY WEED, N, 2, through-out, h881
Salix kali L. RUSSIAN THISTLE, E, 4, through-out, B338
Salix tragus L. PRICKLY RUSSIAN THISTLE, E, 1, upper MC, probably same as S. kali above, r901
Sarcobatus vermiculatus (Hook.) Torr. GREASEWOOD, N, 3, lower cyns, B347
Suerda moquinii (Torr.) Greene. ALKALI SEEPWEED, N, 0, south of NPS housing area, White House Ruins, L7

Chusciaceae
Hypericum scouleri Hook. SCOULER ST. JOHN’S WORT, N, 0, upper CdM, h462

Convolvulaceae
Calystegia macounii (Greene) Brummitt. MACOUN’S FALSE BINDWEED, N, 0, upper CdM, h485
Convolvulus arvensis L. FIELD BINDWEED, E, 3, disturbed sites through-out, h52
Evolutus nattallianus J.A. Schultes. PROSTRATE EVOLVULUS, N, 0, Black Rock Cyn & talus slopes nr. Spider Rock, R146
Ipomoea costellata Torr. crestrrib MORNINGGLORY, N, 1, S Rim Dr .5 mile E of VC; r1406

Cornaceae
Cornus sericea L. REDOSIER DOGWOOD, N, 3, upper cyns, h191

Cucurbitaceae
Citrullus lanatus var. lanatus (Thunb.) Matsumura & Nakai. WILD WATERMELON, H, 0, Antelope House Ruin, h610
Cucurbita foetidissima Kuntz. BUFFALO GOURD, N, 3, lower cyns, h565
Cucurbita moschata (Duchesne ex Lam.) Duchesne ex Poir. CROOKNECK SQUASH, H, 1, S Rim Dr W of Tunnel Tr., r1531

Elaeagnaceae
Elaeagnus angustifolia L. RUSSIAN OLIVE, H, 5, through-out, riparian, mainly lower cyns, H

Euphorbiaceae
Chamaesyce fendleri (Torr. & Gray) Small. FEN-DLER’S SANDMAT, N, 3, lower cyns & rims, h53
Chamaesyce glyptosperma (Engelm) Small. RIB-SEED SANDMAT, N, 3, lower cyns, h511
Chamaesyce serpyllifolia (Pers.) Small. THYMELEAF SANDMAT, N, 3, through-out, h545
Croton texensis (Klotzsch) Muell.- Arg. TEXAS CROTTON, N, 4, lower cyns & rims, R25
Euphorbia brachycera Engelm. HORSED SPURGE, N, 2, upper CdC and Whiskey Cr area, h524
Tragia ramosa Torr. NOSEBURN, N, 3, slopes, lower cyns, h90

Fabaceae
Astragalus brandegeei Porter. BRANDEGEE’S MILK VETCH, N, 1, Whiskey Res. shoreline, r571
Astragalus calycosus Torr. ex S. Wats. TORREY’S MILKVETCH, N, 2, lower rims, B217
Astragalus cissaricus Sheldon. PAINTED MILKVETCH, N, 2, sandy areas, lower cyns & rims, r214
Astragalus chuskanus Barneby & Spellenberg. SAN JUAN MILKVETCH, N, 1, Whiskey Cr & upper CdC endemic to Chuska and Tunitcha Mtns, r671
Astragalus humilatus var. humivagans (Rydb.) Barneby. GROUNDCOVER MILKVETCH, N, 1, upper Wheatfields, r860
Astragalus lentiginosus Dougl. ex Hook. FRECKLED MILKVETCH, N, probably var. diphysus, h
Astragalus lentiginosus var. diphysus (Gray) M.E. Jones. FRECKLED MILKVETCH, N, 3, throughout, B220
Astragalus lonchocarpus Torr. RUSHY MILKVETCH, N, 2, slopes & rims throughout, r979
Astragalus missouriensis var. mimetes Barneby HORN LOCO MILKVETCH, N, 2, mid cyns, r532
Astragalus mollissimus var. thompsoniae (S. Wats.) Barneby. THOMPSON’S WOOLY MILKVETCH, N, 3, throughout, B218
Astragalus nuttalllanus DC. Nuttall. MILKVETCH, N, 2, mid cyn bottoms, h797
Astragalus scopulorum T.C. Porter. ROCKY MOUNTAIN MILKVETCH, N, 1, upper CdM, r350
Astragalus wingatus S. Wats. FORT WINGATE MILKVETCH, N, 2, upper rims, r323
Calliandra humilis Benth. MOUNTAIN CALLIA, N, 1, rim above MC, r961
Dalea candida var. oligophylla (Torr.) Shinners. WHITE PRAIRIE CLOVER, N, 2, lower cyns, R468
Gleditsia triacanthos L. var. inermis Willd. HONEY LOCUST, E, 1, bottom of Twin Trail & T, r1294
Hedysarum bor?ale Nutt. NORTHERN SWEET VETCH, N, 2, slopes, mid cyns, Cu
Lathyrus eucosmus Butters & St. John. BUSH PEA, N, 2, mid-upper cyns, h210
Lathyrus graminifollus (S. Wats.) White. GRASSLEAF PEA, N, 0, Antelope House Trail, h137
Lotus caudatus subsp. cutleri (Eastw.) Hess & Dunn. CUTLER’S SPURRED LUPINE, N, 3, upper terraces in mid cyns, endemic to the area, h271
Lupinus brevicaulis Wats. SHORTSTEM LUPINE, N, 2, sage flats mid-upper rims, h847
Lupinus caudatus subsp. cutleri (Eastw.) Hess & Dunn. CUTLER’S SPURRED LUPINE, N, 3, upper terraces in mid cyns, endemic to the area, h271
Lupinus kingii (S. Wats. KING’S LUPINE, N, 2, upper cyns & rims >7000’, r187
Medicago lupulina L. BLACK MEDIC, E, 4, throughout, Ha
Medicago polymorpha L. BUR CLOVER, E, 1, upper Wheatfields, r283
Medicago sativa L. ALFALFA, H, 4, throughout, h499
Medicago sativa subsp. falcata (L.) Arcang. ALFALFA, H, 3, lower canyons, r768
Melilotus alba Desr. WHITE SWEETCLOVER, E, 3, throughout, B
Melilotus officinalis (L.) Lam. YELLOW SWEET-CLOVER, E, 3, throughout, Melilotus may have been introduced as a crop for making hay, B303
Oxytropis lambertii Pursh. LAMBERT LOCOWEED, N, 1, upper CdC >6900’, r835
Parryella fillifolia Torr. & Gray ex Gray. DUNE BROOM, N, 1, bottom of Tseh Ya Kin Cyn, r1512
Pediomelum megalanthum (Woot. & Stand.) Rydb. INTERMOUNTAIN INDIAN BREADROOT, N, 1, shaly slope, head of Yellow Coyote Wash, r211
Psoralidium lanceolatum (Pursh) Rydb. DUNE SCURFPEA, N, 3, upper terraces, mid cyns, h249
Psoralidium tenuiflorum (Pursh) Rydb. SCURFPEA, N, 1, Wheatfields Cr. & slopes east of Coyote Cr, r841
Robinia pseudo-acacia Linnaeus. BLACK LOCUST, H, 1, Draper Ranch, end of road in CdM, r1189
Spartium junceum L. SPANISH BROOM, H, 1, T, r1294
Trifolium longipes Nutt. LONGSTALK CLOVER, N, 3, mid-upper cyns, riparian, r341
Trifolium repens L. WHITE CLOVER, E, 3, cyns throughout, Ha
Vicia americana Muhl ex Willd. AMERICAN DEERVETCH, N, 2, upper cyns, h210a

Fagaceae
Quercus gambelii Nutt. GAMBEL OAK, N, 5, throughout, L26
Quercus turbinella Greene. SCRUB OAK, N, 4, lower cyns & rims, B244
Quercus X pauclloba Rydb. (pro sp.) WAVYLEAF OAK, N, 2, lower cyns & rims, B380

Fumariaceae
Corydalis curvisiliqua subsp. occidentalis (Engelm. ex Gray) W.A. Weber. CURVEPOD FUMEWORT, N, 2, throughout, B365

Gentianaceae
Centaurium curvisiliqua subsp. occidentalis (Engelm. ex Gray) W.A. Weber. CURVEPOD FUMEWORT, N, 2, throughout, B365

Geraniaceae
Erodium cicutarium (L.) Brande. BIRD’S-FOOT-TREFOIL, N, 1, upper CdM; r350
Lotus nigricans (Grey) Greene. WRIGHT’S DEERVETCH, N, 2, upper cyns, h316
Lupinus brevicaulis Wats. SHORTSTEM LUPINE, N, 2, sage flats mid-upper rims, h847
Lupinus luteus subsp. cutleri (Eastw.) Hess & Dunn. CUTLER’S SPURRED LUPINE, N, 3, upper terraces in mid cyns, endemic to the area, h271
Lupinus kingii (S. Wats. KING’S LUPINE, N, 2, upper cyns & rims >7000’, r187
Medicago lupulina L. BLACK MEDIC, E, 4, throughout, Ha
Medicago polymorpha L. BUR CLOVER, E, 1, upper Wheatfields, r283
Medicago sativa L. ALFALFA, H, 4, throughout, h499
Medicago sativa subsp. falcata (L.) Arcang. ALFALFA, H, 3, lower canyons, r768
Melilotus alba Desr. WHITE SWEETCLOVER, E, 3, throughout, B
Melilotus officinalis (L.) Lam. YELLOW SWEET-CLOVER, E, 3, throughout, Melilotus may have been introduced as a crop for making hay, B303
Oxytropis lambertii Pursh. LAMBERT LOCOWEED, N, 1, upper CdC >6900’, r835
Parryella fillifolia Torr. & Gray ex Gray. DUNE BROOM, N, 1, bottom of Tseh Ya Kin Cyn, r1512
Pediomelum megalanthum (Woot. & Stand.) Rydb. INTERMOUNTAIN INDIAN BREADROOT, N, 1, shaly slope, head of Yellow Coyote Wash, r211
Psoralidium lanceolatum (Pursh) Rydb. DUNE SCURFPEA, N, 3, upper terraces, mid cyns, h249
Psoralidium tenuiflorum (Pursh) Rydb. SCURFPEA, N, 1, Wheatfields Cr. & slopes east of Coyote Cr, r841
Robinia pseudo-acacia Linnaeus. BLACK LOCUST, H, 1, Draper Ranch, end of road in CdM, r1189
Spartium junceum L. SPANISH BROOM, H, 1, T, r1294
Trifolium longipes Nutt. LONGSTALK CLOVER, N, 3, mid-upper cyns, riparian, r341
Trifolium repens L. WHITE CLOVER, E, 3, cyns throughout, Ha
Vicia americana Muhl ex Willd. AMERICAN DEERVETCH, N, 2, upper cyns, h210a

Fagaceae
Quercus gambelii Nutt. GAMBEL OAK, N, 5, throughout, L26
Quercus turbinella Greene. SCRUB OAK, N, 4, lower cyns & rims, B244
Quercus X pauclloba Rydb. (pro sp.) WAVYLEAF OAK, N, 2, lower cyns & rims, B380

Fumariaceae
Corydalis curvisiliqua subsp. occidentalis (Engelm. ex Gray) W.A. Weber. CURVEPOD FUMEWORT, N, 2, throughout, B365

Gentianaceae
Centaurium curvisiliqua subsp. occidentalis (Engelm. ex Gray) W.A. Weber. CURVEPOD FUMEWORT, N, 2, throughout, B365

Geraniaceae
Erodium cicutarium (L.) L’Her. ex Ait. FILAREE, E, 4, throughout, B342
Geranium caespitosum var. caespitosum James. PI-NEYWOODS GERANIUM, N, 2, upper cyns, h635
Geranium lentum Woot. & Standl. MOGOLLON GERANIUM, N, 3, upper cyns, h338
Geranium richardsonii Fisch. & Trautv. RICHARD-SON’S GERANIUM, N, 2, upper cyns, h338a
Grossulariaceae
Ribes cereum Dougl. WAX CURRANT, N, 2, upper CdC>6900', r550
Ribes leptanthum Gray. TRUMPET GOOSEBERRY, N, 3, through-out, h9

Haloragaceae
Myriophyllum sibiricum Komarov. MILFOIL, N, 3, upper CdM, aquatic, r603

Hydrangeaceae
Fendlera rupicola Gray. FENDLERBUSH, N, 3, slopes, lower cyns, B223
Philadelphus microphyllus Gray. LITTLELEAF MOCKORANGE, N, 3, slopes, through-out, Cu

Hydrophyllaceae
Nama dichotomum (Ruiz & Pavón) Choisy. WISHBONE FIDDLELEAF, N, 2, upper cyns & rims, r1413
Nama retrorsum J.T. Howell. BETATAKIN FIDDLELEAF, N, 2, sandy areas, lower cyns & rims, h563
Phacelia alba Rydb. WHITE PHACELIA, N, 1, Whiskey Cr, h516
Phacelia crenulata var. corrugata Torr, ex S. Wats. CATERPILLARWEED, N, 3, lowermost rims, h55
Phacelia ivesiana Torr. IVE'S PHACELIA, N, 2, lower rims <6500', D

Juglandaceae
Carya illinoensis (Wangenh.) K. Koch. PECAN, H, 1, Draper Ranch, end of road in CdM, r1190
Juglans major (Torr.) Heller. ARIZONA BLACK WALNUT, H, 2, lower cyns, h105

Lamiaceae
Agastache pallidiflora (Heller) Rydb. BILL WILLIAM HYSSOP, N, 0, probably ssp as below, h634
Agastache pallidiflora subsp. neomexicana (Briq.) Lint & Epling. NEW MEXICAN GIANT HYSSOP N, 2, upper CdC>7000', r818
Draecocephalum parviflorum Nutt. AMERICAN DRAGONHEAD, N, 2, mid cyns, B
Hedeoma drummondii Benth. DRUMMOND'S FALSE PENNYROYAL, N, 3, through-out, B354
Hedeoma oblongifolia (Gray) Heller. FALSE PENNYROYAL, N, 1, west slopes of Pine Tree Cyn, W
Marrubium vulgare L. HOREHOUND, E, 3, lower cyns, De
Mentha arvensis L. FIELD MINT, N, 2, Tsaille Lake to mouth of cyns, L34
Monarda fistulosa var. menthifolia (Graham) Fern. WILDBERGAMOT BEEBALM, N, 3, upper cyns, h474
Perovskia atriplicifolia Benth. H, 1, T, r1295
Polionimtha incana (Torr.) Gray. ROSEMARY MINT, N, 2, sandy sites, lower cyns, r227
Prunella vulgaris L. SELFHEAL, N, 2, upper cyns, b276
Salvia reflexa Hornem. BLUE SAGE, N, 2, Tsaille Lake to confluence, r1479
Stachys rothrockii Gray. ROTHROCK'S HEDGE-NETTLE, N, 2, upper CdC, h530

Lemnaceae
Lemma minor L. COMMON DUCKWEED, N, 3, upper CdM, aquatic, r965

Linaceae
Linum aristatum Engelm. BRISTLE FLAX, N, 0, rim, upper CdM, h339
Linum australe Heller. SOUTHERN FLAX, N, 2, through-out, r559
Linum lewisii Pursh. BLUE FLAX, N, 2, upper cyns & rims >6500', h917
Linum puberulum (Engelm.) Heller. DESERT FLAX, N, 2, lower cyns & rims, D

Loasaceae
Mentzelia albicaulis Dougl. WHITE BLAZINGSTAR, N, 2, through-out, h900
Mentzelia multiflora (Nutt.) Gray. DESERT BLAZINGSTAR, N, 2, sandy sites, lower cyns, r276
Mentzelia pumila Nutt. ex Torr. & Gray. DWARF BLAZINGSTAR, N, 2, sandy sites, lower rims, h63
Mentzelia rusbyi Woot. RUSBY'S BLAZINGSTAR, N, 1, NE of Whiskey Reservoir, r1080

Malvaceae
Malva neglecta Wallr. CHEESEWEED, E, 2, lower cyns & slopes, W
Sphaeralcea ambigua Gray. DESERT GLOBEMALLOW, N, 0, WH Ruin, B
Sphaeralcea coccinea (Pursh) Rydb. COPPER MALLOW, N, 3, lower cyns & rims, B204
Sphaeralcea fendleri Gray. FENDLER'S GLOBEMALLOW, N, 3, mid-lower cyns & rims, B276
Sphaeralcea hastulata Gray. SPREADING GLOBEMALLOW, N, 0, NPS housing area, h59
Sphaeralcea incana Torr. ex Gray. GRAY GLOBEMALLOW, N, 1, White Sands Tr, r717
Sphaeralcea leptophylla (Gray) Rydb. SCALY GLOBEMALLOW, N, 2, dunes south of VC, R154
Sphaeralcea parvifolia A. Nelson. SMALLFLOWER GLOBEMALLOW, N, 2, lower cyns, L35

Monotropaceae
Pterospora andromedea Nutt. WOODLAND PINE-DROPS, N, 1, spring at top of TR124 upper CdC, r1379

Moraceae
Morus alba L. WHITE MULBERRY, H, 1, Sliding Rock & Antelope House Ruins, h876

Nyctaginaceae
Abronia elliptica A. Nels. FRAGRANT WHITE SAND VERBENA, N, 2, sandy sites, lower cyns, B336
Abronia fragrans Nutt. ex Hook. SWEET SANDVERBENA, N, 1, sandy sites, Cottonwood Cyn, r277
Boerhavia spicata Choisy. CREEPING SPIDERLING, N, 3, lower cyns & rims, h658
Mirabilis decipiens (Standl.) Standl. BROADLEAF FOUR-O'CLOCK, N, 2, upper cyns, r963
Mirabilis linearis (Pursh) Heimerl. NARROWLEAF FOUR-O'CLOCK, N, 2, through-out, h491
Mirabilis multiflora (Torr.) Gray. COLORADO FOUR O'CLOCK, N, 2, through-out, R466
Mirabilis oxybaphoides (Gray) Gray. SPREADING FOUR-O'CLOCK, N, 2, cyns through-out, h
Tripterocalyx carnea var. wootonii (Standl.) L.A. Gal. WOOTON SANDPUFFS, N, 2, sandy sites, lower cyns, B315

Oleaceae

Forestiera pubescens var. pubescens Nutt. DESERT OLIVE, N, 3, through-out, B228
Fraxinus an?mala Torr, ex S. Wats. SINGLELEAF ASH, N, 1, S Rim road .5 km east of VC & WH Tr, B
Fraxinus sp. L. ASH, H, 1, T, rl966
Ligustrum sp. PRIVET, H, 1, T, rl566
Menodora scabra Gray. ROUGH MENODORA, N, 2, upper CdC & rim above Whiskey Cr, r456

Onagraceae

Calylophus lavandulifolius (Torr. & Gray) LAVENDER CALYLOPHUS, N, 2, lower south rim, B208
Epilobium ciliatum Raf. FRINGED WILLOW HERB, N, 3, cyns through-out, riparian, h463
Gaura cocc?nea Nutt. ex Pursh. SCARLET GAURA, N, 2, sage flats above CdC >7000 r662
Gaura hexandra subsp. gracilis (Woot. & Standl.) Raven & Gregory. HARLEQUIN BUSH, N, 0, upper MC, h644
Gaura mollis James. VELVETWEED, N, 2, lower cyns & rims, h408
Gayophytum diffusum subsp. parviflorum Lewis & Szweykowski. SPREADING GROUNDSMOKE, N, 1, upper Wheatfields Cyn, r866
Gayophytum ramosissimum Torr. & Gray. PINYON GROUNDSMOKE, N, 1, near head of Black Rock Cyn, r429
Oenothera albicaulis Pursh. WHITE-STEM EVENING PRIMROSE, N, 3, mid-lower cyns & rims, B273
Oenothera caespitosa subsp. caespitosa Nutt. TUFTED EVENING PRIMROSE, N, 0, lower cyns, B274
Oenothera caespitosa subsp. marginata (Nutt. ex Htek. & Arn.) Munz. TUFTED EVENING PRIMROSE, N, 2, mid cyns, B
Oenothera caespitosa subsp. navajoensis W.L. Wagner, Stockhouse & Klein. NAVAJO EVENING-PRIMROSE, N, 0, base of Spider Rock, h214
Oenothera coronopifolia Torr. & Gray. CROWNLEAF EVENING PRIMROSE, N, 2, Wheatfields & Coyote Creeks, r558
Oenothera elata subsp. hookeri (Torr. & Gray) W. Dietr. & W.L. Wagner. HOOKER'S EVENING-PRIMROSE, N, 2, upper CdC, h490
Oenothera flavia (A. Nels.) Garrett. YELLOW EVENING-PRIMROSE, N, 3, upper cyns & rims, B325
Oenothera pallida Lindl. PALE EVENING PRIMROSE, N,? , likely subsp. runciniata or trichocalyx, Ha
Oenothera palida subsp. runcinata (Engelm.) Munz & W. Klein. PALE EVENING PRIMROSE, N, 0, WH Tr, Ha
Oenothera palida subsp. trichocalyx (Nutt.) Munz & W. Klein. PALE EVENING PRIMROSE, N, 2, dunes 1 mile south of VC, r306

Orobanchaceae

Orobanche fasciculata Nutt. PURPLE BROOMRAPE, N, 1, rim of MC, H rep common on rims through-out, C
Orobanche ludoviciana subsp. multiflora (Nutt.) Collins, comb. nov. ined. MANYFLOWERED BROOMRAPE, N, 1, rims through-out, D

Oxalidaceae

Oxalis decaprylla Kunth. TENLEAF WOODSORREL, N, 2, through-out, r866

Pedaliaceae

Proboscidea parviflora (Woot.) Woot. & Standl. DEVIL'S CLAW, N, 2, lower cyns, r1108

Plantaginaceae

Plantago argyraea Morris. SALTMEADOW PLANTAIN, N, 2, mid-upper cyns, h543
Plantago eriopoda Torr. ALKALI PLANTAIN, N, 2, mid-lower cyns, Ba
Plantago lanceolata L. LANCELEAF PLANTAIN, N, 3, through-out cyns, riparian, L38
Plantago major L. BROADLEAF PLANTAIN, N, 3, through-out cyns, riparian, He
Plantago patagonica Jaqc. WOOLY PLANTAIN, N, 3, upper terraces, mid-lower cyns, B313

Polemoniaceae

Eriastrum diffusum (Gray) Mason. DIFFUSE ERIASTRUM, N, 1, sandy site lower peninsula, r250
Gilia inconspicua (Sm.) Sweet. SHY GILIA, N, 3, through-out, r164
Gilia leptoneria Gray. SAND GILIA, N, 0, between NPS housing & dunes, D
Gilia ophthalmoides Brand. EYED GILIA, N, 0, lower cyns, h125
Gilia sinuata Dougll. ROSY GILIA, N, 0, lower cyns, D125
Ipomopsis aggregata (Pursh) V. Grant. SCARLET GIRLIA, N, 3, lower cyns & slopes, B36
Ipomopsis gunnisonii (T. & G.) V. Grant. SAND-DUNE SKYROCKET, N, 0, sandy sites, lower cyns & rims, D
Ipomopsis longiflora (Torr.) V. Grant. WHITEFLOWERED GILIA, N, 2, sandy sites, lower cyns, Cu
Ipomopsis multij flora (Nutt.) V. Grant. MANYFLOWERED GILIA, N, 2, upper cyns & rims, h187
Ipomopsis polycladon (Torr.) V. Grant. SPRAWLING SKYROCKET, N, 2, sandy sites, lower south rim, D
Ipomopsis pumila (Nutt.) V. Grant. DWARF GILIA, N, 0, lower rims, D
Leptodactylon pungens Torr.) Torr. ex Nutt. COM-
MON PRICKLYGILIA, N, 3, lower cyns & slopes, B222

Phlox austromontana Coville. DESERT PHLOX, N, 3, slopes, lower cyns, h35

Phlox gracilis (Dougl.) Greene. SLENDER PHLOX, N, 2, upper cyns, h198

Phlox hoodii Richards. HOOD’S PHLOX, N, 1, Navajo Fortress, W

Phlox longifolia subsp. brevifolia (Gray) Mason. LONGLEAF PHLOX, N, 0, near Spider Rock Overlook, h771

Phlox longifolia subsp. longifolia Nutt. LONGLEAF PHLOX, N, 2, mid cyns, h198

Phlox hoodii Richards. HOOD’S PHLOX, N, 1, Na- vajo Fortress, W

Phlox longifolia subsp. brevifolia (Gray) Mason. LONGLEAF PHLOX, N, 0, near Spider Rock Overlook, h771

Phlox gracilis (Dougl.) Greene. SLENDER PHLOX, N, 2, upper cyns, h198

Phlox hoodii Richards. HOOD’S PHLOX, N, 1, Na- vajo Fortress, W

Polemonium foliosissimum var. foliosissimum Gray. TOWERING JACOBS LADDER, N, 1, upper Wheatfields Cr, r829

Polygonaceae

Eriogonum alatum Torr. WINGED BUCKWHEAT, N, 3, rims through-out, C

Eriogonum cernuum Nutt. NODDING BUCKWHEAT, N, 2, upper cyns & rims, h910

Eriogonum corymbosum Benth. CRISPLEAF BUCKWHEAT, N, 1, S Rim Dr 1 km east of VC, r1405

Eriogonum microthecum Nutt. SLENDER BUCKWHEAT, N, 3, rims & slopes through-out, R159

Eriogonum racemosum Nutt. REDROOT BUCKWHEAT, N, 3, upper cyns & rims >6500’, h519

Eriogonum shockleyi S. Wats. SHOCKLEY’S BUCKWHEAT, N, 1, floor of CdC, R463

Eriogonum umbellatum var. cognatum (Greene) Reveal. SULPHUR-FLOWER BUCKWHEAT, N, I have found no reference separating this from E. u. var. subaridum below, h522

Eriogonum umbellatum var. subaridum S. Stokes. SULPHUR-FLOWER BUCKWHEAT, N, 2, upper cyns & rims, h522

Polygonum aviculare L. PROSTRATE KNOTWEED, E, 2, cyns through-out, h129

Polygonum convolvulus L. BLACK BINDWEED, E, 1, through out, h756

Polygonum douglasii subsp. johnstonii (Munz) Hickman. JOHNSTON KNOTWEED, N, 2, upper cyns and rims, r446

Polygonum lapathifolium L. SMARTWEED, N, 1, Tsaile Lake discharge area, r970

Polygonum longirostris Godr. LONGBEAK BUTTERCUP, N, 3, upper cyns & rims; r1141b

Ranunculus aquatilis L. WATER BUTTERCUP, N, O, upper cyns, aquatic, h302

Ranunculus cymbalaria Pursh. ALKALI BUTTERCUP, N, 3, cyns through-out, B277

Ranunculus macounii Britt. MACOUN’S BUTTERCUP, N, 2, upper CdM & near cyn mouth, h86

Ranunculus sceleratus var. multifidus Nutt. BLISTER BUTTERCUP, N, 2, cyns through-out; r1141b

Thalictrum dasycarpum Fisch. & Av?l-Ali. PURPLE MEADOWRUE, N, 0, S Rim Dr Va mi ESE of T, H

Thalictrum fendleri Engelm. ex Gray. FENDLER’S MEADOW-RUE, N, 3, cyns through-out, B323

Rhamnaceae

Ceanothus fendleri Gray. FENDLER’S Ceano-

Thus, N, 1, upper cyns & rims, r982

Rosaceae

Agrimonia striata Michx. ROADSIDE AGRIMONY, N, 0, upper MC, h625

Amelanchier alnifolia var. alnifolia (Nutt.) Nutt. ex M. Roemer. SASKATOON SERVICEBERRY, N, 2, upper cyns, h1231

Amelanchier utahensis var. utahensis Koehne. UTAH SERVICEBERRY, N, 4, through-out, B241

Argentea anserina (L.) Rydb. SILVERWEED CINQUEFOIL, N, 2, cyns through-out, r561

Primulaceae

Androsace occidentalis Pursh. WESTERN ROCK JASMINE, N, 1, rim near head of Poison Ivy Cyn, r360

Androsace septentrionalis subsp. subulifera (Gray) G.T. Robbins. PIGMYFLOWER ROCKJAS-

MINE, N, 3, through-out, D

Ranunculaceae

Actaea rubra subsp. arguta (Nutt.) Hultén. RED BANE\n
BERRY, N, 0, upper MC, h636

Aquilegia chrysantha Gray. GOLDEN COLUMBINE, H, 1, T, r1952

Aquilegia elegans Greene. WESTERN RED COL-

UMBINE, N, 1, upper east arm of MC, r509

Aquilegia micrantha Eastw. MANCOS COLUMBINE, N, 3, bg through-out, h245

Ceratocephala tecticata (Cranz) Bess. BUR BUT-

TERCUP, E, 4, through-out, h756

 Clematis columbiana (Nutt.) Torr. & Gray. ROCK CLEMATIS, N, 1, steep, forested slope in Poison Ivy Cyn, r355

Clematis hirsutissima var. hirsutissima Pursh. HAIRY CLEMATIS, N, 1, Wheatfields Creek, r855

Clematis ligusticifolia Nutt. VIRGIS BOWER, N, 3, cyns & slopes through-out, B382

Delphinium nuttallianum Pritz. ex Walp. LOW LARK-

SPUR, N, 3, mid-upper cyns & rims >6500', B201

Delphinium scaposum Greene. BARESTEM LARK-

SPUR, N, 3, lower cyns & rims <6000’, h845

Myosurus apetalus var. borealis Whitemore. BRIS-

TLY MOUSSETAIL, N, 1, upper cyns & rims, h769

Myosurus cupulatus Wats. ARIZONA MOUSSETAIL, N, 0, rim of upper CdM, h922

Ranunculus aquatilis L. WATER BUTTERCUP, N, 0, upper cyns, aquatic, h302

Ranunculus cymbalaria Pursh. ALKALI BUT-

TERCUP, N, 3, cyns through-out, B277

Ranunculus longirostris Godr. LONGBEAK BUT-

TERCUP, N, 3, upper CdM, aquatic, r602

Ranunculus macounii Britt. MACOUN’S BUTTER-

CUP, N, 2, upper CdM & near cyn mouth, h86

Ranunculus sceleratus var. multifidus Nutt. BLISTER BUTTERCUP, N, 2, cyns through-out; r1141b

Thalictrum dasycarpum Fisch. & Av?l-Ali. PURPLE MEADOWRUE, N, 0, S Rim Dr Va mi ESE of T, H

Thalictrum fendleri Engelm. ex Gray. FENDLER’S MEADOW-RUE, N, 3, cyns through-out, B323

This content downloaded from 134.114.107.52 on Wed, 25 Apr 2018 15:46:14 UTC
All use subject to http://about.jstor.org/terms
Cercocarpus intricatus S. Wats. LITTLELEAF MOUNTAIN MAHOGANY, N, 4, rims and slopes <6500', B252
Cercocarpus ledifolius var. intermontanus N. Holmgren. CURL LEAF MOUNTAIN MAHOGANY, N, 2, lower rims and slopes <6400', r692
Cercocarpus montanus Raf. MOUNTAIN MAHOGANY, N, 4, through-out, B239
Cotoneaster horizontalis Dene. ROCKSPRAY COPTONEASTER, H, 1, T, rl564
Dasiphora floribunda (Pursh) Kartesz, comb. nov. SHRUBBY CINQUEFOIL, N, 1, hg on N side of Coyote Cr., r1309
Fallugia paradoxa (D. Don) Endl. APACHE PLUME, H, 1, T, rl1293
Fragaria virginiana subsp. glauca (S. Wats.) Staudt L. VIRGINIA STRAWBERRY, N, 2, upper SW arm of MC, r491
Holodiscus dumosus (Nutt. ex Hook.) Heller. ROCKSPIREA, N, 2, cyns through-out >6200', h464
Malus pumila Mill. COMMON APPLE, H, 4, lower cyns, h807
Potentilla crinita Gray. BEARDED CINQUEFOIL, N, 1, upper CdC, h352
Potentilla pensylvanica L. PRAIRIE CINQUEFOIL, N, 2, upper CdC, r665
Prunus armeniaca L. APRICOT, H, 3, lower cyns, r1183
Prunus persica (L.) Batsch. PEACH, H, 4, lower cyns, h806
Prunus virginiana L. CHOKECHERRY, N, 3, upper cyns, h309
Purshia stansburiana (Torr.) Henrickson. STANSBURY CLIFFROSE, N, 4, through-out, B224
Purshia tridentata (Pursh) DC. ANTELOPE BITTERBRUSH, N, 1, Whiskey Cr., r674
Rosa woodsii var. ultramontana (S. Wats.) Jepson. WOOD'S ROSE, N, 3, through-out, h189
Rubus idaeus subsp. strigosus (Michx.) Focke. RED RASPBERRY, N, 2, upper cyns, h484
Rubus parviflorus Nutt. THIMBLEBERRY, N, 1, upper CdM, r656

Rubiaceae

Galium boreale L. NORTHERN BEDSTRAW, N, 1, upper CdM, h rep as common, h308
Galium triflorum Michx. FRAGRANT BEDSTRAW, N, 1, hg, Whiskey Creek, h332
Galium wrightii Gray. WRIGHT BEDSTRAW, N, 4, through-out. Ba61

Salicaceae

Populus alba L. WHITE POPLAR, H, 1, Draper Ranch, end of road in CdM, B
Populus angustifolia James. NARROWLEAF COTTONWOOD, N, 2, cyns >6200', h646
Populus deltoides subsp. wisdomi (S. Wats) Eckenwalder. RIO GRANDE COTTONWOOD, N, 5, lower cyns through-out, B376
Populus fremontii S. Wats. FREMONT COTTONWOOD, H, 1, T, r1558
Populus nigra L. LOMBARDOY POPULAR, H, 1, Campground and VC, r1219
Populus tremuloides Michx. QUAKING ASPEN, N, 3, cyns >6500', h355

This content downloaded from 134.114.107.52 on Wed, 25 Apr 2018 15:46:14 UTC
All use subject to http://about.jstor.org/terms
Orthocarpus luteus Nutt. YELLOW OWLCLOVER, N, 0, head of MC, h549
Orthocarpus purpureoalbus Gray ex S. Wats. PURPLE OWLCLOVER, N, 3, upper rims & cyns, r642
Pedicularis centranthera Gray. DWARF LOUSEWORT, N, 2, lower rims, h837
Penstemon barbatus subsp. trichander (Gray) Keck. BEARDLIP PENSTEMON, N, 2, through-out, R165
Penstemmon comarrhenus Gray. DUSTY PENSTEMON, N, 1, rim above CdM, h461
Penstemon lentus Pennell. HANDSOME PENSTEMON, N, 1, CdM upstream of Middle Trail Cyn, r384
Penstemon linarioides Gray. CREEPING PENSTEMON, N, 3, mid-upper cyns & rims, r266
Penstemon ophianthus Pennell. ARIZONA BEARDLIP, N, 3, uppermost cyns & rims >6000', h333
Penstemon strictiformis Rydb. MANCOS PENSTEMON, N, 1, lower Bat Cyn, r480
Penstemon strictus Benth. ROCKY MOUNTAIN PENSTEMON, N, 2, sage flats >7000', C
Penstemon virgatus Gray. UPRIGHT BLUE BEARDLIP, N, 1, uppermost MC >7000', h621
Veronica americana Schwein. Ex Benth. AMERICAN SPEEDWELL, N, 2, through-out cyns, R166
Veronica anagallis-aquatica L. WATER SPEEDWELL, N, 3, mid-upper cyns & rims, h70
Veronica peregrina subsp. xalapensis (Kunth) Pennell. NECKWEED, N, 2, through-out >6000', r230
Veronica serpyllifolia L. THYMELEAF SPEEDWELL, N, 1, upper CdM, r661

Solanaceae

Chamaesaracha coronopus (Dunal) Gray. GREEN FALSE NIGHTSHADE, N, 2, through-out, R167
Datura wrightii Regel. SACRED DATURA, N, 2, through-out, B370
Lycium pallidum Miers. PALE WOLFBERRY, N, 2, through-out, B308
Nicotiana attenuata Torr, ex S. Wats. COYOTE TOBACCO, N, 0, through-out cyns, M
Nicotiana obtusifolia var. obtusifolia Mertens & Galleotti. DESERT TOBACCO, N, 2, lower cyns, h655
Physalis hederifolia var. fendleri (Gray) Cronq. FENDERLY GRASSY MALLOW, N, 2, lower CdC, R48
Physalis hederifolia var. hederifolia Gray. IVYLEAF GROUND CHERRY, N, 1, upper Bat Cyn, Tunnel Cyn, r927
Physalis longifolia Nutt. COMMON GROUND CHERRY, N, 0, in field near Twin Tr, CdM, m
Solanum elaeagnifolium Cav. WHITE HORSENETTLE, E, 3, disturbed sites, esp. lower cyns & rims, H
Solanum jamaicensis Torr. WILD POTATO, N, 2, through-out, h724
Solanum rostratum Dunal. BUFFALO BUR, N, 3, disturbed sites, through-out, R470
Solanum triflorum N. COMMON NIGHTSHADE, N, 2, upper cyns & rims, R

Tamaricaceae

Tamarix chinensis Lour. SALTCEDAR, E, 5, through-out, L49
Tamarix parviflora DC. SALTCEDAR, E, 5, only at canyon mouth, r1121

Ulmaceae

Celtis laevigata var. reticulata (Torr.) L. Benson. NE-TLEAF HACKBERRY, N, 3, lower cyns, B334
Ulmus americana L. AMERICAN ELM, N, 0, CdC near mouth of Wild Cherry Cyn, h877
Ulmus pumila L. SIBERIAN ELM, E, 3, through-out, B

Urticaceae

Parietaria pensylvanica Muhl. ex Willd. PENNSYLVANIA PELLITORY, N, 2, rock overhangs, upper cyns, W
Urtica dioica subsp. gracilis (Ait.) Seland. STINGING NETTLE, N, 2, through-out, h437

Valerianaceae

Valeriana acutiloba Rydb. CORDILLERAN VALERIAN, N, 1, upper slopes & rims, r152

Verbenaceae

Carvopyteris X clandonensis hort. ex Rehd. CARYOPTERIS, H, 1, T, r1569
Verbena bracteata Lag. & Rodr. PROSTRATE VERBENA, N, 3, disturbed sites lower cyns, R
Verbena macdougallii Heller. MACDOUGAL VERBENA, N, 2, disturbed sites, upper cyns & rims, h472

Violaceae

Viola sororia Willd. COMMON BLUE VIOLET, N, 1, upper CdM & MC, h321

Viscaceae

Arceuthobium diversifolium Engelm. PINYON DWARF MISTLETOE, N, 2?, middle rims, B250
Phoradendron juniperinum Engelm.ex Gray. JUNIPER MISTLETOE, N, 0, through-out, B233

Vitaceae

Parthenocissus vitacea (Knerr) A.S. Hitchc. VIRGINIA CREEPER, N, 3, through-out, B358
Vitis arizonica Engelm. ARIZONA GRAPE, N, 3, cyns through-out, B

Zygophyllaceae

Kallstroemia californica (Wats.) Vail. CALIFORNIA CALTROP, N, 0, CdM downstream of Antelope House Ruin, h653
Tribulus terrestris L. PUNCTUREVINE, E, 3, disturbed sites, lower cyns, h rep in NPS housing area, h701

Agavaceae

Yucca angustissima Engelm. ex Trel. NARROW LEAF YUCCA, N, 4, through-out, h121
**Yucca baccata** Torr. BANANA YUCCA, N, 4, through-out, B219

**Commelinaceae**

*Tradescantia occidentalis* var. *occidentalis* (Britt.) Smyth. PRAIRIE SPIDERWORT, N, 2, lower cyns, R462

*Tradescantia pinetorum* Greene. PINEWOODS SPIDERWORT, N, 1?, upper rims>7000', h638

**Cyperaceae**

*Carex aurea* Nutt. GOLDEN SEDGE, N, 3, hg through-out, r377

*Carex chihuahuensis* MacKenzie. CHIHUAHUAN SEDGE, N, 1, hg mouth of Cottonwood Cyn; rl358

*Carex duriuscola* C. A. Mey. NEEDLELEAF SEDGE, N, 3, cyns through-out, r332

*Carex filifolia* Nutt. THREADLEAF SEDGE, N, 1, Wide Rock Butte, W

*Carex foenea* var. *foenea* Willd. DRYSPIKE SEDGE, N, 2, riparian sites through-out, B369

*Carex geophila* Mackenzie. WHITE MOUNTAIN SEDGE, N, 1, upper CdC, rl54

*Carex Interior* Bailey. INLAND SEDGE, N, 1?, upper Black Rock Cyn, r436

*Carex meadii* Dewey. MEAD SEDGE, N, 1, hg above Coyote Cr; rl315

*Carex microptera* MacKenzie. OVALHEAD SEDGE, N, 0, upper CdM, h326

*Carex nebrascensis* Dewey. NEBRASKA SEDGE, N, 1, where road crosses Coyote Cr, r1255

*Carex occidentalis* Bailey. WESTERN SEDGE, N, 2, cyns through-out, h185

*Carex pachystachya* Cham, ex Steud. CHAMISSO SEDGE, N, 1, upper CdM; r615

*Carex pellita* Muhl ex Willd. WOOLLY SEDGE, N, 2, mid-upper cyns >6200', h327

*Carex praegracilis* W Boott. SLIM SEDGE, N, 2, cyns through-out, rll63

*Carex speculicola* J.T. Howell. NAVAJO SEDGE, N, 2, 4 hgs in CdM, r258

*Carex vallicola* Dewey. VALLEY SEDGE, N, 1, upper cyns, r346

*Scirpus microcarpus* J. & K. Presl. PANICLED BULRUSH, N, 2, upper CdM & at spring at top of Tr 124 in CdC, h325

*Scirpus pallidus* (Britt.) Fern. PALE BULRUSH, N, 1, Wheatfields Cyn, rl340

**Iridaceae**

*Iris missouriensis* Nutt. ROCKY MOUNTAIN IRIS, N, 2, rim above upper MC, r541

*Sisyrinchium demissum* Greene. DWARF BLUE-EYED GRASS, N, 2, wet places, upper cyns, h281

**Juncaceae**

*Juncus balticus* var. *montanus* Engelm. MOUNTAIN RUSH, N, 0, lower Cdc, Ha

*Juncus bufonius* L. TOAD RUSH, N, 2, through-out cyns, h546

*Juncus ensifolius* Wikstr. SWORDLEAF RUSH, N, 2, CdM, h186a

*Juncus interior* Wieg. INLAND RUSH, N, 2?, Pine Tree Cyn, CdM, W

*Juncus longistylis* Torr. LONGSTYLE RUSH, N, 2, upper cyns, r345

*Juncus mexicanus* Willd. ex J.A.& J.H. Schultes. MEXICAN RUSH, N, 2, rims and cyns >5900', r231

*Juncus saximontanus* A. Nels. ROCKY MOUNTAIN RUSH, N, 1, Antelope House Tr, h186a

*Juncus tenuis* Willd. FIELD RUSH, N, 2, rims and cyns >6200', r991

*Juncus torreyi* Coville. TORREY RUSH, N, 2, Tsaille Dam discharge area & hg in side cyn below WH Ruin, W

**Liliaceae**

*Allium bisceptrum* var. *palmeri* (S. Wats.) Cronq. ASPEN ONION, N, 2, upper CdM, h920

*Allium cernuum* var. *obtusum* Cockerell ex J.F. Macbr. NODDING ONION, N, 2, upper cyns & rims >7000, h546

*Allium geyeri* Wats. GYEYER'S ONION, N, 2, upper CdM & rims >7000, h471

*Allium macropteleum* Rydb. LARGEFLOWER ONION, N, 1, above pouroff on rim of Elephant Spring Cyn, r1419

*Asparagus officinalis* L. ASPARAGUS, E, 1, disturbed sites, lower cyns, h138

*Calochortus aureus* S. Wats. SEGO LILY, N, 3, rims through-out, D

*Calochortus gunnisonii* S. Wats. GUNNISON'S MAR-IPOSA LILY, N, 2, rim above CdM, h311a

*Disporum trachycarpum* (S. Wats.) Benth. & Hook. f. ROUGHFRUIT FAIRYBELLS, N, 0, upper CdM, h471

*Disporum vittatum* (L.) Roemer & J.A. Schultz. COMMON SPIKERUSH, N, 3, through-out cyns, h176

*Schoenoplectus acutus* var. *acutus* (Muhl. ex Bigelow) A.& D. Løve. HARDSTEM BULRUSH, N, 1, 1 km below Tsaille Dam in CdM, r614

*Schoenoplectus americanus* (Pers.) Volk. Ex Schinz & R. Keller. AMERICAN BULRUSH, N, 3, through-out, H

*Schoenoplectus pungens* var. *pungens* (Vahl) Palla. COMMON THREEQUARE, N, 2, through-out cyns, r387

This content downloaded from 134.114.107.52 on Wed, 25 Apr 2018 15:46:14 UTC
All use subject to http://about.jstor.org/terms
Nolina microcarpa Wats. SACAHUISTA, H, 1, base of Face Rock, h892.
Zigadenus paniculatus (Nutt.) S. Wats. FOOTHILL DEATHCAMAS, N, 2, upper Cdm & rims above Cdm, h312.
Zigadenus vaginatus (Ryd.) Macbr. SHEATHED DEATHCAMAS, N, 2, 4 hgs in Cdc & at Jct, r1312.

Orchidaceae

Epipactis gigantea Doug. ex Hook. STREAM ORCHID, N, 3, hgs through-out, Bu717.

Poaceae

Achnatherum lettermanii (Vasey) Barkworth. LET TERMAN NEEDLEGRASS, N, 1, Gopher Spring area, MC, r910.
Achnatherum hymenoides (Roemer & J.A. Schultes) Barkworth. INDIAN RICE GRASS, N, 3, lower cyns & rims, B254.
Achnatherum scribneri (Trin. & Rupr.) Barkworth. SCRIBNER NEEDLEGRASS, N, 1, mesa above Wheatfields Cyn, r890.
Achnatherum speciosum (Trin. & Rupr.) Barkworth. DESERT NEEDLEGRASS, N, 2, lower Cdm, D.
Agropyron desertorum (Fisch, ex Link) J.A. Schultes. PENDULUS GRASS, E, 0, disturbed sites, lower cyns, B364.
Alopecurus aequalis Sobol. SHORT FOXTAIL, N, 2,通过-out, Bu779.
Agrostis scabra Willd. ROUGH BENTGRASS, N, 0,通过-out, Wynne Cr, r245.
Bouteloua aristidoides (Kunth) Griseb. NEEDLE GRASS, E, 0,通过-out, Wynne Cr, r245.
Bouteloua aristidoides (Kunth) Griseb. NEEDLE GRASS, E, 0,通过-out, Wynne Cr, r245.
Glyceria striata (Lam.) A.S. Hitchc. FOWL MAN-NAGRASS, N, 2, upper cyns >6500', h307
Hesperostipa comata subsp. comata (Trin. & Rupr.) Barkworth. NEEDLE AND THREAD, N, 2, through-out, B
Hesperostipa neomexicana (Thurb. ex Coult.) Barkworth. NEW MEXICO NEEDLEGRASS, N, 2, through-out, B299
Hordeum jubatum L. LITTLE BARLEY, N, 2, disturbed sites, lower cyns, Ha
Hordeum marinum subsp. glaucum (Steud.) Tzvelev. SMOOTH MUHLY, E, 3, disturbed sites, lower cyns, r300
Hordeum murinum subsp. leporinum (Link) Arcang. LEOPAR BARLEY, E, 0; H rep as common in lower cyns, h40
Hordeum pusillum Nutt. HARE BARLEY, N, 3, lower cyns, h681
Koeleria macrantha (Ledeb.) J.A. Schultes. JUNE GRASS, N, 3, upper rims>7000', h304
Leptochloa fusca subsp. fascicularis (Lam.) Snow. BEARDED SPARGLETOP, N, 1, campground; stock pond above Pine Tree Cyn, r1514
Lolium arundinaceum (Schreb.) S.J. Darbyshire. MEADOW FESCUE, E, 2, through-out, h
Lolium pratense (Huds.) S.J. Darbyshire. MEADOW FESCUE, E, 2, through-out cyns, h328
Lycurus phleoides Kunth. WOLFTAIL, N, 2, lower rims <6000', H
Monroa squarrosa (Nutt.) Torr. FALSE BUFFALO GRASS, N, 2, through-out, h874
Muhlenbergia andina (Nutt.) A.S. Hitchc. FOXTAIL AL MUHLY, N, 2, through-out, r1444
Muhlenbergia arsenei A.S. Hitchc. NAVAJO MUHLY, N, 1, lower cyns >6800', r1420
Muhlenbergia asperifolia (Nees & Mey.) Parodi. AL MUHLY, N, 2, through-out, h128
Muhlenbergia curtifolia Scribn. LOW MUHLY, N, 3, hg <6000', h614
Muhlenbergia depauperata Scribn. SIXWEEKS MUHLY, N, 2, middle rims, r1412
Muhlenbergia filiformis (Schreb.) S.J. Darbyshire. TALL FESCUE, E, 2, through-out, h
Muhlenbergia integrifolia (Steud.) Swallen. ANNU-AL MUHLY, N, 2, through-out, r300
Muhlenbergia montana (Nutt.) Hitchc. MOUNTAIN MUHLY, N, 2, rims >6800', r859
Muhlenbergia pauciflora Buckl. NEW MEXICO MUHLY, N, 3, slopes <6500', r415
Muhlenbergia peruviana (Beauv.) Steud. PERUVIAN MUHLY, N, 0, mouth of Black Rock Cyn, h442
Muhlenbergia porteri Scribn. ex Beal. BUSH MUH-LY, N, 1, lower Cdc, likely more common, r1520
Muhlenbergia pungens Thurb. SANDHILL MUHLY, N, 0, lower rims, r732
Muhlenbergia racemosa (Michx.) B.S.P. GREEN MUHLY, N, 3, mid cyns, h681
Muhlenbergia repens (J. Presl) A.S. Hitchc. CREEP-ING MUHLY, N, 1, upper Cdc; r165
Muhlenbergia thurberi Rydb. Thurber. THURBER MUHLY, N, 2, hg, mid cyns, r917
Muhlenbergia wrightii Vasey ex Coult. SPIKE MUH-LY, N, 3, sage flats >7000', h632
Nassella viridula (Trin.) Barkworth. GREEN NEED-LEGRASS, N, 1, head of Whiskey Cr, r1318
Panicum capillare L. WITCHGRASS, N, 2, through-out, h608
Panicum obtusum Kunth. VINE MESQUITE, N, 1, lower Cdc, r1372
Paspalum smithii (Rydb.) A. Löve. WESTERN WHEATGRASS, N, 3, through-out, D
Phragmites australis (Cav.) Trin. ex Steud. COMMON REED, N&H, 3, lower cyns, H
Piptatherum micranthum (Trin.) Barkworth. LITTLESEED RICEGRASS, N, 2, slopes >7000', D
Pleuraphis jamesii Torr. GALLETA, N, 3, through-out, Ha
Poa annua L. ANNUAL BLUE GRASS, E, 1, SE arm of MC, r514
Poa bulbosa L. BULBOUS BLUE GRASS, E, 1, lower cyns, r244
Poa compressa L. FLATSTEM BLUEGRASS, N, 3, cyns through-out, h109
Poa fendleriaca (Steud.) Vasey. MUTTON GRASS, N, 4, through-out, h3
Poa glauca Vahl. GLAUCOUS BLUEGRASS, N, 0, fence at Newspaper Rock, h183
Poa nemoralis L. FOREST BLUEGRASS, N, 1, upper Black Rock Cyn, r34
Poa pratensis L. KENTUCKY BLUEGRASS, N&E, 3, through-out, D
Poa secunda J. Presl. BIG BLUEGRASS, N, 0, near mouth of cyn, H
Polypogon interruptus Kunth. DITCH POLYPOGON, E, 3, lower cyns, B309
Polypogon monspeliensis (L.) Desf. RABBITFOOTGRASS, E, 2, lower cyns, Ha
Polypogon viridis (Gouan) Breistr. WATER BENT-GRASS, E, 2, through-out Cdm, h423
Puccinellia distans (Jacq.) Parodi. SPREADING AL-KALI MUHLY, N, 3, through-out, h
Puccinellia fasiculata (Torr.) Bickn. ALKALI GRASS, N, 1, lower cyns; r132
Puccinellia nuttalliana (J.A. Schultes) Hitch. NUT-TALL ALKALI GRASS, N, 2, lower cyns, h131
Schedonardus paniculatus (Nutt.) Trel. TUMBLE GRASS, N, 1, sage flats above Wheatfields Cyn, r1032
Schizachyrium scoparium (Michx.) Nash. LITTLE BLUESTEM, N, 3, through-out, h558
Setaria macrostachys H. B. KRISTLEGRASS, N, 1, Crack in Rock Tr, r472
Setaria viridis (L.) Beauv. BOTTLE GRASS, E, 2, VC, campground & T, W
Sorghastrum nutans (L.) Nash. INDIANGRASS, N, 1, sandy site at mouth of Cottonwood Cyn, r472
Stipa letermannii Vasey. NEEDLEGRASS, N, 1, rim above upper CdC, r1251
Thinopyrum intermedium (Host) Barkworth & D.R. Dewey. INTERMEDIATE WHEATGRASS, E, 1, Tsaile Lake discharge area, r1484
Thinopyrum ponticum (Podp.) Z.-W. Liu & R.-C. Wang. RUSH WHEATGRASS, E, 1, Tsaile Lake discharge area, W
Torreyochloa pallida var. pauciflora (J. Presl) J.I. Davis. PALE FALSE MANNAGRASS, N, 1, Tsaile Lake discharge area, r1267
Vulpia myuros (L.) K.C. Gmel. FOXTAIL FESCUE, E, 2, through-out, r1278
Vulpia octoflora var. hirtella (Piper) Henr. SIX-WEEKS FESCUE, N, 2, through-out, D
Zea mays L. CORN, H, 5, lower cyans & rims, W

Potamogetonaceae
Potamogeton foliosus Raf. LEAFY PONDWEED, N, 1, Tsaile Lake discharge area, r1478

Typhaceae
Typha angustifolia L. NARROWLEAF CATTAIL, E, 0, end of road in Black Rock Cyn, F(CACH)
Typha latifolia L. BROADLEAF CATTAIL N, 2, cyans through-out, b453