



Annotated Checklist of Vascular Flora

Black Canyon of the Gunnison National Park

Natural Resource Technical Report NPS/NCPN/NRTR—2009/227



ON THE COVER

Fendler's mountain lilac (*Ceanothus fendleri*). Photograph by Walter Fertig.

Annotated Checklist of Vascular Flora

Black Canyon of the Gunnison National Park

Natural Resource Technical Report NPS/NCPN/NRTR—2009/227

Authors

Tim Hogan
Nan Lederer
Dina Clark
University of Colorado Museum Herbarium
218 UCB
Boulder, CO 80309

Walter Fertig
Moenave Botanical Consulting
1117 W. Grand Canyon Dr.
Kanab, UT 84741

Editing and Design

Alice Wondrak Biel
Northern Colorado Plateau Network
National Park Service
P.O. Box 848
Moab, UT 84532

July 2009

U.S. Department of the Interior
National Park Service
Natural Resource Program Center
Fort Collins, Colorado

The National Park Service, Natural Resource Program Center publishes a range of reports that address natural resource topics of interest and applicability to a broad audience in the National Park Service and others in natural resource management, including scientists, conservation and environmental constituencies, and the public.

The Natural Resource Technical Report Series is used to disseminate results of scientific studies in the physical, biological, and social sciences for both the advancement of science and the achievement of the National Park Service mission. The series provides contributors with a forum for displaying comprehensive data that are often deleted from journals because of page limitations.

All manuscripts in the series receive the appropriate level of peer review to ensure that the information is scientifically credible, technically accurate, appropriately written for the intended audience, and designed and published in a professional manner. This report received informal peer review by subject-matter experts who were not directly involved in the collection, analysis, or reporting of the data.

Views, statements, findings, conclusions, recommendations, and data in this report are those of the author(s) and do not necessarily reflect views and policies of the National Park Service, U.S. Department of the Interior. Mention of trade names or commercial products does not constitute endorsement or recommendation for use by the National Park Service.

This report is available from the Northern Colorado Plateau Network website, <http://www.nature.nps.gov/im/units/NCPN>, as well as at the Natural Resource Publications Management web site, <http://www.nature.nps.gov/publications/NRPM>.

Please cite this publication as:

Hogan, T., N. Lederer, D. Clark, and W. Fertig. 2009. Annotated checklist of vascular flora: Black Canyon of the Gunnison National Park. Natural Resource Technical Report NPS/NCPN/NRTR—2009/227. National Park Service, Fort Collins, Colorado.

Contents

Figures	v
Tables	v
Abstract	vii
Acknowledgements	ix
1 Introduction	1
1.1 Background and justification.....	1
1.2 Objectives.....	1
1.3 Study area	1
1.3.1 History and setting.....	1
1.3.2 Geology	2
1.3.3 Vegetation.....	2
1.3.4 Previous botanical studies	4
2 Methods.....	7
3 Results.....	9
3.1 Summary of the flora of Black Canyon of the Gunnison National Park.....	9
3.2 Life form and biogeographic diversity.....	10
3.3 Plants of special concern	10
3.4 Non-native species and noxious weeds.....	10
4 Discussion	13
5 Literature Cited	15
Appendices	17
Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes.	19
Appendix B. Potential (unconfirmed) vascular plant taxa of Black Canyon of the Gunnison National Park.	71
Appendix C. Rejected (falsely reported or questionable) vascular plant taxa of Black Canyon of the Gunnison National Park.....	89
Appendix D. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes.....	91

Figures

Figure 1.3.1. Location of Black Canyon of the Gunnison National Park, Montrose County, Colorado..... 3

Figure 1.3.4. Increase in the number of plant taxa confirmed as present in Black Canyon of the Gunnison National Park by decade, 1950–2007. 6

Tables

Table 1.3.4. Chronology of plant-collecting efforts in Black Canyon of the Gunnison National Park. 5

Table 3.1. Statistical summary of the flora of Black Canyon of the Gunnison National Park. 9

Table 3.3. Plant species of conservation concern from Black Canyon of the Gunnison National Park. 11

Table 3.4. Noxious weed species of Black Canyon of the Gunnison National Park. 12

Abstract

In 2005–2006, the National Park Service’s Northern Colorado Plateau Network received funding to develop a revised checklist of the vascular plant flora of Black Canyon of the Gunnison National Park. This entailed a thorough review of existing literature, re-examination of specimens from the Black Canyon of the Gunnison National Park herbarium and other state and national museum collections, and additional field work to corroborate unverified species reports and locate new species. Based on this study, 532 vascular plant taxa have been confirmed or reliably reported as occurring in the park (470 are known from validated herbarium specimens and 62 from unvouchered literature reports). Another 20 species formerly considered part of the park flora have now been shown to be falsely reported. The current flora of Black Canyon of the Gunnison National Park represents about 17% of the known flora of Colorado, and 28% of the flora of the Colorado Plateau ecoregion within Colorado. Although no plant taxa are listed as threatened or endangered, at least 18 are considered species of concern by the state natural heritage program. Introduced plants make up 13.7% of the park flora (73 species), of which 19 species are considered noxious weeds by the State of Colorado. Further surveys in Black Canyon of the Gunnison National Park are likely to find additional new species (at least 290 taxa are known from similar habitats outside the park boundary), especially among late-flowering, weedy, or wetland taxa.

Acknowledgements

We would like to thank the following individuals for their assistance with this project: Dr. Angela Evenden, botanist and former leader of the Northern Colorado Plateau Network (NCPN) program in Moab, Utah, was an active proponent of this project and helped secure funding for field work and herbarium studies in 2006. Libby Nance (former NCPN database specialist), and Margaret Beer (former NCPN database manager) assisted with development and quality control of the park's NPSpecies database. Libby Nance, Janet Coles, and Helen Thomas also provided data from recent vegetation mapping and wetland inventories on the park. Thanks to Black Canyon of the Gunnison National Park staff, especially Danguole Bockus and Paul Zaenger, for providing logistical help with the herbarium-review phase of the project and comments on the draft manuscript. To any others whom we may have inadvertently forgotten, please accept our apologies (and thanks). Funding for this project was provided by the National Park Service.

1 Introduction

In 2006, the National Park Service (NPS) established a cooperative agreement with the University of Wyoming, through the Rocky Mountains Cooperative Ecosystem Studies Unit, to produce a series of technical reports summarizing the vascular plant flora of each of the 16 national park units of the Northern Colorado Plateau Network (NCPN). These reports are based on existing information in the park service's NPSpecies database system and augmented by further data mining, reviews of state and regional herbaria, and new field surveys to resolve the status of many reported and unconfirmed species. The objective of these reports is to summarize the current state of knowledge of the flora of each park for the benefit of NPS biologists and interpretive staff, outside researchers, and the general public. The following report addresses the vascular flora of Black Canyon of the Gunnison National Park, in west-central Colorado. Other NCPN park units are addressed in separate reports.

1.1 Background and justification

One of the primary missions of the NPS is “to conserve unimpaired the natural and cultural resources and values of the national park system for the enjoyment of this and future generations” (NPS 2000). Due to their high degree of protection and distribution across a wide variety of habitat types, the nation's national park units make a significant contribution to the protection of biological diversity (Noss and Cooperrider 1994). Unfortunately, the full contribution of the National Park System is not known, as many park units have traditionally lacked comprehensive biological inventories or monitoring programs to identify the composition and condition of their biota. Knowing the status of park flora and fauna is critical for effective park management and for systematically identifying and filling gaps in the nation's protected area network (Margules and Pressey 2000).

To rectify this shortcoming, Congress passed the National Parks Omnibus Management Act in 1998, to provide guidance and funding for an inventory and monitoring program across the entire National Park System. Since 2000, the NCPN Inventory and Monitoring Program has been developing and verifying species lists of

vertebrates and vascular plants for each park unit in the network (Evenden et al. 2002). This effort has entailed reviewing existing species checklists, corroborating the identification of specimens in park museum and herbarium collections, locating additional specimen records from other museums, mining relevant literature and datasets, and conducting field surveys to locate new taxa or confirm unsubstantiated reports.[†] All of these data have been synthesized in NPSpecies, the park service's standardized database for documenting park status (present, probably present, unconfirmed, falsely reported), abundance, residency, nativity, and rarity. With the production of a technical series of reports on the flora of each park, the NPSpecies data will now be available to a broader audience.

1.2 Objectives

The objectives of this project were to:

1. Document the current status (present, reported, potential, or falsely reported) of all vascular plant species that have been cited as occurring in Black Canyon of the Gunnison National Park, based on a review of herbarium collections and past literature.
2. Develop an annotated checklist of the flora of Black Canyon of the Gunnison National Park, with supplemental information on taxonomic synonyms, distribution, within-park abundance, flowering period, growth form, nativity, habitat, and sources for each record.

1.3 Study area

1.3.1 History and setting

The Black Canyon of the Gunnison River is one of the steepest and narrowest canyons in the world. At its deepest point, the river is nearly 2,300 feet below the canyon rim; at its narrowest, it is only 40 feet wide. Due to its remote location and rugged depths, the Black Canyon remained poorly explored until the middle of the nineteenth century. Captain John Gunnison, who explored the Gunnison River drainage as a potential route for a transcontinental railroad in 1853, reached the upper end of the canyon (in the area that is now Curecanti National Recreation Area) but did not descend into its depths. The Denver and

[†]Taxa refer to all named species, subspecies, and varieties.

Rio Grande Railroad constructed a narrow-gauge rail line to the upper end of the canyon in 1882, and considered extending the route through the entire Black Canyon. Byron Bryant led a team of surveyors into the canyon in the winter of 1883, and, after four months of difficult work, convinced the railroad to find an easier route elsewhere. An expedition in 1900 sought to explore the canyon bottom by wooden boat in search of a location to divert Gunnison River water to agricultural communities in the Uncompahgre Valley. This expedition failed, but in the following year, Will Torrence and Abraham Lincoln Fellows succeeded in running the river on boats constructed of inflatable rubber mattresses (Vandenbusche 1980). Construction of the six-mile Gunnison Tunnel, to divert part of the river's flow, commenced at the upper end of the canyon in 1905; it was completed four years later.

In later years, Torrence became an advocate for protecting the Black Canyon for public enjoyment. In March 1933, President Herbert Hoover used the Antiquities Act to create Black Canyon of the Gunnison National Monument (NM) for "the preservation of the spectacular gorges and additional features of scenic, scientific, and educational interest" (Evenden et al. 2002). Since 1935, the boundaries of the monument have been expanded on six occasions—most recently in 1999, when 4,400 acres of adjacent wilderness were added and the unit was converted to national park status (Figure 1.3.1). Presently, the park covers 30,750 acres (12,444 ha), of which nearly half is officially designated wilderness (Evenden et al. 2002).

Black Canyon of the Gunnison National Park (NP) is located about 15 miles east of Montrose, in eastern Montrose County, Colorado. The park borders Curecanti National Recreation Area (NRA) along its southeastern border. The recreation area contains three dams that regulate the flow of the Gunnison River into Black Canyon. Elevation within the park ranges from 5,400 feet (1,645 m) at the bottom of Black Canyon to 8,775 feet (2,675 m) on the summit of Signal Hill. Average annual precipitation is 16–20 inches (400–508 mm), with about one-quarter coming as snow. Temperature ranges from an average of 15°F (–9°C) in winter to 85°F (29°C) in mid-summer (Evenden et al. 2002).

1.3.2 Geology

Most of the Black Canyon of the Gunnison con-

sists of 1.3–1.7 billion year-old Precambrian rocks. The oldest outcrops in the park are derived from sedimentary and igneous rocks that were re-crystallized by heat and pressure to form gneisses and schists interlaced by pinkish pegmatite. Over time, these rock layers were faulted, folded, and compressed into nearly vertical, accordion-like bands. Later in the Precambrian, volcanic magma intruded into these rocks, forming a plug of granite at the mid-reach of the canyon (Chronic 1988).

Late in the Precambrian, the ancestral Gunnison Plateau had eroded to a level peneplain. During most of the Paleozoic and Mesozoic, the area was near or below sea level and subjected to cycles of deposition and erosion of marine shales, limestones, and sandstones. Only the later Jurassic and Cretaceous sedimentary layers are still present (earlier layers eroded away eons ago). Mesozoic outcrops in Black Canyon of the Gunnison NP include the Dakota Sandstone (a beach deposit) and the Mancos Shale (marine clays that weather into adobe-like badlands), present on mesa tops and slopes along the park's western boundary (Chronic 1988).

About 60 million years ago, in the late Cretaceous, tectonic forces during the Laramide Orogeny elevated the Gunnison Plateau and adjacent areas of the Colorado Plateau and southern Rocky Mountains. Starting about 35 million years ago, volcanic activity in the West Elk and San Juan mountains buried much of the Black Canyon area under a thick mantle of volcanic ash and mudflows. Following the last major volcanic eruptions about 10–15 million years ago, the Gunnison River became entrenched within its current drainage and began slicing through the volcanic overburden and underlying Mesozoic sediments at the same time the region experienced a second period of uplift. Ultimately, the river reached Precambrian basement rock about 2 million years ago, and began carving the Black Canyon. A steep gradient, abundant runoff from the Rocky Mountains, and time have allowed the river to downcut at a rate of 33 cm (1 foot) every thousand years (Chronic 1988).

1.3.3 Vegetation

Six general vegetation types have been documented within Black Canyon of the Gunnison NP (see NCPN in ed. for a more detailed classification). Extensive areas along the summit of the plateau above the canyon (especially on the south rim) are

Black Canyon of the Gunnison National Park

Colorado

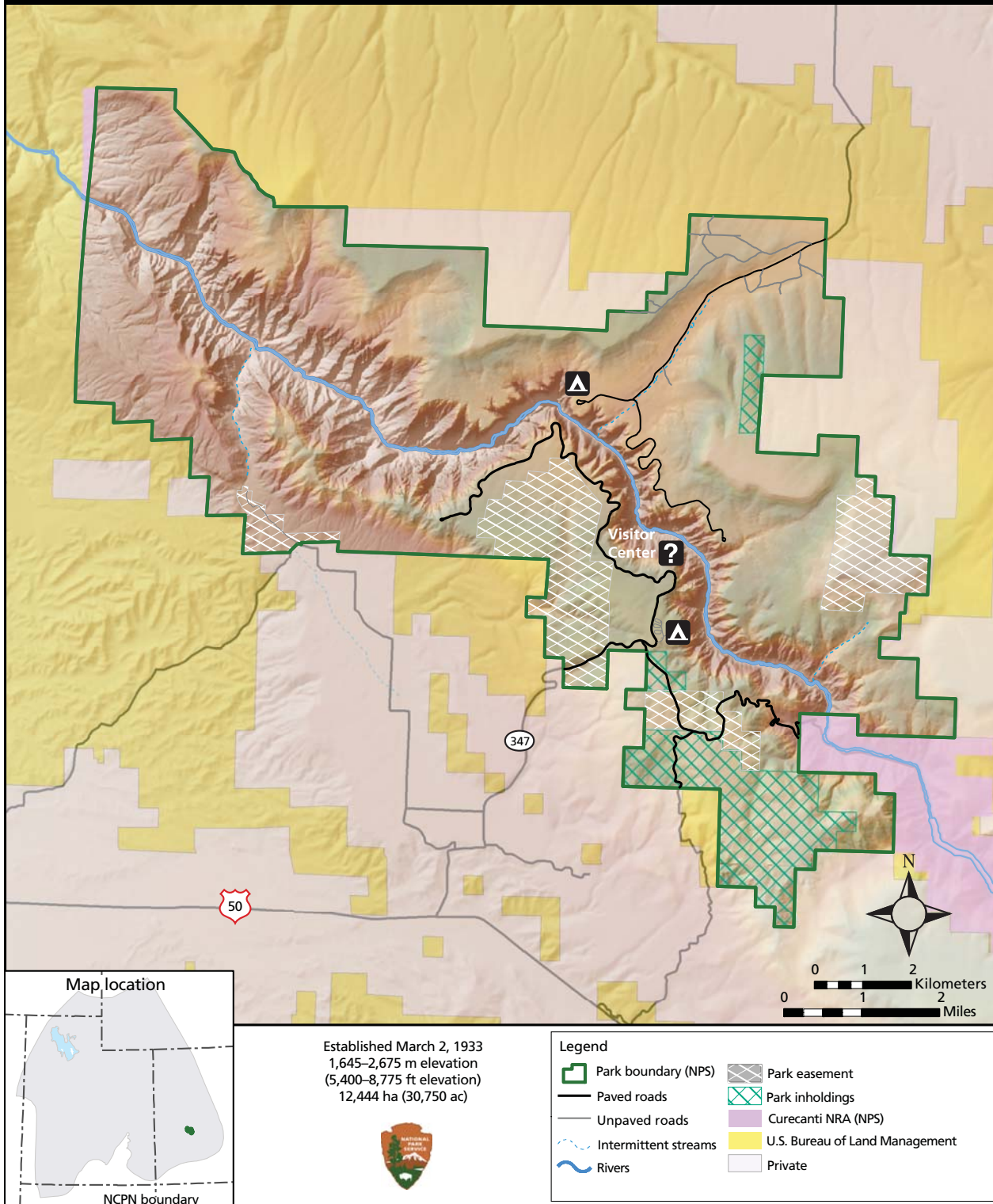


Figure 1.3.1. Location of Black Canyon of the Gunnison National Park, Montrose County, Colorado.

covered by thickets of Gambel oak (*Quercus gambelii*) and Saskatoon serviceberry (*Amelanchier alnifolia*). Openings within oak scrubland may be dominated by mountain big sagebrush (*Seriphidium vaseyanum*) grasslands with an understory of needle-and-thread grass (*Hesperostipa comata*), muttongrass (*Poa fendleriana*), and an assortment of perennial forbs. Rocky areas along the north rim of the canyon and on south-facing canyon slopes tend to be occupied by two-needle pinyon (*Pinus edulis*) and Utah juniper (*Sabina osteosperma*) interspersed with Gambel oak, serviceberry, and alder-leaf mountain mahogany (*Cercocarpus montanus*). Adobe badlands of semi-barren Mancos Shale occur sporadically along the western park boundary and support desert shrubland vegetation of scattered Utah juniper, shadscale (*Atriplex confertifolia*), and mat saltbush (*Atriplex corrugata*). These badlands contain a large number of desert species that do not occur elsewhere in the park.

North-facing slopes within the inner canyon support forests of Douglas-fir (*Pseudotsuga menziesii*), blue spruce (*Picea pungens*), and quaking aspen (*Populus tremuloides*). These woodlands may be replaced by Gambel oak on drier sites. Moist, shaded cliff-faces provide a micro-habitat for several rare species, such as Black Canyon gilia (*Gilia penstemonoides*) and Purpus' sullivania (*Sullivantia hapemanii* var. *purpusii*), or plants usually found at much higher elevations, such as spotted saxifrage (*Ciliaria austromontana*). The canyon bottom is lined by a narrow band of riparian forest dominated by box-elder (*Negundo aceroides*), narrowleaf cottonwood (*Populus angustifolia*), and western chokecherry (*Padus virginiana*), and occasional ponderosa pine (*Pinus ponderosa*) (Evenden et al. 2002; Hogan et al. 2005).

1.3.4 Previous botanical studies

Because of the ready access provided by the Denver and Rio Grande Railroad, the Gunnison River drainage attracted a large number of field botanists in the late nineteenth and early twentieth centuries, including Marcus E. Jones, E. L. Greene, Herbert Wheeler, Charles Crandall, and Charles Baker. Unfortunately, the locality data from the specimens procured by these early visitors is usually vague and often limited only to the name of one of the railroad towns (Sapinero or Cimarron) now located largely within adjacent Curecanti NRA (Hogan et al. 2009). Thus the full

extent of their explorations within the modern boundaries of Black Canyon of the Gunnison NP will likely be forever unknown.

The earliest botanist known to have entered Black Canyon was Carl Albert Purpus, who collected the type specimen of Purpus' sullivania (*Sullivantia hapemanii* var. *purpusii*) within the canyon in 1892 (Table 1.3.4, Figure 1.3.4). In the ensuing 60 years, botanical exploration within the Black Canyon area was limited. Edwin Payson, of the University of Wyoming, collected the type of mountain pepperweed (*Lepidium montanum* var. *tenellum*) in Black Canyon in 1917. William Penland documented nine new species for the area in 1942. Margaret Douglass added matrimony-vine (*Lycium barbarum*) to the Black Canyon flora in 1954.

The first systematic effort to document the complete flora of Black Canyon of the Gunnison NM began in 1959. Over the next four years, the flora of the monument increased from 12 to 152 species (an increase of 92%) (Figure 1.3.4). Monument naturalists W. D. Wetlaufer and Pat and Carol Miller added 48 new species in the process of developing the monument's herbarium. Other collectors of note included University of Colorado professor William A. Weber (59 new species), J. M. Rominger (23 new grass taxa), A. S. Hyde, Richard Beidelman, and B. Vogel (10 new species combined) (Hogan 2006).

The next significant effort to document the monument's flora took place 20 years later, when William Weber resumed his research on the flora of Black Canyon in collaboration with Hans Beck, of the University of Colorado herbarium; Claudia Rector, of Colorado National Monument; and Don Kennedy, of Black Canyon of the Gunnison NM. Weber (1983) documented 178 new species for the monument and developed a list of additional species to be expected within the area with additional field work. Weber's work brought the total number of species confirmed for the monument to 347.

A new wave of botanical exploration began in the early years of the twenty-first century. In 2002, the NCPN (in ed.) vegetation mapping team conducted sampling across Black Canyon of the Gunnison NP, and reported 86 new species for the flora. Steve Dewey and Kim Andersen, of Utah State University, reported three additional species during a survey of noxious weeds in the park

in 2003 (Dewey and Andersen 2005). Tim Hogan, Nan Lederer, Dina Clark, and Luke Tembrock, of the University of Colorado Museum Herbarium, conducted a general floristic survey of the park in 2004, and collected more than 450 specimens for

the Black Canyon of the Gunnison NP herbarium (doubling it in size). Hogan and others (2005) discovered 93 new species and confirmed (with vouchers) 28 of the taxa reported previously by the NCPN veg mapping crew.

Table 1.3.4. Chronology of plant-collecting efforts in Black Canyon of the Gunnison National Park.

Year	Collector(s)	# of new taxa	Comments
1892	C. A. Purpus	1	Carl Albert Purpus collected the holotype of Purpus' sullivantia (<i>Sullivantia hapemanii</i> var. <i>purpusii</i>) in Black Canyon in 1892. The full extent of Purpus's collecting within the future national park is not known.
1917	E. B. Payson	1	Edwin Payson collected the type of mountain pepperweed (<i>Lepidium montanum</i> var. <i>tenellum</i>) in Black Canyon. The full extent of Payson's collecting within the future national park is not known.
1942	C. W. T. Penland	9	William Penland collected at least 9 new species for Black Canyon of the Gunnison NM (deposited at the University of Colorado). The full extent of Penland's collecting in the monument is not known.
1954	M. Douglass	1	Margaret Douglass collected matrimony-vine (<i>Lycium barbarum</i>).
1959–1963	W. D. Wetlaufer, W. A. Weber, P. Miller, C. Miller, R. S. Beidelman, A. S. Hyde, J. M. Rominger, and B. Vogel	140	Park naturalist W. D. Wetlaufer collected 33 new species for Black Canyon of the Gunnison National Monument from 1959 to 1961. William Weber, of the University of Colorado herbarium, discovered 59 new species for the monument in 1960 and 1962. Pat and Carol Miller, naturalists for Black Canyon and Colorado national monuments, added 15 new species in 1961. J. M. Rominger collected 23 new grass species for the monument in 1962. A. S. Hyde, Richard Beidelman, and B. Vogel contributed 10 new species from 1961 to 1963.
1974	M. Cottrell and C. Gregory	15	Cottrell and Gregory collected 28 specimens for the BLCA herbarium and added 15 new species to the monument flora.
1980	K. Koepsel and W. Grey	2	Kirk Koepsel collected elegant columbine (<i>Aquilegia elegantula</i>) and William Grey discovered Black Canyon gilia (<i>Gilia penstemonoides</i>) during his research on rare plants of Black Canyon.
1983	W. A. Weber, H. Beck, D. Kennedy, and C. Rector	178	William Weber and Hans Beck, of the University of Colorado; Don Kennedy, from Black Canyon of the Gunnison NM; and Claudia Rector, from Colorado NM, collected 239 specimens for the BLCA herbarium and 178 new vascular plant taxa for the monument flora.
1984	E. Elder	1	Ellen Elder collected leopard-lily (<i>Fritillaria atropurpurea</i>).
2002	NCPN vegetation mapping team	86 reported	Vegetation mappers with the NCPN (in ed.) reported (without vouchers) 140 new species for the park. At least 28 of these were later corroborated with vouchers by Hogan and others (2005), but 58 remain unverified.
2003–2004	T. Hogan, N. Lederer, D. Clark, L. Tembrock, S. Dewey, and K. Andersen	121 + 3 reported	Tim Hogan, Nan Lederer, Dina Clark, and Luke Tembrock, of the University of Colorado Museum Herbarium, collected 460 specimens throughout the park as part of a general floristic survey. Hogan and others (2005) discovered 93 new species for the Black Canyon NP flora and confirmed 28 additional species previously reported by the NCPN vegetation mapping crew. Dewey and Andersen (2005) reported 3 additional species during a survey of noxious weeds in 2003.

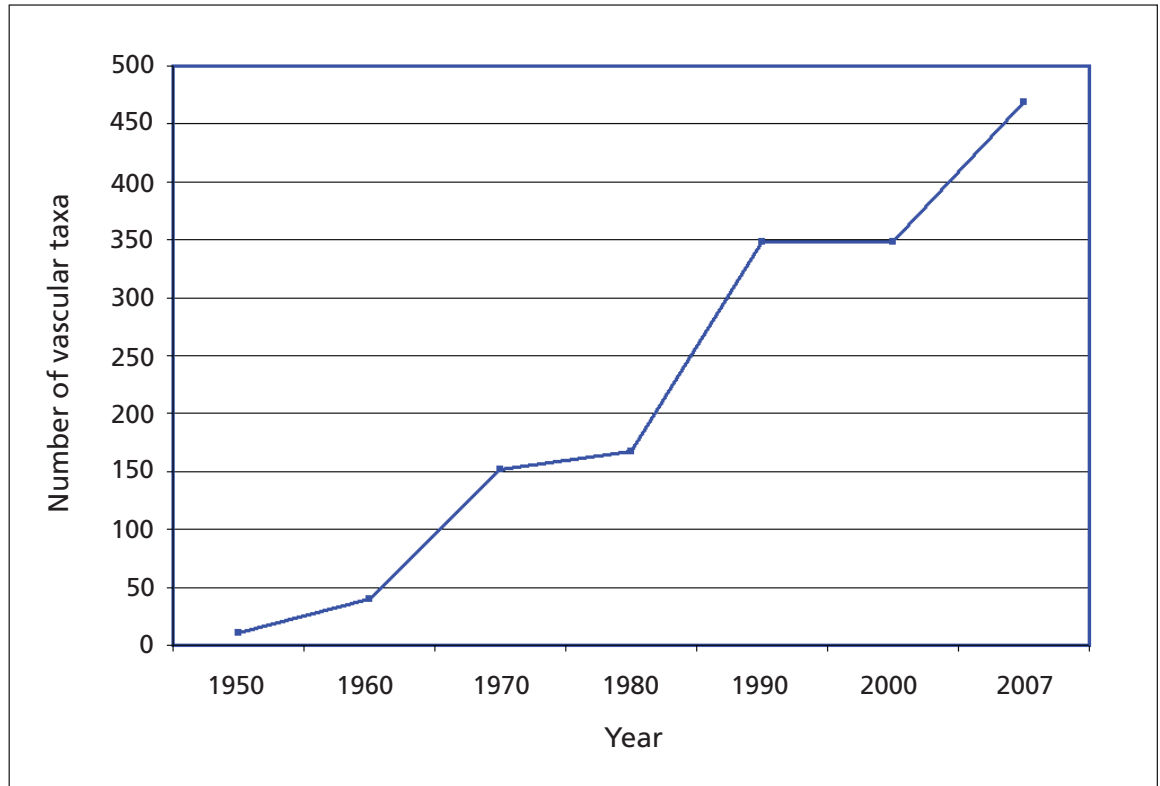


Figure 1.3.4. Increase in the number of plant taxa confirmed as present in Black Canyon of the Gunnison National Park by decade, 1950–2007.

2 Methods

In 2005, Tim Hogan and Nan Lederer, of the University of Colorado Museum Herbarium, reviewed all mounted specimens in the Black Canyon of the Gunnison National Park herbarium (BLCA) to determine whether each was correctly identified to species, subspecies, or variety following the nomenclature of Weber and Wittmann (2001). Hogan and others (2005) also reviewed relevant herbarium collections from the University of Colorado (COLO). As necessary, they made corrections and annotations to each specimen and to the voucher records in the park's Automated National Cataloging System (ANCS+) and NPSpecies database.

Based on this herbarium work and a review of park references (Dewey and Andersen 2005; NCPN in ed.; Weber 1983), we developed four lists:

1. A revised checklist of species that were present in the park (confirmed by an authenticated voucher; included in Appendices A and D);
2. A list of species that were reported in the literature but not corroborated with a voucher (equivalent to "probably present" in NPSpecies terminology; included in Appendices A and D);
3. A list of potential species ("unconfirmed" in NPSpecies) known from the vicinity of Black Canyon of the Gunnison National Park based on Weber and Wittmann (1992) and data from the University of Colorado Museum Herbarium digital specimen database (www.cumuseum.colorado.edu/Research/Botany/Databases/search.php) (included in Appendix B); and
4. A list of species that are now known to be misidentified or highly questionable (Appendix C).

Each list was annotated with supplemental information on life form, geographic range (within the context of Colorado), population size in the park (derived from Hogan et al. 2005, NCPN in ed., and field observations), flowering period, distribution across general vegetation types, nativity, data source (collector and collection number from a sample specimen or literature citation), year of earliest collection (from herbarium records), and relevant synonymy and taxonomic problems (based on review of Barkworth et al. 2003, 2007; Barneby 1989; Cronquist 1994; Cronquist et al. 1972, 1977, 1984, 1997; Dorn 2001; Flora of North America Editorial Committee 1993, 1997, 2000, 2002a, 2002b, 2003, 2005, 2006a, 2006b, 2006c; Holmgren et al. 2005; Kartesz 2003; Welsh et al. 2003; and the Integrated Taxonomic Information System [ITIS] website, <http://www.itis.gov/>). The annotations to these lists and label data from the BLCA herbarium review were then incorporated into the NPSpecies database for the park.

3 Results

3.1 Summary of the flora of Black Canyon of the Gunnison National Park

Based on a review of specimens in the BLCA and COLO herbaria (correcting for misidentifications and collections from outside the park) and results of the 2003–2004 University of Colorado floristic survey (Hogan et al. 2005), the number of vascular plant taxa confirmed as occurring in Black Canyon of the Gunnison NP with an authenticated voucher stands at 470 (Table 3.1, Appendices A, D). This number is slightly lower than the 485 reported by Hogan and others (2005), due to the elimination of some duplicate names. An additional 62 taxa have been reported for the park but have not been corroborated with a voucher

specimen (Table 3.1, Appendix A). Of these, 59 were reported by the NCPN (in ed.) and 3 from Dewey and Andersen (2005). Taken together, the number of confirmed and reported vascular plant taxa in Black Canyon of the Gunnison NP is 532 (Table 3.1, Appendices A, D).

Following our review of literature and herbarium collections from neighboring Curecanti National Recreation Area, we recognized 290 species (Appendix B) that could potentially be found within Black Canyon of the Gunnison NP (Weber 1983; Hogan and Lederer NPSpecies database 2006). Most of these species are known from comparable habitats elsewhere in Montrose County, or have been collected from within a 5–7-mile radius of the park.

Of the pool of species documented or reported for Black Canyon of the Gunnison NP, we found

Table 3.1. Statistical summary of the flora of Black Canyon of the Gunnison National Park.

Category	Number confirmed in park	Number additionally reported for park	Total
Taxonomic diversity			
Total taxa (including varieties and subspecies)	470	62	532
Full species (excluding varieties and subspecies)	465	61	526
Families	87	3	90
Life form diversity			
Tree taxa	13	1	14
Shrub taxa	53	9	62
Perennial forb taxa	242	35	277
Annual forb taxa	73	10	83
Perennial graminoid taxa	73	6	79
Annual graminoid taxa	4	1	5
Fern taxa	12	0	12
Biogeographic diversity			
Introduced taxa	63	10	73
Native taxa			
Locally endemic taxa	12	1	13
Regionally endemic taxa	29	6	35
Disjunct taxa	1	0	1
Peripheral taxa	7	4	11
Sparse taxa	2	0	2
Widespread taxa	356	41	397
<i>Total native taxa</i>	<i>407</i>	<i>52</i>	<i>459</i>

The number of taxa and families is based on taxonomic concepts of Weber and Wittmann (2001). See appendices for an explanation of the various categories.

that 11 taxa were falsely reported based on misidentified voucher specimens in the BLCA and COLO herbaria. We consider an additional 9 species cited (but not vouchered) by the NCPN vegetation mapping team (NCPN in ed.) to be questionable based on the absence of suitable habitat or the distance of Black Canyon of the Gunnison NP to the known or expected range of each species (Appendix C).

The confirmed and reported flora of Black Canyon of the Gunnison NP represents 16.9% of the 3,145 native and naturalized taxa documented for the state of Colorado by Weber & Wittmann (1992), and 56.3% of the state's 160 plant families (Table 3.1). The park contains 66.7% of the 797 species reported for Montrose County (Kartesz 2003). At the ecoregional scale, Black Canyon of the Gunnison NP contains 28.0% of the 1,898 species reported for the Colorado portion of the Colorado Plateau (Kartesz 2003).

3.2 Life form and biogeographic diversity

Although ecologically dominant, tree and shrub species make up only 14.3% of the confirmed and reported plant taxa of Black Canyon of the Gunnison NP (see Table 3.1). Perennial forbs are the most species-rich life form in the park flora, with 277 known and reported taxa (52.1% of the total flora). Annual forbs and grass-like plants comprise less than 17% of the flora. Like trees and shrubs, perennial graminoids are ecologically important but relatively species-poor, representing just 14.8% of the total flora. The diversity of ferns and fern-allies in Black Canyon of the Gunnison NP is especially low (2.2%) (see Table 3.1).

Of the park's 459 native taxa, 397 (86.5%) are widespread across Colorado and western North America. Only 13 species (2.8% of the native flora) have extremely limited global distributions (local endemics found within an area of less than 1° of latitude × 2° of longitude; see appendices for complete definitions of biogeographic categories). Regional endemics (largely restricted to the Colorado Plateau) comprise an additional 7.6% of the native park flora (see Table 3.1). Species at the extreme edge of their global range in Colorado (peripherals), and those found sparsely over a wide range, make up 2.4% and 0.4% of the park's native flora, respectively (see Table 3.1). Shelton's violet (*Viola biternata*) is the only disjunct species presently known from the park.

3.3 Plants of special concern

Black Canyon of the Gunnison NP has no plants listed as threatened or endangered under the U.S. Endangered Species Act. Only three species, Rocky Mountain spring-parsley (*Lomatium concinnum*), Rocky Mountain thistle (*Cirsium perplexans*), and Uncompahgre bladderpod (*Lesquerella vicina*), are listed as sensitive by the U.S. Bureau of Land Management's Colorado office or the U.S. Forest Service (Table 3.3) (Spackman et al. 1997). The Colorado Natural Heritage Program (2007) tracks 17 taxa known from Black Canyon of the Gunnison NP as species of concern, and one other on its watch list of potential species of concern (Table 3.3). Hogan and others (2005) discovered the first populations of Rocky Mountain thistle and Uncompahgre bladderpod within the park in 2004, and also mapped occurrences of two other rare species: juniper tumbledust (*Thelypodopsis juniperorum*) and Purpus' sullivantia.

3.4 Non-native species and noxious weeds

Introduced plant species (not historically native to Colorado or North America) make up 13.7% of the confirmed and reported flora of Black Canyon of the Gunnison NP (see Table 3.1). This figure is lower than the statewide average of 15.6% for non-native species (Rejmanek and Randall 1994). Of the park's 73 introduced plant species, 19 are listed as noxious by the State of Colorado (Table 3.4) (Dewey and Andersen 2005; CDA 2007). Plants on the Colorado state noxious weed list fall into three categories with differing management objectives and requirements (Colorado Noxious Weed Act of 1996 Title 35 Article 5.5). Weeds on List A are designated for full eradication wherever they occur. Containment of infestations is the goal for species on List B, and voluntary control, education, and research is the objective for species on List C. Currently, 14 species from Black Canyon of the Gunnison NP are on List B, and 5 are on List C; none is on List A (Table 3.4). Dewey and Andersen (2005) and Hogan and others (2005) mapped infestations of 19 noxious weeds and invasive non-native species within the park.

Table 3.3. Plant species of conservation concern from Black Canyon of the Gunnison National Park.

Family	Species	Common name	TNC global rank	Legal status	CNHP status
Apiaceae (Umbelliferae)	<i>Aletes anisatus</i>	Rocky Mountain Indian parsley	G3		Watch, S3
Apiaceae (Umbelliferae)	<i>Cymopterus planosus</i>	Rocky Mountain spring-parsley	G3		SOC, S3S4
Apiaceae (Umbelliferae)	<i>Lomatium concinnum</i>	adobe desert-parsley	G2G3	CO BLM: Sensitive	SOC, S2S3
Asteraceae (Compositae)	<i>Cirsium perplexans</i>	Rocky Mountain thistle	G2	CO BLM: Sensitive, USFS R2: Sensitive	SOC, S2S3
Brassicaceae (Cruciferae)	<i>Boechera gunnisoniana</i>	Gunnison's rockcress	G3		SOC, S3
Brassicaceae (Cruciferae)	<i>Boechera oxylobula</i>	Glenwood Springs rockcress	G3		SOC, S3
Brassicaceae (Cruciferae)	<i>Lesquerella vicina</i>	Uncompaghre bladderpod	G2	CO BLM: Sensitive	SOC, S2
Brassicaceae (Cruciferae)	<i>Stanleya albescens</i>	white prince's-plume	G3		SOC, S3
Brassicaceae (Cruciferae)	<i>Thelypodopsis juniperorum</i>	juniper tumbledustard	G2		SOC, S2
Capparaceae (Cleomaceae)	<i>Cleomella palmeriana</i>	Palmer's stinkweed	G3G4		SOC, S3
Crossosomataceae	<i>Forsellesia meionandra</i>	spiny greasewood	G5T3		SOC, S3
Hydrophyllaceae	<i>Phacelia splendens</i>	Eastwood's phacelia	G3		SOC, S3
Lamiaceae (Labiatae)	<i>Monardella odoratissima</i>	stinking horsemint	G4G5 T3T5		SOC, S2
Loasaceae	<i>Nuttallia pterosperma</i>	wing-seed stickleaf	G3G5		SOC, S3?
Polemoniaceae	<i>Gilia penstemonoides</i>	Black Canyon gilia	G3		SOC, S3
Ranunculaceae	<i>Myosurus cupulatus</i>	horseshoe mousetail	G4		SOC, S1?
Saxifragaceae	<i>Sullivantia hapemanii</i> var. <i>purpusii</i>	Purpus' sullivantia	G3T3		SOC, S3
Scrophulariaceae	<i>Penstemon retrorsus</i>	Adobe Hills beardtongue	G3		SOC, S3

This list was derived from the Colorado Natural Heritage Program (CNHP 2007). All species are confirmed as present in the park.

Codes: **TNC global rank** assesses abundance and conservation priority on a scale of 1–5 (1 being extremely vulnerable and 5 being secure) for full species (G) and varieties or subspecies (T) across their entire range. A “?” indicates uncertainty in the rank, Q = taxonomic questions, and NR = not ranked. A comparable scoring system is used to measure state abundance (S) in Colorado under the column CNHP status. TNC = The Nature Conservancy. Under **legal status**, USFWS R2= U.S. Fish and Wildlife Service, Region 2. CO BLM = U.S. Bureau of Land Management, Colorado office. Under **CNHP status**, SOC denotes plants on the state “Species of Concern” list and Watch indicates species on the watch list that may ultimately warrant listing as species of concern (CNHP 2007).

Table 3.4. Noxious weed species of Black Canyon of the Gunnison National Park.

Family	Species	Common name	Park status	CO noxious weed list
Asteraceae (Compositae)	<i>Acosta diffusa</i> (<i>Centaurea diffusa</i>)	diffuse knapweed	Present	List B
Asteraceae (Compositae)	<i>Acosta maculosa</i> (<i>Centaurea maculosa</i>)	spotted knapweed	Present	List B
Asteraceae (Compositae)	<i>Acroptilon repens</i> (<i>Centaurea repens</i>)	Russian knapweed	Present	List B
Asteraceae (Compositae)	<i>Arctium minus</i>	burdock	Present	List C
Asteraceae (Compositae)	<i>Breea arvensis</i> (<i>Cirsium arvense</i>)	Canada thistle	Present	List B
Asteraceae (Compositae)	<i>Breea incana</i> (<i>Cirsium arvense</i>)	Canada thistle	Present	List B
Asteraceae (Compositae)	<i>Carduus nutans</i> var. <i>macrolepis</i>	musk thistle	Present	List B
Asteraceae (Compositae)	<i>Cirsium vulgare</i>	bull thistle	Present	List B
Boraginaceae	<i>Cynoglossum officinale</i>	common hound's-tongue	Present	List B
Brassicaceae (Cruciferae)	<i>Cardaria draba</i>	whitetop	Present	List B
Brassicaceae (Cruciferae)	<i>Hesperis matronalis</i>	Dame's rocket	Reported	List B
Chenopodiaceae	<i>Halogeton glomeratus</i>	halogeton	Present	List C
Convolvulaceae	<i>Convolvulus arvensis</i>	field bindweed	Present	List C
Geraniaceae	<i>Erodium cicutarium</i>	stork's-bill	Reported	List B
Poaceae (Gramineae)	<i>Anisantha tectorum</i> (<i>Bromus tectorum</i>)	cheatgrass	Present	List C
Poaceae (Gramineae)	<i>Elytrigia repens</i>	quackgrass	Present	List B
Scrophulariaceae	<i>Linaria vulgaris</i>	butter-and-eggs	Reported	List B
Scrophulariaceae	<i>Verbascum thapsus</i>	woolly mullein	Present	List C
Tamaricaceae	<i>Tamarix ramosissima</i>	five-stamen tamarisk	Present	List B

This list was derived from the Colorado Department of Agriculture (2007).

4 Discussion

Since 1983, the confirmed and reported flora of Black Canyon of the Gunnison National Park has increased by 35%, from 348 to 532 taxa due primarily to the floristic research of Weber (1983), Hogan et al. (2005), and others. Another 290 species have been documented from the vicinity (Appendix A, B). Should all of these potential species be found, the flora of Black Canyon of the Gunnison National Park would increase by nearly 35%.

Many of the “missing” potential or reported taxa consist of cryptic species that flower late in the growing season, or occur in undersampled wetland or weedy habitats. Confirmation of reported species should remain a high priority, as some of these taxa may ultimately prove to be erroneous. Additional studies would also be useful to better refine the abundance and distribution of species of high management interest (especially rare plants and invasive non-natives).

5 Literature Cited

- Barkworth, M. E., K. M. Capels, S. Long, and M. B. Piep, eds. 2003. Magnoliophyta: Commelinidae (in part): Poaceae, part 2. Flora of North America north of Mexico, Volume 25. New York: Oxford University Press. 783 pp.
- Barkworth, M. E., K. M. Capels, S. Long, L. K. Anderton, and M. B. Piep, eds. 2007. Magnoliophyta: Commelinidae (in part): Poaceae, part 1. Flora of North America north of Mexico, Volume 24. New York: Oxford University Press. 911 pp.
- Barneby, R. C. 1989. Volume 3, Part B. Fabales. In Cronquist, A., A. H. Holmgren, N. H. Holmgren, J. L. Reveal, and P. K. Holmgren, eds. Intermountain flora: Vascular plants of the Intermountain West, U.S.A. Bronx, N.Y.: New York Botanical Garden. 279 pp.
- Chronic, H. 1988. Pages of stone: Geology of western national parks and monuments: Grand Canyon and the plateau country. Seattle, Wa.: The Mountaineers. 158 pp.
- Colorado Department of Agriculture (CDA). 2007. Colorado noxious weed list. www.cepep.colostate.edu/noxious.htm#CONWA.
- Colorado Natural Heritage Program (CNHP). 2007. Tracked vascular plant species (8/16/2007 version). www.cnhp.colostate.edu/tracking/vascular.html.
- Cronquist, A. 1994. Volume 5, Asterales. In Cronquist, A., A. H. Holmgren, N. H. Holmgren, J. L. Reveal, and P. K. Holmgren, eds. Intermountain flora: Vascular plants of the Intermountain West, U.S.A. Bronx, N.Y.: New York Botanical Garden. 496 pp.
- Cronquist, A., A. H. Holmgren, N. H. Holmgren, and J. L. Reveal, eds. 1972. Volume 1, Geological and botanical history of the region, its plant geography and a glossary. The vascular cryptogams and the gymnosperms. Intermountain flora: Vascular plants of the Intermountain West, U.S.A. Bronx, N.Y.: New York Botanical Garden. 270 pp.
- Cronquist, A., A. H. Holmgren, N. H. Holmgren, J. L. Reveal, and P. K. Holmgren, eds. 1977. Volume 6, The monocotyledons. Intermountain flora: Vascular plants of the Intermountain West, U.S.A. Bronx, N.Y.: New York Botanical Garden. 584 pp.
- . 1984. Volume 4, Subclass Asteridae (except Asteraceae). Intermountain flora: Vascular plants of the Intermountain West, U.S.A. Bronx, N.Y.: New York Botanical Garden. 573 pp.
- Cronquist, A., N. H. Holmgren, and P. K. Holmgren, eds. 1997. Volume 3, Part A, Subclass Rosidae (except Fabales). Intermountain flora: Vascular plants of the Intermountain West, U.S.A. Bronx, N.Y.: New York Botanical Garden. 446 pp.
- Dewey, S., and K. Andersen. 2005. An inventory of invasive non-native plants in Black Canyon of the Gunnison National Park (2003): Final report. Utah State University. Weed Science Research Project #SD0511A.
- Dorn, R. D. 2001. Vascular plants of Wyoming. Third edition. Cheyenne, Wyo.: Mountain West Publishing. 412 pp.
- Evenenden, A., M. Miller, M. Beer, E. Nance, S. Daw, A. Wight, M. Estenson, and L. Cudlip. 2002. Northern Colorado Plateau Vital Signs Network and Prototype Cluster plan for Natural Resources Monitoring: Phase I report. October 1. Two volumes. National Park Service, Northern Colorado Plateau Network, Moab, Ut. 138 pp + app.
- Flora of North America Editorial Committee. 1993. Pteridophytes and gymnosperms. Flora of North America north of Mexico, Volume 2. New York: Oxford University Press. 475 pp.
- . 1997. Magnoliophyta: Magnoliidae and Hamamelidae. Flora of North America north of Mexico, Volume 3. New York: Oxford University Press. 590 pp.
- . 2000. Magnoliophyta: Alismatidae, Arecaceae, Commelinidae (in part), and Zingiberidae. Flora of North America north of Mexico, Volume 22. New York: Oxford University Press. 352 pp.
- . 2002a. Magnoliophyta: Commelinidae (in part): Cyperaceae. Flora of North America north of Mexico, Volume 23. New York: Oxford University Press. 608 pp.
- . 2002b. Magnoliophyta: Liliidae: Liliales and Orchidales. Flora of North America north of Mexico, Volume 26. New York: Oxford University Press. 723 pp.

- . 2003. Magnoliophyta: Caryophyllidae, part 1. *Flora of North America north of Mexico*. Volume 4. New York: Oxford University Press. 559 pp.
- . 2005. Magnoliophyta: Caryophyllidae, part 2. *Flora of North America north of Mexico*. Volume 5. New York: Oxford University Press. 656 pp.
- . 2006a. Magnoliophyta: Asteridae, part 6: Asteraceae, part 1. *Flora of North America north of Mexico*. Volume 19. New York: Oxford University Press. 579 pp.
- . 2006b. Magnoliophyta: Asteridae, part 7: Asteraceae, part 2. *Flora of North America north of Mexico*. Volume 20. New York: Oxford University Press. 666 pp.
- . 2006c. Magnoliophyta: Asteridae, part 8: Asteraceae, part 3. *Flora of North America north of Mexico*. Volume 21. New York: Oxford University Press. 616 pp.
- Hogan, T. 2006. History of botanical surveys in Black Canyon of the Gunnison National Park and Curecanti National Recreation Area. Report prepared for the Northern Colorado Plateau Network, National Park Service. 4 pp.
- Hogan, T., N. Lederer, and D. Clark. 2005. Floristic inventory of Black Canyon of the Gunnison National Park and Curecanti National Recreation Area. Report prepared for the Northern Colorado Plateau Network by the University of Colorado Museum Herbarium, Boulder, Co.
- Hogan, T., N. Lederer, D. Clark, and W. Fertig. 2009. Annotated checklist of the vascular flora of Curecanti National Recreation Area. National Park Service, Denver, Co.
- Holmgren, N. H., P. K. Holmgren, and A. Cronquist. 2005. Volume 2, Part B Subclass Dilleniidae. *Intermountain flora: Vascular plants of the Intermountain West, U.S.A.* Bronx, N.Y.: New York Botanical Garden. 488 pp.
- Kartesz, J. T. 2003. Synthesis of the North American flora, Version 2.0.
- Margules, C. R., and R. L. Pressey. 2000. Systematic conservation planning. *Nature* 405:243–253.
- National Park Service (NPS). 2000. Management policies. U.S. Department of Interior, National Park Service, Washington, D.C. Publication #NPS D1416. 137 pp.
- Northern Colorado Plateau Network (NCPN). in ed. Black Canyon of the Gunnison National Park vegetation classification and mapping project. Natural Resource Technical Report. National Park Service, Denver, Co.
- Noss, R. F., and A. Y. Cooperrider. 1994. Saving nature's legacy: Protecting and restoring biodiversity. Washington, D.C.: Island Press. 416 pp.
- Rejmanek, M., and J. M. Randall. 1994. Invasive alien plants in California: 1993 summary and comparison with other areas in North America. *Madrono* 41(3):161–177.
- Spackman, S., B. Jennings, J. Coles, C. Dawson, M. Minton, A. Kratz, and C. Spurrier. 1997. Colorado rare plant field guide. Prepared for the Bureau of Land Management, U.S. Forest Service, and U.S. Fish and Wildlife Service by the Colorado Natural Heritage Program, Ft. Collins, Co.
- Vandenbusche, D. 1980. The Gunnison country. Gunnison, Co.: B & B Printers.
- Weber, W. A. 1983. Checklist of plants of Black Canyon National Monument. Boulder, Co.: University of Colorado Museum. 14 pp.
- Weber, W. A., and R. C. Wittmann. 1992. Catalog of the Colorado flora: A biodiversity baseline. Niwot, Co.: University Press of Colorado (revised electronic version, January 2000). http://cumuseum.colorado.edu/Research/Botany/Databases/vascular_plants.pdf.
- . 2001. Colorado flora: Western Slope. Third edition. Boulder: University Press of Colorado. 488 pp.
- Welsh, S. L., N. D. Atwood, S. Goodrich, and L. C. Higgins. 2003. A Utah flora. Third edition, revised. Provo, Ut: Brigham Young University. 912 pp.

Appendices

The following appendices contain annotated checklists of the vascular flora of Black Canyon of the Gunnison National Park. Appendix A lists all species that have been confirmed for the flora with an authenticated voucher specimen (including extant and historical records) or that have been reliably reported for the park in the literature (Dewey and Andersen 2005; NCPN in ed.; Weber 1983). Vouchers were examined from the Black Canyon of the Gunnison NP and University of Colorado herbaria (BLCA and COLO, respectively).

Species entries in Appendix A are organized alphabetically by family and genus.

Appendix B includes species that may potentially occur within Black Canyon of the Gunnison NP based on the proximity of the park to other populations or the presence of suitable habitat.

Appendix C lists species that have been previously reported for Black Canyon of the Gunnison NP but are now considered erroneous because they are based on misidentified specimens or questionable literature records.

Appendix D contains the same confirmed, historical, and reported taxa as in Appendix A, but organized by life form rather than by family in order to better meet the needs of NPS interpretive specialists.

The codes and references for each field in the appropriate appendices are summarized below.

Family (Appendices A, B, C, and D)

Family concepts and nomenclature follow *Colorado Flora: Western Slope, third edition* (Weber and Wittmann 2001). Alternative family names and treatments from other regional floras (Dorn 2001; Flora of North America Editorial Committee 1993, 2002b; Holmgren et al. 2005; Welsh et al. 2003) are listed in parentheses.

Species name (Appendices A, B, C, and D)

Nomenclature for scientific names and taxonomic concepts are derived from Weber and Wittmann (2001). Scientific names are listed in alphabetical rather than phylogenetic order.

Synonyms/Taxonomic notes (Appendices A, B, and C)

Pertinent synonyms are included for species with alternative scientific names in other recent state and regional floras (Barkworth et al. 2003, 2007; Barneby 1989; Cronquist 1994; Cronquist et al. 1972, 1977, 1984, 1997; Dorn 2001; Flora of North America Editorial Committee 1993, 1997, 2000, 2002a, 2002b, 2003, 2005, 2006a, 2006b, 2006c; Hol-

mgren et al. 2005; Welsh et al. 2003). No effort has been made to identify additional synonyms from monographs and floras preceding the early 1970s.

Common name (Appendices A, B, C, and D)

Common names are derived primarily from Welsh and others (2003) and the *Intermountain Flora* (Barneby 1989; Cronquist 1994; Cronquist et al. 1972, 1977, 1984, 1997; Holmgren et al. 2005).

Life form (Appendices A, B, C, and D)

Life form is based on the stature and growth habit of typical members of a species at reproductive maturity. **Trees** are woody perennials with a single stem or trunk and are typically over 3.5 m tall. **Shrubs** are woody perennials with one to many trunks arising from near the base of the plant and are usually less than 3.5 m tall. **Perennial Forbs (PerF)** are broad-leaved dicots or monocots with non-woody stems (at least above ground level) that live for multiple years. **Annual Forbs (AnnF)** are broad-leaved dicots or monocots with non-woody stems that complete their life cycle (mature, flower, and die) in one year. **Perennial Graminoids (PerG)** are linear-leaved, grass-like monocots that live for multiple years. **Annual Graminoids (AnnG)** are linear-leaved, grass-like monocots that complete their life cycle (mature, flower, and die) in one year. **Ferns and fern-allies (Fern)** are non-flowering vascular plants that reproduce by spores.

Range (Appendices A, B, and C)

Range represents the distribution of a species within Colorado and the state's contribution to the plant's overall global range. **Disjunct (Disj)** taxa have their Colorado distribution separated from the main, contiguous portion of their range by a gap of more than 800 km (ca 500 miles). **Introduced (Intro)** taxa are those that are not native to Colorado or North America but which have become naturalized (breeding on their own without human assistance). **Local Endemics (LocEn)** are taxa whose entire global range is restricted to an area of less than 16,500 km² (ca 6,370 mi², or 1° of latitude × 2° of longitude). **Peripheral (Periph)** taxa have a widespread global distribution but occur at the margin of their contiguous range in Colorado and occupy less than 5% of the state's area (usually only within a few miles of the state border). **Regional Endemics (RegEn)** are taxa with a global range of 16,500–250,000 km² (an area about the size of the state of Wyoming). **Sparse** taxa occur widely across Colorado or North America but their range within Colorado is small and patchy, with populations restricted to specialized or uncommon habitats. **Widespread (Wide)** taxa have global ranges exceeding 250,000 km² and occur over at least 10% of the state.

Park status (Appendices A, C, and D)

Park status identifies whether a species is Present (**Pres**), Historical (**Hist**), or Reported (**Rep**) for Black Canyon of the Gunnison NP. Species are considered Present if a confirmed voucher or documented observation has been made within park boundaries since 1970. Historical species have been confirmed with a voucher from the park but have not been relocated since before 1970. Reported species are listed for the park in the literature (Dewey and Andersen 2005; NCPN in ed.; Weber 1983), but have not been corroborated with a voucher specimen. Species that may potentially occur in Black Canyon of the Gunnison NP are listed in Appendix B. Rejected taxa (listed in Appendix C) have either been falsely reported (**FalsRep**) in the literature based on misidentified herbarium specimens or are considered Questionable (**Ques?**) because park reports are from well outside their known or expected range.

Pop. size (Appendix A)

Population size refers to the abundance and frequency with which a species occurs within Black Canyon of the Gunnison NP. Abundance data are derived from Hogan and others (2005), NCPN (in ed.), and personal observations. Abundant (**Abun**) taxa have large populations, a broad ecological amplitude (often being dominant in one to several vegetation types), or occur extensively across the park. Common (**Com**) taxa have large local populations but may be restricted to a single vegetation type or do not occur across the entire park. Uncommon (**Unc**) taxa have low to medium-sized populations, typically have a narrow ecological amplitude (or at least contribute relatively little to total vegetative cover), or have a small range across the park. Rare taxa usually have low population numbers and are restricted to a single location within the park. A “?” indicates that population size is unknown.

Source (Appendix A)

Sources are the evidence for the assigned park status. In the case of Present and Historical taxa, sources are herbarium records (with collector, collection number, and repository) that were corroborated during this study. For reported taxa, the source is a published or unpublished reference citing the species within the park. Specimen repositories include the Black Canyon of the Gunnison NP (**BLCA**) and University of Colorado (**COLO**) herbaria.

Year doc. (Appendix A)

Year documented indicates the first year in which a species was confirmed or reported to occur in Black Canyon of the Gunnison NP. This year does not necessarily correspond with the date of the voucher specimen cited under Source. “NA” indicates that the first year is not known (used only for “reported” taxa).

Comments (Appendices A, B, C, and D)

This column includes additional comments on the status of a particular species in the park, the place of origin for introduced species, legal status, and other data.

Nativity (Appendix D)

Nativity indicates whether a species is native to Colorado or Introduced (**Intro**) based on Weber and Wittmann (2001) and the Flora of North America Editorial Committee (1993, 1997, 2000, 2002a, 2002b, 2003, 2005, 2006a, 2006b, 2006c).

Flower time (Appendix D)

Flower time refers to the months in which a species is most likely to be in flower. NA indicates a species that is a non-flowering fern or gymnosperm.

Habitat (Appendix D)

The distribution of species across generalized habitats in Black Canyon of the Gunnison National Park is indicated by an “X” in the columns Sage/Grass through Wet and is derived from Hogan and others (2005) and NCPN (in ed.). **Sage/Grass** = communities dominated by big sagebrush, needle-and-thread, and muttongrass. **PinJun** = two-needle pinyon–Utah juniper woodlands. **Oak/MtBr** = woodlands dominated by Gambel oak and other montane shrubs. **Dg-fir** = Douglas-fir–quaking aspen forests. **Wet** = Wetlands (including seeps and springs). Additional comments are included for species that are restricted to a particular soil/geologic type or are found mostly in disturbed sites.

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Aceraceae	<i>Acer glabrum</i>	Includes vars. <i>neomexicanum</i> , <i>douglasii</i> , & <i>tripartitum</i>	Rocky Mountain maple	Shrub	Wide	Pres	Com	Weber & Miller 11375 (BLCA)	1962	
Aceraceae	<i>Negundo aceroides</i> ssp. <i>interius</i>	<i>Acer negundo</i> , <i>A. negundo</i> var. <i>interius</i>	box elder	Tree	Wide	Pres	Com	Hogan 4110 (BLCA)	1962	
Agavaceae	<i>Yucca harrimaniae</i>	<i>Y. harrimaniae</i> var. <i>harrimaniae</i>	Harriman's yucca	Shrub	Wide	Pres	Unc	Weber 17012 (COLO)	1983	
Alliaceae (Liliaceae)	<i>Allium acuminatum</i>		taper-tip onion	PerF	Wide	Pres	Unc	Hogan 4130 (BLCA)	1959	
Alliaceae (Liliaceae)	<i>Allium geyeri</i>	<i>A. geyeri</i> var. <i>geyeri</i>	Geyer's onion	PerF	Wide	Pres	Unc	Weber, Rector, & Kennedy 16750 (BLCA)	1983	
Alliaceae (Liliaceae)	<i>Allium macropetalum</i>		San Juan onion	PerF	Wide	Pres	Unc	Hogan 4230 (BLCA)	2004	Type locality is Palisades, Mesa Co., CO (Crandall s.n. RM)
Alliaceae (Liliaceae)	<i>Allium textile</i>		textile onion	PerF	Wide	Rep	Rare	NCPN (in ed.)	2002	Report may be base on misidentified <i>A. macropetalum</i>
Alsinaceae (Caryophyllaceae)	<i>Cerastium fontanum</i>	<i>C. vulgatum</i> , <i>C. fontanum</i> ssp. <i>vulgare</i>	mouse-ear chickweed	PerF	Intro	Pres	Unc	Hogan & Tembrock 4339 (BLCA)	2004	Native to Eurasia
Alsinaceae (Caryophyllaceae)	<i>Eremogone congesta</i>	<i>Arenaria congesta</i> var. <i>congesta</i> , <i>E. congesta</i> var. <i>congesta</i>	ball-head sandwort	PerF	Wide	Pres	Com	Clark & Hogan 2021 (BLCA)	1959	
Alsinaceae (Caryophyllaceae)	<i>Eremogone fendleri</i>	<i>Arenaria fendleri</i> var. <i>fendleri</i>	Fendler's sandwort	PerF	Wide	Rep	Unc	NCPN (in ed.)	2002	
Alsinaceae (Caryophyllaceae)	<i>Eremogone hookeri</i>	<i>Arenaria hookeri</i> var. <i>hookeri</i> , <i>E. hookeri</i> var. <i>hookeri</i>	Hooker's sandwort	PerF	Wide	Rep	Unc	NCPN (in ed.)	2002	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Alinaceae (Caryophyllaceae)	<i>Pseudostellaria jamesiana</i>	<i>Stellaria jamesiana</i>	James' chickweed	PerF	Wide	Pres	Com	Weber 11363 (COLO)	1962	
Amaranthaceae	<i>Amaranthus albus</i>		tumble pigweed	AnnF	Intro	Pres	Unc	Weber & Beck 16987 (BLCA)	1983	Native to tropical America
Anacardiaceae	<i>Rhus aromatica</i> ssp. <i>trilobata</i>	<i>R. trilobata</i> var. <i>trilobata</i>	squawbush	Shrub	Wide	Pres	Com	Beck & Kennedy 17026 (BLCA)	1983	
Anacardiaceae	<i>Rhus glabra</i>		smooth sumac	Shrub	Wide	Pres	?	Weber, Rector, & Kennedy 16844 (BLCA)	1983	
Anacardiaceae	<i>Toxicodendron rydbergii</i>	<i>Rhus radicans</i> , <i>T. radicans</i>	western poison ivy	Shrub	Wide	Pres	Com	Wetlaufer s.n. (BLCA)	1961	
Apiaceae (Umbelliferae)	<i>Aletes anisatus</i>	<i>Pteryxia hendersonii</i>	Rocky Mountain Indian parsley	PerF	Wide	Pres	Unc	Weber 11159 (COLO)	1960	
Apiaceae (Umbelliferae)	<i>Cymopterus bulbosus</i>		onion spring-parsley	PerF	Wide	Pres	Unc	Lederer, Clark, Hogan, & Tembrock 04-43 (BLCA)	2004	
Apiaceae (Umbelliferae)	<i>Cymopterus planosus</i>		Rocky Mountain spring-parsley	PerF	LocEn	Pres	Unc	Weber & Miller 11388 (BLCA)	1962	Type locality is Minturn, Eagle Co., CO (Osterhout 2572)
Apiaceae (Umbelliferae)	<i>Cymopterus purpureus</i>	<i>C. purpureus</i> var. <i>purpureus</i>	Colorado Plateau spring-parsley	PerF	RegEn	Pres	Unc	Hogan & Clark 4056 (BLCA)	2003	
Apiaceae (Umbelliferae)	<i>Ligusticum porteri</i>		southern ligusticum	PerF	Wide	Pres	Unc	Hogan 4139 (BLCA)	1959	
Apiaceae (Umbelliferae)	<i>Lomatium concinnum</i>		adobe desert-parsley	PerF	LocEn	Pres	Rare	Hogan 4231 (BLCA)	2004	Type locality is Paonia, Delta Co., CO (Osterhout 4515 RM). CO BLM Sensitive

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Apiaceae (Umbelliferae)	<i>Lomatium dissectum</i>	Includes vars. <i>eatonii</i> & <i>multifidum</i>	fern-leaved desert-parsley	PerF	Wide	Pres	Unc	Lederer & Clark 03-41 (BLCA)	1962	BLCA material is var. <i>multifidum</i> (BLCA)
Apiaceae (Umbelliferae)	<i>Lomatium grayi</i>	<i>L. grayi</i> var. <i>grayi</i>	milfoil lomatium	PerF	Wide	Pres	Unc	Penland 1805 (COLO)	1942	
Apiaceae (Umbelliferae)	<i>Lomatium triternatum</i> var. <i>platycarpum</i>	<i>L. simplex</i> var. <i>simplex</i>	ternate desert- parsley	PerF	Wide	Pres	Unc	Lederer & Clark 03-03 (COLO)	1961	
Apiaceae (Umbelliferae)	<i>Osmorhiza chilensis</i>	<i>O. berteroi</i>	Chilean sweet- cicely	PerF	Wide	Rep	Rare	NCPN (in ed.)	2002	
Apiaceae (Umbelliferae)	<i>Osmorhiza depauperata</i>		blunt sweet-cicely	PerF	Wide	Pres	Com	Weber, Rector, & Kennedy 16830 (BLCA)	1983	
Apiaceae (Umbelliferae)	<i>Osmorhiza occidentalis</i>		western sweet- cicely	PerF	Wide	Pres	Unc	Weber, Rector, & Kennedy 16828 (BLCA)	1983	
Apiaceae (Umbelliferae)	<i>Pseudocymopterus montanus</i>	<i>Cymopterus lemmonii</i>	Lemmon's spring- parsley	PerF	Wide	Pres	Unc	Weber, Rector, & Kennedy 16815 (BLCA)	1983	
Apocynaceae	<i>Apocynum cannabinum</i>	Includes vars. <i>cannabinum</i> , <i>glaberrimum</i> , & <i>angustifolium</i>	common dogbane	PerF	Wide	Pres	Unc	Hogan 4104 (BLCA)	1963	
Asclepiadaceae	<i>Asclepias cryptoceras</i>	<i>A. cryptoceras</i> var. <i>cryptoceras</i>	pallid milkweed	PerF	Wide	Pres	Unc	Lederer, Clark, Hogan, & Tembrock 04- 51 (BLCA)	2004	
Asclepiadaceae	<i>Asclepias speciosa</i>		showy milkweed	PerF	Wide	Pres	Unc	Weber & Beck 17004 (BLCA)	1983	
Asclepiadaceae	<i>Asclepias subverticillata</i>	<i>A. galioides</i>	whorled milkweed	PerF	Wide	Pres	Unc	Clark 2110 (BLCA)	1983	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Asparagaceae (Liliaceae)	<i>Asparagus officinalis</i>		asparagus	PerF	Intro	Pres	Unc	Hogan 4168 (BLCA)	2003	Native to Eurasia
Aspidiaceae (Polypodiaceae, Aspleniaceae)	<i>Dryopteris filix-mas</i>		male fern	fern	Wide	Pres	Unc	Hogan 4162 (BLCA)	1983	
Aspleniaceae (Polypodiaceae)	<i>Cystopteris fragilis</i>	Some authors include <i>C. utahensis</i> , <i>C. reevesiana</i> , & <i>C. tenuis</i>	brittle bladder fern	fern	Wide	Pres	Unc	Weber & Miller 11378 (BLCA)	1962	
Aspleniaceae (Polypodiaceae)	<i>Cystopteris reevesiana</i>	Included in <i>Cystopteris fragilis</i> by some authors	southwestern bladder fern	fern	Wide	Pres	Unc	Montgomery 86-282 (COLO)	1983	
Asteraceae (Compositae)	<i>Achillea lanulosa</i>	<i>Achillea millefolium</i> var. <i>lanulosa</i> , vars. not recognized in <i>Flora of North America</i> (2006)	common yarrow	PerF	Wide	Pres	Com	Wetlaufer s.n. (BLCA)	1959	
Asteraceae (Compositae)	<i>Acosta maculosa</i>	<i>Centaurea stoebe</i> ssp. <i>micranthos</i> , <i>C. maculosa</i> , <i>C. biebersteinii</i>	spotted knapweed	PerF	Intro	Pres	Unc	Hogan & Lederer 4388 (BLCA)	2004	CO state noxious weed (List B). Native to Europe.
Asteraceae (Compositae)	<i>Acroptilon repens</i>	<i>Centaurea repens</i>	Russian knapweed	PerF	Intro	Pres	Unc	Hogan & Tembrock 4287 (BLCA)	2004	CO state noxious weed (List B). Native to Eurasia.
Asteraceae (Compositae)	<i>Agoseris aurantiaca</i> var. <i>aurantiaca</i>		orange agoseris	PerF	Periph	Pres	Unc	Weber, Rector, & Kennedy 16825 (BLCA)	1983	
Asteraceae (Compositae)	<i>Agoseris glauca</i> var. <i>dasycephala</i>		short agoseris	PerF	Periph	Pres	Com	Weber, Rector, & Kennedy 16824 (BLCA)	1983	
Asteraceae (Compositae)	<i>Agoseris glauca</i> var. <i>laciniata</i>	<i>A. parviflora</i>	cutleaf agoseris	PerF	Wide	Pres	Com	Weber, Rector, & Kennedy 16745 (BLCA)	1983	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Asteraceae (Compositae)	<i>Almutaster pauciflorus</i>	<i>Aster pauciflorus</i>	alkali aster	PerF	Wide	Rep	Unc	Hogan et al. (2005), NCPN (in ed.)	2002	
Asteraceae (Compositae)	<i>Antennaria dimorpha</i>		low pussytoes	PerF	Wide	Pres	Com	Weber & Miller 11318 (BLCA)	1962	
Asteraceae (Compositae)	<i>Antennaria parvifolia</i>		common pussytoes	PerF	Wide	Pres	Com	Lederer & Clark 03-12 (BLCA)	1962	
Asteraceae (Compositae)	<i>Antennaria pulcherrima</i> ssp. <i>anaphalooides</i>	<i>A. anaphalooides</i>	tall pussytoes	PerF	Wide	Pres	Unc	Beck 17054 (COLO)	1983	
Asteraceae (Compositae)	<i>Antennaria rosea</i>	Included in <i>A. microphylla</i> by some authors	rosy pussytoes	PerF	Wide	Pres	Unc	Beidleman s.n. (BLCA)	1961	
Asteraceae (Compositae)	<i>Arctium minus</i>		burdock	PerF	Intro	Pres	Unc	Weber & Beck 16940 (BLCA)	1983	CO state noxious weed (List C). Native to Eurasia.
Asteraceae (Compositae)	<i>Arnica cordifolia</i>	<i>A. cordifolia</i> var. <i>cordifolia</i> ; vars. not recognized in <i>Flora of North America</i> (2006).	heartleaf arnica	PerF	Wide	Pres	Unc	Hogan & Tembrock 4274 (BLCA)	1962	
Asteraceae (Compositae)	<i>Artemisia carruthii</i>		Carruth's wormwood	PerF	Wide	Pres	Unc	Clark & Hogan 1999 (BLCA)	2003	
Asteraceae (Compositae)	<i>Artemisia frigida</i>		fringed sagebrush	Shrub	Wide	Pres	Com	Weber & Miller 11381 (BLCA)	1962	
Asteraceae (Compositae)	<i>Artemisia ludoviciana</i> ssp. <i>incompta</i>		Louisiana wormwood	PerF	Wide	Pres	Com	Hogan 4107 (BLCA)	1983	
Asteraceae (Compositae)	<i>Artemisia ludoviciana</i> ssp. <i>ludoviciana</i>		Louisiana wormwood	PerF	Wide	Pres	Com	Weber 16916 (COLO)	1983	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Asteraceae (Compositae)	<i>Aster foliaceus</i>	<i>A. foliaceus</i> var. <i>canbyi</i> , <i>Symphotrichum</i> <i>foliaceum</i> var. <i>canbyi</i>	Canby's aster	PerF	Wide	Rep	Unc	NCPN (in ed.)	2002	
Asteraceae (Compositae)	<i>Aster laevis</i> var. <i>geyeri</i>	<i>A. laevis</i> , <i>Symphotrichum</i> <i>laeve</i> var. <i>geyeri</i>	smooth aster	PerF	Wide	Rep	Unc	NCPN (in ed.)	2002	
Asteraceae (Compositae)	<i>Balsamorhiza</i> <i>sagittata</i>		arrowleaf balsamroot	PerF	Wide	Pres	Com	Lederer & Clark 03-15 (BLCA)	1942	
Asteraceae (Compositae)	<i>Breea arvensis</i>	<i>Cirsium arvense</i> ; includes vars. <i>horridum</i> & <i>integrifolium</i>	Canada thistle	PerF	Intro	Pres	Unc	Hogan 4101 (BLCA)	1983	CO state noxious weed (List B). Native to Eurasia.
Asteraceae (Compositae)	<i>Breea incana</i>	Included in <i>Cirsium</i> <i>arvense</i> in <i>Flora</i> of <i>North America</i> (2006)	Canada thistle	PerF	Intro	Pres	?	Weber 16890 (COLO)	1983	CO state noxious weed (List B). Native to Eurasia. Duplicate specimen at BLCA is determined as <i>B. arvensis</i> .
Asteraceae (Compositae)	<i>Brickellia californica</i>		California brickellbush	Shrub	Wide	Pres	Unc	Hogan 4172 (BLCA)	1983	
Asteraceae (Compositae)	<i>Brickellia grandiflora</i>		tassel-flower brickellbush	PerF	Wide	Pres	Unc	Beck & Kennedy 17029 (BLCA)	1983	
Asteraceae (Compositae)	<i>Brickellia longifolia</i>	<i>B. longifolia</i> var. <i>longifolia</i>	longleaf brickellbush	Shrub	Periph	Pres	Unc	Lederer & Clark 04-27 (BLCA)	2004	
Asteraceae (Compositae)	<i>Brickellia</i> <i>oblongifolia</i>	<i>B. oblongifolia</i> var. <i>linifolia</i>	Mohave brickellbush	Shrub	Wide	Pres	Unc	Hogan & Tembrock 4383 (BLCA)	2004	
Asteraceae (Compositae)	<i>Carduus nutans</i> var. <i>macrolepis</i>	Includes ssp. <i>leiophyllus</i>	musk thistle	PerF	Intro	Pres	Unc	Weber & Beck 16950 (BLCA)	1983	CO state noxious weed (List B). Native to Eurasia.

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Asteraceae (Compositae)	<i>Chaenactis douglasii</i>	Includes vars. <i>douglasii</i> & <i>montana</i>	hoary dusty- maiden	PerF	Wide	Pres	Unc	Hogan & Clark 4059 (BLCA)	1962	
Asteraceae (Compositae)	<i>Chrysothamnus depressus</i>		dwarf rabbitbrush	Shrub	Wide	Pres	Com	Hogan & Lederer 4387 (BLCA)	2002	
Asteraceae (Compositae)	<i>Chrysothamnus nauseosus</i> ssp. <i>graveolens</i>	<i>Ericameria nauseosa</i> var. <i>graveolens</i> , <i>E. nauseosa</i> var. <i>glabrata</i>	glabrate rabbitbrush	Shrub	Wide	Pres	Com	Weber & Beck 16989 (BLCA)	2003	
Asteraceae (Compositae)	<i>Chrysothamnus parryi</i> ssp. <i>parryi</i>	<i>Ericameria parryi</i> var. <i>parryi</i>	Parry's rabbitbrush	Shrub	Wide	Pres	Com	Weber & Beck 16930 (BLCA)	1983	
Asteraceae (Compositae)	<i>Chrysothamnus viscidiflorus</i> ssp. <i>viscidiflorus</i>		green rabbitbrush	Shrub	Wide	Pres	Com	Weber & Beck 16908 (BLCA)	1983	
Asteraceae (Compositae)	<i>Cirsium centaureae</i>	<i>C. clavatum</i> var. <i>americanum</i> , <i>C. remotifolium</i> ssp. <i>oregonense</i> ; included in <i>C. callilepis</i> by some authors	fringed thistle	PerF	RegEn	Pres	Unc	Weber & Beck 16891 (BLCA)	1983	
Asteraceae (Compositae)	<i>Cirsium eatonii</i>	<i>C. tweedyi</i> , <i>C. polyphyllum</i> , includes vars. <i>eatonii</i> & <i>harrisonii</i>	Eaton's thistle	PerF	RegEn	Pres	Unc	Weber & Beck 16945 (BLCA)	1983	
Asteraceae (Compositae)	<i>Cirsium neomexicanum</i>	<i>C. neomexicanum</i> var. <i>neomexicanum</i> , vars. not recognized in <i>Flora of North America</i> (2006)	New Mexico thistle	PerF	Wide	Pres	Unc	Hogan 4154 (BLCA)	2003	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Asteraceae (Compositae)	<i>Cirsium perplexans</i>		Rocky Mountain thistle	PerF	LocEn	Pres	Unc	Lederer, Clark, Hogan, & Tembrock 04- 62 (BLCA)	2004	Type locality is Cimarron, Montrose Co., CO (Baker 286 NY). CO BLM Sensitive, USFS Region 2 Sensitive
Asteraceae (Compositae)	<i>Cirsium tracyi</i>	<i>C. undulatum</i> var. <i>tracyi</i>	Tracy's thistle	PerF	RegEn	Pres	Unc	Weber, Rector, & Kennedy 16852 (BLCA)	1983	Type locality is Mancos, CO (Baker, Earle, & Tracy 90)
Asteraceae (Compositae)	<i>Cirsium vulgare</i>		bull thistle	PerF	Intro	Pres	Unc	Weber, Rector, & Kennedy 16841 (BLCA)	1983	CO state noxious weed (List B). Native to Europe.
Asteraceae (Compositae)	<i>Conyza canadensis</i>	<i>C. canadense</i> var. <i>glabrata</i> , vars. not recognized in <i>Flora</i> of <i>North America</i> (2006)	Canadian horseweed	AnnF	Wide	Pres	Unc	Hogan 4171 (BLCA)	1983	
Asteraceae (Compositae)	<i>Cyclachaena xanthifolia</i>	<i>Iva xanthifolia</i>	marsh-elder	AnnF	Wide	Pres	Unc	Hogan & Lederer 4399 (BLCA)	1983	
Asteraceae (Compositae)	<i>Erigeron concinnus</i>	<i>E. pumilus</i> var. <i>concinus</i> , <i>E.</i> <i>concinus</i> var. <i>concinus</i>	Navajo fleabane	PerF	Wide	Pres	Com	Weber, Rector, & Kennedy 16856 (BLCA)	1983	
Asteraceae (Compositae)	<i>Erigeron divergens</i>	<i>E. divergens</i> var. <i>divergens</i>	spreading daisy	PerF	Wide	Pres	Unc	Hogan & Tembrock 4354 (BLCA)	1961	
Asteraceae (Compositae)	<i>Erigeron eatonii</i>	<i>E. eatonii</i> var. <i>eatonii</i>	Eaton's daisy	PerF	Wide	Pres	Com	Penland 1802 (COLO)	1942	
Asteraceae (Compositae)	<i>Erigeron engelmannii</i>		Engelmann's daisy	PerF	Wide	Rep	?	NCPN (in ed.)	2002	
Asteraceae (Compositae)	<i>Erigeron flagellaris</i>		trailing daisy	PerF	Wide	Pres	Unc	Hogan 4124 (BLCA)	1959	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Asteraceae (Compositae)	<i>Erigeron peregrinus</i>	<i>E. peregrinus</i> var. <i>scaposus</i> , <i>E. glacialis</i> var. <i>glacialis</i>	wandering fleabane	PerF	Wide	Rep	Rare	NCPN (in ed.)	2002	
Asteraceae (Compositae)	<i>Erigeron speciosus</i>	<i>E. speciosus</i> var. <i>macranthus</i>	aspen daisy	PerF	Wide	Pres	Com	Hogan 4133 (BLCA)	1959	
Asteraceae (Compositae)	<i>Euthamia occidentalis</i>	<i>Solidago occidentalis</i>	western goldenrod	PerF	Wide	Pres	Unc	Hogan 4169 (BLCA)	2003	
Asteraceae (Compositae)	<i>Gnaphalium uliginosum</i>	<i>G. exilifolium</i>	slender cudweed	AnnF	Wide	Pres	Unc	Weber & Beck 16929 (BLCA)	1983	
Asteraceae (Compositae)	<i>Grindelia squarrosa</i> var. <i>squarrosa</i>	Vars. not recognized in <i>Flora</i> of North America (2006)	curly-cup gumweed	PerF	Wide	Pres	Unc	Clark 2107 (BLCA)	2003	May be introduced from C USA
Asteraceae (Compositae)	<i>Gutierrezia microcephala</i>		thread snakeweed	Shrub	Periph	Rep	Rare	NCPN (in ed.)	2002	Report may be based on <i>G.</i> <i>sarothrae</i>
Asteraceae (Compositae)	<i>Gutierrezia sarothrae</i>		broom snakeweed	Shrub	Wide	Pres	Unc	Weber & Beck 16931 (BLCA)	1983	
Asteraceae (Compositae)	<i>Helianthella quinquenervis</i>		five-nerve sunflower	PerF	Wide	Pres	Unc	Hogan 4141 (BLCA)	1983	
Asteraceae (Compositae)	<i>Helianthus annuus</i>	<i>H. annuus</i> ssp. <i>lenticularis</i> . Ssp. not recognized in <i>Flora of North</i> <i>America</i> (2006).	common sunflower	AnnF	Wide	Pres	?	Hogan & Tembrock 4288 (BLCA)	2004	
Asteraceae (Compositae)	<i>Heliomeris multiflora</i> var. <i>multiflora</i>	<i>Viguiera multiflora</i> var. <i>multiflora</i>	showy goldeneye	PerF	Wide	Pres	Com	Weber & Beck 16918 (BLCA)	1961	
Asteraceae (Compositae)	<i>Heterotheca villosa</i>	<i>Chrysopsis villosa</i> var. <i>villosa</i>	hairy golden- aster	PerF	Wide	Pres	Com	Hogan 4096 (BLCA)	1959	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Asteraceae (Compositae)	<i>Hymenopappus filifolius</i> var. <i>luteus</i>		Wyoming hyalineherb	PerF	RegEn	Pres	Unc	Lederer, Clark, Hogan, & Tembrock 04- 60 (BLCA)	2004	
Asteraceae (Compositae)	<i>Lactuca serriola</i>		prickly lettuce	AnnF	Intro	Pres	Unc	Hogan & Lederer 4393 (COLO)	2004	Native to Europe
Asteraceae (Compositae)	<i>Leucantha cyanus</i>	<i>Centaurea cyanus</i>	bachelor's button	AnnF	Intro	Rep	Rare	NCPN (in ed.)	2002	Native to Europe
Asteraceae (Compositae)	<i>Leucelene ericoides</i>	<i>Aster arenosus</i> , <i>Chaetopappa ericoides</i>	rose-heath	PerF	Wide	Pres	Unc	Hogan & Tembrock 4379 (BLCA)	2004	
Asteraceae (Compositae)	<i>Ligularia pudica</i>	<i>Senecio pudicus</i>	bashful groundsel	PerF	RegEn	Pres	Unc	Beck 17045 (COLO)	1983	
Asteraceae (Compositae)	<i>Machaeranthera canescens</i>	<i>M. canescens</i> var. <i>canescens</i> , <i>Aster canescens</i> , <i>Dieteria canescens</i> var. <i>canescens</i>	hoary aster	PerF	Wide	Pres	Com	Wetlaufer s.n. (BLCA)	1959	
Asteraceae (Compositae)	<i>Machaeranthera gracilis</i>	<i>Haplopappus gracilis</i> , <i>Xanthisma gracile</i>	slender goldenweed	AnnF	Periph	Rep	Unc	NCPN (in ed.)	2002	
Asteraceae (Compositae)	<i>Machaeranthera grindelioides</i>	<i>M. grindelioides</i> var. <i>grindelioides</i> , <i>Haplopappus nuttallii</i> , <i>Xanthisma grindelioides</i> var. <i>grindelioides</i>	gumweed aster	PerF	Wide	Rep	Unc	NCPN (in ed.)	2002	
Asteraceae (Compositae)	<i>Machaeranthera pinnatifida</i>	<i>M. pinnatifida</i> var. <i>pinnatifida</i> , <i>Haplopappus spinulosus</i> var. <i>spinulosus</i>	lacy tansy-aster	PerF	Wide	Pres	Unc	Hogan & Tembrock 4372 (BLCA)	2004	
Asteraceae (Compositae)	<i>Madia glomerata</i>		mountain tarweed	AnnF	Wide	Pres	Unc	Weber & Beck 16928 (BLCA)	1983	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Asteraceae (Compositae)	<i>Microseris nutans</i>	<i>Ptilocalais nutans</i>	nodding microseris	PerF	Wide	Pres	Unc	Weber, Rector, & Kennedy 16768 (BLCA)	1983	
Asteraceae (Compositae)	<i>Oligosporus dracunculus</i> ssp. <i>glaucus</i>	<i>O. dracunculus</i> , <i>Artemisia dracunculus</i> , vars. not recognized <i>Flora of North America</i> (2006)	tarragon	PerF	Wide	Pres	Unc	Hogan & Lederer 4386 (BLCA)	1983	
Asteraceae (Compositae)	<i>Packera multilobata</i>	<i>Senecio multilobatus</i>	basin groundsel	PerF	Wide	Pres	Com	Weber 11353 (COLO)	1962	
Asteraceae (Compositae)	<i>Packera neomexicana</i>	<i>Senecio neomexicanus</i> var. <i>mutabilis</i> , <i>P. neomexicana</i> var. <i>mutabilis</i>	New Mexico groundsel	PerF	Wide	Pres	Com	Weber & Miller 11366 (BLCA)	1961	
Asteraceae (Compositae)	<i>Petroradia pumila</i>	<i>P. pumila</i> var. <i>pumila</i> , <i>Solidago petradoria</i>	rock-goldenrod	PerF	Wide	Pres	Com	Hogan 4151 (BLCA)	1959	
Asteraceae (Compositae)	<i>Psilochenia acuminata</i>	<i>Crepis acuminata</i>	mountain hawksbeard	PerF	Wide	Pres	Unc	Wetlaufer s.n. (BLCA)	1959	
Asteraceae (Compositae)	<i>Psilochenia atribarba</i>	<i>Crepis atribarba</i>	slender hawksbeard	PerF	Wide	Pres	Unc	Hogan & Tembrock 4281 (BLCA)	1983	
Asteraceae (Compositae)	<i>Psilochenia modocensis</i>	<i>Crepis modocensis</i>	Modoc hawksbeard	PerF	Wide	Pres	Unc	Weber, Rector, & Kennedy 16795 (BLCA)	1983	
Asteraceae (Compositae)	<i>Psilochenia occidentalis</i>	<i>Crepis occidentalis</i> var. <i>occidentalis</i>	western hawksbeard	PerF	Wide	Pres	Unc	Lederer, Clark, Hogan, & Tembrock 04- 52 (BLCA)	2004	
Asteraceae (Compositae)	<i>Rudbeckia ampla</i>	<i>R. laciniata</i> var. <i>ampla</i>	cutleaf coneflower	PerF	Wide	Pres	Unc	Hyde s.n. (BLCA)	1961	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Asteraceae (Compositae)	<i>Senecio integerrimus</i>	<i>S. integerrimus</i> var. <i>exaltatus</i>	western groundsel	PerF	Wide	Pres	Com	Lederer & Clark 03-06 (BLCA)	1960	
Asteraceae (Compositae)	<i>Senecio wootonii</i>		Wooton's ragwort	PerF	Wide	Hist	?	Penland 1799 (COLO)	1942	
Asteraceae (Compositae)	<i>Seriphidium novum</i>	<i>Artemisia nova</i> , <i>A. nova</i> var. <i>nova</i> , <i>A. arbuscula</i> var. <i>nova</i>	black sagebrush	Shrub	Wide	Rep	Unc	NCPN (in ed.)	2002	
Asteraceae (Compositae)	<i>Seriphidium tridentatum</i> ssp. <i>wyomingense</i>	<i>Artemisia tridentata</i> var. <i>wyomingensis</i>	Wyoming big sagebrush	Shrub	Wide	Rep	Unc	NCPN (in ed.)	2002	
Asteraceae (Compositae)	<i>Seriphidium vaseyanum</i>	<i>Artemisia tridentata</i> var. <i>vaseyana</i> , includes <i>A. tridentata</i> var. <i>pauciflora</i>	mountain big sagebrush	Shrub	Wide	Pres	Abun	Hogan 4178 (BLCA)	1961	
Asteraceae (Compositae)	<i>Solidago velutina</i>	<i>S. sparsiflora</i> , <i>S. velutina</i> var. <i>sparsiflora</i>	three-nerve goldenrod	PerF	Wide	Pres	Com	Weber & Beck 16979 (BLCA)	1983	
Asteraceae (Compositae)	<i>Stenotus acaulis</i>	<i>Haplopappus acaulis</i> var. <i>acaulis</i> , <i>S. acaulis</i> var. <i>acaulis</i>	stemless goldenweed	PerF	Wide	Rep	Unc	NCPN (in ed.)	2002	Report may be based on <i>S. armerioides</i>
Asteraceae (Compositae)	<i>Stenotus armerioides</i>	<i>Haplopappus armerioides</i> var. <i>armerioides</i> , <i>S. armerioides</i> var. <i>armerioides</i>	thrift goldenweed	PerF	Wide	Pres	Unc	Weber & Miller 11324 (BLCA)	1962	
Asteraceae (Compositae)	<i>Stephanomeria pauciflora</i>		brown-plume wire-lettuce	PerF	Wide	Pres	Unc	Weber & Beck 16996 (BLCA)	1983	
Asteraceae (Compositae)	<i>Taraxacum officinale</i>		common dandelion	PerF	Intro	Pres	Unc	Weber, Rector, & Kennedy 16764 (BLCA)	1983	Native to Eurasia
Asteraceae (Compositae)	<i>Tetradymia canescens</i>		spineless horsebrush	Shrub	Wide	Pres	Unc	Clark 2101 (BLCA)	2002	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Asteraceae (Compositae)	<i>Tetradymia spinosa</i>	<i>T. spinosa</i> var. <i>spinosa</i>	shortspine horsebrush	Shrub	Wide	Pres	Unc	Hogan 4226 (BLCA)	2002	
Asteraceae (Compositae)	<i>Tetranuris acaulis</i>	<i>Hymenoxys acaulis</i> var. <i>acaulis</i> , <i>T.</i> <i>acaulis</i> var. <i>acaulis</i>	stemless hymenoxys	PerF	Wide	Rep	?	NCPN (in ed.)	2002	
Asteraceae (Compositae)	<i>Tetranuris ivesiana</i>	<i>Hymenoxys</i> <i>argentea</i> var. <i>ivesiana</i> , <i>H. acaulis</i> var. <i>ivesiana</i>	Canyonlands hymenoxys	PerF	Wide	Pres	Unc	Clark & Hogan 1992 (BLCA)	1959	
Asteraceae (Compositae)	<i>Tetranuris torreyana</i>	<i>Hymenoxys</i> <i>torreyana</i>	Torrey's hymenoxys	PerF	RegEn	Pres	Unc	Lederer & Clark 03-24 (BLCA)	2003	
Asteraceae (Compositae)	<i>Townsendia incana</i>		hoary townsendia	PerF	Wide	Pres	Unc	Lederer, Clark, Hogan, & Tembrock 04- 58 (BLCA)	2002	
Asteraceae (Compositae)	<i>Tragopogon dubius</i> var. <i>major</i>	<i>T. dubius</i>	yellow salsify	PerF	Intro	Pres	Unc	Clark & Hogan 1996 (BLCA)	1983	Native to Europe
Asteraceae (Compositae)	<i>Virgulastr</i> <i>ascendens</i>	<i>Aster ascendens</i> , <i>A. chilensis</i> ssp. <i>ascendens</i> , <i>Symphotrichum</i> <i>ascendens</i>	Pacific aster	PerF	Wide	Pres	Unc	Hogan & Lederer 4385 (BLCA)	1983	
Asteraceae (Compositae)	<i>Wyethia</i> <i>amplexicaulis</i>		mule's-ears	PerF	Wide	Pres	Unc	Clark & Lederer 2187a (BLCA)	2002	
Asteraceae (Compositae)	<i>Wyethia arizonica</i>		Arizona mulesears	PerF	RegEn	Pres	Unc	Hogan 4156 (BLCA)	2003	
Asteraceae (Compositae)	<i>Wyethia x magna</i>	Hybrid of <i>W.</i> <i>amplexicaulis</i> x <i>W.</i> <i>arizonica</i>	hybrid wyethia	PerF	RegEn	Pres	Com	Wetlaufer s.n. (BLCA)	1959	
Asteraceae (Compositae)	<i>Xylorhiza venusta</i>	<i>Machaeranthera</i> <i>venusta</i>	Cisco woodyaster	PerF	RegEn	Pres	Unc	Hogan 4205 (BLCA)	2002	Type locality is Cisco, Grand Co., UT (Jones s.n. POM)

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Berberidaceae	<i>Mahonia fremontii</i>	<i>Berberis fremontii</i>	Fremont's mahonia	Shrub	Wide	Rep	Unc	NCPN (in ed.)	2002	
Berberidaceae	<i>Mahonia repens</i>	<i>Berberis repens</i>	Oregon-grape	Shrub	Wide	Pres	Unc	Hogan & Lederer 4398 (BLCA)	1961	
Betulaceae	<i>Alnus incana</i> ssp. <i>tenuifolia</i>	<i>A. tenuifolia</i> , <i>A. incana</i> var. <i>occidentalis</i>	thinleaf alder	Shrub	Wide	Pres	Com	Weber & Beck 16997 (BLCA)	1983	
Boraginaceae	<i>Cryptantha fendleri</i>		sand dune cryptanth	AnnF	Wide	Pres	Unc	Weber & Beck 16985 (BLCA)	1983	
Boraginaceae	<i>Cryptantha gracilis</i>		slender cryptanth	AnnF	Wide	Pres	Unc	Weber & Miller 11351 (BLCA)	1962	
Boraginaceae	<i>Cryptantha pterocarya</i>	<i>C. pterocarya</i> var. <i>pterocarya</i>	wing-nut cryptanth	AnnF	Wide	Pres	Unc	Weber & Miller 11356 (BLCA)	1962	
Boraginaceae	<i>Cryptantha watsonii</i>		Watson's cryptanth	AnnF	Wide	Pres	Unc	Hogan & Clark 4057 (BLCA)	2003	
Boraginaceae	<i>Cynoglossum officinale</i>		common hound's-tongue	PerF	Intro	Pres	Unc	Weber, Rector, & Kennedy 16779 (BLCA)	1983	CO state noxious weed (List B). Native to Eurasia.
Boraginaceae	<i>Hackelia floribunda</i>		showy stickseed	PerF	Wide	Pres	Unc	Beck & Kennedy 17053 (BLCA)	1983	
Boraginaceae	<i>Lappula marginata</i>	<i>L. texana</i> , <i>L. redowskii</i> var. <i>cupulata</i> , <i>L. occidentalis</i> var. <i>cupulata</i>	cupseed stickseed	AnnF	Wide	Pres	Unc	Hogan & Tembrock 4374 (BLCA)	2004	
Boraginaceae	<i>Lappula redowskii</i>	<i>L. redowskii</i> var. <i>redowskii</i> , <i>L. occidentalis</i> var. <i>occidentalis</i>	western stickseed	AnnF	Wide	Pres	Com	Weber 11314 (COLO)	1962	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Boraginaceae	<i>Lappula squarrosa</i>	<i>L. echinata</i> , <i>L. squarrosa</i> var. <i>squarrosa</i>	European stickseed	AnnF	Intro	Rep	Rare	NCPN (in ed.)	2002	Native to Eurasia. Native race (<i>L. erecta</i>) from the Rocky Mtns. is probably extralimital
Boraginaceae	<i>Lithospermum ruderale</i>		western stoneseed	PerF	Wide	Pres	Unc	Weber & Miller 11313 (BLCA)	1962	
Boraginaceae	<i>Mertensia arizonica</i> var. <i>grahamii</i>	<i>M. arizonica</i>	aspen bluebell	PerF	Periph	Pres	?	Cottrell & Gregory 255 (BLCA)	1974	
Boraginaceae	<i>Mertensia brevistyla</i>	Weber & Wittmann (2001) include <i>M. fusiformis</i>	short-styled bluebell	PerF	Wide	Pres	Com	Hogan 3992 (BLCA)	1960	
Boraginaceae	<i>Mertensia ciliata</i>		streamside bluebell	PerF	Wide	Pres	Unc	Beck & Kennedy 17046 (BLCA)	1959	
Boraginaceae	<i>Oreocarya flavoculata</i>	<i>Cryptantha flavoculata</i>	yellow-eye cryptanth	PerF	Wide	Pres	Com	Weber & Miller 11328 (BLCA)	1962	
Boraginaceae	<i>Plagiobothrys scouleri</i> ssp. <i>penicillatus</i>	<i>P. scouleri</i> var. <i>hispidulus</i>	meadow popcorn-flower	AnnF	Wide	Pres	Unc	Clark & Hogan 2014 (BLCA)	2003	
Brassicaceae (Cruciferae)	<i>Alyssum alyssoides</i>		pale madwort	AnnF	Intro	Rep	Rare	NCPN (in ed.)	2002	Native to Europe
Brassicaceae (Cruciferae)	<i>Alyssum desertorum</i>		desert madwort	AnnF	Intro	Pres	Com	Lederer & Clark 03-47 (BLCA)	2003	Native to Europe
Brassicaceae (Cruciferae)	<i>Alyssum parviflorum</i>	<i>A. parviflorum</i> var. <i>micranthum</i> , <i>A. simplex</i> , <i>A. minus</i> var. <i>micranthum</i>	European madwort	AnnF	Intro	Pres	Com	Weber, Rector, & Kennedy 16742 (BLCA)	1983	Native to Europe

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Brassicaceae (Cruciferae)	<i>Arabis hirsuta</i>	Includes vars. <i>glabrata</i> & <i>pyncocarpa</i>	hairy rockcress	PerF	Wide	Rep	Rare	NCPN (in ed.)	2002	Earlier reports were based on misidentified specimens of <i>Turritis glabra</i>
Brassicaceae (Cruciferae)	<i>Barbarea vulgaris</i>		European wintercress	PerF	Intro	Pres	Unc	Hogan 3963 (BLCA)	2003	Native to Eurasia
Brassicaceae (Cruciferae)	<i>Boechea crandallii</i>	<i>Arabis crandallii</i>	Crandall's rockcress	PerF	RegEn	Rep	Com	NCPN (in ed.)	2002	Type locality is Cimarron, Montrose Co., CO (Crandall 6 GH). CO BLM Sensitive
Brassicaceae (Cruciferae)	<i>Boechea divaricarpa</i>	<i>Arabis confinis</i> , <i>A. holboellii</i> var. <i>brachycarpa</i> , <i>A. x divaricarpa</i> , <i>B. brachycarpa</i>	spreadingpod rockcress	PerF	Wide	Pres	Com	Hogan 3971 (BLCA)	1983	Often considered to represent a hybrid swarm involving <i>Arabis drummondii</i> with <i>A. holboellii</i> , <i>A. sparsiflora</i> , <i>A. pendulina</i> , & <i>A. perennans</i> .
Brassicaceae (Cruciferae)	<i>Boechea drummondii</i>	<i>B. stricta</i> , <i>B. angustifolia</i> , <i>Arabis drummondii</i>	Drummond's rockcress	PerF	Wide	Pres	Unc	Weber, Rector, & Kennedy 16748 (BLCA)	1983	
Brassicaceae (Cruciferae)	<i>Boechea fendleri</i>	<i>Arabis fendleri</i> , <i>A. holboellii</i> var. <i>fendleri</i> , <i>B. fendleri</i> var. <i>spatifolia</i> , vars. not recognized in Holmgren et al. (2005)	Fendler's rockcress	PerF	Wide	Rep	Rare	NCPN (in ed.)	2002	
Brassicaceae (Cruciferae)	<i>Boechea gunnisoniana</i>	<i>Arabis gunnisoniana</i>	Gunnison's rockcress	PerF	LocEn	Pres	Unc	Weber 11340a (COLO)	1962	Type locality is Saguache Creek, Gunnison Co., CO (Rollins 2090 GH)
Brassicaceae (Cruciferae)	<i>Boechea lignifera</i>	<i>Arabis lignifera</i>	Sweetwater rockcress	PerF	Wide	Pres	Unc	Penland 1807 (COLO)	1942	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Brassicaceae (Cruciferae)	<i>Boecheera oxylobula</i>	<i>Arabis oxylobula</i>	Glenwood Springs rockcress	PerF	LocEn	Pres	Unc	Weber 11340 (COLO)	1962	Type locality is Glenwood Springs, Garfield Co., CO (Osterhout s.n.)
Brassicaceae (Cruciferae)	<i>Boecheera pallidifolia</i>	<i>Arabis pallidifolia</i>	Gunnison County rockcress	PerF	LocEn	Pres	Unc	Weber 16785 (COLO)	1962	Type locality is hill above Sapinero, Gunnison Co., CO (Rollins & Rollins 8376)
Brassicaceae (Cruciferae)	<i>Boecheera perennans</i>	<i>Arabis perennans</i> var. <i>perennans</i>	perennial rockcress	PerF	Wide	Pres	Unc	Hogan 4233 (BLCA)	2004	
Brassicaceae (Cruciferae)	<i>Boecheera retrofracta</i>	<i>B. holboellii</i> var. <i>secunda</i> , <i>Arabis</i> <i>holboellii</i> var. <i>secunda</i> , <i>A.</i> <i>holboellii</i> var. <i>retrofracta</i>	Holboell's rockcress	PerF	Wide	Pres	Unc	Lederer & Clark 03-35 (BLCA)	1983	
Brassicaceae (Cruciferae)	<i>Boecheera selbyi</i>	<i>B. selbyi</i> var. <i>selbyi</i> , <i>Arabis selbyi</i>	Selby's rockcress	PerF	Wide	Pres	Unc	Weber 11333 (COLO)	1962	
Brassicaceae (Cruciferae)	<i>Camelina microcarpa</i>		little-pod false flax	AnnF	Intro	Pres	Unc	Clark & Hogan 2000 (BLCA)	2003	Native to Asia
Brassicaceae (Cruciferae)	<i>Capsella bursa- pastoris</i>		shepherd's-purse	AnnF	Intro	Pres	Unc	Hogan 4236 (BLCA)	1983	Native to Europe
Brassicaceae (Cruciferae)	<i>Cardaria chalapensis</i>	<i>C. draba</i> ssp. <i>chalapensis</i> , <i>C.</i> <i>draba</i> var. <i>repens</i>	orbicular whitetop	PerF	Intro	Pres	Unc	Clark & Hogan 2009 (BLCA)	2003	Native to Europe
Brassicaceae (Cruciferae)	<i>Chorispora tenella</i>		blue mustard	AnnF	Intro	Pres	Unc	Clark & Hogan 2008 (BLCA)	2003	Native to Asia
Brassicaceae (Cruciferae)	<i>Descurainia pinnata</i> ssp. <i>filipes</i>	<i>D. pinnata</i> var. <i>filipes</i>	western tansy- mustard	AnnF	Wide	Pres	Unc	Weber & Miller 11354 (BLCA)	1962	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Brassicaceae (Cruciferae)	<i>Descurainia pinnata</i> ssp. <i>incisa</i>	<i>D. richardsonii</i> var. <i>sonnei</i> , <i>D. incana</i> var. <i>incana</i> , <i>D.</i> <i>incana</i> var. <i>sonnei</i>	mountain tansy- mustard	AnnF	Wide	Pres	Unc	Weber, Rector, & Kennedy 16786 (BLCA)	1983	
Brassicaceae (Cruciferae)	<i>Descurainia sophia</i>		flixweed	AnnF	Intro	Pres	Unc	Hogan 4142 (BLCA)	1983	Native to Europe
Brassicaceae (Cruciferae)	<i>Draba cuneifolia</i>	<i>D. cuneifolia</i> var. <i>cuneifolia</i>	wedgeleaf draba	AnnF	Wide	Rep	Unc	NCPN (in ed.)	2002	
Brassicaceae (Cruciferae)	<i>Draba nemorosa</i>		woodland whitlow-grass	AnnF	Intro	Pres	Unc	Hogan 3969 (BLCA)	2003	Native to Eurasia
Brassicaceae (Cruciferae)	<i>Draba reptans</i>		dwarf draba	AnnF	Wide	Pres	Unc	Lederer & Clark 03-17 (BLCA)	2003	
Brassicaceae (Cruciferae)	<i>Erysimum capitatum</i>	<i>E. capitatum</i> var. <i>capitatum</i> , <i>E. asperum</i> var. <i>arkansanum</i> , <i>E. asperum</i> var. <i>elatum</i>	western wallflower	PerF	Wide	Pres	Unc	Weber & Miller 11392 (BLCA)	1962	
Brassicaceae (Cruciferae)	<i>Erysimum cheiranthoides</i> ssp. <i>altum</i>	<i>E. cheiranthoides</i>	worm-seed wallflower	PerF	Wide	Rep	Rare	NCPN (in ed.)	2002	Sometimes considered adventive from Europe (at least in part). Known from CURE.
Brassicaceae (Cruciferae)	<i>Erysimum inconspicuum</i>		shy wallflower	PerF	Wide	Rep	Rare	NCPN (in ed.)	2002	
Brassicaceae (Cruciferae)	<i>Erysimum repandum</i>		spreading wallflower	AnnF	Intro	Pres	Unc	Lederer, Clark, Hogan, & Tembrock 04- 44 (BLCA)	2004	Native to Europe
Brassicaceae (Cruciferae)	<i>Hesperis matronalis</i>		dame's rocket	PerF	Intro	Pres	Unk	Danguole Bockus, pers. Comm..	?	Native to Europe

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Brassicaceae (Cruciferae)	<i>Lepidium densiflorum</i>	<i>L. densiflorum</i> var. <i>densiflorum</i>	prairie pepperwort	AnnF	Wide	Pres	Unc	Weber, Rector, & Kennedy 16758 (BLCA)	1962	
Brassicaceae (Cruciferae)	<i>Lepidium montanum</i> var. <i>jonesii</i>		Jones' pepperwort	PerF	Wide	Pres	Unc	Hogan 4223 (BLCA)	2004	
Brassicaceae (Cruciferae)	<i>Lepidium montanum</i> var. <i>montanum</i>		mountain pepperwort	PerF	Wide	Rep	Rare	NCPN (in ed.)	2002	
Brassicaceae (Cruciferae)	<i>Lepidium montanum</i> var. <i>tenellum</i>		mountain pepperweed	PerF	LocEn	Pres	Unc	Lederer & Clark 04-26 (BLCA)	1917	Type locality is Black Canyon, Montrose Co., CO (Payson 1033 RM)
Brassicaceae (Cruciferae)	<i>Lepidium perfoliatum</i>		clasping pepperwort	AnnF	Intro	Pres	Unc	Weber & Miller 11349 (BLCA)	1962	Native to Europe
Brassicaceae (Cruciferae)	<i>Lepidium ramosissimum</i> var. <i>bourgeauanum</i>	<i>L. bourgeauanum</i>	branched pepperwort	AnnF	Periph	Pres	Unc	Weber & Beck 16910 (BLCA)	1983	
Brassicaceae (Cruciferae)	<i>Lesquerella rectipes</i>	<i>Physaria rectipes</i>	Colorado Plateau bladderpod	PerF	RegEn	Rep	Unc	NCPN (in ed.)	2002	
Brassicaceae (Cruciferae)	<i>Lesquerella vicina</i>		Uncompaghre bladderpod	PerF	LocEn	Pres	Rare	Lederer, Clark, Hogan, & Tembrock 04- 56 (BLCA)	2004	Type locality is mesa overlooking Uncompaghre River, Montrose Co., CO (Reveal 7492 GH). CO BLM Sensitive
Brassicaceae (Cruciferae)	<i>Noccaea montana</i>	<i>N. montana</i> var. <i>montana</i> , <i>Thlaspi</i> <i>montanum</i> var. <i>montanum</i>	alpine pennycress	PerF	Wide	Pres	Unc	Weber & Miller 11391 (BLCA)	1962	
Brassicaceae (Cruciferae)	<i>Physaria acutifolia</i>	<i>P. acutifolia</i> var. <i>acutifolia</i> , <i>P.</i> <i>australis</i>	sharp-leaf twinpod	PerF	Wide	Pres	Unc	Weber & Beck 17062 (BLCA)	1983	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Brassicaceae (Cruciferae)	<i>Physaria floribunda</i>		mesa twinpod	PerF	LocEn	Pres	Unc	Hogan & Clark 4051 (BLCA)	2003	Type locality is Sangre de Cristo Creek, Costilla Co., CO (Rydberg & Vreeland 6135 NY)
Brassicaceae (Cruciferae)	<i>Physaria rollinsii</i>		Rollins' twinpod	PerF	LocEn	Rep	Unc	NCPN (in ed.)	2002	Type locality is 4 miles NW of Doyleville, Gunnison Co., CO (Mulligan & Crampton 2880)
Brassicaceae (Cruciferae)	<i>Schoenocrambe linifolia</i>	<i>Sisymbrium linifolium</i>	flax-leaved plainsmustard	PerF	Wide	Pres	Com	Lederer & Clark 03-44 (BLCA)	1961	
Brassicaceae (Cruciferae)	<i>Sisymbrium altissimum</i>		tumble mustard	AnnF	Intro	Pres	Unc	Hogan 4097 (BLCA)	1961	Native to Europe
Brassicaceae (Cruciferae)	<i>Stanleya albescens</i>		white prince's-plume	PerF	RegEn	Pres	Unc	Hogan 4207 (BLCA)	2002	
Brassicaceae (Cruciferae)	<i>Stanleya pinnata</i> var. <i>S. pinnata</i>		prince's-plume	PerF	Wide	Pres	Unc	Hogan 4221 (BLCA)	2004	
Brassicaceae (Cruciferae)	<i>Streptanthus cordatus</i>	<i>S. cordatus</i> var. <i>cordatus</i>	heart-leaf jewelflower	PerF	Wide	Pres	Unc	Lederer & Clark 03-40 (BLCA)	2002	
Brassicaceae (Cruciferae)	<i>Thelypodopsis elegans</i>		elegant thelypody	PerF	RegEn	Pres	Unc	Hogan 4220 (COLO)	2004	Type locality is Westwater, Grand Co., UT (Jones s.n. POM)
Brassicaceae (Cruciferae)	<i>Thelypodopsis juniperorum</i>	<i>Sisymbrium juniperorum</i>	juniper tumbledustard	AnnF	LocEn	Pres	Unc	Hogan & Tembrock 4381 (BLCA)	1961	Type locality is western Colorado (Payson)
Brassicaceae (Cruciferae)	<i>Turritis glabra</i>	<i>Arabis glabra</i> var. <i>glabra</i> , vars. not recognized in Holmgren et al. (2005)	tower-mustard	PerF	Wide	Pres	Unc	Beck & Kennedy 17034 (BLCA)	1983	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Cactaceae	<i>Echinocereus triglochidiatus</i>	<i>E. triglochidiatus</i> var. <i>melanacanthus</i> , includes var. <i>inermis</i> . Vars. not recognized in <i>Flora of North America</i> (2003).	claretcup	PerF	Wide	Pres	Unc	Weber & Miller 11384 (BLCA)	1962	
Cactaceae	<i>Opuntia fragilis</i> var. <i>brachyartha</i>	<i>O. fragilis</i>	brittle prickly-pear	PerF	Wide	Pres	Unc	Clark & Lederer 2190 (BLCA)	1983	
Cactaceae	<i>Opuntia phaeacantha</i>	<i>O. phaeacantha</i> var. <i>phaeacantha</i> ; vars. not recognized in <i>Flora of North America</i> (2003)	berry prickly-pear	PerF	Wide	Pres	Unc	Hogan 4113 (BLCA)	2003	
Cactaceae	<i>Opuntia polyacantha</i>	<i>O. polyacantha</i> var. <i>polyacantha</i> . <i>Flora of North America</i> (2003) includes vars. <i>rufispina</i> & <i>trichophora</i> in var. <i>polyacantha</i> .	plains prickly-pear	PerF	Wide	Pres	Com	Hogan 4136 (BLCA)	2003	
Cactaceae	<i>Pediocactus simpsonii</i> var. <i>minor</i>	Includes var. <i>simpsonii</i>	Simpson's hedgehog cactus	PerF	Wide	Pres	Unc	Weber, Rector, & Kennedy 16784 (BLCA)	1983	
Calochortaceae (Liliaceae)	<i>Calochortus gunnisonii</i>	<i>C. gunnisonii</i> var. <i>gunnisonii</i>	Gunnison's mariposa	PerF	Wide	Pres	Unc	Clark & Hogan 2031 (BLCA)	1959	
Calochortaceae (Liliaceae)	<i>Calochortus nuttallii</i>		sego-lily	PerF	Wide	Pres	Unc	Lederer, Clark, Hogan, & Tembrock 04-49 (BLCA)	2002	
Campanulaceae	<i>Campanula rotundifolia</i>		harebell	PerF	Wide	Pres	Unc	Wetlaufer s.n. (BLCA)	1959	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Capparaceae (Cleomaceae)	<i>Cleomella palmeriana</i>	<i>C. palmeriana</i> var. <i>palmeriana</i>	Palmer's stinkweed	AnnF	RegEn	Pres	Unc	Lederer, Clark, Hogan, & Tembrock 04- 47 (BLCA)	2004	
Caprifoliaceae (Adoxaceae)	<i>Sambucus microbotrys</i> var. <i>microbotrys</i>	<i>S. racemosa</i> var. <i>microbotrys</i> ; included in <i>S.</i> <i>racemosa</i> var. <i>racemosa</i> by some authors.	red elderberry	Shrub	Wide	Pres	Unc	Hogan & Tembrock 4300 (BLCA)	1983	
Caprifoliaceae	<i>Symphoricarpos rotundifolius</i>	<i>S. oreophilus</i> var. <i>utahensis</i> ; includes vars. <i>utahensis</i> , <i>parishii</i> & <i>oreophilus</i>	mountain snowberry	Shrub	Wide	Pres	Com	Weber, Rector, & Kennedy 16859 (BLCA)	1983	
Caryophyllaceae	<i>Gastrolychnis drummondii</i>	<i>Silene drummondii</i> ssp. <i>drummondii</i> & ssp. <i>striata</i> , includes var. <i>kruckebergii</i> , <i>Lychnis</i> <i>drummondii</i>	Drummond's catchfly	PerF	Wide	Pres	Unc	Hogan 4137 (BLCA)	1983	
Celastraceae	<i>Paxistima myrsinites</i>	<i>Paxistima myrsinites</i> <i>myrsinites</i> , <i>Pachystima myrsinites</i>	mountain-lover	Shrub	Wide	Pres	Com	Cottrell & Gregory 282 (BLCA)	1974	
Chenopodiaceae	<i>Atriplex canescens</i>	<i>A. canescens</i> var. <i>occidentalis</i> , <i>A.</i> <i>canescens</i> var. <i>canescens</i>	fourwing saltbush	Shrub	Wide	Pres	Unc	Hogan & Tembrock 4384 (BLCA)	2002	
Chenopodiaceae	<i>Atriplex confertifolia</i>		shadscale	Shrub	Wide	Pres	Unc	Hogan 4213a (BLCA)	2002	
Chenopodiaceae	<i>Atriplex corrugata</i>		mat saltbush	Shrub	RegEn	Pres	Com	Lederer, Clark, Hogan, & Tembrock 04- 41 (BLCA)	2002	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Chenopodiaceae	<i>Atriplex gardneri</i>	<i>A. gardneri</i> var. <i>A. gardneri</i> , <i>A.</i> <i>nuttallii</i>	Gardner's saltbush	Shrub	Wide	Pres	Com	Lederer, Clark, Hogan, & Tembrock 04- 48 (BLCA)	2002	
Chenopodiaceae	<i>Atriplex powellii</i>	<i>A. powellii</i> var. <i>powellii</i>	Powell's orach	AnnF	Wide	Pres	Unc	Hogan & Tembrock 4289 (BLCA)	2004	
Chenopodiaceae	<i>Chenopodium album</i>	<i>C. album</i> var.	lambsquarter	AnnF	Intro	Rep	Unc	NCPN (in ed.)	2002	Native to Eurasia
Chenopodiaceae	<i>Chenopodium atrovirens</i>	<i>C. fremontii</i> var. <i>atrovirens</i>	mountain goosefoot	AnnF	Wide	Pres	Unc	Weber & Beck 16884 (BLCA)	1983	
Chenopodiaceae	<i>Chenopodium foliosum</i>	<i>C. capitatum</i> var. <i>parvicapitatum</i> , <i>C.</i> <i>overi</i>	smallhead goosefoot	AnnF	Wide	Rep	Unc	NCPN (in ed.)	2002	
Chenopodiaceae	<i>Chenopodium fremontii</i>	<i>C. fremontii</i> var. <i>fremontii</i>	Fremont's goosefoot	AnnF	Wide	Pres	Unc	Clark 2099 (BLCA)	1983	
Chenopodiaceae	<i>Halogeton glomeratus</i>		halogeton	AnnF	Intro	Pres	Unc	Lederer, Clark, Hogan, & Tembrock 04- 37 (BLCA)	2004	CO state noxious weed (List C). Native to Eurasia.
Chenopodiaceae	<i>Krascheninnikovia lanata</i>	<i>K. lanata</i> var. <i>lanata</i> , <i>Ceratoides lanata</i> , <i>Eurotia lanata</i> . Vars. not recognized in <i>Flora of North America</i> (2003).	winterfat	Shrub	Wide	Pres	Unc	Hogan 4214 (BLCA)	2002	
Chenopodiaceae	<i>Monolepis nuttalliana</i>		Nuttall's poverty- weed	AnnF	Wide	Pres	Unc	Weber, Rector, & Kennedy 16759 (BLCA)	1983	
Chenopodiaceae	<i>Salsola australis</i>	<i>S. kali</i> , <i>S. iberica</i> , <i>S.</i> <i>pestifer</i> , <i>S. tragus</i>	Russian thistle	AnnF	Intro	Pres	Unc	Clark 2108 (BLCA)	2003	Native to Asia

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Chenopodiaceae (Sarcobataceae)	<i>Sarcobatus vermiculatus</i>		greasewood	Shrub	Wide	Pres	Unc	Lederer, Clark, Hogan, & Tembrock 04-36 (BLCA)	2002	
Convallariaceae (Liliaceae, Ruscaceae)	<i>Maianthemum amplexicaule</i>	<i>M. racemosum</i> var. <i>amplexicaule</i> , <i>Smilacina racemosa</i>	false Solomon's-seal	Perf	Wide	Pres	Com	Cottrell & Gregory 251 (BLCA)	1961	
Convallariaceae (Liliaceae, Ruscaceae)	<i>Maianthemum stellatum</i>	<i>Smilacina stellata</i>	starry false Solomon's-seal	Perf	Wide	Pres	Unc	Weber, Rector, & Kennedy 16831 (BLCA)	1983	
Convolvulaceae	<i>Convolvulus arvensis</i>		field bindweed	Perf	Intro	Pres	Unc	Weber, Rector, & Kennedy 16820 (BLCA)	1983	CO state noxious weed (List C). Native to Eurasia.
Cornaceae	<i>Swida sericea</i>	<i>Cornus sericea</i> var. <i>sericea</i> , <i>C. stolonifera</i> , <i>C. alba</i> var. <i>alba</i>	red-osier dogwood	Shrub	Wide	Pres	Unc	Weber & Miller 11377 (BLCA)	1962	
Crassulaceae	<i>Amerosedum lanceolatum</i>	<i>Sedum lanceolatum</i> ; includes ssp. <i>lanceolatum</i> & <i>subalpinum</i>	lance-leaved stonecrop	Perf	Wide	Pres	Com	Clark & Hogan 2029 (BLCA)	1959	
Crossosomataceae (Celastraceae)	<i>Forsellesia meionandra</i>	<i>Glossopetalon spinescens</i> var. <i>meionandrum</i>	spiny greasewood	Shrub	RegEn	Pres	Unc	Lederer, Clark, Hogan, & Tembrock 04-45 (BLCA)	2002	
Cupressaceae	<i>Sabina osteosperma</i>	<i>Juniperus osteosperma</i>	Utah juniper	Tree	Wide	Pres	Abun	Cottrell & Gregory 283 (BLCA)	1974	
Cupressaceae	<i>Sabina scopulorum</i>	<i>Juniperus scopulorum</i>	Rocky Mountain juniper	Tree	Wide	Pres	Com	Beck & Kennedy 17019 (BLCA)	1959	
Cyperaceae	<i>Carex egglestonii</i>		Eggleston's sedge	PerG	RegEn	Rep	Rare	NCPN (in ed.)	2002	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Cyperaceae	<i>Carex geophila</i>		White Mountain sedge	PerG	Wide	Pres	Unc	Weber & Miller 11329 (BLCA)	1962	
Cyperaceae	<i>Carex geyeri</i>		elk sedge	PerG	Wide	Pres	Com	Weber & Miller 11312 (BLCA)	1962	
Cyperaceae	<i>Carex lanuginosa</i>	<i>C. pellita</i>	woolly sedge	PerG	Wide	Pres	Unc	Lederer & Clark 04-20 (BLCA)	2004	
Cyperaceae	<i>Carex microptera</i>	<i>C. microptera</i> var. <i>microptera</i> , <i>C. festivella</i> , <i>C.</i> <i>macloviana</i> var. <i>microptera</i>	small-wing sedge	PerG	Wide	Pres	Unc	Weber, Rector, & Kennedy 16855 (BLCA)	1983	
Cyperaceae	<i>Carex occidentalis</i>		western sedge	PerG	Wide	Pres	Com	Clark & Hogan 2004 (COLO)	1962	
Cyperaceae	<i>Carex petasata</i>		Liddon sedge	PerG	Wide	Pres	Unc	Weber, Rector, & Kennedy 16809 (BLCA)	1983	
Cyperaceae	<i>Carex praegracilis</i>		blackcreeper sedge	PerG	Wide	Pres	Unc	Weber & Beck 16913 (BLCA)	1983	
Cyperaceae	<i>Carex rossii</i>	<i>C. deflexa</i> var. <i>boottii</i> , <i>C. brevipes</i> , <i>C. pityophila</i>	Ross' sedge	PerG	Wide	Pres	Unc	Clark & Lederer 2186 (BLCA)	2002	
Cyperaceae	<i>Carex vallicola</i>		valley sedge	PerG	Wide	Pres	Unc	Weber, Rector, & Kennedy 16754 (BLCA)	1983	
Cyperaceae	<i>Carex xerantica</i>	<i>C. taehoensis</i>	dryland sedge	PerG	Wide	Pres	Unc	Hogan 4127 (BLCA)	2003	
Cyperaceae	<i>Eleocharis bolanderi</i>	<i>E. montevidensis</i>	Bolander's spikerush	PerG	Wide	Pres	?	Weber, Rector, & Kennedy 16857 (BLCA)	1983	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Cyperaceae	<i>Eleocharis macrostachya</i>	Includes <i>E. palustris</i> , <i>E. erythropoda</i> , & <i>E. uniglumis</i>	common spikerush	PerG	Wide	Pres	Unc	Weber & Beck 16905 (BLCA)	1983	
Cyperaceae	<i>Schoenoplectus lacustris</i> ssp. <i>acutus</i>	<i>Schoenoplectus acutus</i> var. <i>occidentalis</i> , <i>Schoenoplectus acutus</i> var. <i>acutus</i> , <i>Scirpus acutus</i>	hardstem bulrush	PerG	Wide	Rep	?	Hogan et al. (2005), NPS vegetation plots	NA	
Ephedraceae	<i>Ephedra cutleri</i>	<i>E. viridis</i> var. <i>viscida</i>		Shrub	RegEn	Pres	?	Cottrell & Gregory 269 (BLCA)	1974	
Ephedraceae	<i>Ephedra viridis</i>	<i>E. viridis</i> var. <i>viridis</i>	green ephedra	Shrub	Wide	Pres	Unc	Hogan & Tembrock 4280 (BLCA)	2002	
Equisetaceae	<i>Equisetum arvense</i>		field horsetail	fern	Wide	Pres	Unc	Lederer & Clark 04-21 (BLCA)	1974	
Equisetaceae	<i>Hippochaete hyemalis</i> var. <i>affinis</i>	<i>Equisetum hyemale</i> var. <i>affine</i> , <i>E. praealtum</i>	tall scouring-rush	fern	Wide	Pres	Unc	Cottrell & Gregory 259 (BLCA)	1962	
Equisetaceae	<i>Hippochaete laevigata</i>	<i>Equisetum laevigatum</i> , <i>E. kansanum</i>	smooth scouring-rush	fern	Wide	Pres	Unc	Cottrell & Gregory 260 (BLCA)	1974	
Equisetaceae	<i>Hippochaete x ferrissii</i>	<i>Equisetum x ferrissii</i> , hybrid of <i>E. hyemale</i> x <i>E. laevigatum</i>	Ferriss' horsetail	fern	Sparse	Pres	?	Beck 17018 (COLO)	1983	
Ericaceae	<i>Arctostaphylos uva-ursi</i> ssp. <i>coactilis</i>	<i>A. uva-ursi</i> var. <i>uva-ursi</i> , vars. not recognized in Holmgren et al. (2005)	bearberry	Shrub	Wide	Rep	Rare	NCPN (in ed.)	2002	
Euphorbiaceae	<i>Chamaesyce fendleri</i>	<i>Euphorbia fendleri</i>	Fendler's spurge	PerF	Wide	Rep	Unc	NCPN (in ed.)	2002	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Euphorbiaceae	<i>Chamaesyce glyptosperma</i>	<i>Euphorbia glyptosperma</i>	ridge-seeded spurge	AnnF	Wide	Pres	Unc	Weber & Beck 16933 (BLCA)	1983	
Euphorbiaceae	<i>Tithymalus brachyceras</i>	<i>Euphorbia robusta</i> , <i>E. brachycera</i> , <i>E. brachycera</i> var. <i>robusta</i>	shorthorn spurge	PerF	Wide	Pres	Unc	Lederer, Clark, Hogan, & Tembrock 04-64 (BLCA)	2004	
Euphorbiaceae	<i>Tragia ramosa</i>		noseburn	PerF	Wide	Rep	Rare	NCPN (in ed.)	2002	
Fabaceae (Leguminosae)	<i>Astragalus asclepiadoides</i>		milkweed milkvetch	PerF	RegEn	Pres	Unc	Weber & Miller 11320 (BLCA)	1962	Type locality is Cisco, Grand Co., UT (Jones s.n. POM). Weber & Miller 11320 (BLCA) is probably from just outside the park.
Fabaceae (Leguminosae)	<i>Astragalus convallarius</i>	<i>A. diversifolius</i> var. <i>campestris</i> , <i>A. convallarius</i> var. <i>convallarius</i>	lesser rushy milkvetch	PerF	Wide	Pres	Com	Lederer, Clark, Hogan, & Tembrock 04-55 (BLCA)	2002	
Fabaceae (Leguminosae)	<i>Astragalus falcatus</i>		Russian sickle	PerF	Intro	Rep	Unc	NCPN (in ed.)	2002	Native to Asia
Fabaceae (Leguminosae)	<i>Astragalus flavus</i>	<i>A. flavus</i> var. <i>candicans</i> , <i>A. flavus</i> var. <i>flavus</i>	yellow milkvetch	PerF	Wide	Pres	Com	Hogan 4212 (BLCA)	2004	
Fabaceae (Leguminosae)	<i>Astragalus lentiginosus</i> var. <i>palans</i>		straggling milkvetch	PerF	RegEn	Pres	Unc	Clark & Lederer 2185 (BLCA)	2003	Type locality is Montezuma Canyon, San Juan Co., UT (Eastwood s.n. POM)

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonymic/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Fabaceae (Leguminosae)	<i>Astragalus megacarpus</i>	Includes vars. <i>parryi</i> & <i>megacarpus</i> . Vars. not recognized in Barneby (1989)	great bladderly milkvetch	PerF	Periph	Pres	Unc	Lederer, Clark, Hogan, & Tembrock 04- 59 (BLCA)	2004	
Fabaceae (Leguminosae)	<i>Astragalus miser</i> var. <i>oblongifolius</i>		Rydberg's weedy milkvetch	PerF	Wide	Pres	Com	Clark & Lederer 2195 (BLCA)	1983	
Fabaceae (Leguminosae)	<i>Astragalus nuttallianus</i> var. <i>micranthemiformis</i>		small-flowered milkvetch	AnnF	RegEn	Rep	Unc	NCPN (in ed.)	2002	
Fabaceae (Leguminosae)	<i>Astragalus oophorus</i> var. <i>caulescens</i>		egg milkvetch	PerF	Wide	Pres	Com	Weber & Miller 11345 (BLCA)	1960	
Fabaceae (Leguminosae)	<i>Astragalus scopulorum</i>		Rocky Mountain milkvetch	PerF	Wide	Pres	Unc	Hogan 4125 (BLCA)	2003	
Fabaceae (Leguminosae)	<i>Astragalus tenellus</i>		pulse milkvetch	PerF	Wide	Rep	Unc	NCPN (in ed.)	2002	
Fabaceae (Leguminosae)	<i>Astragalus wingatanus</i>		Fort Wingate milkvetch	PerF	RegEn	Pres	Unc	Clark & Lederer 2194 (BLCA)	2004	
Fabaceae (Leguminosae)	<i>Glycyrrhiza lepidota</i>	<i>G. lepidota</i> var. <i>lepidota</i>	licorice-root	PerF	Wide	Pres	Unc	Beck & Kennedy 17024 (BLCA)	1983	
Fabaceae (Leguminosae)	<i>Lathyrus leucanthus</i>	<i>L. lanszwertii</i> var. <i>leucanthus</i>	whiteflower sweetpea	PerF	RegEn	Pres	Com	Miller & Miller s.n. (BLCA)	1961	Type locality is Ojo, Huerfano Co., CO (Rydberg & Vreeland 6020 NY).
Fabaceae (Leguminosae)	<i>Lupinus argenteus</i>	<i>L. argenteus</i> var. <i>argenteus</i>	silvery lupine	PerF	Wide	Rep	Unc	NCPN (in ed.)	2002	
Fabaceae (Leguminosae)	<i>Lupinus caudatus</i> var. <i>utahensis</i>	<i>L. argenteus</i> var. <i>utahensis</i> , <i>L. caudatus</i> ssp. <i>caudatus</i>	Utah lupine	PerF	Wide	Pres	Com	Hogan & Clark 4058 (BLCA)	1959	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Fabaceae (Leguminosae)	<i>Lupinus polyphyllus</i> var. <i>prunophilus</i>	<i>L. prunophilus</i>	meadow lupine	PerF	Wide	Pres	Unc	Weber, Rector, & Kennedy 16826 (BLCA)	1983	
Fabaceae (Leguminosae)	<i>Lupinus sericeus</i>	<i>L. sericeus</i> var. <i>sericeus</i> , <i>L.</i> <i>bakeri</i> . Vars not recognized in Barneby (1989)	silky lupine	PerF	Wide	Rep	Unc	NCPN (in ed.)	2002	
Fabaceae (Leguminosae)	<i>Medicago lupulina</i>		black medick	AnnF	Intro	Pres	Unc	Weber & Beck 16943 (BLCA)	1983	Native to Europe
Fabaceae (Leguminosae)	<i>Medicago sativa</i>	<i>M. sativa</i> var. <i>sativa</i>	alfalfa	PerF	Intro	Pres	Unc	Hogan 4098 (BLCA)	2003	Native to Europe
Fabaceae (Leguminosae)	<i>Melilotus albus</i>	<i>M. alba</i> ; included in <i>M. officinalis</i> by some authors	white sweet- clover	AnnF	Intro	Pres	Unc	Weber & Beck 16974 (BLCA)	1983	Native to Europe
Fabaceae (Leguminosae)	<i>Melilotus officinale</i>	<i>M. officinalis</i>	yellow sweet- clover	PerF	Intro	Pres	Unc	Weber, Rector, & Kennedy 16853 (BLCA)	1983	Native to Europe
Fabaceae (Leguminosae)	<i>Trifolium gymnocarpon</i>	<i>T. gymnocarpon</i> var. <i>gymnocarpon</i>	dwarf clover	PerF	Wide	Pres	Unc	Weber & Miller 11316 (BLCA)	1962	
Fabaceae (Leguminosae)	<i>Trifolium pratense</i>		red clover	PerF	Intro	Rep	Rare	NCPN (in ed.)	2002	Native to Europe
Fabaceae (Leguminosae)	<i>Trifolium repens</i>		white clover	PerF	Intro	Pres	Unc	Weber & Beck 16948 (BLCA)	1983	Native to Europe
Fabaceae (Leguminosae)	<i>Vicia americana</i> var. <i>americana</i>		American vetch	PerF	Wide	Pres	Unc	Clark & Hogan 1994 (BLCA)	1961	
Fagaceae	<i>Quercus gambelii</i>	<i>Q. gambelii</i> var. <i>gambelii</i>	Gambel oak	Tree	Wide	Pres	Abun	Miller & Miller s.n. (BLCA)	1961	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Fumariaceae	<i>Corydalis aurea</i>	<i>C. aurea</i> var. <i>aurea</i>	golden smoke	PerF	Wide	Pres	Unc	Cottrell & Gregory 279 (BLCA)	1961	
Fumariaceae	<i>Corydalis curvisiliqua</i> ssp. <i>occidentalis</i>	<i>C. aurea</i> var. <i>occidentalis</i>	golden corydalis	PerF	Wide	Pres	Unc	Weber & Miller 11383 (BLCA)	1962	
Gentianaceae	<i>Frasera speciosa</i>	<i>Swertia radiata</i>	elkweed	PerF	Wide	Pres	Unc	Weber, Rector, & Kennedy 16819 (BLCA)	1983	
Geraniaceae	<i>Erodium cicutarium</i>		stork's-bill	AnnF	Intro	Rep	Unc	NCPN (in ed.) 2002	2002	Native to Europe. Weber & Beck 17066 (BLCA) is from just outside the park.
Geraniaceae	<i>Geranium richardsonii</i>		Richardson's crane's-bill	PerF	Wide	Pres	Unc	Weber, Rector, & Kennedy 16835 (BLCA)	1983	
Grossulariaceae (Saxifragaceae)	<i>Ribes cereum</i>	<i>R. cereum</i> var. <i>pedicellare</i> , <i>R. cereum</i> var. <i>inebrians</i>	wax currant	Shrub	Wide	Pres	Unc	Weber & Miller 11334 (BLCA)	1962	
Grossulariaceae (Saxifragaceae)	<i>Ribes leptanthum</i>		trumpet gooseberry	Shrub	Wide	Pres	Unc	Lederer & Clark 03-46 (BLCA)	1962	
Grossulariaceae (Saxifragaceae)	<i>Ribes wolfii</i>		wolf currant	Shrub	Wide	Pres	Unc	Cottrell & Gregory 275 (BLCA)	1974	
Helleboraceae (Ranunculaceae)	<i>Actaea rubra</i> ssp. <i>aArguta</i>	<i>A. rubra</i>	red baneberry	PerF	Wide	Pres	Unc	Hogan 4160 (BLCA)	1983	
Helleboraceae (Ranunculaceae)	<i>Aquilegia elegantula</i>		elegant columbine	PerF	Wide	Pres	Unc	Koepsel s.n. (BLCA)	1980	
Helleboraceae (Ranunculaceae)	<i>Aquilegia micrantha</i>		alcove columbine	PerF	RegEn	Pres	Unc	Hogan & Tembrock 4264 (BLCA)	2002	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Helleboraceae (Ranunculaceae)	<i>Delphinium nuttallianum</i>	<i>D. nelsonii</i>	Nuttall's larkspur	PerF	Wide	Pres	Unc	Clark & Hogan 2017 (BLCA)	1961	Type locality is Bluff, San Juan Co., UT (Wetherill s.n. CAS)
Helleboraceae (Ranunculaceae)	<i>Delphinium ramosum</i>		mountain larkspur	PerF	RegEn	Rep	Unc	NCPN (in ed.)	2002	
Hydrangeaceae (Saxifragaceae)	<i>Fendlera falcata</i>	<i>F. rupicola</i> var. <i>rupicola</i>	Fendlerbush	Shrub	Wide	Pres	Unc	Hogan 3965 (BLCA)	1983	
Hydrangeaceae (Saxifragaceae)	<i>Fendlera wrightii</i>	<i>F. rupicola</i> var. <i>wrightii</i>	Wright's fendlerbush	Shrub	Wide	Pres	Unc	Weber & Miller 11380 (BLCA)	1962	
Hydrangeaceae (Saxifragaceae)	<i>Fendlerella utahensis</i>		Utah fendlerella	Shrub	Periph	Rep	Rare	NCPN (in ed.)	2002	
Hydrangeaceae (Saxifragaceae)	<i>Philadelphus microphyllus</i>	<i>P. microphyllus</i> var. <i>occidentalis</i> , <i>P. occidentalis</i> var. <i>occidentalis</i>	littleleaf mock- orange	Shrub	Wide	Pres	Unc	Hogan 4117 (BLCA)	1959	
Hydrophyllaceae	<i>Hydrophyllum capitatum</i>	<i>H. capitatum</i> var. <i>capitatum</i>	capitate waterleaf	PerF	Wide	Pres	Unc	Penland 1808 (COLO)	1942	
Hydrophyllaceae	<i>Phacelia splendens</i>		Eastwood's phacelia	AnnF	RegEn	Pres	Rare	Hogan 4210 (BLCA)	2004	Type locality is Grand Junction, Mesa Co., CO (Eastwood s.n. CAS)
Hypericaceae (Guttiferae, Clusiaceae)	<i>Hypericum formosum</i>	<i>H. scouleri</i> , <i>H.</i> <i>formosum</i> var. <i>scouleri</i>	western St. John's-wort	PerF	Wide	Pres	Unc	Weber & Beck 16909 (BLCA)	1983	
Juncaceae	<i>Juncus arcticus</i> ssp. <i>ater</i>	<i>J. balticus</i> var. <i>montanus</i> , <i>J.</i> <i>arcticus</i> var. <i>balticus</i> ; includes var. <i>mexicanus</i> .	Baltic rush	PerG	Wide	Pres	Com	Weber, Rector, & Kennedy 16747 (BLCA)	1983	
Juncaceae	<i>Juncus bufonius</i>	Includes vars. <i>bufonius</i> , <i>occidentalis</i> , <i>halophilus</i> , & <i>ambiguus</i>	toad rush	AnnG	Wide	Pres	Unc	Weber & Beck 16901 (BLCA)	1983	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Juncaceae	<i>Juncus confusus</i>		perplexing rush	PerG	Wide	Pres	Unc	Weber, Rector, & Kennedy 16752 (BLCA)	1983	
Juncaceae	<i>Juncus dudleyi</i>	<i>J. tenuis</i> var. <i>dudleyi</i>	slender rush	PerG	Wide	Pres	Unc	Lederer & Clark 04-25 (BLCA)	2004	
Juncaceae	<i>Juncus longistylis</i>		longstyle rush	PerG	Wide	Pres	Com	Weber & Beck 16914 (BLCA)	1983	
Juncaceae	<i>Juncus saximontanus</i>	<i>J. ensifolius</i> var. <i>montanus</i> ; includes <i>J. tracyi</i> , <i>J.</i> <i>xiphoides</i>	mountain rush	PerG	Wide	Pres	Unc	Weber & Beck 16907 (BLCA)	1983	
Juncaceae	<i>Juncus torreyi</i>		Torrey's rush	PerG	Wide	Rep		Hogan et al. (2005), NPS vegetation plots	NA	
Lamiaceae (Labiatae)	<i>Agastache urticifolia</i>		nettle-leaf horsemint	PerF	Wide	Pres	Unc	Weber & Beck 16960 (BLCA)	1983	
Lamiaceae (Labiatae)	<i>Dracocephalum parviflorum</i>	<i>Moldavica parviflora</i>	smallflower dragonhead	PerF	Wide	Pres	Unc	Hogan & Tembrock 4303 (BLCA)	1983	
Lamiaceae (Labiatae)	<i>Marrubium vulgare</i>		common horehound	PerF	Intro	Pres	Unc	Hogan & Tembrock 4378 (BLCA)	2003	Native to Eurasia
Lamiaceae (Labiatae)	<i>Mentha arvensis</i>	<i>M. arvensis</i> var. <i>canadensis</i> , <i>M.</i> <i>arvensis</i> var. <i>glabrata</i>	field mint	PerF	Wide	Pres	Unc	Lederer & Clark 04-23 (BLCA)	2004	
Lamiaceae (Labiatae)	<i>Monardella odoratissima</i>	<i>M. odoratissima</i> var. <i>glauca</i> , <i>M.</i> <i>glauca</i>	stinking horsemint	PerF	Wide	Pres	Unc	Hogan & Tembrock 4342 (BLCA)	2004	
Lemnaceae	<i>Lemna turionifera</i>	<i>L. minor</i>	lesser duckweed	PerF	Wide	Pres	Unc	Weber & Beck 16946 (BLCA)	1983	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Liliaceae	<i>Fritillaria atropurpurea</i>		leopard-lily	PerF	Wide	Pres	Unc	Lederer & Clark 03-07 (BLCA)	1984	
Linaceae	<i>Adenolinum lewisii</i>	<i>L. lewisii</i> , <i>L. lewisii</i> var. <i>lewisii</i> , <i>L. perenne</i> ssp. <i>lewisii</i>	blue flax	PerF	Wide	Pres	Unc	Clark & Lederer 2184 (BLCA)	2002	
Loasaceae	<i>Acrolasia albicaulis</i>	<i>Mentzelia albicaulis</i> , <i>M. obscura</i> . Most authors include <i>A. gracilis</i>	white-stem blazingstar	AnnF	Wide	Pres	Unc	Hogan 4224 (BLCA)	2004	
Loasaceae	<i>Acrolasia dispersa</i>	<i>Mentzelia dispersa</i> ; includes vars. <i>compacta</i> , <i>dispersa</i> , & <i>latifolia</i>	Nevada stickleaf	AnnF	Wide	Pres	Unc	Weber & Beck 16981 (BLCA)	1983	
Loasaceae	<i>Acrolasia humilis</i>	<i>Nuttallia humilis</i> , <i>Mentzelia humilis</i> , <i>M. thompsonii</i>	Thompson's stickleaf	AnnF	RegEn	Pres	Unc	Hogan 4229 (BLCA)	2004	Type locality is 7 miles E of Montrose, Montrose Co., CO (Weber 7470)
Loasaceae	<i>Nuttallia pterosperma</i>	<i>Mentzelia pterosperma</i>	wing-seed stickleaf	PerF	Wide	Pres	Rare	Lederer, Clark, Hogan, & Tembrock 04-63 (BLCA)	2004	Type locality is Willow Creek, San Juan Co., UT (Eastwood 31 CAS)
Malvaceae	<i>Malva neglecta</i>		common mallow	AnnF	Intro	Pres	Unc	Clark & Lederer 2191 (BLCA)	2004	Native to Eurasia
Malvaceae	<i>Sphaeralcea coccinea</i> ssp. <i>dissecta</i>	Includes ssp. <i>coccinea</i> , <i>elata</i> , & <i>dissecta</i>	scarlet globe-mallow	PerF	Wide	Pres	Unc	Hogan 4206 (BLCA)	2002	
Melanthiaceae (Liliaceae)	<i>Toxicoscordion paniculatum</i>	<i>Zigadenus paniculatus</i>	foothills death-camas	PerF	Wide	Pres	?	Miller s.n. (BLCA)	1961	
Melanthiaceae (Liliaceae)	<i>Toxicoscordion venenosum</i>	<i>Zigadenus venenosus</i> var. <i>venenosus</i>	meadow death camas	PerF	Wide	Pres	Unc	Penland 1806 (COLO)	1942	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Nyctaginaceae	<i>Abronia argillosa</i>		clay sand-verbena	PerF	RegEn	Pres	Unc	Hogan & Tembrock 4295 (BLCA)	2004	Type locality is 6 miles S of Cisco, Grand Co., UT (Welsh et al. 16689 BRY)
Nyctaginaceae	<i>Oxybaphus linearis</i>	<i>O. decumbens</i> , <i>Mirabilis linearis</i> var. <i>linearis</i> ; some authors include <i>M. glabra</i>	narrow-leaf four-o'clock	PerF	Wide	Pres	Unc	Weber & Beck 16988 (BLCA)	1983	
Oleaceae	<i>Fraxinus anomala</i>		singleleaf ash	Shrub	Wide	Pres	Com	Weber & Beck 17001 (BLCA)	1974	
Onagraceae	<i>Camissonia scapoidea</i>	<i>C. scapoidea</i> var. <i>scapoidea</i> , <i>Oenothera scapoidea</i> . Includes ssp. <i>brachycarpa</i>	Paiute suncup	AnnF	Wide	Pres	Unc	Hogan 4225 (BLCA)	2004	
Onagraceae	<i>Epilobium brachycarpum</i>	<i>E. paniculatum</i> var. <i>paniculatum</i>	autumn willow-herb	AnnF	Wide	Pres	Unc	Weber & Beck 16906 (BLCA)	1983	
Onagraceae	<i>Epilobium ciliatum</i>	<i>E. ciliatum</i> var. <i>ciliatum</i> , <i>E. watsonii</i> , <i>E. adenocaulon</i>	northern willow-herb	PerF	Wide	Pres	Com	Hogan & Tembrock 4337 (BLCA)	1983	
Onagraceae	<i>Epilobium halleanum</i>		Hall's willow-herb	PerF	Wide	Pres	?	Weber 16912 (COLO)	1983	Duplicate collection at BLCA is identified as <i>E. ciliatum</i> .
Onagraceae	<i>Gayophytum diffusum</i> ssp. <i>parviflorum</i>	<i>G. diffusum</i> var. <i>strictipes</i> , <i>G. lasiospermum</i>	diffuse groundsmoke	AnnF	Wide	Pres	Unc	Beck & Kennedy 17061 (BLCA)	1983	
Onagraceae	<i>Gayophytum ramosissimum</i>		branching groundsmoke	AnnF	Wide	Pres	Unc	Weber, Rector, & Kennedy 16842 (BLCA)	1983	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Onagraceae	<i>Oenothera caespitosa</i> ssp. <i>marginata</i>		long-tube evening-primrose	PerF	Wide	Pres	Com	Weber & Miller 11385 (BLCA)	1962	
Onagraceae	<i>Oenothera coronopifolia</i>		hairy-throat evening-primrose	PerF	Wide	Pres	Unc	Clark & Hogan 1998 (BLCA)	1961	
Orchidaceae	<i>Corallorhiza maculata</i>	Includes vars. <i>maculata</i> & <i>occidentalis</i>	spotted coral-root	PerF	Wide	Rep	Rare	NCPN (in ed.)	2002	
Orchidaceae	<i>Epipactis gigantea</i>		giant helleborine	PerF	Wide	Rep	Unk	Michael Scott ? veg plot		
Orobanchaceae	<i>Aphyllon uniflorum</i>	<i>Orobanche uniflora</i> var. <i>occidentalis</i>	naked broomrape	PerF	Wide	Pres	Unc	Clark & Lederer 2189 (BLCA)	2004	
Pinaceae	<i>Picea pungens</i>		blue spruce	Tree	Wide	Pres	Unc	Weber & Miller 11367 (BLCA)	1962	State tree of Utah and Colorado
Pinaceae	<i>Pinus edulis</i>		two-needle pinyon	Tree	Wide	Pres	Abun	Cottrell & Gregory 253 (BLCA)	1974	
Pinaceae	<i>Pinus ponderosa</i> var. <i>scopulorum</i>		ponderosa pine	Tree	Wide	Pres	Unc	Weber & Beck 16703 (BLCA)	1983	
Pinaceae	<i>Pseudotsuga menziesii</i>	<i>P. menziesii</i> var. <i>glauca</i>	Douglas-fir	Tree	Wide	Pres	Com	Cottrell & Gregory 276 (BLCA)	1974	
Plantaginaceae	<i>Plantago major</i>	Includes var. <i>pachyphylla</i>	common plantain	PerF	Intro	Pres	Unc	Weber & Beck 16902 (BLCA)	1983	
Plantaginaceae	<i>Plantago patagonica</i>	<i>P. patagonica</i> var. <i>patagonica</i>	woolly plantain	AnnF	Wide	Rep	Rare	NCPN (in ed.)	2002	Mostly native to Europe
Poaceae (Gramineae)	<i>Achnatherum hymenoides</i>	<i>Oryzopsis hymenoides</i> , <i>Stipa hymenoides</i>	Indian ricegrass	PerG	Wide	Pres	Com	Hogan & Clark 4077 (BLCA)	1962	
Poaceae (Gramineae)	<i>Achnatherum lettermanii</i>	<i>Stipa lettermanii</i>	Letterman's needlegrass	PerG	Wide	Pres	Unc	Rominger s.n. (BLCA)	1962	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Poaceae (Gramineae)	<i>Achnatherum nelsonii</i>	<i>A. nelsonii</i> var. <i>nelsonii</i> , <i>Stipa nelsonii</i> var. <i>nelsonii</i>	Nelson's needlegrass	PerG	Wide	Pres	Unc	Hogan 4146 (BLCA)	1962	
Poaceae (Gramineae)	<i>Achnatherum pinetorum</i>	<i>Stipa pinetorum</i>	pine needlegrass	PerG	Wide	Pres	Unc	Hogan & Clark 4088 (BLCA)	2002	
Poaceae (Gramineae)	<i>Achnatherum x bloomeri</i>	<i>Stiporyzopsis x bloomeri</i> , <i>Stipa x bloomeri</i> , hybrids between <i>Stipa hymenoides</i> and other <i>Stipa</i> species except <i>S. comata</i>	Bloomer's ricegrass	PerG	Wide	Pres	?	Rominger s.n. (BLCA)	1962	
Poaceae (Gramineae)	<i>Agropyron desertorum</i>	<i>A. cristatum</i> var. <i>desertorum</i> ; included within <i>A. cristatum</i> (without var.) in <i>Flora of North America</i> (2007)	clustered wheatgrass	PerG	Intro	Pres	Unc	Hogan & Tembrock 4347 (BLCA)	1983	Native to Eurasia
Poaceae (Gramineae)	<i>Agropyron mongolicum</i>	<i>A. cristatum</i> var. <i>cristatum</i> , <i>A. cristatum</i> ssp. <i>pectinatum</i> , <i>A. pectinatum</i> , <i>A. sibiricum</i> , <i>A. fragile</i> , <i>A. mongolicum</i>	crested wheatgrass	PerG	Intro	Pres	Unc	Weber & Beck 16919 (BLCA)	1962	Native to Eurasia
Poaceae (Gramineae)	<i>Agrostis gigantea</i>	Included in <i>A. stolonifera</i> by some authors	redtop	PerG	Intro	Pres	Com	Beck & Kennedy 17059 (BLCA)	1962	Native to Eurasia
Poaceae (Gramineae)	<i>Agrostis scabra</i>	<i>A. hiemalis</i> , <i>A. geminata</i>	ticklegass	PerG	Wide	Pres	Unc	Weber & Beck 16977 (BLCA)	1983	
Poaceae (Gramineae)	<i>Alopecurus aequalis</i>	<i>A. aequalis</i> var. <i>aequalis</i>	shortawn foxtail	PerG	Wide	Pres	Unc	Weber & Beck 16944 (BLCA)	1983	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Poaceae (Gramineae)	<i>Anisantha tectorum</i>	<i>Bromus tectorum</i>	cheatgrass	AnnG	Intro	Pres	Com	Weber, Rector, & Kennedy 16878 (BLCA)	1983	CO state noxious weed (List C). Native to Eurasia.
Poaceae (Gramineae)	<i>Aristida purpurea</i> var. <i>longiseta</i>	<i>A. glauca</i> , <i>A. purpurea</i> var. <i>fendleriana</i> , <i>A. fendleriana</i>	purple three-awn	PerG	Wide	Pres	Com	Weber & Beck 16994 (BLCA)	1983	
Poaceae (Gramineae)	<i>Blepharoneuron tricholepis</i>		pine dropseed	PerG	Wide	Pres	Unc	Beck 14 (COLO)	1983	
Poaceae (Gramineae)	<i>Bromopsis canadensis</i>	<i>Bromus ciliatus</i> ; includes vars. <i>ciliatus</i> & <i>richardsonii</i>	fringed brome	PerG	Wide	Pres	Unc	Weber 16968 (COLO)	1983	
Poaceae (Gramineae)	<i>Bromopsis inermis</i>	<i>B. inermis</i> var. <i>inermis</i>	smooth brome	PerG	Intro	Pres	Com	Hogan & Tembrock 4294 (BLCA)	1962	Native to Eurasia
Poaceae (Gramineae)	<i>Bromopsis lanatipes</i>	<i>Bromus lanatipes</i>	woolly brome	PerG	Wide	Pres	Unc	Weber & Beck 16980 (BLCA)	1983	
Poaceae (Gramineae)	<i>Bromopsis porteri</i>	<i>Bromus frondosus</i> , <i>Bromus anomalus</i> . Material ascribed to <i>Bromus anomalus</i> in regional floras is mostly <i>B. porteri</i> or <i>B. lanatipes</i> .	nodding brome	PerG	Wide	Pres	Unc	Hogan & Lederer 4394 (BLCA)	1983	
Poaceae (Gramineae)	<i>Calamagrostis scopulorum</i>		Jones' reedgrass	PerG	Wide	Rep	Rare	NCPN (in ed.)	2002	
Poaceae (Gramineae)	<i>Calamagrostis stricta</i>	<i>C. neglecta</i> , <i>C. inexpansa</i>	slimstem reedgrass	PerG	Wide	Pres	Unc	Rominger s.n. (BLCA)	1962	
Poaceae (Gramineae)	<i>Ceratichloa carinata</i>	<i>Bromus marginatus</i> , <i>B. polyanthus</i> , <i>B. carinatus</i>	mountain brome	PerG	Wide	Pres	Unc	Weber, Rector, & Kennedy 16823 (BLCA)	1983	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Poaceae (Gramineae)	<i>Chondrosium gracile</i>	<i>Bouteloua gracilis</i>	blue grama	PerG	Wide	Pres	Com	Weber & Beck 16938 (BLCA)	1983	
Poaceae (Gramineae)	<i>Critesion jubatum</i>	<i>Hordeum jubatum</i>	foxtail barley	PerG	Wide	Pres	Unc	Rominger s.n. (BLCA)	1962	
Poaceae (Gramineae)	<i>Dactylis glomerata</i>		orchard grass	PerG	Intro	Pres	Unc	Hogan 4126 (BLCA)	1983	Native to Eurasia and Africa
Poaceae (Gramineae)	<i>Elymus canadensis</i>	<i>E. canadensis</i> var. <i>canadensis</i>	Canada wildrye	PerG	Wide	Pres	Unc	Beck & Kennedy 17023 (BLCA)	1983	
Poaceae (Gramineae)	<i>Elymus elymoides</i>	<i>E. elymoides</i> var. <i>elymoides</i> , <i>Sitanion hystrix</i>	squirreltail	PerG	Wide	Pres	Com	Hogan & Clark 4076 (BLCA)	2002	
Poaceae (Gramineae)	<i>Elymus glaucus</i>	<i>E. glaucus</i> var. <i>glaucus</i>	blue wildrye	PerG	Wide	Rep	Rare	NCPN (in ed.)	2002	
Poaceae (Gramineae)	<i>Elymus lanceolatus</i>	<i>E. lanceolatus</i> var. <i>lanceolatus</i> , <i>Agropyron dasystachyum</i> var. <i>dasystachyum</i> , <i>A. albicans</i> var. <i>albicans</i> , <i>A. albicans</i> var. <i>griffithsii</i> . Includes var. <i>riparium</i>	thickspike wheatgrass	PerG	Wide	Pres	Unc	Weber & Beck 16978 (BLCA)	1962	
Poaceae (Gramineae)	<i>Elymus longifolius</i>	<i>Sitanion hystrix</i> , <i>E. elymoides</i> var. <i>brevifolius</i>	bottlebrush squirreltail	PerG	Wide	Pres	Unc	Rominger s.n. (BLCA)	1962	
Poaceae (Gramineae)	<i>Elymus trachycaulus</i>	<i>Agropyron caninum</i> , <i>A. subsecundum</i> , <i>A. trachycaulum</i> , <i>A. latiglume</i> , <i>Elymus alaskanus</i> ssp. <i>latiglumis</i> , <i>E. trachycaulus</i> var. <i>trachycaulus</i>	slender wheatgrass	PerG	Wide	Pres	Unc	Hogan & Tembrock 4349 (BLCA)	1962	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Poaceae (Gramineae)	<i>Elytrigia repens</i>	<i>Agropyron repens</i> , <i>Elymus repens</i>	quackgrass	PerG	Intro	Pres	Unc	Weber, Rector, & Kennedy 16806 (BLCA)	1962	CO state noxious weed (List B). Native to Eurasia.
Poaceae (Gramineae)	<i>Eremopyrum triticeum</i>	<i>Agropyron triticeum</i>	annual wheatgrass	AnnG	Intro	Pres	Unc	Lederer, Clark, Hogan, & Tembrock 04-38 (BLCA)	2004	Native to Asia
Poaceae (Gramineae)	<i>Festuca arizonica</i>	<i>F. ovina</i> var. <i>arizonica</i>	Arizona fescue	PerG	Wide	Rep	Rare	NCPN (in ed.)	2002	
Poaceae (Gramineae)	<i>Festuca arundinacea</i>	<i>Schedonorus phoenix</i> , S. <i>arundinaceus</i> , <i>Lolium arundinaceum</i>	tall fescue	PerG	Intro	Pres	Unc	Weber & Beck 16955 (BLCA)	1983	Native to Europe
Poaceae (Gramineae)	<i>Festuca idahoensis</i>	<i>F. ovina</i> var. <i>ingrata</i>	Idaho fescue	PerG	Wide	Pres	Unc	Hogan 4128 (BLCA)	2003	
Poaceae (Gramineae)	<i>Festuca saximontana</i>	<i>F. ovina</i> var. <i>rydbergii</i> , <i>F. ovina</i> var. <i>saximontana</i>	Rocky Mountain fescue	PerG	Wide	Pres	Unc	Weber 11338 (COLO)	1962	
Poaceae (Gramineae)	<i>Festuca thurberi</i>		Thurber's fescue	PerG	Wide	Pres	Unc	Weber, Rector, & Kennedy 16817 (BLCA)	1983	
Poaceae (Gramineae)	<i>Hesperostipa comata</i>	<i>H. comata</i> var. <i>comata</i> , <i>Stipa comata</i> var. <i>comata</i>	needle-and-thread	PerG	Wide	Pres	Com	Rominger s.n. (BLCA)	1962	
Poaceae (Gramineae)	<i>Hilaria jamesii</i>	<i>Pleuraphis jamesii</i>	galleta	PerG	Wide	Pres	Unc	Lederer, Clark, Hogan, & Tembrock 04-40 (BLCA)	2002	
Poaceae (Gramineae)	<i>Koeleria macrantha</i>	<i>K. cristata</i> , K. <i>pyramidata</i> , K. <i>nitida</i>	Junegrass	PerG	Wide	Pres	Com	Hogan & Clark 4091 (BLCA)	1962	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Poaceae (Gramineae)	<i>Leymus cinereus</i>	<i>Elymus cinereus</i>	Great Basin wildrye	PerG	Wide	Pres	Unc	Weber, Rector, & Kennedy 16827 (BLCA)	1962	
Poaceae (Gramineae)	<i>Leymus salina</i>	<i>Elymus salina</i> , <i>E. salinus</i> , <i>E. ambiguus</i> , <i>L. salinus</i> , <i>L. ambiguus</i>	Salina wildrye	PerG	Wide	Pres	Unc	Lederer, Clark, Hogan, & Tembrock 04-61 (BLCA)	2004	
Poaceae (Gramineae)	<i>Melica porteri</i>		Porter's melic	PerG	Wide	Pres	Unc	Hogan 4161 (BLCA)	1983	
Poaceae (Gramineae)	<i>Monroa squarrosa</i>	<i>Munroa squarrosa</i>	false buffalograss	AnnG	Wide	Pres	?	Weber & Beck 16937 (BLCA)	1983	
Poaceae (Gramineae)	<i>Muhlenbergia asperifolia</i>		scratchgrass	PerG	Wide	Pres	Unc	Rominger s.n. (BLCA)	1962	
Poaceae (Gramineae)	<i>Muhlenbergia racemosa</i>		green muhly	PerG	Wide	Pres	Unc	Hogan 4173 (BLCA)	1962	
Poaceae (Gramineae)	<i>Pascopyrum smithii</i>	<i>Agropyron smithii</i> , <i>Elymus smithii</i> ; includes vars. <i>smithii</i> & <i>palmeri</i>	western wheatgrass	PerG	Wide	Pres	Com	Hogan & Tembrock 4346 (BLCA)	1962	
Poaceae (Gramineae)	<i>Phalaroides arundinacea</i>	<i>Phalaris arundinacea</i>	reed canary grass	PerG	Wide	Pres	Com	Hogan 4100 (BLCA)	2002	
Poaceae (Gramineae)	<i>Phleum pratense</i>		timothy	PerG	Intro	Pres	Unc	Weber & Beck 16923 (BLCA)	1983	Native to Eurasia
Poaceae (Gramineae)	<i>Piptatherum micranthum</i>	<i>Oryzopsis micrantha</i>	littelseed ricegrass	PerG	Wide	Pres	Unc	Hogan 4114 (BLCA)	1962	
Poaceae (Gramineae)	<i>Poa agassizensis</i>	<i>P. pratensis</i> ssp. <i>agassizensis</i> ; included in <i>P. pratensis</i> by some authors	Agassiz's bluegrass	PerG	Wide	Pres	Unc	Rominger s.n. (BLCA)	1962	
Poaceae (Gramineae)	<i>Poa bigelovii</i>		Bigelow's bluegrass	AnnG	Periph	Rep	Rare	NCPN (in ed.)	2002	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Poaceae (Gramineae)	<i>Poa bulbosa</i>		bulbous bluegrass	PerG	Intro	Pres	Unc	Hogan 3975 (BLCA)	2003	Native to Eurasia and Africa
Poaceae (Gramineae)	<i>Poa compressa</i>		Canada bluegrass	PerG	Intro	Pres	Unc	Hogan & Lederer 4396 (BLCA)	1983	Native to Eurasia
Poaceae (Gramineae)	<i>Poa fendleriana</i>	<i>P. longiligula</i> , <i>P. fendleriana</i> ssp. <i>longiligula</i>	muttongrass	PerG	Wide	Pres	Com	Lederer & Clark 03-34 (BLCA)	1962	
Poaceae (Gramineae)	<i>Poa glaucifolia</i>	Included in <i>P. arida</i> by some authors	pale-leaf bluegrass	PerG	Wide	Pres	Unc	Weber, Rector, & Kennedy 16751 (BLCA)	1983	
Poaceae (Gramineae)	<i>Poa nemoralis</i> ssp. <i>interior</i>	<i>P. glauca</i> var. <i>glauca</i> , <i>P. interior</i>	interior bluegrass	PerG	Wide	Pres	Unc	Weber, Rector, & Kennedy 16848 (BLCA)	1983	
Poaceae (Gramineae)	<i>Poa pratensis</i>	Most authors include <i>P.</i> <i>agassizensis</i>	Kentucky bluegrass	PerG	Intro	Pres	Unc	Weber & Beck 16885 (BLCA)	1983	Native to Europe
Poaceae (Gramineae)	<i>Poa secunda</i>	Includes <i>P.</i> <i>gracillima</i> , <i>P.</i> <i>juncifolia</i> , <i>P.</i> <i>sandbergii</i> , <i>P.</i> <i>canbyi</i> , <i>P. scabrella</i> , <i>P. nevadensis</i> , <i>P.</i> <i>ampla</i> , & all vars. of <i>P. secunda</i>	Sandberg's bluegrass	PerG	Wide	Pres	Com	Clark & Lederer 2196 (BLCA)	1962	
Poaceae (Gramineae)	<i>Pseudoroegneria</i> <i>spicata</i>	<i>Agropyron</i> <i>spicatum</i> , <i>Elymus</i> <i>spicatus</i> ; includes ssp. <i>inermis</i> & <i>spicata</i>	bluebunch wheatgrass	PerG	Wide	Pres	Unc	Hogan & Clark 4079 (BLCA)	2003	
Poaceae (Gramineae)	<i>Sporobolus</i> <i>cryptandrus</i>		sand dropseed	PerG	Wide	Pres	Unc	Weber & Beck 16936 (BLCA)	1983	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Poaceae (Gramineae)	<i>Thinopyrum intermedium</i> ssp. <i>barbulatum</i>	<i>Agropyron intermedium</i> , <i>Elytrigia intermedia</i> , <i>T. intermedium</i> , <i>Elymus hispidus</i> var. <i>ruthenicus</i>	intermediate wheatgrass	PerG	Intro	Pres	?	Weber & Beck 16954 (BLCA)	1983	Native to Eurasia
Poaceae (Gramineae)	<i>Thinopyrum intermedium</i> ssp. <i>intermedium</i>	<i>Agropyron intermedium</i> , <i>Elytrigia intermedia</i> , <i>Elymus hispidus</i> var. <i>hispidus</i>	intermediate wheatgrass	PerG	Intro	Pres	?	Weber & Beck 16952 (BLCA)	1983	Native to Eurasia
Polemoniaceae	<i>Collomia linearis</i>		small collomia	AnnF	Wide	Pres	Com	Clark & Hogan 2013 (BLCA)	1983	
Polemoniaceae	<i>Gilia ophthalmoides</i>	Included in <i>G. inconspicua</i> by some authors	eyelash gilia	AnnF	Wide	Pres	Unc	Lederer & Clark 03-45 (BLCA)	1962	Includes reports of <i>G. inconspicua</i> from NCPN (in ed.)
Polemoniaceae	<i>Gilia penstemonoides</i>	<i>Aliciella penstemonoides</i>	Black Canyon gilia	PerF	LocEn	Pres	Rare	Grey 714 (BLCA)	1980	Type locality is Cimarron, Montrose Co., CO (Jones s.n.)
Polemoniaceae	<i>Gilia pinnatifida</i>	<i>Aliciella pinnatifida</i>	sticky gilia	PerF	Wide	Rep	Unc	NCPN (in ed.)	2002	
Polemoniaceae	<i>Ipomopsis aggregata</i> ssp. <i>aggregata</i>	<i>Gilia aggregata</i> var. <i>aggregata</i>	scarlet gilia	PerF	Wide	Pres	Unc	Hogan & Clark 4075 (BLCA)	1959	
Polemoniaceae	<i>Linanthus harknessii</i> var. <i>septentrionalis</i>	<i>Leptosiphon septentrionalis</i> , <i>Linanthus septentrionalis</i>	northern linanthus	AnnF	Wide	Pres	Unc	Weber, Rector, & Kennedy 16775 (BLCA)	1983	
Polemoniaceae	<i>Microsteris gracilis</i>	<i>M. gracilis</i> var. <i>humilior</i> , <i>Phlox gracilis</i> ssp. <i>humilis</i>	slender phlox	AnnF	Wide	Pres	Unc	Weber, Rector, & Kennedy 16760 (BLCA)	1962	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Polemoniaceae	<i>Navarretia breweri</i>		yellow navarretia	AnnF	Wide	Pres	Unc	Weber, Rector, & Kennedy 16771 (BLCA)	1983	
Polemoniaceae	<i>Phlox austromontana</i>	<i>P. austromontana</i> var. <i>austromontana</i> ; var. not recognized in Cronquist et al. (1984)	desert phlox	PerF	Wide	Pres	Unc	Lederer & Clark 04-34 (BLCA)	2004	
Polemoniaceae	<i>Phlox hoodii</i>	<i>P. hoodii</i> ssp. <i>canescens</i> ; includes ssp. <i>glabrata</i> , <i>hoodii</i> , & <i>viscidula</i>	Hood's phlox	PerF	Wide	Pres	Unc	Penland 1804 (COLO)	1942	
Polemoniaceae	<i>Phlox longifolia</i>	Includes vars. <i>longifolia</i> & <i>stansburyi</i>	long-leaf phlox	PerF	Wide	Pres	Unc	Lederer & Clark 03-08 (BLCA)	1942	
Polygonaceae	<i>Acetosella vulgaris</i>	<i>Rumex acetosella</i>	sheep sorrel	PerF	Intro	Pres	Unc	Weber & Beck 16957 (BLCA)	1983	Native to Eurasia
Polygonaceae	<i>Eriogonum flavum</i> ssp. <i>flavum</i>		yellow wild- buckwheat	PerF	Wide	Pres	Unc	Weber & Beck 17015 (BLCA)	1959	
Polygonaceae	<i>Eriogonum gordonii</i>		Gordon's wild buckwheat	AnnF	Wide	Pres	Unc	Hogan 4227 (BLCA)	2002	
Polygonaceae	<i>Eriogonum leptocladon</i>	<i>E. leptocladon</i> var. <i>leptocladon</i>	sand wild buckwheat	Shrub	RegEn	Rep	Rare	NCPN (in ed.)	2002	
Polygonaceae	<i>Eriogonum lonchophyllum</i>	<i>E. lonchophyllum</i> var. <i>lonchophyllum</i> , <i>E. intermontanum</i> , <i>E. corymbosum</i> var. <i>humivagans</i> . Vars. not recognized in <i>Flora of North</i> <i>America</i> (2005)	longleaf wild buckwheat	Shrub	RegEn	Pres	Com	Weber, Rector, & Kennedy 16843 (BLCA)	1983	
Polygonaceae	<i>Eriogonum racemosum</i>	<i>E. racemosum</i> var. <i>racemosum</i>	redroot wild buckwheat	PerF	Wide	Pres	Com	Hogan & Tembrock 4355 (BLCA)	1959	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Polygonaceae	<i>Eriogonum umbellatum</i> var. <i>aureum</i>		sulphur-flower wild-buckwheat	PerF	RegEn	Pres	Com	Weber 16925 (COLO)	1959	
Polygonaceae	<i>Polygonum arenastrum</i>	<i>P. aviculare</i> , <i>P. rurvagum</i>	yard knotweed	AnnF	Intro	Pres	Unc	Hogan & Lederer 4389 (BLCA)	1983	Native to Eurasia
Polygonaceae	<i>Polygonum douglasii</i>	<i>P. douglasii</i> var. <i>douglasii</i>	Douglas' knotweed	AnnF	Wide	Pres	Unc	Weber & Beck 16895 (BLCA)	1983	
Polygonaceae	<i>Polygonum polygaloides</i> ssp. <i>kelloggii</i>	<i>P. kelloggii</i> var. <i>kelloggii</i>	Kellogg's knotweed	AnnF	Wide	Pres	Unc	Weber, Rector, & Kennedy 16798 (BLCA)	1983	
Polygonaceae	<i>Pterogonum alatum</i>	<i>Eriogonum alatum</i>	winged wild buckwheat	PerF	Wide	Pres	Unc	Hogan & Clark 4064 (BLCA)	2002	
Polygonaceae	<i>Rumex crispus</i>		curly dock	PerF	Intro	Pres	Unc	Weber & Beck 16999 (BLCA)	1983	Native to Eurasia
Polygonaceae	<i>Rumex triangulivalvis</i>	<i>R. salicifolius</i> var. <i>triangulivalvis</i> , <i>R. mexicanus</i> , <i>R. salicifolius</i> var. <i>mexicanus</i> , <i>R. utahensis</i> , <i>R. triangulivalvis</i> var. <i>mexicanus</i> , <i>R. triangulivalvis</i> var. <i>montigenitus</i> .	willow dock	PerF	Wide	Pres	Unc	Weber & Beck 17006 (BLCA)	1983	
Portulacaceae	<i>Claytonia lanceolata</i>	<i>C. lanceolata</i> var. <i>lanceolata</i> . Some authors include <i>C. rosea</i>	lanceleaf springbeauty	PerF	Wide	Pres	Unc	Weber & Miller 11359 (BLCA)	1962	
Portulacaceae	<i>Oreobroma pygmaea</i>	<i>Lewisia pygmaea</i>	alpine bitter-root	PerF	Wide	Pres	?	Weber, Rector, & Kennedy 16753 (BLCA)	1983	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Primulaceae	<i>Androsace occidentalis</i>		western rock-jasmine	AnnF	Wide	Pres	Unc	Lederer & Clark 03-28 (BLCA)	1983	
Primulaceae	<i>Androsace septentrionalis</i>	Includes ssp. <i>puberulenta</i> , <i>subumbellata</i> , & var. <i>sublifera</i>	pygmy-flower rock-jasmine	AnnF	Wide	Pres	Com	Hogan 3977 (BLCA)	1983	
Ranunculaceae	<i>Atragene columbiana</i>	<i>Clematis columbiana</i> var. <i>columbiana</i> , <i>C. pseudoalpina</i>	Columbian virgin's-bower	PerF	Wide	Rep	Rare	NCPN (in ed.)	2002	
Ranunculaceae	<i>Ceratocephala orthoceras</i>	<i>Ranunculus testiculatus</i> , <i>C. testiculata</i>	bur buttercup	AnnF	Intro	Pres	Unc	Hogan 3979 (BLCA)	1983	Native to Eurasia
Ranunculaceae	<i>Clematis ligusticifolia</i>		white virgin's-bower	PerF	Wide	Pres	Unc	Beck & Kennedy 17021 (BLCA)	1983	
Ranunculaceae	<i>Coriflora hirsutissima</i>	<i>Clematis hirsutissima</i>	sugar-bowls	PerF	Wide	Pres	Unc	Clark & Hogan 2016 (BLCA)	1961	
Ranunculaceae	<i>Halerpestes cymbalaria</i> ssp. <i>saximontana</i>	<i>Ranunculus cymbalaria</i> var. <i>cymbalaria</i> . Vars. not recognized in <i>Flora of North America</i> (1997)	marsh buttercup	PerF	Wide	Pres	Unc	Weber & Beck 16947 (BLCA)	1983	
Ranunculaceae	<i>Hecatonia scelerata</i>	<i>Ranunculus sceleratus</i> var. <i>multifidus</i>	blister buttercup	AnnF	Wide	Pres	Unc	Weber & Beck 16942 (BLCA)	1983	
Ranunculaceae	<i>Myosurus cupulatus</i>		horseshoe mousetail	AnnF	Periph	Pres	Unc	Hogan 3982 (BLCA)	2003	
Ranunculaceae	<i>Pulsatilla ludoviciana</i>	<i>Anemone nuttalliana</i> , <i>A. patens</i> var. <i>multifida</i> , <i>P. patens</i> ssp. <i>multifida</i>	pasqueflower	PerF	Wide	Pres	Unc	Weber & Miller 11390 (BLCA)	1962	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Ranunculaceae	<i>Ranunculus glaberrimus</i> var. <i>ellipticus</i>	Includes <i>R. oreogenes</i>	sagebrush buttercup	PerF	Wide	Pres	Com	Lederer & Clark 03-09 (BLCA)	1960	
Rhamnaceae	<i>Ceanothus fendleri</i>		Fendler's mountain-lilac	Shrub	Wide	Pres	Unc	Weber & Beck 16973 (BLCA)	1983	
Rhamnaceae	<i>Ceanothus velutinus</i>	<i>C. velutinus</i> var. <i>velutinus</i>	deer-brush	Shrub	Wide	Pres	Unc	Weber, Rector, & Kennedy 16854 (BLCA)	1962	
Rosaceae	<i>Amelanchier alnifolia</i>	<i>A. alnifolia</i> var. <i>alnifolia</i>	Saskatoon serviceberry	Shrub	Wide	Pres	Abun	Cottrell & Gregory 272 (BLCA)	1974	
Rosaceae	<i>Amelanchier utahensis</i>		Utah serviceberry	Shrub	Wide	Pres	Unc	Lederer & Clark 03-18 (BLCA)	1961	
Rosaceae	<i>Argentina anserina</i>	<i>Potentilla anserina</i>	silverweed	PerF	Wide	Pres	Unc	Cottrell & Gregory 257 (BLCA)	1974	
Rosaceae	<i>Cercocarpus montanus</i>		alder-leaf mountain mahogany	Shrub	Wide	Pres	Com	Miller & Miller s.n. (BLCA)	1961	
Rosaceae	<i>Drymocalis arguta</i>	<i>Potentilla arguta</i> var. <i>convallaria</i> , includes ssp. <i>arguta</i>	tall cinquefoil	PerF	Wide	Pres	Unc	Weber, Rector, & Kennedy 16793 (BLCA)	1983	
Rosaceae	<i>Erythrocoma triflora</i>	<i>Geum triflorum</i> var. <i>triflorum</i>	prairie-smoke	PerF	Wide	Pres	Unc	Lederer & Clark 03-22 (BLCA)	1983	
Rosaceae	<i>Fragaria vesca</i> ssp. <i>bracteata</i>	<i>F. vesca</i>	woodland strawberry	PerF	Wide	Pres	Unc	Beck & Kennedy 17044 (BLCA)	1983	
Rosaceae	<i>Fragaria virginiana</i> ssp. <i>glauca</i>	<i>F. virginiana</i>	Virginia strawberry	PerF	Wide	Pres	Unc	Cottrell & Gregory 274 (BLCA)	1974	
Rosaceae	<i>Holodiscus discolor</i>	<i>H. dumosus</i>	bush oceanspray	Shrub	Wide	Pres	Com	Weber 17011 (COLO)	1959	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Rosaceae	<i>Padus virginiana</i> ssp. <i>melanocarpa</i>	<i>Prunus virginiana</i> var. <i>melanocarpa</i>	western chokecherry	Shrub	Wide	Pres	Com	Weber, Rector, & Kennedy 16816 (BLCA)	1983	
Rosaceae	<i>Peraphyllum</i> <i>ramosissimum</i>		squaw-apple	Shrub	Wide	Pres	?	Miller & Miller s.n. (BLCA)	1959	
Rosaceae	<i>Petrophyton</i> <i>caespitosum</i>	<i>Spiraea caespitosa</i>	rock spiraea	PerF	Wide	Pres	Unc	Hogan & Tembrock 4266 (BLCA)	2004	
Rosaceae	<i>Potentilla norvegica</i>	<i>P. norvegica</i> ssp. <i>monspeliensis</i>	Norwegian cinquefoil	AnnF	Intro	Pres	Unc	Beck & Kennedy 17028 (BLCA)	1983	Native to Europe and possibly E North America
Rosaceae	<i>Potentilla</i> <i>pulcherrima</i>	<i>P. gracilis</i> var. <i>pulcherrima</i>	beautiful cinquefoil	PerF	Wide	Pres	Unc	Weber, Rector, & Kennedy 16762 (BLCA)	1983	hybrids with <i>P.</i> <i>hippiana</i> also occur in BLCA (Clark & Hogan 2012)
Rosaceae	<i>Purshia tridentata</i>		antelope bitterbrush	Shrub	Wide	Rep	Unc	NCPN (in ed.)	2002	
Rosaceae	<i>Rosa woodsii</i>	<i>R. woodsii</i> var. <i>ultramontana</i> ; some authors include <i>R. manca</i>	Woods' rose	Shrub	Wide	Pres	Unc	Weber, Rector, & Kennedy 16845 (BLCA)	1983	
Rosaceae	<i>Rubus armeniacus</i>	<i>Rubus discolor</i>	Himalayan blackberry	Shrub	Intro	Rep	Unc	Dewey & Andersen (2005)	2003	Native to Eurasia
Rosaceae	<i>Rubus idaeus</i> ssp. <i>melanolasius</i>	<i>R. idaeus</i> var. <i>strigosus</i> , <i>R. idaeus</i> var. <i>aculeatissimus</i>	common red raspberry	Shrub	Wide	Pres	Unc	Beck & Kennedy 17039 (BLCA)	1983	
Rubiaceae	<i>Galium bifolium</i>		twin-leaf bedstraw	AnnF	Wide	Pres	Unc	Weber, Rector, & Kennedy 16774 (BLCA)	1983	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Rubiaceae	<i>Galium coloradoense</i>	<i>G. multiflorum</i> var. <i>coloradoense</i>	Colorado bedstraw	PerF	RegEn	Pres	Com	Hogan & Clark 4053 (BLCA)	1962	Type locality is Mancos, Montezuma Co., CO (Eastwood s.n.)
Rubiaceae	<i>Galium septentrionale</i>	<i>G. boreale</i>	northern bedstraw	PerF	Wide	Pres	Com	Weber & Beck 16961 (BLCA)	1983	
Rubiaceae	<i>Galium spurium</i>	<i>G. aparine</i> var. <i>echinospermon</i>	cleavers	AnnF	Wide	Pres	Unc	Weber, Rector, & Kennedy 16807 (BLCA)	1962	
Salicaceae	<i>Populus angustifolia</i>		narrow-leaved cottonwood	Tree	Wide	Pres	Unc	Cottrell & Gregory 287 (BLCA)	1974	
Salicaceae	<i>Populus deltoides</i> ssp. <i>wisizenii</i>	<i>P. fremontii</i> var. <i>wisizenii</i>	Rio Grande cottonwood	Tree	Wide	Pres	Unc	Hogan & Tembrock 4375 (BLCA)	2004	
Salicaceae	<i>Populus tremuloides</i>		quaking aspen	Tree	Wide	Pres	Unc	Weber 11374 (COLO)	1962	
Salicaceae	<i>Salix exigua</i>	<i>S. exigua</i> var. <i>exigua</i> , <i>S. exigua</i> var. <i>stenophylla</i>	coyote willow	Shrub	Wide	Pres	Com	Hogan & Tembrock 4377 (BLCA)	1983	
Santalaceae	<i>Comandra umbellata</i>	<i>C. umbellata</i> var. <i>pallida</i>	bastard toadflax	PerF	Wide	Pres	Com	Hogan 4150 (BLCA)	1962	
Saxifragaceae	<i>Ciliaria austromontana</i>	<i>Saxifraga bronchialis</i> var. <i>austromontana</i>	spotted saxifrage	PerF	Wide	Pres	Unc	Hogan & Tembrock 4275 (BLCA)	1962	
Saxifragaceae	<i>Heuchera parvifolia</i>	Includes vars. <i>major</i> , <i>parvifolia</i> , & <i>utahensis</i>	littelleaf alumroot	PerF	Wide	Pres	Unc	Clark & Hogan 2022 (BLCA)	1959	BLCA material is var. <i>parvifolia</i> .
Saxifragaceae	<i>Lithophragma glabrum</i>	<i>L. bulbifera</i> , <i>L. glabra</i> , <i>L. glabrum</i> var. <i>ramulosum</i>	fringecup woodlandstar	PerF	Wide	Pres	Unc	Lederer & Clark 03-25b (BLCA)	2003	
Saxifragaceae	<i>Lithophragma tenellum</i>	<i>L. tenella</i>	slender woodlandstar	PerF	Wide	Pres	Unc	Cottrell & Gregory 265 (BLCA)	1960	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Saxifragaceae	<i>Sullivantia hapemanii</i> var. <i>purpusii</i>	<i>S. hapemanii</i>	Purpus' sullivantia	PerF	RegEn	Pres	Unc	Hogan & Tembrock 4334 (BLCA)	1892	Type locality is Black Canyon, Montrose Co., CO (Purpus 512 UC)
Scrophulariaceae	<i>Castilleja chromosa</i>	<i>C. angustifolia</i> var. <i>dubia</i> , <i>C.</i> <i>aplegatei</i> ssp. <i>martinii</i>	desert paintbrush	PerF	Wide	Pres	Com	Cottrell & Gregory 263 (BLCA)	1961	
Scrophulariaceae	<i>Castilleja linariifolia</i>		Wyoming paintbrush	PerF	Wide	Pres	Unc	Lederer & Clark 04-35 (BLCA)	1959	
Scrophulariaceae	<i>Castilleja miniata</i>	Includes <i>C.</i> <i>gracillima</i>	scarlet paintbrush	PerF	Wide	Rep	Unc	NCPN (in ed.)	2002	
Scrophulariaceae	<i>Collinsia parviflora</i>		blue-eyed Mary	AnnF	Wide	Pres	Com	Lederer & Clark 03-02 (BLCA)	1961	
Scrophulariaceae	<i>Limosella aquatica</i>		mudwort	PerF	Wide	Pres	?	Weber & Beck 16900 (BLCA)	1983	
Scrophulariaceae	<i>Linaria vulgaris</i>		butter-and-eggs	PerF	Intro	Rep	Unc	Dewey & Andersen (2005)	2003	CO state noxious weed (List B). Native to Eurasia.
Scrophulariaceae	<i>Mimulus floribundus</i>		seep monkeyflower	AnnF	Wide	Pres	Unc	Kennedy s.n. (BLCA)	1983	
Scrophulariaceae	<i>Mimulus rubellus</i>		reddish monkeyflower	AnnF	Wide	Pres	Unc	Hogan 3981 (BLCA)	2003	
Scrophulariaceae	<i>Orthocarpus luteus</i>		yellow owl-clover	AnnF	Wide	Pres	Com	Weber & Beck 16897 (BLCA)	1983	
Scrophulariaceae	<i>Pedicularis centranthera</i>		dwarf lousewort	PerF	Wide	Pres	Unc	Hogan & Clark 4068 (BLCA)	2003	
Scrophulariaceae	<i>Pedicularis procera</i>		Gray's lousewort	PerF	Wide	Rep	Rare	NCPN (in ed.)	2002	
Scrophulariaceae	<i>Penstemon barbatus</i> var. <i>torreyi</i>	<i>P. barbatus</i> var. <i>barbatus</i>	beardlip penstemon	PerF	Wide	Pres	Unc	Lederer & Clark 04-30 (BLCA)	1983	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Scrophulariaceae	<i>Penstemon caespitosus</i>	<i>P. caespitosus</i> var. <i>caespitosus</i> ; includes <i>P.</i> <i>teucroides</i>	mat penstemon	PerF	RegEn	Pres	Com	Beidleman s.n. (BLCA)	1961	
Scrophulariaceae	<i>Penstemon retrorsus</i>	Included in <i>P.</i> <i>caespitosus</i> by some authors	Adobe Hills beardtongue	PerF	LocEn	Pres	Unc	Hogan 4219 (BLCA)	2004	Type locality is near Montrose, Montrose Co., CO (Payson 673 US)
Scrophulariaceae	<i>Penstemon strictus</i>		Rocky Mountain penstemon	PerF	Wide	Pres	Com	Hogan & Clark 4090 (BLCA)	1959	
Scrophulariaceae	<i>Penstemon watsonii</i>		Watson's penstemon	PerF	Wide	Pres	Unc	Weber, Rector, & Kennedy 16778 (BLCA)	1983	
Scrophulariaceae	<i>Pocilla biloba</i>	<i>Veronica biloba</i>	two-lobe speedwell	AnnF	Intro	Pres	Unc	Clark & Hogan 2026 (BLCA)	2003	Native to Asia
Scrophulariaceae	<i>Scrophularia lanceolata</i>		lance-leaf figwort	PerF	Wide	Pres	Unc	Hogan & Tembrock 4270 (BLCA)	1983	
Scrophulariaceae	<i>Verbascum thapsus</i>		woolly mullein	PerF	Intro	Pres	Unc	Weber & Beck 16956 (BLCA)	1983	CO state noxious weed (List C). Native to Eurasia.
Scrophulariaceae	<i>Veronica americana</i>		American brooklime	PerF	Wide	Pres	Unc	Weber & Beck 16941 (BLCA)	1983	
Scrophulariaceae	<i>Veronica catenata</i>	Included in <i>V.</i> <i>anagallis-aquatica</i> by some authors	chain speedwell	PerF	Wide	Pres	Unc	Hogan 4111 (BLCA)	2003	
Scrophulariaceae	<i>Veronica peregrina</i> var. <i>xalapensis</i>		purslane speedwell	AnnF	Wide	Pres	Unc	Weber, Rector, & Kennedy 16797 (BLCA)	1983	
Selaginellaceae	<i>Selaginella densa</i>	Includes vars. <i>standleyi</i> , <i>densa</i> , & <i>scopulorum</i>	dense spike-moss	fern	Wide	Pres	Unc	Weber & Miller 11348 (BLCA)	1962	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Selaginellaceae	<i>Selaginella mutica</i>	<i>S. mutica</i> var. <i>mutica</i>	blunt-leaf spike-moss	fern	Wide	Pres	Unc	Hogan & Tembrock 4268 (BLCA)	1962	
Simaroubaceae	<i>Ailanthus altissima</i>		tree-of-heaven	Tree	Intro	Rep	Rare	Dewey & Andersen (2005)	2003	Native to China
Sinopteridaceae (Polypodiaceae, Adiantaceae)	<i>Argyrochosma fendleri</i>	<i>Notholaena fendleri</i>	Fendler's cloak-fern	fern	Sparse	Pres	Unc	Hogan & Tembrock 4269 (BLCA)	2004	
Sinopteridaceae (Polypodiaceae, Adiantaceae)	<i>Cheilanthes feei</i>		slender lip-fern	fern	Wide	Pres	Unc	Lederer & Clark 04-33 (BLCA)	2004	
Solanaceae	<i>Lycium barbarum</i>	<i>L. halmifolium</i>	matrimony-vine	Shrub	Intro	Pres	Rare	Douglas 54-300 (COLO)	1954	Native to Eurasia
Tamaricaceae	<i>Tamarix ramosissima</i>	<i>T. pentandra</i> , <i>T. chinensis</i>	five-stamen tamarisk	Shrub	Intro	Pres	Unc	Hogan & Tembrock 4376 (BLCA)	2003	CO state noxious weed (List B). Native to Eurasia.
Thalictraceae (Ranunculaceae)	<i>Thalictrum fendleri</i>		Fendler's meadow-rue	PerF	Wide	Pres	Unc	Hogan & Tembrock 4353 (BLCA)	2004	
Typhaceae	<i>Typha latifolia</i>		broad-leaved cattail	PerG	Wide	Pres	Unc	Weber & Beck 16949 (BLCA)	1983	
Ulmaceae (Celtidaceae)	<i>Celtis reticulata</i>	<i>C. laevigata</i> var. <i>reticulata</i>	netleaf hackberry	Tree	Wide	Pres	Unc	Hogan 4109 (BLCA)	2003	
Ulmaceae	<i>Ulmus pumila</i>		Siberian elm	Tree	Intro	Pres	Rare	Weber, Rector, & Kennedy 16787 (BLCA)	1983	Native to Asia
Urticaceae	<i>Parietaria pennsylvanica</i>		Pennsylvania pellitory	AnnF	Wide	Pres	Unc	Hogan & Tembrock 4335 (BLCA)	2004	
Urticaceae	<i>Urtica gracilis</i> ssp. <i>gracilis</i>	<i>U. dioica</i> var. <i>procera</i>	stinging nettle	PerF	Wide	Pres	Unc	Weber, Rector, & Kennedy 16836 (BLCA)	1983	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Black Canyon of the Gunnison National Park, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Pop. size	Source	Year doc.	Comments
Uvulariaceae (Liliaceae, Calochortaceae)	<i>Prosartes trachycarpa</i>	<i>Disporum trachycarpum</i>	rough-fruited fairy-bells	PerF	Wide	Pres	Unc	Hogan 3990 (BLCA)	1974	
Valerianaceae	<i>Valeriana capitata</i> var. <i>acutiloba</i>	<i>V. acutiloba</i> var. <i>acutiloba</i> ; includes var. <i>pubicarpa</i>	mountain valerian	PerF	Wide	Pres	Unc	Weber & Beck 16818 (BLCA)	1983	Type locality of <i>V. acutiloba</i> is Sangre de Cristo Range, CO (Rydberg & Vreeland 5576 NY).
Verbenaceae	<i>Verbena bracteata</i>		prostrate vervain	PerF	Wide	Pres	Unc	Weber & Beck 17000 (BLCA)	1983	
Violaceae	<i>Viola adunca</i>		hook-spur violet	PerF	Wide	Pres	Unc	Hogan 3983 (BLCA)	1983	
Violaceae	<i>Viola biternata</i>	<i>V. sheltonii</i>	Shelton's violet	PerF	Disj	Pres	?	Weber & Miller 11389 (BLCA)	1962	
Violaceae	<i>Viola scopulorum</i>	<i>V. canadensis</i> var. <i>scopulorum</i> ; included in <i>V. canadensis</i> by some authors	Canada violet	PerF	Wide	Pres	Unc	Weber 11364 (COLO)	1962	
Violaceae	<i>Viola vallicola</i>	<i>V. nuttallii</i> var. <i>vallicola</i> , <i>V. vallicola</i> var. <i>vallicola</i>	valley violet	PerF	Wide	Pres	Unc	Clark & Lederer 2175 (BLCA)	2004	
Viscaceae	<i>Phoradendron juniperinum</i>		juniper mistletoe	PerF	Wide	Pres	Unc	Hogan & Tembrock 4344 (BLCA)	2004	Typically parasitic on <i>Juniperus</i> <i>osteosperma</i>
Woodsiaceae (Polypodiaceae, Aspleniaceae)	<i>Woodsia oregana</i> ssp. <i>cathartiana</i>		Oregon woodsia	fern	Wide	Pres	Unc	Hogan 4174 (BLCA)	1983	
Zannichelliaceae	<i>Zannichellia palustris</i>		horned pondweed	PerF	Wide	Pres	Unc	Clark & Hogan 2015 (BLCA)	2003	

Appendix B. Potential (unconfirmed) vascular plant taxa of Black Canyon of the Gunnison National Park.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life form	Range	Comments
Alliaceae (Liliaceae)	<i>Allium cernuum</i>	Includes vars. <i>cernuum</i> & <i>obtusum</i> .	nodding onion	PerF	Wide	Known from CURE
Alliaceae (Liliaceae, Themidaceae)	<i>Androstegium breviflorum</i>		pink funnel-lily	PerF	Wide	
Alsinaceae (Caryophyllaceae)	<i>Alsine media</i>	<i>Stellaria media</i>	common chickweed	AnnF	Intro	Native to Eurasia
Alsinaceae (Caryophyllaceae)	<i>Paronychia sessiliflora</i>		creeping nailwort	PerF	Wide	Known from CURE
Alsinaceae (Caryophyllaceae)	<i>Stellaria longifolia</i>		long-leaved starwort	PerF	Wide	Known from CURE
Amaranthaceae	<i>Amaranthus blitoides</i>	<i>A. graecizans</i>	prostrate pigweed	AnnF	Wide	Present in CURE
Amaranthaceae	<i>Amaranthus retroflexus</i>		redroot pigweed	AnnF	Intro	Native to Central America
Apiaceae (Umbelliferae)	<i>Angelica ampla</i>		giant angelica	PerF	RegEn	Known from CURE
Apiaceae (Umbelliferae)	<i>Carum carvi</i>		caraway	PerF	Intro	CO state noxious weed (List B). Native to Eurasia. Known from CURE.
Apiaceae (Umbelliferae)	<i>Cicuta douglasii</i>	<i>C. occidentalis</i> , <i>C. maculata</i> var. <i>angustifolia</i>	water-hemlock	PerF	Wide	Known from CURE
Apiaceae (Umbelliferae)	<i>Conioselinum scopulorum</i>		rock lovage	PerF	Wide	Known from CURE
Apiaceae (Umbelliferae)	<i>Cymopterus constancei</i>		Constance's spring-parsley	PerF	Wide	Known from CURE
Apiaceae (Umbelliferae)	<i>Heracleum sphondylium</i> ssp. <i>montanum</i>	<i>H. sphondylium</i> var. <i>lanatum</i> , <i>H. maximum</i> , <i>H. lanatum</i>	cow parsnip	PerF	Wide	Known from CURE
Apiaceae (Umbelliferae)	<i>Oxypolis fendleri</i>		Fendler's cowbane	PerF	Wide	Known from CURE
Apiaceae (Umbelliferae)	<i>Sium suave</i>		water parsnip	PerF	Wide	Known from CURE
Apocynaceae	<i>Apocynum androsaemifolium</i>	<i>A. androsaemifolium</i> var. <i>androsaemifolium</i>	spreading dogbane	PerF	Wide	Known from CURE
Apocynaceae	<i>Apocynum sibiricum</i>	<i>A. cannabinum</i> var. <i>hypericifolium</i>	clasping leaved dogbane	PerF	Sparse	
Asclepiadaceae	<i>Asclepias hallii</i>		Hall's milkweed	PerF	Sparse	Known from CURE

Appendix B. Potential (unconfirmed) taxa of Black Canyon of the Gunnison National Park, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life form	Range	Comments
Asteraceae (Compositae)	<i>Acosta diffusa</i>	<i>Centaurea diffusa</i>	diffuse knapweed	PerF	Intro	CO state noxious weed (List B). Native to Mediterranean. Known from CURE.
Asteraceae (Compositae)	<i>Ambrosia tomentosa</i>	<i>Franseria tomentosa</i>	skeleton-leaf bursage	PerF	Wide	Known from CURE
Asteraceae (Compositae)	<i>Anaphalis margaritacea</i>		pearly-everlasting	PerF	Wide	
Asteraceae (Compositae)	<i>Antennaria microphylla</i>	Some authors include <i>A. rosea</i>	small-leaf pussyoes	PerF	Wide	
Asteraceae (Compositae)	<i>Arnica chamissonis</i> sp. <i>foliosa</i>	<i>A. chamissonis</i> var. <i>andina</i>	Chamisso's arnica	PerF	Wide	Known from CURE
Asteraceae (Compositae)	<i>Arnica mollis</i>	Includes <i>A. ovata</i>	hairy arnica	PerF	Wide	Known from CURE
Asteraceae (Compositae)	<i>Artemisia biennis</i>	<i>A. biennis</i> var. <i>biennis</i>	biennial wormwood	PerF	Intro	Known from CURE
Asteraceae (Compositae)	<i>Aster lanceolatus</i> sp. <i>hesperius</i>	<i>A. hesperius</i> , <i>Symphotrichum lanceolatum</i> var. <i>hesperium</i>	Siskiyou aster	PerF	Wide	Known from CURE
Asteraceae (Compositae)	<i>Aster spathulatus</i>	<i>A. occidentalis</i> , <i>Symphotrichum spathulatum</i>	western aster	PerF	Wide	Known from CURE
Asteraceae (Compositae)	<i>Bahia dissecta</i>	<i>Amauriopsis dissecta</i>	cutleaf	PerF	Wide	Known from CURE
Asteraceae (Compositae)	<i>Bidens cernua</i>		nodding bur-marigold	PerF	Wide	Known from CURE
Asteraceae (Compositae)	<i>Chaenactis stevioides</i>		stevia dusty-maiden	AnnF	Wide	
Asteraceae (Compositae)	<i>Cichorium intybus</i>		chicory	PerF	Intro	Native to Eurasia
Asteraceae (Compositae)	<i>Cirsium calcareum</i>	<i>C. calcareum</i> var. <i>calcareum</i> ; included in <i>C. arizonicum</i> var. <i>bipinnatum</i> (Flora of North America 2006)	Caineville thistle	PerF	RegEn	
Asteraceae (Compositae)	<i>Cirsium parryi</i>		Parry's thistle	PerF	Wide	Known from CURE

Appendix B. Potential (unconfirmed) taxa of Black Canyon of the Gunnison National Park, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life form	Range	Comments
Asteraceae (Compositae)	<i>Cirsium scariosum</i>	<i>C. scariosum</i> var. <i>scariosum</i>	elk thistle	PerF	Wide	
Asteraceae (Compositae)	<i>Dugaldia hoopesii</i>	<i>Helenium hoopesii</i> , <i>Hymenoxys hoopesii</i>	orange sneezeweed	PerF	Wide	Known from CURE
Asteraceae (Compositae)	<i>Dyssodia papposa</i>		pappose glandweed	annual Forb	Wide	Native to C North America
Asteraceae (Compositae)	<i>Erigeron canus</i>		hoary daisy	PerF	Wide	
Asteraceae (Compositae)	<i>Erigeron glabellus</i>	<i>E. glabellus</i> var. <i>glabellus</i>	smooth daisy	PerF	Wide	Known from CURE
Asteraceae (Compositae)	<i>Erigeron leiomerus</i>		smooth daisy	PerF	Wide	Known from CURE
Asteraceae (Compositae)	<i>Eucephalus glaucus</i>	<i>Aster glaucodes</i> , <i>Eurybia glauca</i> , <i>Herrickia glauca</i> var. <i>glauca</i>	blueleaf aster	PerF	Wide	Known from CURE
Asteraceae (Compositae)	<i>Gaillardia x grandiflora</i>	Hybrid of <i>G. aristata</i> x <i>G. pulchella</i>	large-flowered blanketflower	PerF	Intro	Known from CURE
Asteraceae (Compositae)	<i>Helianthus nuttallii</i>	<i>H. nuttallii</i> ssp. <i>nuttallii</i>	Nuttall's sunflower	PerF	Wide	Known from CURE
Asteraceae (Compositae)	<i>Helianthus petiolaris</i>	<i>H. petiolaris</i> ssp. <i>fallax</i>	prairie sunflower	AnnF	Wide	Known from CURE
Asteraceae (Compositae)	<i>Hymenopappus filifolius</i> var. <i>parvulus</i>		fineleaf woollywhite	PerF	RegEn	Known from CURE
Asteraceae (Compositae)	<i>Iva axillaris</i>	<i>Iva axillaris</i> var. <i>axillaris</i> ; vars. not recognized in <i>Flora of North America</i> (2006).	poverty-weed	PerF	Wide	Weber & Beck # 17063 (CURE) collected just outside the park
Asteraceae (Compositae)	<i>Lactuca tatarica</i> var. <i>pulchella</i>	<i>L. pulchella</i> , <i>L.</i> <i>oblongifolia</i> , <i>Mulgedium pulchellum</i>	blue lettuce	PerF	Wide	Known from CURE
Asteraceae (Compositae)	<i>Lepidotheca suaveolens</i>	<i>Matricaria</i> <i>matricarioides</i> , <i>M.</i> <i>discoidea</i>	pineapple-weed	AnnF	Wide	
Asteraceae (Compositae)	<i>Leucanthemum vulgare</i>	<i>Chrysanthemum</i> <i>leucanthemum</i>	ox-eye daisy	PerF	Intro	CO state noxious weed (List B). Native to Eurasia. Known from CURE.

Appendix B. Potential (unconfirmed) taxa of Black Canyon of the Gunnison National Park, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life form	Range	Comments
Asteraceae (Compositae)	<i>Ligularia bigelovii</i> var. <i>hallii</i>	<i>Senecio bigelovii</i> var. <i>hallii</i>	Bigelow's groundsel	PerF	RegEn	Known from CURE
Asteraceae (Compositae)	<i>Malacothrix torreyi</i>		Torrey's desert-dandelion	AnnF	Wide	
Asteraceae (Compositae)	<i>Matricaria perforata</i>	<i>M. maritima</i> , <i>Tripleurospermum perforata</i> , <i>T. inodorum</i> , <i>T. maritima</i> ssp. <i>maritima</i>	scentless chamomile	PerF	Intro	CO state noxious weed (List B). Native to Europe. Known from CURE.
Asteraceae (Compositae)	<i>Packera pseudoaurea</i>	<i>P. pseudoaurea</i> var. <i>pseudoaurea</i> , <i>Senecio pseudoaureus</i> var. <i>pseudoaureus</i>	streambank groundsel	PerF	Wide	Known from CURE
Asteraceae (Compositae)	<i>Pseudognaphalium viscosum</i>	<i>Gnaphalium viscosum</i> , <i>G. macounii</i> , <i>P. macounii</i>	sticky cudweed	AnnF	Wide	
Asteraceae (Compositae)	<i>Ratibida columnifera</i>		prairie coneflower	PerF	Wide	Known from CURE
Asteraceae (Compositae)	<i>Rudbeckia hirta</i>	<i>R. hirta</i> var. <i>pulcherrima</i>	black-eyed Susan	PerF	Wide	Native to E North America. Known from CURE.
Asteraceae (Compositae)	<i>Rudbeckia occidentalis</i> var. <i>montana</i>	<i>R. montana</i>	montane coneflower	PerF	RegEn	Known from CURE
Asteraceae (Compositae)	<i>Senecio eremophilus</i> var. <i>kingii</i>		cut-leaved groundsel	PerF	Wide	Known from CURE
Asteraceae (Compositae)	<i>Senecio serra</i> var. <i>admirabilis</i>		saw-toothed groundsel	PerF	RegEn	Known from CURE
Asteraceae (Compositae)	<i>Senecio spartioides</i>	<i>S. spartioides</i> var. <i>spartioides</i> ; vars. not recognized in <i>Flora of North America</i> (2006).	broom groundsel	PerF	Wide	Known from CURE
Asteraceae (Compositae)	<i>Senecio triangularis</i>		arrowleaf groundsel	PerF	Wide	Known from CURE
Asteraceae (Compositae)	<i>Seriphidium tridentatum</i>	<i>Artemisia tridentata</i> var. <i>tridentata</i>	basin big sagebrush	Shrub	Wide	
Asteraceae (Compositae)	<i>Solidago canadensis</i>	<i>S. canadensis</i> var. <i>salebrosa</i> , <i>S. lepida</i> var. <i>salebrosa</i>	Canadian goldenrod	PerF	Wide	Known from CURE

Appendix B. Potential (unconfirmed) taxa of Black Canyon of the Gunnison National Park, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life form	Range	Comments
Asteraceae (Compositae)	<i>Solidago gigantea</i>		late goldenrod	PerF	Wide	
Asteraceae (Compositae)	<i>Stephanomeria tenuifolia</i>	<i>S. minor</i> var. <i>minor</i> , <i>S. tenuifolia</i> var. <i>tenuifolia</i> , vars. not recognized in <i>Flora of</i> <i>North America</i> (2003)	slender wirelettuce	PerF	Wide	Known from CURE
Asteraceae (Compositae)	<i>Townsendia exscapa</i>		stemless townsendia	PerF	Wide	Known from CURE
Asteraceae (Compositae)	<i>Virgulus falcatus</i>	<i>Aster falcatus</i> var. <i>falcatus</i> , <i>Symphotrichum</i> <i>falcatum</i> var. <i>falcatum</i>	falcate aster	PerF	Wide	
Asteraceae (Compositae)	<i>Xanthium strumarium</i>	<i>X. pensylvanicum</i> , <i>X. saccharatum</i> , <i>X. strumarium</i> var. <i>canadense</i> , vars. not recognized in <i>Flora of</i> <i>North America</i> (2006).	rough cocklebur	AnnF	Wide	
Asteraceae (Compositae)	<i>Ximenesia encelioides</i>	<i>Verbesina encelioides</i> var. <i>exauriculata</i>	golden crownbeard	AnnF	Wide	Known from CURE
Betulaceae	<i>Betula fontinalis</i>	<i>B. occidentalis</i>	water birch	Tree	Wide	Known from CURE
Boraginaceae	<i>Cryptantha crassisejala</i> var. <i>elachantha</i>		thick-sepal cryptanth	AnnF	Wide	Known from CURE
Boraginaceae	<i>Cryptantha recurvata</i>		recurved cryptanth	AnnF	Periph	
Boraginaceae	<i>Lithospermum incisum</i>		showy stoneseed	PerF	Wide	Known from CURE
Boraginaceae	<i>Oreocarya bakeri</i>	<i>Cryptantha bakeri</i>	Baker's cryptanth	PerF	RegEn	Type locality is Mancos River, Montezuma Co., CO (Baker et al. 827)
Boraginaceae	<i>Oreocarya suffruticosa</i>	<i>Cryptantha jamesii</i> , <i>C.</i> <i>cinerea</i> var. <i>jamesii</i>	James' cryptanth	PerF	Wide	
Brassicaceae (Cruciferae)	<i>Barbarea orthoceras</i>		northern wintercress	PerF	Wide	Known from CURE
Brassicaceae (Cruciferae)	<i>Berteroa incana</i>		hoary alyssum	AnnF	Intro	Native to Europe
Brassicaceae (Cruciferae)	<i>Boechera demissa</i> var. <i>demissa</i>	<i>Arabis demissa</i>	nodding rock cress	PerF	LocEn	Known from CURE

Appendix B. Potential (unconfirmed) taxa of Black Canyon of the Gunnison National Park, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life form	Range	Comments
Brassicaceae (Cruciferae)	<i>Camelina rumelica</i>		graceful false flax	AnnF	Intro	Weber & Rector 17308 (COLO) is from just outside the park.
Brassicaceae (Cruciferae)	<i>Cardamine cordifolia</i>	<i>C. cordifolia</i> var. <i>cordifolia</i>	heartleaf bittercress	PerF	Wide	Known from CURE
Brassicaceae (Cruciferae)	<i>Cardaria draba</i>	<i>Lepidium draba</i> , <i>C. draba</i> var. <i>draba</i>	whitotop	PerF	Intro	CO state noxious weed (List B). Native to Europe. Known from CURE.
Brassicaceae (Cruciferae)	<i>Cardaria pubescens</i>		hairy whitetop	PerF	Intro	Native to Asia. Known from CURE.
Brassicaceae (Cruciferae)	<i>Conringia orientalis</i>		hare's-ear mustard	AnnF	Intro	Native to Europe
Brassicaceae (Cruciferae)	<i>Descurainia incisa</i> ssp. <i>viscosa</i>	<i>D. incana</i> var. <i>viscosa</i> , <i>D. richardsonii</i> var. <i>viscosa</i> , <i>D. incisa</i> var. <i>leptophylla</i>	slender-leaved tansy-mustard	AnnF	Wide	Known from CURE
Brassicaceae (Cruciferae)	<i>Descurainia pinnata</i> ssp. <i>halictorum</i>	<i>D. pinnata</i> var. <i>osmiarum</i>	western tansy-mustard	AnnF	Sparse	
Brassicaceae (Cruciferae)	<i>Draba rectifracta</i>		mountain draba	AnnF	RegEn	Known from CURE
Brassicaceae (Cruciferae)	<i>Draba spectabilis</i>	Includes vars. <i>oxyloba</i> & <i>spectabilis</i>	splendid draba	PerF	RegEn	Known from CURE
Brassicaceae (Cruciferae)	<i>Euclidium syriacum</i>		Syrian mustard	AnnF	Intro	Native to Europe
Brassicaceae (Cruciferae)	<i>Hymenolobus procumbens</i>	<i>Hornungia procumbens</i> , <i>Hutchinsia procumbens</i>	ovalpurse	AnnF	Sparse	
Brassicaceae (Cruciferae)	<i>Lepidium alyssoides</i> var. <i>eastwoodiae</i>	<i>L. montanum</i> var. <i>spathulatum</i> , <i>L. eastwoodiae</i>	Eastwood's tall pepperwort	PerF	RegEn	Known from CURE
Brassicaceae (Cruciferae)	<i>Lesquerella ludoviciana</i>	<i>Physaria ludoviciana</i>	silver bladderpod	PerF	Wide	
Brassicaceae (Cruciferae)	<i>Malcolmia africana</i>		African mustard	AnnF	Intro	Native to Africa
Brassicaceae (Cruciferae)	<i>Nasturtium officinale</i>	<i>Rorippa nasturtium-aquaticum</i>	watercress	PerF	Intro	Native to Europe. Known from CURE.
Brassicaceae (Cruciferae)	<i>Neolepia campestre</i>	<i>Lepidium campestre</i>	field pepperwort	AnnF	Intro	Native to Asia. Known from CURE.
Brassicaceae (Cruciferae)	<i>Rorippa palustris</i> var. <i>hispidia</i>	<i>R. islandica</i> var. <i>hispidia</i>	hairy yellowcress	PerF	Wide	Known from CURE

Appendix B. Potential (unconfirmed) taxa of Black Canyon of the Gunnison National Park, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life form	Range	Comments
Brassicaceae (Cruciferae)	<i>Rorippa sinuata</i>		spreading yellowcress	PerF	Wide	Known from CURE
Brassicaceae (Cruciferae)	<i>Rorippa teres</i>		southern marsh yellowcress	PerF	Sparse	Not included for CO by many authors. Known from CURE
Brassicaceae (Cruciferae)	<i>Thelypodium integrifolium</i>	<i>T. integrifolium</i> var. <i>integrifolium</i>	entire-leaf thelypody	PerF	Wide	
Brassicaceae (Cruciferae)	<i>Thelypodium laxiflorum</i>		slate thelypody	PerF	Wide	
Brassicaceae (Cruciferae)	<i>Thlaspi arvense</i>		field pennycress	AnnF	Intro	Native to Europe. Known from CURE.
Cactaceae	<i>Coryphantha vivipara</i>	<i>Escobaria vivipara</i> var. <i>vivipara</i> ; varieties not recognized in <i>Flora of</i> <i>North America</i> (2003)	pincushion cactus	PerF	Wide	
Campanulaceae	<i>Campanula parryi</i>	<i>C. parryi</i> var. <i>parryi</i>	Parry's harebell	PerF	Wide	Known from CURE
Cannabaceae	<i>Humulus lupulus</i> ssp. <i>americanus</i>	<i>H. lupulus</i> var. <i>neomexicanus</i>	common hops	PerF	Wide	Known from CURE
Capparaceae (Cleomaceae)	<i>Cleome lutea</i>		yellow beeplant	AnnF	Wide	
Capparaceae (Cleomaceae)	<i>Cleome serrulata</i>		Rocky Mountain beeplant	AnnF	Wide	Known from CURE
Caprifoliaceae	<i>Distegia involuocrata</i>	<i>Lonicera involuocrata</i>	black twinberry	Shrub	Wide	Known from CURE
Caryophyllaceae	<i>Anotites menziesii</i>	<i>A. menziesii</i> var. <i>menziesii</i> , <i>Silene</i> <i>menziesii</i> var. <i>menziesii</i>	Menzies' campion	PerF	Wide	Known from CURE
Caryophyllaceae	<i>Silene antirrhina</i>		sleepy catchfly	AnnF	Wide	
Ceratophyllaceae	<i>Ceratophyllum demersum</i>		common hornwort	PerF	Wide	
Chenopodiaceae	<i>Atriplex rosea</i>		tumbling orach	AnnF	Intro	Native to Eurasia. Known from CURE.
Chenopodiaceae	<i>Axyris amaranthoides</i>		Russian pigweed	annual Forb	Intro	
Chenopodiaceae	<i>Bassia sieversiana</i>	<i>Kochia scoparia</i> , <i>B.</i> <i>scoparia</i>	summer-cypress	AnnF	Intro	Native to Eurasia. Known from CURE.
Chenopodiaceae	<i>Chenopodium berlandieri</i>	<i>C. berlandieri</i> var. <i>zschackei</i> , <i>C. album</i> var. <i>berlandieri</i>	pitseed goosefoot	AnnF	Wide	Known from CURE

Appendix B. Potential (unconfirmed) taxa of Black Canyon of the Gunnison National Park, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life form	Range	Comments
Chenopodiaceae	<i>Chenopodium capitatum</i>	<i>C. capitatum</i> var. <i>capitatum</i>	strawberry-blite	annual Forb	Wide	
Chenopodiaceae	<i>Chenopodium glaucum</i>	<i>C. glaucum</i> var. <i>salinum</i> , <i>C. salinum</i>	oakleaf goosefoot	AnnF	Wide	Known from CURE
Chenopodiaceae	<i>Chenopodium leptophyllum</i>		narrow-leaf goosefoot	AnnF	Wide	Known from CURE
Chenopodiaceae	<i>Salsola collina</i>		slender Russian thistle	AnnF	Intro	Native to Russia
Cyptogrammaeae (Polypodiaceae, Adiantaceae)	<i>Cryptogramma acrostichoideae</i>	<i>C. crispa</i> var. <i>acrostichoideae</i>	parsley-fern	fern	Wide	Known from CURE
Cupressaceae	<i>Juniperus communis</i> ssp. <i>alpina</i>	<i>J. communis</i> var. <i>depressa</i>	common juniper	Shrub	Wide	Known from CURE
Cyperaceae	<i>Carex aquatilis</i>	<i>C. aquatilis</i> var. <i>aquatilis</i>	water sedge	PerG	Wide	Known from CURE
Cyperaceae	<i>Carex aurea</i>	<i>C. garberi</i>	golden sedge	PerG	Wide	Known from CURE
Cyperaceae	<i>Carex deweyana</i>	<i>C. deweyana</i> var. <i>deweyana</i> ; included in <i>C. bolanderi</i> by some authors	Dewey's sedge	PerG	Wide	Known from CURE
Cyperaceae	<i>Carex douglasii</i>		Douglas' sedge	PerG	Wide	Known from CURE
Cyperaceae	<i>Carex emoryi</i>		Emory's sedge	PerG	Wide	
Cyperaceae	<i>Carex hassei</i>		Hasse's sedge	PerG	Disj	CO material may belong in <i>C. aurea</i> .
Cyperaceae	<i>Carex nebrascensis</i>		Nebraska sedge	PerG	Wide	Known from CURE
Cyperaceae	<i>Carex pennsylvanica</i> ssp. <i>heliophila</i>	<i>C. pennsylvanica</i> var. <i>digyna</i> , <i>C. heliophila</i> , <i>C. inops</i> ssp. <i>heliophila</i>	Pennsylvania sedge	PerG	Wide	Known from CURE
Cyperaceae	<i>Carex praticola</i>		meadow sedge	PerG	Wide	Known from CURE
Cyperaceae	<i>Carex stenophylla</i> ssp. <i>eleocharis</i>	<i>C. eleocharis</i> , <i>C. stenophylla</i> , <i>C. duriuscula</i>	narrowleaf sedge	PerG	Wide	Known from CURE
Cyperaceae	<i>Carex utriculata</i>	<i>C. rostrata</i> (sensu lato)	beaked sedge	PerG	Wide	Known from CURE

Appendix B. Potential (unconfirmed) taxa of Black Canyon of the Gunnison National Park, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life form	Range	Comments
Cyperaceae	<i>Schoenoplectus pungens</i>	<i>Scirpus pungens</i> var. <i>polyphyllus</i> , <i>Schoenoplectus</i> <i>pungens</i> var. <i>longispicatus</i> , <i>Schoenoplectus</i> <i>pungens</i> var. <i>polyphyllus</i>	three-square bulrush	PerG	Wide	
Cyperaceae	<i>Scirpus microcarpus</i>		panicked bulrush	PerG	Wide	Known from CURE
Elaeagnaceae	<i>Elaeagnus angustifolia</i>		Russian-olive	Tree	Intro	CO state noxious weed (List B). Native to Europe.
Elaeagnaceae	<i>Shepherdia argentea</i>		silver buffaloberry	Shrub	Wide	
Euphorbiaceae	<i>Tithymalus uralensis</i>	<i>Euphorbia esula</i> var. <i>uralensis</i>	leafy spurge	PerF	Wide	
Fabaceae (Leguminosae)	<i>Astragalus agrestis</i>	<i>A. dasyglottis</i>	field milkvetch	PerF	Wide	Known from CURE
Fabaceae (Leguminosae)	<i>Astragalus amphioxys</i> var. <i>vespertinus</i>		Sheldon's milkvetch	PerF	RegEn	
Fabaceae (Leguminosae)	<i>Astragalus anisus</i>		Gunnison milkvetch	PerF	LocEn	CO BLM Sensitive. Known from CURE.
Fabaceae (Leguminosae)	<i>Astragalus bisulcatus</i>	<i>A. bisulcatus</i> var. <i>bisulcatus</i>	two-grooved milkvetch	PerF	Wide	
Fabaceae (Leguminosae)	<i>Astragalus cicer</i>		chickpea milkvetch	PerF	Intro	Native to Europe. Known from CURE.
Fabaceae (Leguminosae)	<i>Astragalus drummondii</i>		Drummond's milkvetch	PerF	Wide	Known from CURE
Fabaceae (Leguminosae)	<i>Astragalus hallii</i>	<i>A. hallii</i> var. <i>hallii</i>	Hall's milkvetch	PerF	RegEn	Known from CURE
Fabaceae (Leguminosae)	<i>Astragalus haydenianus</i>	<i>A. bisulcatus</i> var. <i>haydenianus</i>	Hayden's milkvetch	PerF	Wide	Known from CURE
Fabaceae (Leguminosae)	<i>Astragalus lonchocarpus</i>		great rushy milkvetch	PerF	Wide	Type locality is 'southern Utah', (Parry 32 ISC). Known from CURE.
Fabaceae (Leguminosae)	<i>Astragalus microcymbus</i>		skiff milkvetch	PerF	LocEn	CO BLM Sensitive

Appendix B. Potential (unconfirmed) taxa of Black Canyon of the Gunnison National Park, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life form	Range	Comments
Fabaceae (Leguminosae)	<i>Astragalus pattersonii</i>		Patterson's milkvetch	PerF	RegEn	Type locality is near Grand Canyon of the Grand River, Grand Co., CO (Patterson s.n. GH)
Fabaceae (Leguminosae)	<i>Astragalus praelongus</i> var. <i>praelongus</i>		stinking milkvetch	PerF	Wide	
Fabaceae (Leguminosae)	<i>Astragalus wetherillii</i>		Wetherill's milkvetch	PerF	RegEn	USFWS: 3C, USFS R2 Sensitive
Fabaceae (Leguminosae)	<i>Caragana arborescens</i>		Siberian pea-tree	Shrub	Intro	Native to Siberia. Known from CURE.
Fabaceae (Leguminosae)	<i>Hedysarum boreale</i>	<i>Hedysarum boreale</i> var. <i>boreale</i>	northern sweet-vetch	PerF	Wide	
Fabaceae (Leguminosae)	<i>Lathyrus eucoismus</i>	<i>L. brachycalyx</i> var. <i>eucoismus</i>	seemly sweetpea	PerF	Wide	Known from CURE
Fabaceae (Leguminosae)	<i>Lotus wrightii</i>		Wright's trefoil	PerF	RegEn	Known from CURE
Fabaceae (Leguminosae)	<i>Lupinus kingii</i>	<i>L. kingii</i> var. <i>kingii</i>	King's lupine	AnnF	Wide	
Fabaceae (Leguminosae)	<i>Lupinus lepidus</i> ssp. <i>caespitosus</i>	<i>L. lepidus</i> var. <i>utahensis</i> , <i>L. caespitosus</i> var. <i>utahensis</i>	stemless lupine	PerF	Wide	
Fabaceae (Leguminosae)	<i>Lupinus parviflorus</i>	<i>L. argenteus</i> var. <i>laxiflorus</i> , <i>L. argenteus</i> var. <i>parviflorus</i>	smallflower lupine	PerF	Wide	Known from CURE
Fabaceae (Leguminosae)	<i>Thermopsis montana</i>	<i>T. pinetorum</i> , <i>T. rhombifolia</i> var. <i>montana</i> ; includes <i>T. rhombifolia</i> var. <i>ovata</i>	montane golden pea	PerF	Wide	Known from CURE
Fabaceae (Leguminosae)	<i>Trifolium hybridum</i>		Alsike clover	PerF	Intro	Native to Europe. Known from CURE.
Fabaceae (Leguminosae)	<i>Trifolium longipes</i>	<i>T. longipes</i> var. <i>brachypus</i> , <i>T. longipes</i> var. <i>rusbyi</i> , <i>T. longipes</i> ssp. <i>pygmaeum</i>	Rusby's clover	PerF	Wide	Known from CURE
Fumariaceae	<i>Corydalis caseana</i> ssp. <i>brandegeei</i>		Brandegee's corydalis	PerF	LocEn	Type locality is in Colorado

Appendix B. Potential (unconfirmed) taxa of Black Canyon of the Gunnison National Park, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life form	Range	Comments
Gentianaceae	<i>Gentianella heterosepala</i>	<i>G. amarella</i> var. <i>heterosepala</i>	Engelmann's gentian	PerF	Wide	
Gentianaceae	<i>Pneumonanthe affinis</i>	<i>Gentiana affinis</i> var. <i>affinis</i>	Rocky Mountain gentian	PerF	Wide	Known from CURE
Geraniaceae	<i>Geranium caespitosum</i> ssp. <i>caespitosum</i>	Includes var. <i>parryi</i>	purple cluster crane's-bill	PerF	Periph	Known from CURE
Grossulariaceae (Saxifragaceae)	<i>Ribes inerme</i>		whitestem gooseberry	Shrub	Wide	Known from CURE
Grossulariaceae (Saxifragaceae)	<i>Ribes lacustre</i>		spiny swamp currant	Shrub	Wide	Known from CURE
Haloragaceae	<i>Myriophyllum sibiricum</i>		Siberian water-milfoil	PerF	Wide	
Helleboraceae (Ranunculaceae)	<i>Aconitum columbianum</i>	Includes vars. <i>columbianum</i> & <i>ochroleucum</i>	Columbian monkshood	PerF	Wide	Known from CURE
Helleboraceae (Ranunculaceae)	<i>Aquilegia barnebyi</i>		shale columbine	PerF	RegEn	USFWS: 3C
Hippuridaceae	<i>Hippuris vulgaris</i>		common mare's-tail	PerF	Wide	Known from CURE
Hydrocharitaceae	<i>Elodea canadensis</i>		Canadian waterweed	PerF	Sparse	Known from CURE
Hydrocharitaceae	<i>Elodea nuttallii</i>		western waterweed	PerF	Sparse	
Hydrophyllaceae	<i>Hydrophyllum fendleri</i>	<i>H. fendleri</i> var. <i>fendleri</i>	Fendler's waterleaf	PerF	Wide	Known from CURE
Hydrophyllaceae	<i>Phacelia alba</i>	<i>P. neomexicana</i> var. <i>alba</i>	white scorpion-weed	AnnF	Wide	Known from CURE
Hydrophyllaceae	<i>Phacelia heterophylla</i>	Includes ssp. <i>heterophylla</i> and var. <i>virgata</i>	wand phacelia	PerF	Wide	Known from CURE
Hypolepidaceae (Polypodiaceae, Dennstaedtiaceae)	<i>Pteridium aquilinum</i> var. <i>lanuginosum</i>	<i>P. aquilinum</i> var. <i>pubescens</i>	bracken fern	fern	Wide	Known from CURE
Iridaceae	<i>Iris missouriensis</i>		Rocky Mountain iris	PerF	Wide	Known from CURE
Iridaceae	<i>Sisyrinchium idahoense</i> var. <i>occidentale</i>		Idaho blue-eyed grass	PerF	Wide	Known from CURE
Iridaceae	<i>Sisyrinchium montanum</i>		mountain blue-eyed grass	PerF	Wide	Known from CURE
Juncaceae	<i>Juncus nodosus</i>		knotted rush	PerG	Wide	Known from CURE
Juncaceae	<i>Juncus tracyi</i>	Included in <i>J. ensifolius</i> var. <i>montanus</i> by some authors	Tracy's rush	PerG	Wide	Known from CURE

Appendix B. Potential (unconfirmed) taxa of Black Canyon of the Gunnison National Park, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life form	Range	Comments
Juncaceae	<i>Luzula parviflora</i>		small-flowered woodrush	PerG	Wide	
Lamiaceae (Labiatae)	<i>Galeopsis bifida</i>		splitlip hempnettle	AnnF	Intro	Known from CURE
Lamiaceae (Labiatae)	<i>Prunella vulgaris</i>	<i>P. vulgaris</i> var. <i>lanceolata</i>	self-heal	PerF	Wide	Known from CURE
Lamiaceae (Labiatae)	<i>Salvia reflexa</i>		annual sage	PerF	Wide	
Lamiaceae (Labiatae)	<i>Scutellaria galericulata</i> var. <i>epilobifolia</i>	<i>S. galericulata</i>	little skullcap	PerF	Wide	Known from CURE
Lamiaceae (Labiatae)	<i>Stachys palustris</i> ssp. <i>pilosa</i>		hairy hedge-nettle	PerF	Wide	Known from CURE
Lemnaceae	<i>Lemna trisulca</i>		ivy-leaf duckweed	PerF	Wide	
Lentibulariaceae	<i>Utricularia macrorhiza</i>	<i>U. vulgaris</i>	common bladderwort	PerF	Wide	Known from CURE
Limnanthaceae	<i>Floerkea proserpinacoides</i>		false mermaid	AnnF	Wide	
Loasaceae	<i>Nuttallia rusbyi</i>	<i>Mentzelia rusbyi</i>	Rusby's stickleaf	PerF	Wide	Known from CURE
Malvaceae	<i>Sidalcea candida</i>	Includes vars. <i>candida</i> & <i>glabrata</i>	white checker-mallow	PerF	Wide	Known from CURE
Malvaceae	<i>Sidalcea neomexicana</i>	Includes vars. <i>crenulata</i> & <i>neomexicana</i>	New Mexico checker- mallow	PerF	Wide	Known from CURE
Oleaceae	<i>Forestiera pubescens</i>	<i>F. neomexicana</i>	desert olive	Shrub	Wide	
Onagraceae	<i>Chamerion danielsii</i>	<i>Epilobium</i> <i>angustifolium</i> var. <i>canescens</i> , <i>C. angustifolium</i> var. <i>canescens</i> , <i>C.</i> <i>angustifolium</i> ssp. <i>circumvagum</i>	fireweed	PerF	Wide	Known from CURE
Onagraceae	<i>Epilobium lactiflorum</i>	<i>E. alpinum</i> var. <i>lactiflorum</i> , <i>E.</i> <i>hornemannii</i> var. <i>lactiflorum</i>	white-flower willow- herb	PerF	Wide	
Onagraceae	<i>Gaura coccinea</i>		scarlet gaura	PerF	Wide	
Onagraceae	<i>Oenothera elata</i> ssp. <i>hirsutissima</i>	<i>O. elata</i>	western evening- primrose	PerF	Wide	Known from CURE
Onagraceae	<i>Oenothera flava</i>	<i>O. flava</i> var. <i>flava</i>	yellow evening-primrose	PerF	Wide	Known from CURE
Onagraceae	<i>Oenothera pallida</i> ssp. <i>pallida</i>		pale evening-primrose	PerF	Periph	

Appendix B. Potential (unconfirmed) taxa of Black Canyon of the Gunnison National Park, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life form	Range	Comments
Onagraceae	<i>Oenothera villosa</i> ssp. <i>strigosa</i>	<i>O. strigosa</i> , <i>O. biennis</i>	biennial evening-primrose	PerF	Wide	Known from CURE
Orchidaceae	<i>Limnorchis stricta</i>	<i>Platanthera stricta</i> , <i>P. gracilis</i> , <i>Habenaria saccata</i>	slender bog orchid	PerF	Wide	Known from CURE
Orobanchaceae	<i>Aphyllon fasciculatum</i>	<i>Orobanche fasciculata</i>	clustered broomrape	PerF	Wide	Known from CURE
Pinaceae	<i>Picea engelmannii</i>		Engelmann spruce	Tree	Wide	Known from CURE
Plantaginaceae	<i>Plantago eriopoda</i>		woolly-base plantain	PerF	Wide	
Plantaginaceae	<i>Plantago lanceolata</i>		English plantain	PerF	Intro	Native to Eurasia. Known from CURE.
Poaceae (Gramineae)	<i>Agropyron pectiniforme</i>	<i>A. cristatum</i> var. <i>pectiniforme</i> ; included within <i>A. cristatum</i> (without variety) in <i>Flora of North America</i> (2007)	crested wheatgrass	PerG	Intro	Native to Eurasia
Poaceae (Gramineae)	<i>Alopecurus pratensis</i>		meadow foxtail	PerG	Intro	Native to Eurasia. Known from CURE.
Poaceae (Gramineae)	<i>Beckmannia syzigachne</i>		American sloughgrass	AnnG	Wide	Known from CURE
Poaceae (Gramineae)	<i>Calamagrostis canadensis</i>	Includes vars. <i>canadensis</i> , <i>imberbis</i> , & <i>macouniana</i> , <i>C. scribneri</i>	bluejoint reedgrass	PerG	Wide	Known from CURE
Poaceae (Gramineae)	<i>Catabrosa aquatica</i>		brookgrass	PerG	Wide	Known from CURE
Poaceae (Gramineae)	<i>Chondrosium prostratum</i>	<i>Bouteloua simplex</i>	mat grama	AnnG	Wide	Known from CURE
Poaceae (Gramineae)	<i>Critesion brachyantherum</i>	<i>Hordeum brachyantherum</i>	meadow barley	PerG	Wide	
Poaceae (Gramineae)	<i>Deschampsia cespitosa</i>		tufted hairgrass	PerG	Wide	Known from CURE
Poaceae (Gramineae)	<i>Distichlis stricta</i>	<i>D. spicata</i> var. <i>stricta</i>	desert saltgrass	PerG	Wide	
Poaceae (Gramineae)	<i>Eragrostis cilianensis</i>		stinkgrass	AnnG	Intro	Native to Eurasia. Known from CURE.
Poaceae (Gramineae)	<i>Glyceria borealis</i>		northern mannagrass	PerG	Wide	Known from CURE
Poaceae (Gramineae)	<i>Glyceria elata</i>	Included in <i>G. striata</i> by some authors	fowl mannagrass	PerG	Wide	Known from CURE
Poaceae (Gramineae)	<i>Glyceria grandis</i>		American mannagrass	PerG	Wide	Known from CURE
Poaceae (Gramineae)	<i>Glyceria striata</i>	Includes <i>G. elata</i>	fowl mannagrass	PerG	Wide	Known from CURE
Poaceae (Gramineae)	<i>Leucopoa kingii</i>	<i>Hesperochloa kingii</i>	spike fescue	PerG	Wide	

Appendix B. Potential (unconfirmed) taxa of Black Canyon of the Gunnison National Park, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life form	Range	Comments
Poaceae (Gramineae)	<i>Muhlenbergia minutissima</i>		annual muhly	AnnG	Wide	Known from CURE
Poaceae (Gramineae)	<i>Muhlenbergia montana</i>		mountain muhly	PerG	Wide	Known from CURE
Poaceae (Gramineae)	<i>Muhlenbergia wrightii</i>		spike muhly	PerG	Wide	Known from CURE
Poaceae (Gramineae)	<i>Nassella viridula</i>	<i>Stipa viridula</i>	green needlegrass	PerG	Wide	Known from CURE
Poaceae (Gramineae)	<i>Poa palustris</i>		fowl bluegrass	PerG	Wide	Known from CURE
Poaceae (Gramineae)	<i>Puccinellia airoides</i>	<i>P. nuttalliana</i>	Nuttall's alkaligrass	PerG	Wide	
Poaceae (Gramineae)	<i>Sporobolus airoides</i>	<i>S. airoides</i> var. <i>airoides</i>	alkali sacaton	PerG	Wide	
Poaceae (Gramineae)	<i>Thinopyrum ponticum</i>	<i>Elymus elongatus</i> , <i>Elymus elongatus</i> var. <i>ponticus</i> , <i>Agropyron</i> <i>elongatum</i>	tall wheatgrass	PerG	Intro	Native to Eurasia. Weber & Beck 17067 (BLCA) was collected just outside the park.
Poaceae (Gramineae)	<i>Trisetum spicatum</i>	Includes ssp. <i>alaskanum</i> & <i>congdonii</i> , <i>T. montanum</i>	spike trisetum	PerG	Wide	Known from CURE
Polemoniaceae	<i>Leptodactylon pungens</i>	<i>Leptodactylon pungens</i> var. <i>pungens</i> , <i>Linanthus</i> <i>pungens</i>	prickly-phlox	Shrub	Wide	Known from CURE
Polemoniaceae	<i>Phlox multiflora</i>	Includes ssp. <i>depressa</i> , <i>multiflora</i> , & <i>patula</i>	Rocky Mountain phlox	PerF	Wide	Known from CURE
Polemoniaceae	<i>Polemonium foliosissimum</i>	<i>P. foliosissimum</i> var. <i>foliosissimum</i>	blue leafy Jacob's-ladder	PerF	Wide	Known from CURE
Polygonaceae	<i>Eriogonum cernuum</i>	<i>E. cernuum</i> var. <i>cernuum</i> , vars. not recognized in <i>Flora of</i> <i>North America</i> (2005)	nodding wild buckwheat	AnnF	Wide	Known from CURE
Polygonaceae	<i>Eriogonum ovalifolium</i> var. <i>ovalifolium</i>		cushion wild buckwheat	PerF	Wide	
Polygonaceae	<i>Eriogonum subalpinum</i>	<i>E. umbellatum</i> var. <i>majus</i> , <i>E. umbellatum</i> var. <i>subalpinum</i> ; includes vars. <i>dichrocephalum</i> & <i>desereticum</i>	cream wild buckwheat	PerF	Wide	Known from CURE
Polygonaceae	<i>Persicaria amphibia</i>	<i>Polygonum amphibium</i> var. <i>emersum</i> , <i>Polygonum coccineum</i> , <i>Persicaria coccinea</i>	water smartweed	PerF	Wide	Known from CURE

Appendix B. Potential (unconfirmed) taxa of Black Canyon of the Gunnison National Park, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life form	Range	Comments
Polygonaceae	<i>Persicaria coccinea</i>	<i>Polygonum coccineum</i> , <i>Polygonum amphibium</i> var. <i>emersum</i>	water smartweed	PerF	Wide	Known from CURE
Polygonaceae	<i>Persicaria lapathifolia</i>	<i>Polygonum</i> <i>lapathifolium</i>	willow-weed	AnnF	Intro	Native to Eurasia. Known from CURE.
Polygonaceae	<i>Persicaria maculosa</i>	<i>Polygonum persicaria</i>	lady's-thumb	AnnF	Intro	Native to Eurasia. Known from CURE.
Polygonaceae	<i>Rumex aquaticus</i> ssp. <i>occidentalis</i>	<i>R. occidentalis</i> , <i>R. aquaticus</i> var. <i>fenestratus</i>	western dock	PerF	Wide	Known from CURE
Polygonaceae	<i>Rumex maritimus</i> var. <i>fuiginus</i>	<i>R. fuiginus</i>	golden dock	annual Forb	Wide	
Potamogetonaceae	<i>Potamogeton pectinatus</i>	<i>Stuckenia pectinata</i> , <i>Coleogeton pectinatus</i>	fennel-leaf pondweed	PerF	Wide	
Primulaceae	<i>Dodecatheon pulchellum</i>	<i>D. pulchellum</i> var. <i>pulchellum</i> , <i>D.</i> <i>pauciflorum</i> . Includes "subvars." from UT <i>Flora: coriaceum</i> , <i>atwoodii</i> , & <i>huberi</i>	dark-throat shooting- star	PerF	Wide	Known from CURE
Pyrolaceae (Ericaceae)	<i>Pyrola chlorantha</i>	<i>P. virens</i>	green-flowered wintergreen	PerF	Wide	Known from CURE
Ranunculaceae	<i>Batrachium circinatum</i>	<i>Ranunculus aquatilis</i> var. <i>diffusus</i> , <i>R. circinatus</i> , <i>R. longirostris</i> , <i>R. trichophyllus</i> var. <i>eradicatus</i> , <i>B. longirostre</i> , <i>B.</i> <i>circinatum</i> ssp. <i>subrigidum</i>	thread water-buttercup	PerF	Wide	
Ranunculaceae	<i>Batrachium trichophyllum</i>	<i>Ranunculus</i> <i>trichophyllus</i> var. <i>trichophyllus</i> . Included in <i>B. circinatum</i> by some authors.	water-crowfoot	PerF	Wide	
Ranunculaceae	<i>Cyrtorhyncha ranunculina</i>	<i>Ranunculus</i> <i>ranunculinus</i>	little buttercup	PerF	RegEn	Known from CURE

Appendix B. Potential (unconfirmed) taxa of Black Canyon of the Gunnison National Park, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life form	Range	Comments
Ranunculaceae	<i>Ranunculus inamoenus</i> var. <i>inamoenus</i>	Includes var. <i>alpeophilus</i>	drab buttercup	PerF	Wide	Known from CURE
Ranunculaceae	<i>Ranunculus macounii</i>		Macoun's buttercup	PerF	Wide	Known from CURE
Ranunculaceae	<i>Ranunculus repens</i>	<i>R. repens</i> var. <i>repens</i>	creeping buttercup	PerF	Intro	Native to Eurasia. Known from CURE.
Ranunculaceae	<i>Viticella orientalis</i>	<i>Clematis orientalis</i>	Oriental clematis	PerF	Intro	CO state noxious weed (List B). Native to Asia. Known from CURE.
Rosaceae	<i>Crataegus rivularis</i>	<i>C. douglasii</i> var. <i>rivularis</i>	river hawthorn	Shrub	Wide	Known from CURE
Rosaceae	<i>Crataegus saligna</i>		willow hawthorn	Shrub	RegEn	Known from CURE
Rosaceae	<i>Geum aleppicum</i>		erect avens	PerF	Wide	Known from CURE
Rosaceae	<i>Geum macrophyllum</i> ssp. <i>perincisum</i>		large-leaved avens	PerF	Wide	Known from CURE
Rosaceae	<i>Pentaphylloides floribunda</i>	<i>Potentilla fruticosa</i> , <i>Pentaphylloides fruticosa</i> , <i>Dasiphora fruticosa</i> ssp. <i>floribunda</i> , <i>D. floribunda</i>	shrubby cinquefoil	Shrub	Wide	Known from CURE
Rosaceae	<i>Physocarpus monogynus</i>		mountain ninebark	Shrub	Wide	Known from CURE
Rosaceae	<i>Potentilla biennis</i>		biennial cinquefoil	AnnF	Wide	Known from CURE
Rosaceae	<i>Potentilla concinna</i> var. <i>concinna</i>		red cinquefoil	PerF	Wide	Known from CURE
Rosaceae	<i>Potentilla flabelliformis</i>	<i>P. gracilis</i> var. <i>flabelliformis</i>	graceful cinquefoil	PerF	Disj	
Rosaceae	<i>Potentilla hippiana</i>	<i>P. hippiana</i> var. <i>hippiana</i>	woolly cinquefoil	PerF	Wide	
Rosaceae	<i>Potentilla pensylvanica</i>		Pennsylvania cinquefoil	PerF	Wide	Known from CURE
Rosaceae	<i>Rubacer parviflorum</i>	<i>Rubus parviflorus</i>	western thimbleberry	Shrub	Wide	Known from CURE
Rubiaceae	<i>Galium triflorum</i>		sweet-scented bedstraw	PerF	Wide	Known from CURE
Salicaceae	<i>Salix bebbiana</i>		Bebb's willow	Shrub	Wide	Known from CURE
Salicaceae	<i>Salix boothii</i>		Booth's willow	Shrub	Wide	Known from CURE
Salicaceae	<i>Salix drummondiana</i>		Drummond's willow	Shrub	Wide	Known from CURE
Salicaceae	<i>Salix fragilis</i>		crack willow	Tree	Intro	Native to Eurasia. Known from CURE.

Appendix B. Potential (unconfirmed) taxa of Black Canyon of the Gunnison National Park, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life form	Range	Comments
Salicaceae	<i>Salix geyeriana</i>	<i>S. geyeriana</i> var. <i>geyeriana</i>	Geyer's willow	Shrub	Wide	Known from CURE
Salicaceae	<i>Salix ligulifolia</i>	<i>S. eriocephala</i> var. <i>ligulifolia</i>	strapleaf willow	Shrub	Wide	Known from CURE
Salicaceae	<i>Salix lucida</i> ssp. <i>caudata</i>	<i>S. lasiandra</i> var. <i>caudata</i>	whiplash willow	Shrub	Wide	Known from CURE
Salicaceae	<i>Salix lucida</i> ssp. <i>lasiandra</i>		whiplash willow	Shrub	Wide	Known from CURE
Salicaceae	<i>Salix monticola</i>		mountain willow	Shrub	Wide	Known from CURE
Salicaceae	<i>Salix scouleriana</i>		Scouler's willow	Shrub	Wide	Known from CURE
Saxifragaceae	<i>Heuchera rubescens</i>		red alumroot	PerF	Wide	
Saxifragaceae	<i>Lithophragma parviflorum</i>	<i>Lithophragma</i> <i>parviflora</i>	smallflower woodlandstar	PerF	Sparse	
Saxifragaceae	<i>Micranthes odontoloma</i>	<i>Saxifraga arguta</i> , <i>S.</i> <i>odontoloma</i>	brook saxifrage	PerF	Wide	Known from CURE
Saxifragaceae	<i>Micranthes rhomboidea</i>	<i>Saxifraga rhomboidea</i>	diamondleaf saxifrage	PerF	Wide	
Scrophulariaceae	<i>Besseyia ritteriana</i>		Ritter's coraldrops	PerF	RegEn	Known from CURE
Scrophulariaceae	<i>Castilleja scabrida</i>	<i>C. scabrida</i> var. <i>scabrida</i>	Eastwood's paintbrush	PerF	RegEn	
Scrophulariaceae	<i>Castilleja sulphurea</i>	<i>C. rhexifolia</i> var. <i>sulphurea</i> , <i>C.</i> <i>septentrionalis</i>	sulphur paintbrush	PerF	Wide	
Scrophulariaceae	<i>Mimulus glabratus</i>	<i>M. glabratus</i> var. <i>fremontii</i> , <i>M. glabratus</i> var. <i>jamesii</i>	glabrous monkeyflower	PerF	Wide	Known from CURE
Scrophulariaceae	<i>Mimulus guttatus</i>		yellow monkeyflower	PerF	Wide	Known from CURE
Scrophulariaceae	<i>Penstemon eatonii</i>		Eaton's firecracker	PerF	Periph	
Scrophulariaceae	<i>Penstemon rydbergii</i>	<i>P. rydbergii</i> var. <i>rydbergii</i>	Rydberg's penstemon	PerF	Wide	Known from CURE
Scrophulariaceae	<i>Veronicastrum serpyllifolium</i> ssp. <i>humifusum</i>	<i>Veronica serpyllifolia</i> , <i>Veronica serpyllifolia</i> var. <i>humifusa</i>	thyme-leaved speedwell	PerF	Wide	Known from CURE
Solanaceae	<i>Physalis virginiana</i>		Virginia ground-cherry	PerF	Wide	Known from CURE
Solanaceae	<i>Solanum triflorum</i>		cut-leaf nightshade	AnnF	Wide	Native to C North America, may be adventive in CO. Known from CURE.

Appendix B. Potential (unconfirmed) taxa of Black Canyon of the Gunnison National Park, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life form	Range	Comments
Uvulariaceae (Liliaceae, Calochortaceae)	<i>Streptopus fassettii</i>	<i>S. amplexifolius</i> . Includes vars. <i>amplexifolius</i> , <i>americanus</i> , & <i>chalezatus</i> .	clasping twisted-stalk	PerF	Wide	Known from CURE
Valerianaceae	<i>Valeriana edulis</i>		tobacco-root	PerF	Wide	Known from CURE
Violaceae	<i>Viola rydbergii</i>	<i>V. canadensis</i> var. <i>rugulosa</i> , <i>V. scopulorum</i> ; included in <i>V. canadensis</i> by some authors	Canadian white violet	PerF	Wide	Known from CURE
Zygophyllaceae	<i>Tribulus terrestris</i>		puncture vine	AnnF	Intro	CO state noxious weed (List C). Native to Eurasia. Known from CURE.

The vascular plant species shown in this table are known from the vicinity of Black Canyon of the Gunnison National Park in Montrose County, Colorado, but have not previously been reported or confirmed for the park. Species on this list are derived from a checklist of potential species developed by Tim Hogan, Nan Lederer, and Dina Clark (2005) for Black Canyon of the Gunnison National Park's NPSpecies database and Weber (1983). Some species from Appendix C could be considered as potentially occurring in the park, but are not included here.

Appendix C. Rejected (falsely reported or questionable) vascular plant taxa of Black Canyon of the Gunnison National Park.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Comments
Agavaceae	<i>Yucca neomexicana</i>	<i>Y. harrimaniae</i> var. <i>neomexicana</i>	New Mexico yucca	Shrub	RegEn	FalsRep	Report from BLCA based on misidentified specimen of <i>Y. harrimaniae</i> (Weber & Beck 17012).
Alsinaceae (Caryophyllaceae)	<i>Cerastium strictum</i>	<i>C. arvense</i> , <i>C. arvense</i> ssp. <i>strictum</i>	field chickweed	PerF	Wide	FalsRep	Reports from BLCA based on misidentified specimens of <i>Pseudostellaria jamesiana</i> .
Apiaceae (Umbelliferae)	<i>Cymopterus longipes</i>	<i>C. longipes</i> var. <i>longipes</i>	long-stalk spring-parsley	PerF	Wide	FalsRep	Reports from BLCA based on misidentified specimens of <i>C. planosus</i> .
Asteraceae (Compositae)	<i>Artemisia michauxiana</i>		Michaux's wormwood	PerF	Wide	Ques?	Reported by NCPN (in ed.), but suitable habitat probably not present in park. May be based on misidentified <i>A. ludoviciana</i> .
Asteraceae (Compositae)	<i>Chrysothamnus Greenei</i>		Greene's rabbitbrush	Shrub	Periph	Ques?	Reported by NCPN (in ed.), but BLCA is well outside the known range of this species in Colorado (Weber & Wittmann 2001). May be based on misidentified <i>C. viscidiflorus</i> .
Asteraceae (Compositae)	<i>Cirsium undulatum</i>	<i>C. undulatum</i> var. <i>undulatum</i>	wavy-leaved thistle	PerF	Wide	FalsRep	Reports from BLCA based on misidentified specimens of <i>C. tracyi</i> .
Asteraceae (Compositae)	<i>Erigeron pumilus</i>	<i>E. pumilus</i> var. <i>pumilus</i>	shaggy fleabane	PerF	Wide	FalsRep	Reports from BLCA based on misidentified specimens of <i>E. concinnus</i> .
Brassicaceae (Cruciferae)	<i>Schoenocrambe linearifolia</i>	<i>Hesperidanthus linearifolius</i>	slim-leaf plains-mustard	PerF	Wide	Ques?	Reported by NCPN (in ed.), but BLCA is outside the known range of this species in Colorado (Weber & Wittmann 2001). May be based on misidentified <i>S. linearifolius</i> .
Cactaceae	<i>Echinocereus coccineus</i>		scarlet claret-cup cactus	PerF	Wide	Ques?	Reported by NCPN (in ed.), but BLCA is outside the known range of this species in Colorado (Weber & Wittmann 2001). May be based on misidentified <i>E. triglochidiatus</i> .
Campanulaceae	<i>Campanula uniflora</i>		Arctic harebell	PerF	Wide	FalsRep	Report by Weber (1983) based on a misidentified specimen of <i>C. rotundifolia</i> .
Hydrophyllaceae	<i>Phacelia constancei</i>		Constance's phacelia	PerF	RegEn	Ques?	Reported by NCPN (in ed.), but BLCA is outside the known range of this species in Colorado (Weber & Wittmann 2001). May be based on misidentified <i>P. splendens</i> .
Onagraceae	<i>Epilobium saximontanum</i>		Rocky Mountain willow-herb	PerF	Wide	FalsRep	Report by Weber (1983) based on a misidentified specimen of <i>E. ciliatum</i> .
Poaceae (Gramineae)	<i>Dichanthelium oligosanthes</i> var. <i>scribnerianum</i>	<i>Panicum oligosanthes</i> var. <i>scribnerianum</i>	Scribner panicgrass	PerG	Wide	Ques?	Reported by NCPN (in ed.), but this species is not known from Colorado (Weber & Wittmann 2001).

Appendix C. Rejected (falsely reported or questionable) taxa of Black Canyon of the Gunnison National Park, cont.

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life Form	Range	Park status	Comments
Poaceae (Gramineae)	<i>Poa cusickii</i> var. <i>epilis</i>	Included in <i>P.</i> <i>fendleriana</i> by some authors	skyline bluegrass	PerG	Wide	Ques?	Reported by NCPN (in ed.), but BLCA is outside the known range of this species in Colorado (Weber & Wittmann 2001). May be based on misidentified <i>P. fendleriana</i> .
Polygonaceae	<i>Eriogonum umbellatum</i> var. <i>subaridum</i>		arid wild buckwheat	PerF	Wide	Ques?	Reported by NCPN (in ed.), but BLCA is outside the known range of this species in Colorado (Weber & Wittmann 2001). May be based on misidentified var. <i>aureum</i> .
Portulacaceae	<i>Oreobroma nevadensis</i>	<i>Lewisia nevadensis</i>	Nevada bitterroot	PerF	Wide	FalsRep	Report by Weber (1983) based on a misidentified specimen of <i>O. pygmaea</i> .
Rosaceae	<i>Potentilla rivalis</i>		brook cinquefoil	AnnF	Sparse	FalsRep	Report by Weber (1983) based on a misidentified specimen of <i>P. norvegica</i> .
Rubiaceae	<i>Galium mexicanum</i> ssp. <i>asperrimum</i>		rough bedstraw	PerF	Sparse	FalsRep	Report by Weber (1983) based on a misidentified specimen of <i>G. coloradense</i> .
Scrophulariaceae	<i>Castilleja integra</i>		entire-leaved paintbrush	PerF	Periph	Ques?	Reported by NCPN (in ed.), but BLCA is outside the known range of this species in Colorado (Weber & Wittmann 2001).
Typhaceae	<i>Typha x glauca</i>	Sterile hybrid between <i>T. latifolia</i> x <i>T. domingensis</i>	hybrid cattail	PerG	Wide	FalsRep	Report by Weber (1983) based on a misidentified specimen of <i>T. latifolia</i> .

The vascular plant species shown in this table have been reported for Black Canyon of the Gunnison National Park from published and unpublished literature (NCPN in ed., Weber 1983) or from herbarium specimens, but are now believed to be erroneous because of misidentifications (False Reports or FalsRep) or because the park is well outside the known or expected range of the species (Questionable or Ques?).

Appendix D. Confirmed, historical, and reported vascular plant taxa of the Gunnison National Park, organized by life form with ecological notes.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Grs	Pin/ Jun	Oak/ MtBr	Dg-fir	Wet	Comments
Trees											
Aceraceae	<i>Negundo aceroides</i> ssp. <i>interius</i>	box elder	Native	Pres	Apr–Jun			X		X	
Cupressaceae	<i>Sabina osteosperma</i>	Utah juniper	Native	Pres	NA	X	X	X	X	X	
Cupressaceae	<i>Sabina scopulorum</i>	Rocky Mountain juniper	Native	Pres	NA		X	X	X	X	
Fagaceae	<i>Quercus gambelii</i>	Gambel oak	Native	Pres	Apr–Jun	X	X	X	X	X	
Pinaceae	<i>Picea pungens</i>	blue spruce	Native	Pres	NA					X	
Pinaceae	<i>Pinus edulis</i>	two-needle pinyon	Native	Pres	NA	X	X				
Pinaceae	<i>Pinus ponderosa</i> var. <i>scopulorum</i>	ponderosa pine	Native	Pres	NA			X	X	X	
Pinaceae	<i>Pseudotsuga menziesii</i>	Douglas-fir	Native	Pres	NA			X	X		
Salicaceae	<i>Populus angustifolia</i>	narrow-leaved cottonwood	Native	Pres	Apr–Jun					X	
Salicaceae	<i>Populus deltoides</i> ssp. <i>wisizenii</i>	Rio Grande cottonwood	Native	Pres	Mar–Jun					X	
Salicaceae	<i>Populus tremuloides</i>	quaking aspen	Native	Pres	Mar–Jun			X	X	X	
Simaroubaceae	<i>Ailanthus altissima</i>	tree-of-heaven	Intro	Rep	Jun–Jul						Disturbed areas
Ulmaceae (Celtidaceae)	<i>Celtis reticulata</i>	netleaf hackberry	Native	Pres	Apr–May	X	X	X			
Ulmaceae	<i>Ulmus pumila</i>	Siberian elm	Intro	Pres	Mar–Apr	X	X				Disturbed areas
Shrubs											
Aceraceae	<i>Acer glabrum</i>	Rocky Mountain maple	Native	Pres	Apr–Jun		X	X	X		
Agavaceae	<i>Yucca harrimaniae</i>	Harriman's yucca	Native	Pres	Apr–May	X	X	X			
Anacardiaceae	<i>Rhus aromatica</i> ssp. <i>trilobata</i>	squawbush	Native	Pres	May–Jul					X	
Anacardiaceae	<i>Rhus glabra</i>	smooth sumac	Native	Pres	Jun–Jul	X	X	X		X	
Anacardiaceae	<i>Toxicodendron rydbergii</i>	western poison ivy	Native	Pres	May–Jun					X	
Asteraceae (Compositae)	<i>Artemisia frigida</i>	fringed sagebrush	Native	Pres	Jul–Sep	X	X	X	X		
Asteraceae (Compositae)	<i>Brickellia californica</i>	California brickellbush	Native	Pres	Aug–Sep			X			Rock crevices
Asteraceae (Compositae)	<i>Brickellia longifolia</i>	longleaf brickellbush	Native	Pres	Aug–Sep					X	

Appendix D. Confirmed, historical, and reported taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes, cont.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Grs	Pin/ Jun	Oak/ MtBr	Dg-fir	Wet	Comments
<i>Shrubs, cont.</i>											
Asteraceae (Compositae)	<i>Brickellia oblongifolia</i>	Mohave brickellbush	Native	Pres	Jun-Aug	X	X		X		
Asteraceae (Compositae)	<i>Chrysothamnus depressus</i>	dwarf rabbitbrush	Native	Pres	Jul-Sep	X	X	X	X		
Asteraceae (Compositae)	<i>Chrysothamnus nauseosus</i> ssp. <i>graveolens</i>	glabrate rabbitbrush	Native	Pres	Aug-Oct	X	X	X	X	X	
Asteraceae (Compositae)	<i>Chrysothamnus parryi</i> ssp. <i>parryi</i>	Parry's rabbitbrush	Native	Pres	Jul-Sep	X		X	X		
Asteraceae (Compositae)	<i>Chrysothamnus viscidiflorus</i> ssp. <i>viscidiflorus</i>	green rabbitbrush	Native	Pres	Jul-Sep	X	X	X	X		
Asteraceae (Compositae)	<i>Gutierrezia microcephala</i>	thread snakeweed	Native	Rep	Jul-Oct	X	X				
Asteraceae (Compositae)	<i>Gutierrezia sarothrae</i>	broom snakeweed	Native	Pres	Jul-Oct	X	X	X			
Asteraceae (Compositae)	<i>Seriphidium novum</i>	black sagebrush	Native	Rep	Sep-Oct	X	X	X			
Asteraceae (Compositae)	<i>Seriphidium tridentatum</i> ssp. <i>wyomingense</i>	Wyoming big sagebrush	Native	Rep	Jul-Sep	X	X				
Asteraceae (Compositae)	<i>Seriphidium vaseyanum</i>	mountain big sagebrush	Native	Pres	Jul-Sep	X	X	X	X		
Asteraceae (Compositae)	<i>Tetradymia canescens</i>	spineless horsebrush	Native	Pres	Jun-Sep	X		X	X		
Asteraceae (Compositae)	<i>Tetradymia spinosa</i>	shortspine horsebrush	Native	Pres	Apr-Jun	X	X				Adobe Hills, Mancos Shale
Berberidaceae	<i>Mahonia fremontii</i>	Fremont's mahonia	Native	Rep	Apr-Jul	X	X	X			
Berberidaceae	<i>Mahonia repens</i>	Oregon-grape	Native	Pres	Apr-Jun	X	X	X	X	X	
Betulaceae	<i>Alnus incana</i> ssp. <i>tenuifolia</i>	thinleaf alder	Native	Pres	Apr-May					X	
Caprifoliaceae (Adoxaceae)	<i>Sambucus microbotrys</i> var. <i>microbotrys</i>	red elderberry	Native	Pres	Jun-Jul				X		Rocky slopes
Caprifoliaceae	<i>Symphoricarpos rotundifolius</i>	mountain snowberry	Native	Pres	Jun-Aug	X	X	X	X		

Appendix D. Confirmed, historical, and reported taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes, cont.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Grs	Pin/Jun	Oak/MtBr	Dg-fir	Wet	Comments
<i>Shrubs, cont.</i>											
Celastraceae	<i>Paxistima myrsinites</i>	mountain-lover	Native	Pres	May-Aug		X	X	X		
Chenopodiaceae	<i>Atriplex canescens</i>	fourwing saltbush	Native	Pres	May-Sep	X	X	X			Sandy soils
Chenopodiaceae	<i>Atriplex confertifolia</i>	shadscale	Native	Pres	May-Sep	X	X				Adobe Hills, Mancos Shale
Chenopodiaceae	<i>Atriplex corrugata</i>	mat saltbush	Native	Pres	Apr-Sep		X				Adobe Hills, Mancos Shale
Chenopodiaceae	<i>Atriplex gardneri</i>	Gardner's saltbush	Native	Pres	May-Aug	X					Adobe Hills, Mancos Shale
Chenopodiaceae	<i>Krascheninnikovia lanata</i>	winterfat	Native	Pres	May-Jul	X	X				Adobe Hills, Mancos Shale
Chenopodiaceae (Sarcobataceae)	<i>Sarcobatus vermiculatus</i>	greasewood	Native	Pres	May-Aug		X				Adobe Hills, Mancos Shale
Cornaceae	<i>Swida sericea</i>	red-osier dogwood	Native	Pres	May-Jul				X	X	
Crossosomataceae (Celastraceae)	<i>Forsellesia meionandra</i>	spiny greasewood	Native	Pres	Mar-Jun	X	X				Adobe Hills, Mancos Shale
Ephedraceae	<i>Ephedra cutleri</i>	Cutler's ephedra	Native	Pres	NA	X					
Ephedraceae	<i>Ephedra viridis</i>	green ephedra	Native	Pres	NA	X	X				
Ericaceae	<i>Arctostaphylos uva-ursi</i> ssp. <i>coactilis</i>	bearberry	Native	Rep	May-Aug			X	X		
Grossulariaceae (Saxifragaceae)	<i>Ribes cereum</i>	wax currant	Native	Pres	Apr-Aug	X	X	X	X		
Grossulariaceae (Saxifragaceae)	<i>Ribes leptanthum</i>	trumpet gooseberry	Native	Pres	Apr-Jun		X	X	X		
Grossulariaceae (Saxifragaceae)	<i>Ribes wolfii</i>	wolf currant	Native	Pres	May-Aug			X	X		
Hydrangeaceae (Saxifragaceae)	<i>Fendlera falcata</i>	Fendlerbush	Native	Pres	Apr-Jun		X				
Hydrangeaceae (Saxifragaceae)	<i>Fendlera wrightii</i>	Wright's fendlerbush	Native	Pres	Apr-Jun		X	X			Rocky slopes
Hydrangeaceae (Saxifragaceae)	<i>Fendlerella utahensis</i>	Utah fendlerella	Native	Rep	Apr-Sep	X	X	X			Rocky areas
Hydrangeaceae (Saxifragaceae)	<i>Philadelphus microphyllus</i>	littleleaf mock-orange	Native	Pres	May-Sep		X	X	X		
Oleaceae	<i>Fraxinus anomala</i>	singleleaf ash	Native	Pres	Apr-May		X	X	X	X	

Appendix D. Confirmed, historical, and reported taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes, cont.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Grs	Pin/Jun	Oak/MtBr	Dg-fir	Wet	Comments
<i>Shrubs, cont.</i>											
Polygonaceae	<i>Eriogonum leptoclados</i>	sand wild buckwheat	Native	Rep	Jun-Oct		X				
Polygonaceae	<i>Eriogonum lonchophyllum</i>	longleaf wild buckwheat	Native	Pres	Jun-Oct	X	X	X	X		Adobe Hills, Mancos Shale
Rhamnaceae	<i>Ceanothus fendleri</i>	Fendler's mountain-lilac	Native	Pres	Jun-Aug		X	X	X		
Rhamnaceae	<i>Ceanothus velutinus</i>	deer-brush	Native	Pres	Jun-Jul	X		X	X		
Rosaceae	<i>Amelanchier alnifolia</i>	Saskatoon serviceberry	Native	Pres	May-Jul	X		X	X	X	
Rosaceae	<i>Amelanchier utahensis</i>	Utah serviceberry	Native	Pres	Apr-Jun	X	X	X	X	X	
Rosaceae	<i>Cercocarpus montanus</i>	alder-leaf mountain mahogany	Native	Pres	May-Jun	X	X	X	X		
Rosaceae	<i>Holodiscus discolor</i>	bush oceanspray	Native	Pres	Jun-Aug	X	X	X	X		Rock crevices
Rosaceae	<i>Padus virginiana</i> ssp. <i>melanocarpa</i>	western chokecherry	Native	Pres	May-Jul	X	X	X			
Rosaceae	<i>Peraphyllum ramosissimum</i>	squaw-apple	Native	Pres	May-Jun		X	X	X		
Rosaceae	<i>Purshia tridentata</i>	antelope bitterbrush	Native	Rep	Apr-Jul	X	X	X	X		
Rosaceae	<i>Rosa woodsii</i>	Woods' rose	Native	Pres	May-Jul			X	X	X	
Rosaceae	<i>Rubus armeniacus</i>	Himalayan blackberry	Intro	Rep	Jun-Sep						Disturbed areas
Rosaceae	<i>Rubus idaeus</i> ssp. <i>melanolasius</i>	common red raspberry	Native	Pres	Jun-Aug					X	Rocky slopes
Salicaceae	<i>Salix exigua</i>	coyote willow	Native	Pres	Apr-Aug					X	
Solanaceae	<i>Lycium barbarum</i>	matrimony-vine	Intro	Pres	Mar-Oct			X			Disturbed areas
Tamaricaceae	<i>Tamarix ramosissima</i>	five-stamen tamarisk	Intro	Pres	Apr-Sep					X	
Perennial Forbs											
Aliiaceae (Liliaceae)	<i>Allium acuminatum</i>	taper-tip onion	Native	Pres	May-Jul	X	X	X	X		
Aliiaceae (Liliaceae)	<i>Allium geeyeri</i>	Geyer's onion	Native	Pres	May-Sep	X	X	X	X	X	
Aliiaceae (Liliaceae)	<i>Allium macropetalum</i>	San Juan onion	Native	Pres	May-Jun		X				Adobe Hills, Mancos Shale
Aliiaceae (Liliaceae)	<i>Allium textile</i>	textile onion	Native	Rep	May-Jun	X	X				
Alsinaceae (Caryophyllaceae)	<i>Cerastium fontanum</i>	mouse-ear chickweed	Intro	Pres	Apr-Sep					X	
Alsinaceae (Caryophyllaceae)	<i>Eremogone congesta</i>	ball-head sandwort	Native	Pres	May-Aug	X	X	X	X		

Appendix D. Confirmed, historical, and reported taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes, cont.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Grs	Pin/ Jun	Oak/ MtBr	Dg-fir	Wet	Comments
<i>Perennial Forbs, cont.</i>											
Alsinaceae (Caryophyllaceae)	<i>Eremogone fendleri</i>	Fendler's sandwort	Native	Rep	May-Sep			X	X		
Alsinaceae (Caryophyllaceae)	<i>Eremogone hookeri</i>	Hooker's sandwort	Native	Rep	Apr-Aug	X	X				
Alsinaceae (Caryophyllaceae)	<i>Pseudostellaria jamesiana</i>	James' chickweed	Native	Pres	Jun-Aug	X	X	X			
Apiaceae (Umbelliferae)	<i>Aletes anisatus</i>	Rocky Mountain Indian parsley	Native	Pres	May-Jul			X			Granite cliffs
Apiaceae (Umbelliferae)	<i>Cymopterus bulbosus</i>	onion spring-parsley	Native	Pres	Apr-May	X	X				Adobe Hills, Mancos Shale
Apiaceae (Umbelliferae)	<i>Cymopterus planosus</i>	Rocky Mountain spring-parsley	Native	Pres	Apr-May		X				
Apiaceae (Umbelliferae)	<i>Cymopterus purpureus</i>	Colorado Plateau spring-parsley	Native	Pres	Apr-Jun	X	X	X			Adobe Hills, Mancos Shale
Apiaceae (Umbelliferae)	<i>Ligusticum porteri</i>	southern ligusticum	Native	Pres	Jun-Aug			X	X		
Apiaceae (Umbelliferae)	<i>Lomatium concinnum</i>	adobe desert-parsley	Native	Pres	May		X				Adobe Hills, Mancos Shale
Apiaceae (Umbelliferae)	<i>Lomatium dissectum</i>	fern-leaved desert-parsley	Native	Pres	Apr-Jun	X	X	X		X	
Apiaceae (Umbelliferae)	<i>Lomatium grayi</i>	milfoil lomatium	Native	Pres	Apr-May	X	X	X			
Apiaceae (Umbelliferae)	<i>Lomatium triternatum</i> var. <i>platycarpum</i>	ternate desert-parsley	Native	Pres	May-Jul	X	X	X			
Apiaceae (Umbelliferae)	<i>Osmorhiza chilensis</i>	Chilean sweet-cicely	Native	Rep	May-Jul			X	X	X	
Apiaceae (Umbelliferae)	<i>Osmorhiza depauperata</i>	blunt sweet-cicely	Native	Pres	Jun-Jul			X	X	X	
Apiaceae (Umbelliferae)	<i>Osmorhiza occidentalis</i>	western sweet-cicely	Native	Pres	May-Jul	X		X	X	X	
Apiaceae (Umbelliferae)	<i>Pseudocymopterus montanus</i>	Lemmon's spring-parsley	Native	Pres	Jul-Aug			X	X		
Apocynaceae	<i>Apocynum cannabinum</i>	common dogbane	Native	Pres	Jun-Aug					X	Disturbed areas

Appendix D. Confirmed, historical, and reported taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes, cont.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Grs	Pin/Jun	Oak/MtBr	Dg-fir	Wet	Comments
<i>Perennial Forbs, cont.</i>											
Asclepiadaceae	<i>Asclepias cryptoceras</i>	pallid milkweed	Native	Pres	Apr–Jun		X				Adobe Hills, Mancos Shale
Asclepiadaceae	<i>Asclepias speciosa</i>	showy milkweed	Native	Pres	May–Aug					X	Disturbed areas
Asclepiadaceae	<i>Asclepias subverticillata</i>	whorled milkweed	Native	Pres	May–Sep	X	X	X			Disturbed areas
Asparagaceae (Liliaceae)	<i>Asparagus officinalis</i>	asparagus	Intro	Pres	Jun–Jul					X	Disturbed areas
Asteraceae (Compositae)	<i>Achillea lanulosa</i>	common yarrow	Native	Pres	May–Sep	X	X	X	X	X	
Asteraceae (Compositae)	<i>Acosta maculosa</i>	spotted knapweed	Intro	Pres	Jul–Sep	X		X			Disturbed areas
Asteraceae (Compositae)	<i>Acroptilon repens</i>	Russian knapweed	Intro	Pres	Jun–Sep		X			X	Disturbed areas
Asteraceae (Compositae)	<i>Agoseris aurantiaca</i> var. <i>aurantiaca</i>	orange agoseris	Native	Pres	Jun–Aug	X	X	X			
Asteraceae (Compositae)	<i>Agoseris glauca</i> var. <i>dasycephala</i>	short agoseris	Native	Pres	May–Sep	X	X	X			
Asteraceae (Compositae)	<i>Agoseris glauca</i> var. <i>laciniata</i>	cutleaf agoseris	Native	Pres	May–Sep	X	X	X	X		
Asteraceae (Compositae)	<i>Almutaster pauciflorus</i>	alkali aster	Native	Rep	May–Sep					X	
Asteraceae (Compositae)	<i>Antennaria dimorpha</i>	low pussytoes	Native	Pres	Apr–Jun	X	X	X			
Asteraceae (Compositae)	<i>Antennaria parvifolia</i>	common pussytoes	Native	Pres	May–Jul	X	X	X	X		
Asteraceae (Compositae)	<i>Antennaria pulcherrima</i> ssp. <i>anaphalooides</i>	tall pussytoes	Native	Pres	Jun–Aug			X	X		
Asteraceae (Compositae)	<i>Antennaria rosea</i>	rosy pussytoes	Native	Pres	Jun–Aug						
Asteraceae (Compositae)	<i>Arctium minus</i>	burdock	Intro	Pres	Jul–Sep		X	X		X	Disturbed areas
Asteraceae (Compositae)	<i>Arnica cordifolia</i>	heartleaf arnica	Native	Pres	May–Aug	X			X		
Asteraceae (Compositae)	<i>Artemisia carruthii</i>	Carruth's wormwood	Native	Pres	Aug–Sep	X		X			

Appendix D. Confirmed, historical, and reported taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes, cont.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Grs	Pin/ Jun	Oak/ MtBr	Dg-fir	Wet	Comments
<i>Perennial Forbs, cont.</i>											
Asteraceae (Compositae)	<i>Artemisia ludoviciana</i> ssp. <i>incompta</i>	Louisiana wormwood	Native	Pres	Jul-Oct		X	X		X	
Asteraceae (Compositae)	<i>Artemisia ludoviciana</i> ssp. <i>ludoviciana</i>	Louisiana wormwood	Native	Pres	Jul-Oct	X	X	X	X	X	
Asteraceae (Compositae)	<i>Aster foliaceus</i>	Canby's aster	Native	Rep	Jul-Sep				X		
Asteraceae (Compositae)	<i>Aster laevis</i> var. <i>geyeri</i>	smooth aster	Native	Rep	Jul-Sep				X	X	
Asteraceae (Compositae)	<i>Balsamorhiza sagittata</i>	arrowleaf balsamroot	Native	Pres	Apr-Jul	X	X	X	X		
Asteraceae (Compositae)	<i>Breea arvensis</i>	Canada thistle	Intro	Pres	Jul-Sep	X	X	X		X	
Asteraceae (Compositae)	<i>Breea incana</i>	Canada thistle	Intro	Pres	Jul-Sep			X			
Asteraceae (Compositae)	<i>Brickellia grandiflora</i>	tassel-flower brickellbush	Native	Pres	Jul-Oct		X	X	X		
Asteraceae (Compositae)	<i>Carduus nutans</i> var. <i>macrolepis</i>	musk thistle	Intro	Pres	Jun-Sep	X	X	X		X	Disturbed areas
Asteraceae (Compositae)	<i>Chaenactis douglasii</i>	hoary dusty-maiden	Native	Pres	May-Sep	X	X	X	X		
Asteraceae (Compositae)	<i>Cirsium centaureae</i>	fringed thistle	Native	Pres	Jul-Aug	X		X			
Asteraceae (Compositae)	<i>Cirsium eatonii</i>	Eaton's thistle	Native	Pres	Jun-Sep					X	
Asteraceae (Compositae)	<i>Cirsium neomexicanum</i>	New Mexico thistle	Native	Pres	May-Jun	X	X				
Asteraceae (Compositae)	<i>Cirsium perplexans</i>	Rocky Mountain thistle	Native	Pres	May-Jul		X				Adobe Hills, Mancos Shale
Asteraceae (Compositae)	<i>Cirsium tracyi</i>	Tracy's thistle	Native	Pres	Jun-Sep	X	X	X	X		
Asteraceae (Compositae)	<i>Cirsium vulgare</i>	bull thistle	Intro	Pres	Jul-Aug	X				X	Disturbed areas
Asteraceae (Compositae)	<i>Erigeron concinnus</i>	Navajo fleabane	Native	Pres	May-Aug	X	X	X	X		Adobe Hills, Mancos Shale

Appendix D. Confirmed, historical, and reported taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes, cont.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Grs	Pin/Jun	Oak/MtBr	Dg-fir	Wet	Comments
<i>Perennial Forbs, cont.</i>											
Asteraceae (Compositae)	<i>Erigeron divergens</i>	spreading daisy	Native	Pres	May-Sep	X	X	X	X	X	
Asteraceae (Compositae)	<i>Erigeron eatonii</i>	Eaton's daisy	Native	Pres	May-Jul	X	X	X	X		
Asteraceae (Compositae)	<i>Erigeron engelmannii</i>	Engelmann's daisy	Native	Rep	May-Jul	X	X				
Asteraceae (Compositae)	<i>Erigeron flagellaris</i>	trailing daisy	Native	Pres	May-Aug	X	X	X	X		
Asteraceae (Compositae)	<i>Erigeron peregrinus</i>	wandering fleabane	Native	Rep	Jul-Aug				X	X	
Asteraceae (Compositae)	<i>Erigeron speciosus</i>	aspen daisy	Native	Pres	Jun-Aug	X		X	X		
Asteraceae (Compositae)	<i>Euthamia occidentalis</i>	western goldenrod	Native	Pres	Jul-Oct					X	
Asteraceae (Compositae)	<i>Grindelia squarrosa</i> var. <i>squarrosa</i>	curly-cup gumweed	Native	Pres	Jul-Sep	X	X	X			Disturbed areas
Asteraceae (Compositae)	<i>Helianthella quinquenervis</i>	five-nerve sunflower	Native	Pres	Jun-Aug	X			X		
Asteraceae (Compositae)	<i>Helioomeris multiflora</i> var. <i>multiflora</i>	showy goldeneye	Native	Pres	Jun-Sep	X	X		X	X	
Asteraceae (Compositae)	<i>Heterotheca villosa</i>	hairy golden-aster	Native	Pres	May-Sep		X		X		
Asteraceae (Compositae)	<i>Hymenopappus filifolius</i> var. <i>luteus</i>	Wyoming hyalineherb	Native	Pres	May-Oct	X	X				Adobe Hills, Mancos Shale
Asteraceae (Compositae)	<i>Leucelene ericoides</i>	rose-heath	Native	Pres	May-Sep	X	X		X		
Asteraceae (Compositae)	<i>Ligularia pudica</i>	bashful groundsel	Native	Pres	Jul-Oct				X		
Asteraceae (Compositae)	<i>Machaeranthera canescens</i>	hoary aster	Native	Pres	May-Sep	X	X	X	X		
Asteraceae (Compositae)	<i>Machaeranthera grindelioides</i>	gumweed aster	Native	Rep	May-Jul	X	X				
Asteraceae (Compositae)	<i>Machaeranthera pinnatifida</i>	lacy tansy-aster	Native	Pres	Apr-Sep		X				
Asteraceae (Compositae)	<i>Microseris nutans</i>	nodding microseris	Native	Pres	Apr-Aug	X	X	X	X		

Appendix D. Confirmed, historical, and reported taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes, cont.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/ Grs	Pin/ Jun	Oak/ MtBr	Dg- fir	Wet	Comments
<i>Perennial Forbs, cont.</i>											
Asteraceae (Compositae)	<i>Oligosporus dracunculus</i> ssp. <i>glauca</i>	tarragon	Native	Pres	Jul–Oct	X	X		X	X	
Asteraceae (Compositae)	<i>Packera multilobata</i>	basin groundsel	Native	Pres	Apr–Aug	X	X	X	X		
Asteraceae (Compositae)	<i>Packera neomexicana</i>	New Mexico groundsel	Native	Pres	Jun–Aug	X		X	X		
Asteraceae (Compositae)	<i>Petroria pumila</i>	rock-goldenrod	Native	Pres	Jul–Sep	X	X	X	X		
Asteraceae (Compositae)	<i>Psilochenia acuminata</i>	mountain hawksbeard	Native	Pres	May–Jul	X	X	X	X		
Asteraceae (Compositae)	<i>Psilochenia atribarba</i>	slender hawksbeard	Native	Pres	May–Jul	X		X	X		
Asteraceae (Compositae)	<i>Psilochenia modocensis</i>	Modoc hawksbeard	Native	Pres	May–Jul	X	X	X			
Asteraceae (Compositae)	<i>Psilochenia occidentalis</i>	western hawksbeard	Native	Pres	May–Jul	X	X		X		
Asteraceae (Compositae)	<i>Rudbeckia ampla</i>	cutleaf coneflower	Native	Pres	Jul–Sep					X	
Asteraceae (Compositae)	<i>Senecio integerrimus</i>	western groundsel	Native	Pres	Jun–Aug	X	X	X	X		
Asteraceae (Compositae)	<i>Senecio wootonii</i>	Wooton's ragwort	Native	Hist	Apr–Aug	X					
Asteraceae (Compositae)	<i>Solidago velutina</i>	three-nerve goldenrod	Native	Pres	Aug–Oct	X	X	X	X		
Asteraceae (Compositae)	<i>Stenotus acaulis</i>	stemless goldenweed	Native	Rep	May–Jul	X	X	X			
Asteraceae (Compositae)	<i>Stenotus armerioides</i>	thrift goldenweed	Native	Pres	May–Jun	X	X	X	X		
Asteraceae (Compositae)	<i>Stephanomeria pauciflora</i>	brown-plume wire-lettuce	Native	Pres	May–Oct	X	X				
Asteraceae (Compositae)	<i>Taraxacum officinale</i>	common dandelion	Intro	Pres	Apr–Dec	X	X	X	X	X	Disturbed areas
Asteraceae (Compositae)	<i>Tetraneuris acaulis</i>	stemless hymenoxys	Native	Rep	Apr–Jun	X	X				

Appendix D. Confirmed, historical, and reported taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes, cont.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Grs	Pin/ Jun	Oak/ MtBr	Dg-fir	Wet	Comments
<i>Perennial Forbs, cont.</i>											
Asteraceae (Compositae)	<i>Tetranuris ivesiana</i>	Canyonlands hymenoxys	Native	Pres	Apr–Jun	X	X		X		
Asteraceae (Compositae)	<i>Tetranuris torreyana</i>	Torrey's hymenoxys	Native	Pres	May–Jul	X	X	X			
Asteraceae (Compositae)	<i>Townsendia incana</i>	hoary townsendia	Native	Pres	Apr–Jul	X	X				Adobe Hills, Mancos Shale
Asteraceae (Compositae)	<i>Tragopogon dubius</i> var. <i>major</i>	yellow salsify	Intro	Pres	May–Jul	X				X	Disturbed areas
Asteraceae (Compositae)	<i>Virgaster ascendens</i>	Pacific aster	Native	Pres	Jul–Oct	X	X	X	X	X	
Asteraceae (Compositae)	<i>Wyethia amplexicaulis</i>	mule's-ears	Native	Pres	May–Jun	X	X	X			
Asteraceae (Compositae)	<i>Wyethia arizonica</i>	Arizona mulesears	Native	Pres	Jun–Aug		X	X	X		
Asteraceae (Compositae)	<i>Wyethia x magna</i>	hybrid wyethia	Native	Pres	May–Jul			X			
Asteraceae (Compositae)	<i>Xylorhiza venusta</i>	Cisco woodyaster	Native	Pres	Apr–Jun		X				Adobe Hills, Mancos Shale
Boraginaceae	<i>Cynoglossum officinale</i>	common hound's-tongue	Intro	Pres	May–Jul	X	X	X	X	X	
Boraginaceae	<i>Hackelia floribunda</i>	showy stickseed	Native	Pres	Jun–Aug	X		X	X	X	
Boraginaceae	<i>Lithospermum ruderale</i>	western stoneseed	Native	Pres	Apr–Jun	X	X	X	X		
Boraginaceae	<i>Mertensia arizonica</i> var. <i>grahamii</i>	aspen bluebell	Native	Pres	Jun–Aug		X	X	X	X	
Boraginaceae	<i>Mertensia brevistylis</i>	short-styled bluebell	Native	Pres	Apr–Jun	X		X			
Boraginaceae	<i>Mertensia ciliata</i>	streamside bluebell	Native	Pres	Jun–Aug			X	X		
Boraginaceae	<i>Oreocarya flavoculata</i>	yellow-eye cryptanth	Native	Pres	Apr–Jun	X	X	X	X		
Brassicaceae (Cruciferae)	<i>Arabis hirsuta</i>	hairy rockcross	Native	Rep	Jun–Aug	X	X	X			
Brassicaceae (Cruciferae)	<i>Barbarea vulgaris</i>	European wintercross	Intro	Pres	May–Aug					X	
Brassicaceae (Cruciferae)	<i>Boechea crandallii</i>	Crandall's rockcross	Native	Rep	May–Jun	X					
Brassicaceae (Cruciferae)	<i>Boechea divaricarpa</i>	spreadingpod rockcross	Native	Pres	Jun–Jul	X	X	X		X	

Appendix D. Confirmed, historical, and reported taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes, cont.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Grs	Pin/Jun	Oak/MtBr	Dg-fir	Wet	Comments
<i>Perennial Forbs, cont.</i>											
Brassicaceae (Cruciferae)	<i>Boechea drummondii</i>	Drummond's rockcress	Native	Pres	May-Sep	X		X			
Brassicaceae (Cruciferae)	<i>Boechea fendleri</i>	Fendler's rockcress	Native	Rep	Apr-Aug	X	X	X	X	X	
Brassicaceae (Cruciferae)	<i>Boechea gunnisoniana</i>	Gunnison's rockcress	Native	Pres	May-Jun	X		X			
Brassicaceae (Cruciferae)	<i>Boechea lignifera</i>	Sweetwater rockcress	Native	Pres	May-Jul	X	X				
Brassicaceae (Cruciferae)	<i>Boechea oxyclobula</i>	Glenwood Springs rockcress	Native	Pres	May-Jun	X	X	X			
Brassicaceae (Cruciferae)	<i>Boechea pallidifolia</i>	Gunnison County rockcress	Native	Pres	May-Jun	X	X	X			Adobe Hills, Mancos Shale
Brassicaceae (Cruciferae)	<i>Boechea perennans</i>	perennial rockcress	Native	Pres	Mar-Jul	X	X	X	X		
Brassicaceae (Cruciferae)	<i>Boechea retrofracta</i>	Holboell's rockcress	Native	Pres	May-Jul	X	X	X	X		
Brassicaceae (Cruciferae)	<i>Boechea selbyi</i>	Selby's rockcress	Native	Pres	May-Aug	X	X	X	X		
Brassicaceae (Cruciferae)	<i>Cardaria chalepensis</i>	orbicular whitetop	Intro	Pres	May-Aug					X	Disturbed areas
Brassicaceae (Cruciferae)	<i>Erysimum capitatum</i>	western wallflower	Native	Pres	Apr-Aug	X	X	X	X		
Brassicaceae (Cruciferae)	<i>Erysimum cheiranthoides</i> ssp. <i>altum</i>	worm-seed wallflower	Native	Rep	Jun-Aug	X					Disturbed areas
Brassicaceae (Cruciferae)	<i>Erysimum inconspicuum</i>	shy wallflower	Native	Rep	Apr-Jul	X					
Brassicaceae (Cruciferae)	<i>Hesperis matronalis</i>	dame's rocket	Intro	Pres	Apr-Jun					X	Disturbed areas
Brassicaceae (Cruciferae)	<i>Lepidium montanum</i> var. <i>jonesii</i>	Jones' pepperwort	Native	Pres	Apr-Sep	X	X				Adobe Hills, Mancos Shale
Brassicaceae (Cruciferae)	<i>Lepidium montanum</i> var. <i>montanum</i>	mountain pepperwort	Native	Rep	Apr-Sep	X	X				
Brassicaceae (Cruciferae)	<i>Lepidium montanum</i> var. <i>tenellum</i>	mountain pepperweed	Native	Pres	Jun-Jul		X	X			

Appendix D. Confirmed, historical, and reported taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes, cont.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Grs	Pin/ Jun	Oak/ MtBr	Dg-fir	Wet	Comments
<i>Perennial Forbs, cont.</i>											
Brassicaceae (Cruciferae)	<i>Lesquerella rectipes</i>	Colorado Plateau bladderpod	Native	Rep	Apr–Aug	X	X	X			
Brassicaceae (Cruciferae)	<i>Lesquerella vicina</i>	Uncompaghere bladderpod	Native	Pres	Apr–May		X				Adobe Hills, Mancos Shale
Brassicaceae (Cruciferae)	<i>Noccaea montana</i>	alpine pennycress	Native	Pres	Apr–Aug	X		X	X		
Brassicaceae (Cruciferae)	<i>Physaria acutifolia</i>	sharp-leaf twinpod	Native	Pres	May–Jul	X	X		X		
Brassicaceae (Cruciferae)	<i>Physaria floribunda</i>	mesa twinpod	Native	Pres	May–Jul		X				
Brassicaceae (Cruciferae)	<i>Physaria rollinsii</i>	Rollins' twinpod	Native	Rep	May–Jun	X					Talus
Brassicaceae (Cruciferae)	<i>Schoenocrambe linifolia</i>	flax-leaved plainsmustard	Native	Pres	Apr–Jul	X	X	X			
Brassicaceae (Cruciferae)	<i>Stanleya albescens</i>	white prince's-plume	Native	Pres	May–Jun		X				Adobe Hills, Mancos Shale
Brassicaceae (Cruciferae)	<i>Stanleya pinnata</i> var. <i>pinnata</i>	prince's-plume	Native	Pres	Apr–Sep	X	X	X			Adobe Hills, Mancos Shale
Brassicaceae (Cruciferae)	<i>Streptanthus cordatus</i>	heart-leaf jewelflower	Native	Pres	Apr–Jul	X	X	X	X		
Brassicaceae (Cruciferae)	<i>Thelypodopsis elegans</i>	elegant thelypody	Native	Pres	Apr–Jul	X	X	X			Adobe Hills, Mancos Shale
Brassicaceae (Cruciferae)	<i>Turritis glabra</i>	tower-mustard	Native	Pres	May–Sep	X	X	X	X		
Cactaceae	<i>Echinocereus triglochidiatus</i>	claretcup	Native	Pres	Apr–Jun	X	X	X			Adobe Hills, Mancos Shale
Cactaceae	<i>Opuntia fragilis</i> var. <i>brachyartha</i>	brittle prickly-pear	Native	Pres	Jun–Jul	X	X	X	X	X	
Cactaceae	<i>Opuntia phaeacantha</i>	berry pricklypear	Native	Pres	Apr–Jul		X	X			
Cactaceae	<i>Opuntia polyacantha</i>	plains prickly-pear	Native	Pres	May–Jun	X	X	X	X		
Cactaceae	<i>Pediocactus simpsonii</i> var. <i>minor</i>	Simpson's hedgehog cactus	Native	Pres	May–Jul	X	X		X		
Calochortaceae (Liliaceae)	<i>Calochortus gunnisonii</i>	Gunnison's mariposa	Native	Pres	Jun–Aug	X	X	X			

Appendix D. Confirmed, historical, and reported taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes, cont.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Grs	Pin/Jun	Oak/MtBr	Dg-fir	Wet	Comments
<i>Perennial Forbs, cont.</i>											
Calochortaceae (Liliaceae)	<i>Calochortus nuttallii</i>	sego-lily	Native	Pres	Jun–Jul	X	X	X	X		Adobe Hills, Mancos Shale
Campanulaceae	<i>Campanula rotundifolia</i>	harebell	Native	Pres	Jun–Sep				X		
Caryophyllaceae	<i>Gastrollychnis drummondii</i>	Drummond's catchfly	Native	Pres	May–Sep	X	X	X	X		
Convallariaceae (Liliaceae, Ruscaceae)	<i>Maianthemum amplexicaule</i>	false Solomon's-seal	Native	Pres	Jun–Jul		X	X	X		
Convallariaceae (Liliaceae, Ruscaceae)	<i>Maianthemum stellatum</i>	starry false Solomon's-seal	Native	Pres	Apr–Jun	X	X	X	X	X	
Convolvulaceae	<i>Convolvulus arvensis</i>	field bindweed	Intro	Pres	Jun–Aug		X	X			Disturbed areas
Crassulaceae	<i>Amerosedum lanceolatum</i>	lance-leaved stonecrop	Native	Pres	Jun–Aug	X	X	X			
Euphorbiaceae	<i>Chamaesyce fendleri</i>	Fendler's spurge	Native	Rep	May–Sep	X	X	X			
Euphorbiaceae	<i>Tithymalus brachyceras</i>	shorthorn spurge	Native	Pres	May–Jun	X	X	X		X	Adobe Hills, Mancos Shale
Euphorbiaceae	<i>Tragia ramosa</i>	noseburn	Native	Rep	May–Aug	X	X				
Fabaceae (Leguminosae)	<i>Astragalus asclepiadoides</i>	milkweed milkvetch	Native	Pres	May–Jun		X				Adobe Hills, Mancos Shale
Fabaceae (Leguminosae)	<i>Astragalus convallarius</i>	lesser rushy milkvetch	Native	Pres	May–Aug	X	X	X	X		Adobe Hills, Mancos Shale
Fabaceae (Leguminosae)	<i>Astragalus falcatus</i>	Russian sickle	Intro	Rep	Jun–Aug						Disturbed areas
Fabaceae (Leguminosae)	<i>Astragalus flavus</i>	yellow milkvetch	Native	Pres	Apr–Jul		X				Adobe Hills, Mancos Shale
Fabaceae (Leguminosae)	<i>Astragalus lentiginosus</i> var. <i>palans</i>	straggling milkvetch	Native	Pres	Apr–Jun	X	X	X			
Fabaceae (Leguminosae)	<i>Astragalus megacarpus</i>	great bladderly milkvetch	Native	Pres	Apr–Jul	X	X	X	X		Adobe Hills, Mancos Shale
Fabaceae (Leguminosae)	<i>Astragalus miser</i> var. <i>oblongifolius</i>	Rydberg's weedy milkvetch	Native	Pres	Jun–Aug	X		X			
Fabaceae (Leguminosae)	<i>Astragalus oophorus</i> var. <i>caulescens</i>	egg milkvetch	Native	Pres	May–Jul	X	X	X			

Appendix D. Confirmed, historical, and reported taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes, cont.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/ Grs	Pin/ Jun	Oak/ MtBr	Dg- fir	Wet	Comments
<i>Perennial/ Forbs, cont.</i>											
Fabaceae (Leguminosae)	<i>Astragalus scopolorum</i>	Rocky Mountain milkvetch	Native	Pres	May-Aug	X	X	X	X		
Fabaceae (Leguminosae)	<i>Astragalus tenellus</i>	pulse milkvetch	Native	Rep		X	X	X	X	X	x
Fabaceae (Leguminosae)	<i>Astragalus wingatanus</i>	Fort Wingate milkvetch	Native	Pres	Apr-Jul	X	X	X			
Fabaceae (Leguminosae)	<i>Glycyrrhiza lepidota</i>	licorice-root	Native	Pres	May-Jul					X	Disturbed areas
Fabaceae (Leguminosae)	<i>Lathyrus leucanthus</i>	whiteflower sweetpea	Native	Pres	May-Aug			X	X		
Fabaceae (Leguminosae)	<i>Lupinus argenteus</i>	silvery lupine	Native	Rep	May-Aug	X	X	X	X		
Fabaceae (Leguminosae)	<i>Lupinus caudatus</i> var. <i>utahensis</i>	Utah lupine	Native	Pres	May-Aug	X	X	X	X		
Fabaceae (Leguminosae)	<i>Lupinus polyphyllus</i> var. <i>prunophilus</i>	meadow lupine	Native	Pres	Jun-Aug	X	X	X	X		
Fabaceae (Leguminosae)	<i>Lupinus sericeus</i>	silky lupine	Native	Rep	May-Aug	X	X	X	X		
Fabaceae (Leguminosae)	<i>Medicago sativa</i>	alfalfa	Intro	Pres	May-Sep		X	X			Disturbed areas
Fabaceae (Leguminosae)	<i>Melilotus officinale</i>	yellow sweet-clover	Intro	Pres	May-Oct	X					Disturbed areas
Fabaceae (Leguminosae)	<i>Trifolium gymnocarpon</i>	dwarf clover	Native	Pres	Apr-Aug	X	X	X	X		
Fabaceae (Leguminosae)	<i>Trifolium pratense</i>	red clover	Intro	Rep	May-Oct	X				X	Disturbed areas
Fabaceae (Leguminosae)	<i>Trifolium repens</i>	white clover	Intro	Pres	Apr-Sep					X	
Fabaceae (Leguminosae)	<i>Vicia americana</i> var. <i>americana</i>	American vetch	Native	Pres	May-Aug	X	X	X	X		
Fumariaceae	<i>Corydalis aurea</i>	golden smoke	Native	Pres	Apr-Sep			X	X	X	
Fumariaceae	<i>Corydalis curviflora</i> ssp. <i>occidentalis</i>	golden corydalis	Native	Pres	Apr-Sep	X	X	X			
Gentianaceae	<i>Frasera speciosa</i>	elkweed	Native	Pres	Jun-Aug	X		X	X		
Geraniaceae	<i>Geranium richardsonii</i>	Richardson's crane's-bill	Native	Pres	Jun-Aug		X	X	X		

Appendix D. Confirmed, historical, and reported taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes, cont.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Grs	Pin/ Jun	Oak/ MtBr	Dg-fir	Wet	Comments
<i>Perennial Forbs, cont.</i>											
Helleboraceae (Ranunculaceae)	<i>Actaea rubra</i> ssp. <i>arguta</i>	red baneberry	Native	Pres	May–Aug			X	X	X	
Helleboraceae (Ranunculaceae)	<i>Aquilegia elegantula</i>	elegant columbine	Native	Pres	Jun–Jul					X	
Helleboraceae (Ranunculaceae)	<i>Aquilegia micrantha</i>	alcove columbine	Native	Pres	May–Jun					X	Hanging garden
Helleboraceae (Ranunculaceae)	<i>Delphinium nuttallianum</i>	Nuttall's larkspur	Native	Pres	Apr–Jul	X	X	X	X		
Helleboraceae (Ranunculaceae)	<i>Delphinium ramosum</i>	mountain larkspur	Native	Rep	Jun–Aug				X		
Hydrophyllaceae	<i>Hydrophyllum capitatum</i>	capitate waterleaf	Native	Pres	Apr–Jul	X	X	X			
Hypericaceae (Guttiferae, Clusiaceae)	<i>Hypericum formosum</i>	western St. John's-wort	Native	Pres	May–Sep					X	
Lamiaceae (Labiatae)	<i>Agastache urticifolia</i>	nettle-leaf horsemint	Native	Pres	Jun–Aug	X		X	X		
Lamiaceae (Labiatae)	<i>Dracocephalum parviflorum</i>	smallflower dragonhead	Native	Pres	Jun–Aug	X	X	X	X		
Lamiaceae (Labiatae)	<i>Marrubium vulgare</i>	common horehound	Intro	Pres	May–Oct	X	X				Disturbed areas
Lamiaceae (Labiatae)	<i>Mentha arvensis</i>	field mint	Native	Pres	Jun–Sep					X	
Lamiaceae (Labiatae)	<i>Monardella odoratissima</i>	stinking horsemint	Native	Pres	May–Aug	X	X	X	X		Rocky slopes
Lemnaceae	<i>Lemna turionifera</i>	lesser duckweed	Native	Pres	Jun–Oct					X	
Liliaceae	<i>Fritillaria atropurpurea</i>	leopard-lily	Native	Pres	Apr–Jul	X	X	X	X		
Linaceae	<i>Adenolinum lewisii</i>	blue flax	Native	Pres	Apr–Aug	X	X	X			
Loasaceae	<i>Nuttallia pterosperma</i>	wing-seed stickleaf	Native	Pres	Mar–Aug	X	X				Adobe Hills, Mancos Shale
Malvaceae	<i>Sphaeralcea coccinea</i> ssp. <i>dissecta</i>	scarlet globe-mallow	Native	Pres	Apr–Oct	X	X	X	X		Adobe Hills, Mancos Shale
Melanthiaceae (Liliaceae)	<i>Toxicoscordion paniculatum</i>	foothills death-camas	Native	Pres	Mar–Jun	X	X	X	X		

Appendix D. Confirmed, historical, and reported taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes, cont.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Grs	Pin/Jun	Oak/MtBr	Dg-fir	Wet	Comments
<i>Perennial/Forbs, cont.</i>											
Melanthiaceae (Liliaceae)	<i>Toxicoscordion venenosum</i>	meadow death camas	Native	Pres	Apr–Jul	X	X	X	X	X	
Nyctaginaceae	<i>Abronia argillosa</i>	clay sand-verbena	Native	Pres	May–Aug		X				Adobe Hills, Mancos Shale
Nyctaginaceae	<i>Oxybaphus linearis</i>	narrow-leaf four-o'clock	Native	Pres	May–Aug	X	X	X	X	X	
Onagraceae	<i>Epilobium ciliatum</i>	northern willow-herb	Native	Pres	Jun–Aug					X	
Onagraceae	<i>Epilobium halleanum</i>	Hall's willow-herb	Native	Pres	Jun–Aug					X	
Onagraceae	<i>Oenothera caespitosa</i> ssp. <i>marginata</i>	long-tube evening-primrose	Native	Pres	Apr–Jun	X	X	X	X		Adobe Hills, Mancos Shale
Onagraceae	<i>Oenothera coronopifolia</i>	hairy-throat evening-primrose	Native	Pres	Jun–Aug	X	X	X	X		
Orchidaceae	<i>Corallorhiza maculata</i>	spotted coral-root	Native	Rep	Jun–Jul			X			
Orchidaceae	<i>Epipactis gigantea</i>	giant helleborine	Native	Rep	Apr–Aug					X	
Orobanchaceae	<i>Aphyllon uniflorum</i>	naked broomrape	Native	Pres	May–Jul	X	X	X	X		
Plantaginaceae	<i>Plantago major</i>	common plantain	Intro	Pres	May–Aug					X	
Polemoniaceae	<i>Gilia penstemonoides</i>	Black Canyon gilia	Native	Pres	Jun–Aug						Rock crevices
Polemoniaceae	<i>Gilia pinnatifida</i>	sticky gilia	Native	Rep	May–Sep	X	X				
Polemoniaceae	<i>Ipomopsis aggregata</i> ssp. <i>aggregata</i>	scarlet gilia	Native	Pres	May–Aug	X	X	X	X	X	
Polemoniaceae	<i>Phlox austromontana</i>	desert phlox	Native	Pres	Apr–Jun	X	X	X	X		
Polemoniaceae	<i>Phlox hoodii</i>	Hood's phlox	Native	Pres	Apr–Jun	X	X	X	X		
Polemoniaceae	<i>Phlox longifolia</i>	long-leaf phlox	Native	Pres	Apr–Jul	X	X	X	X		
Polygonaceae	<i>Acetosella vulgaris</i>	sheep sorrel	Intro	Pres	Apr–Sep						Disturbed areas
Polygonaceae	<i>Eriogonum flavum</i> ssp. <i>flavum</i>	yellow wild-buckwheat	Native	Pres	Jun–Sep	X		X			
Polygonaceae	<i>Eriogonum racemosum</i>	redroot wild buckwheat	Native	Pres	Jun–Oct	X	X	X	X		
Polygonaceae	<i>Eriogonum umbellatum</i> var. <i>aureum</i>	sulphur-flower wild-buckwheat	Native	Pres	Jun–Sep	X	X	X	X		
Polygonaceae	<i>Pterogonum alatum</i>	winged wild buckwheat	Native	Pres	Jun–Oct	X	X	X	X		Sandy soils
Polygonaceae	<i>Rumex crispus</i>	curly dock	Intro	Pres	May–Sep					X	Disturbed areas

Appendix D. Confirmed, historical, and reported taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes, cont.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/ Grs	Pin/ Jun	Oak/ MtBr	Dg-fir	Wet	Comments
<i>Perennial Forbs, cont.</i>											
Polygonaceae	<i>Rumex triangulivalvis</i>	willow dock	Native	Pres	May-Sep	X	X	X	X		
Portulacaceae	<i>Claytonia lanceolata</i>	lanceleaf springbeauty	Native	Pres	Apr-Jul		X	X			
Portulacaceae	<i>Oreobroma pygmaea</i>	alpine bitter-root	Native	Pres	May-Aug	X		X			
Ranunculaceae	<i>Atragene columbiana</i>	Columbian virgin's-bower	Native	Rep	May-Sep			X	X	X	
Ranunculaceae	<i>Clematis ligusticifolia</i>	white virgin's-bower	Native	Pres	Jul-Aug					X	
Ranunculaceae	<i>Coriflora hirsutissima</i>	sugar-bowls	Native	Pres	May-Aug	X		X	X		
Ranunculaceae	<i>Halerpestes cymbalaria</i> ssp. <i>saximontana</i>	marsh buttercup	Native	Pres	May-Sep					X	
Ranunculaceae	<i>Pulsatilla ludoviciana</i>	pasqueflower	Native	Pres	Apr-Jun	X					
Ranunculaceae	<i>Ranunculus glaberrimus</i> var. <i>ellipticus</i>	sagebrush buttercup	Native	Pres	Apr-Jun	X	X	X	X		
Rosaceae	<i>Argentina anserina</i>	silverweed	Native	Pres	May-Aug					X	
Rosaceae	<i>Dryocallis arguta</i>	tall cinquefoil	Native	Pres	Jun-Jul			X			
Rosaceae	<i>Erythrocoma triflora</i>	prairie-smoke	Native	Pres	Jun-Aug	X					
Rosaceae	<i>Fragaria vesca</i> ssp. <i>bracteata</i>	woodland strawberry	Native	Pres	Jun-Jul			X	X	X	
Rosaceae	<i>Fragaria virginiana</i> ssp. <i>glauca</i>	Virginia strawberry	Native	Pres	Jun-Jul				X	X	
Rosaceae	<i>Petrophyton caespitosum</i>	rock spiraea	Native	Pres	Aug-Sep	X	X	X	X		Rock crevices
Rosaceae	<i>Potentilla pulcherrima</i>	beautiful cinquefoil	Native	Pres	Jun-Aug	X		X			
Rubiaceae	<i>Galium coloradoense</i>	Colorado bedstraw	Native	Pres	May-Aug	X	X	X			
Rubiaceae	<i>Galium septentrionale</i>	northern bedstraw	Native	Pres	Jun-Aug	X		X	X		
Santalaceae	<i>Comandra umbellata</i>	bastard toadflax	Native	Pres	Apr-Aug	X	X	X	X		
Saxifragaceae	<i>Ciliaria austromontana</i>	spotted saxifrage	Native	Pres	Jun-Sep			X	X		Cliff face
Saxifragaceae	<i>Heuchera parvifolia</i>	littleleaf alumroot	Native	Pres	May-Sep	X	X	X	X		Rocky slopes
Saxifragaceae	<i>Lithophragma glabrum</i>	fringe cup woodlandstar	Native	Pres	Mar-Aug	X	X	X	X	X	
Saxifragaceae	<i>Lithophragma tenellum</i>	slender woodlandstar	Native	Pres	Apr-Aug	X	X	X	X	X	
Saxifragaceae	<i>Sullivantia hapemanii</i> var. <i>purpusii</i>	Purpus' sullivantia	Native	Pres	Jun-Jul					X	Rock crevices

Appendix D. Confirmed, historical, and reported taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes, cont.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Gr	Pin/ Jun	Oak/ MtBr	Dg-fir	Wet	Comments
<i>Perennial / Forbs, cont.</i>											
Scrophulariaceae	<i>Castilleja chromosa</i>	desert paintbrush	Native	Pres	Apr–Jun	X	X	X			
Scrophulariaceae	<i>Castilleja linariifolia</i>	Wyoming paintbrush	Native	Pres	Jul–Aug	X	X	X			
Scrophulariaceae	<i>Castilleja miniata</i>	scarlet paintbrush	Native	Rep	Jul–Aug	X	X	X		X	
Scrophulariaceae	<i>Limosella aquatica</i>	mudwort	Native	Pres	Jun–Aug					X	
Scrophulariaceae	<i>Linaria vulgaris</i>	butter-and-eggs	Intro	Rep	Jun–Aug	X					Disturbed areas
Scrophulariaceae	<i>Pedicularis centranthera</i>	dwarf lousewort	Native	Pres	Apr–Jun		X	X			
Scrophulariaceae	<i>Pedicularis procera</i>	Gray's lousewort	Native	Rep	Jul–Aug				X		
Scrophulariaceae	<i>Penstemon barbatus</i> var. <i>torreyi</i>	beardlip penstemon	Native	Pres	Jun–Jul			X			Rocky slopes
Scrophulariaceae	<i>Penstemon caespitosus</i>	mat penstemon	Native	Pres	May–Jul	X	X	X			
Scrophulariaceae	<i>Penstemon retrorsus</i>	Adobe Hills beardtongue	Native	Pres	May–Jun		X				Adobe Hills, Mancos Shale
Scrophulariaceae	<i>Penstemon strictus</i>	Rocky Mountain penstemon	Native	Pres	Jun–Aug	X	X	X			
Scrophulariaceae	<i>Penstemon watsonii</i>	Watson's penstemon	Native	Pres	Jun–Aug	X	X	X			
Scrophulariaceae	<i>Scrophularia lanceolata</i>	lance-leaf figwort	Native	Pres	Jun–Jul	X		X		X	
Scrophulariaceae	<i>Verbascum thapsus</i>	woolly mullein	Intro	Pres	Jun–Aug	X	X	X			Disturbed areas
Scrophulariaceae	<i>Veronica americana</i>	American brooklime	Native	Pres	Jul–Aug					X	
Scrophulariaceae	<i>Veronica catenata</i>	chain speedwell	Native	Pres	Jun–Aug					X	
Thalictraceae (Ranunculaceae)	<i>Thalictrum fendleri</i>	Fendler's meadow-rue	Native	Pres	Jun–Aug			X		X	
Urticaceae	<i>Urtica gracilis</i> ssp. <i>gracilis</i>	stinging nettle	Native	Pres	Jul–Aug	X		X			
Uvulariaceae (Liliaceae, Calochortaceae)	<i>Prosartes trachycarpa</i>	rough-fruited fairy-bells	Native	Pres	Jun–Aug			X			
Valerianaceae	<i>Valeriana capitata</i> var. <i>acutiflora</i>	mountain valerian	Native	Pres	Jun–Jul			X			
Verbenaceae	<i>Verbena bracteata</i>	prostrate vervain	Native	Pres	May–Sep	X	X	X			Disturbed areas
Violaceae	<i>Viola adunca</i>	hook-spur violet	Native	Pres	Mar–Aug			X		X	
Violaceae	<i>Viola biternata</i>	Shelton's violet	Native	Pres	Apr–Jun			X			
Violaceae	<i>Viola scopulorum</i>	Canada violet	Native	Pres	Apr–Aug		X	X			

Appendix D. Confirmed, historical, and reported taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes, cont.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Grs	Pin/ Jun	Oak/ MtBr	Dg-fir	Wet	Comments
<i>Perennial Forbs, cont.</i>											
Violaceae	<i>Viola vallicola</i>	valley violet	Native	Pres	Mar-Jul	X		X			
Viscaceae	<i>Phoradendron juniperinum</i>	juniper mistletoe	Native	Pres	Jul-Sep		X				
Zannichelliaceae	<i>Zannichellia palustris</i>	horned pondweed	Native	Pres	Mar-Nov					X	
Annual Forbs											
Amaranthaceae	<i>Amaranthus albus</i>	tumble pigweed	Intro	Pres	Jun-Oct	X					Disturbed areas
Asteraceae (Compositae)	<i>Conyza canadensis</i>	Canadian horseweed	Native	Pres	Jul-Sep			X		X	
Asteraceae (Compositae)	<i>Cyclachaena xanthifolia</i>	marsh-elder	Native	Pres	Aug-Oct					X	Disturbed areas
Asteraceae (Compositae)	<i>Gnaphalium uliginosum</i>	slender cudweed	Native	Pres	Jul-Oct					X	
Asteraceae (Compositae)	<i>Helianthus annuus</i>	common sunflower	Native	Pres	Jun-Sep		X	X			Adobe Hills, Mancos Shale
Asteraceae (Compositae)	<i>Lactuca serriola</i>	prickly lettuce	Intro	Pres	Jul-Sep	X	X	X			
Asteraceae (Compositae)	<i>Leucantha cyanus</i>	bachelor's button	Intro	Rep	Jun-Sep	X					Disturbed areas
Asteraceae (Compositae)	<i>Machaeranthera gracilis</i>	slender goldenweed	Native	Rep	May-Oct	X					
Asteraceae (Compositae)	<i>Madia glomerata</i>	mountain tarweed	Native	Pres	Jul-Sep	X		X		X	Disturbed areas
Boraginaceae	<i>Cryptantha fendleri</i>	sand dune cryptanth	Native	Pres	May-Jul	X	X	X	X		
Boraginaceae	<i>Cryptantha gracilis</i>	slender cryptanth	Native	Pres	Apr-Jul	X	X	X			
Boraginaceae	<i>Cryptantha pterocarya</i>	wing-nut cryptanth	Native	Pres	Apr-Jul	X	X				
Boraginaceae	<i>Cryptantha watsonii</i>	Watson's cryptanth	Native	Pres	May-Jul	X	X	X	X		
Boraginaceae	<i>Lappula marginata</i>	cupseed stickseed	Native	Pres	Apr-Jun	X	X	X	X		Disturbed areas
Boraginaceae	<i>Lappula redowskii</i>	western stickseed	Native	Pres	Apr-Jun	X	X	X	X		Disturbed areas
Boraginaceae	<i>Lappula squarrosa</i>	European stickseed	Intro	Rep	Jun-Aug	X					Disturbed areas
Boraginaceae	<i>Plagiobothrys scouleri</i> ssp. <i>penicillatus</i>	meadow popcorn-flower	Native	Pres	May-Aug					X	
Brassicaceae (Cruciferae)	<i>Alyssum alyssoides</i>	pale madwort	Intro	Rep	May-Jul	X	X				Disturbed areas

Appendix D. Confirmed, historical, and reported taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes, cont.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Grs	Pin/Jun	Oak/MtBr	Dg-fir	Wet	Comments
<i>Annual Forbs, cont.</i>											
Brassicaceae (Cruciferae)	<i>Alyssum desertorum</i>	desert madwort	Intro	Pres	Apr–Jul	X	X		X		Disturbed areas
Brassicaceae (Cruciferae)	<i>Alyssum parviflorum</i>	European madwort	Intro	Pres	Apr–Jul	X	X	X			
Brassicaceae (Cruciferae)	<i>Camelina microcarpa</i>	little-pod false flax	Intro	Pres	Apr–Jul	X					Disturbed areas
Brassicaceae (Cruciferae)	<i>Capsella bursa-pastoris</i>	shepherd's-purse	Intro	Pres	Apr–Sep	X		X			Disturbed areas
Brassicaceae (Cruciferae)	<i>Choripora tenella</i>	blue mustard	Intro	Pres	Apr–Jun						Disturbed areas
Brassicaceae (Cruciferae)	<i>Descurainia incisa</i> ssp. <i>filipes</i>	western tansy-mustard	Native	Pres	Apr–Jul		X	X	X		
Brassicaceae (Cruciferae)	<i>Descurainia incisa</i> ssp. <i>incisa</i>	mountain tansy-mustard	Native	Pres	Apr–Jul	X	X	X			
Brassicaceae (Cruciferae)	<i>Descurainia sophia</i>	flixweed	Intro	Pres	Mar–Aug	X	X				Disturbed areas
Brassicaceae (Cruciferae)	<i>Draba cuneifolia</i>	wedgeleaf draba	Native	Rep	Feb–Jul	X	X				
Brassicaceae (Cruciferae)	<i>Draba nemorosa</i>	woodland whitlow-grass	Intro	Pres	Apr–Jun	X		X	X		
Brassicaceae (Cruciferae)	<i>Draba reptans</i>	dwarf draba	Native	Pres	Apr–Jul	X	X	X			
Brassicaceae (Cruciferae)	<i>Erysimum repandum</i>	spreading wallflower	Intro	Pres	Apr–Jun	X	X				Adobe Hills, Mancos Shale
Brassicaceae (Cruciferae)	<i>Lepidium densiflorum</i>	prairie pepperwort	Native	Pres	May–Jul	X	X	X	X		
Brassicaceae (Cruciferae)	<i>Lepidium perfoliatum</i>	clasping pepperwort	Intro	Pres	May–Jul	X	X	X			Disturbed areas
Brassicaceae (Cruciferae)	<i>Lepidium ramosissimum</i> var. <i>bourgeauanum</i>	branched pepperwort	Native	Pres	Jun–Aug	X				X	
Brassicaceae (Cruciferae)	<i>Sisymbrium altissimum</i>	tumble mustard	Intro	Pres	May–Aug	X	X				Disturbed areas
Brassicaceae (Cruciferae)	<i>Thelypodopsis juniperorum</i>	juniper tumblemustard	Native	Pres	May–Jun		X				

Appendix D. Confirmed, historical, and reported taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes, cont.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Grs	Pin/ Jun	Oak/ MtBr	Dg-fir	Wet	Comments
<i>Annual Forbs, cont.</i>											
Capparaceae (Cleomaceae)	<i>Cleomella palmeriana</i>	Palmer's stinkweed	Native	Pres	Apr–Oct		X				Adobe Hills, Mancos Shale
Chenopodiaceae	<i>Atriplex powellii</i>	Powell's orach	Native	Pres	Jun–Sep	X	X				Adobe Hills, Mancos Shale
Chenopodiaceae	<i>Chenopodium album</i>	lambsquarter	Intro	Rep	Jun–Sep						
Chenopodiaceae	<i>Chenopodium atrovirens</i>	mountain goosefoot	Native	Pres	Jul–Sep	X	X	X	X		
Chenopodiaceae	<i>Chenopodium foliosum</i>	smallhead goosefoot	Native	Rep	Jun–Sep			X	X		
Chenopodiaceae	<i>Chenopodium fremontii</i>	Fremont's goosefoot	Native	Pres	Aug–Oct	X	X	X			
Chenopodiaceae	<i>Halogeton glomeratus</i>	halogeton	Intro	Pres	Jul–Aug		X				Adobe Hills, Mancos Shale
Chenopodiaceae	<i>Monolepis nuttalliana</i>	Nuttall's poverty-weed	Native	Pres	Apr–Jul	X	X	X	X		Adobe Hills, Mancos Shale
Chenopodiaceae	<i>Salsola australis</i>	Russian thistle	Intro	Pres	Jun–Sep						Disturbed areas
Euphorbiaceae	<i>Chamaesyce glyptosperma</i>	ridge-seeded spurge	Native	Pres	Jun–Aug	X	X		X		
Fabaceae (Leguminosae)	<i>Astragalus nuttallianus</i> var. <i>micranthemiformis</i>	small-flowered milkvetch	Native	Rep	Apr–Jun	X	X				
Fabaceae (Leguminosae)	<i>Medicago lupulina</i>	black medick	Intro	Pres	May–Oct	X			X	X	Disturbed areas
Fabaceae (Leguminosae)	<i>Melilotus albus</i>	white sweet-clover	Intro	Pres	May–Oct	X				X	Disturbed areas
Geraniaceae	<i>Erodium cicutarium</i>	stork's-bill	Intro	Rep	Feb–Oct	X	X	X		X	Disturbed areas
Hydrophyllaceae	<i>Phacelia splendens</i>	Eastwood's phacelia	Native	Pres	May–Jun		X				Adobe Hills, Mancos Shale
Loasaceae	<i>Acrolasia albicaulis</i>	white-stem blazingstar	Native	Pres	Apr–Aug	X	X		X		Adobe Hills, Mancos Shale
Loasaceae	<i>Acrolasia dispersa</i>	Nevada stickleaf	Native	Pres	Apr–Aug	X	X	X	X		
Loasaceae	<i>Acrolasia humilis</i>	Thompson's stickleaf	Native	Pres	Apr–Jun		X				Adobe Hills, Mancos Shale
Malvaceae	<i>Malva neglecta</i>	common mallow	Intro	Pres	Apr–Oct						Disturbed areas
Onagraceae	<i>Camissonia scapoidea</i>	Paiute suncup	Native	Pres	May–Jun	X	X				Adobe Hills, Mancos Shale

Appendix D. Confirmed, historical, and reported taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes, cont.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Grs	Pin/Jun	Oak/MtBr	Dg-fir	Wet	Comments
<i>Annual Forbs, cont.</i>											
Onagraceae	<i>Epilobium brachycarpum</i>	autumn willow-herb	Native	Pres	Jul-Sep	X	X	X	X	X	
Onagraceae	<i>Gayophytum diffusum</i> ssp. <i>parviflorum</i>	diffuse groundsmoke	Native	Pres	May-Aug	X		X	X		
Onagraceae	<i>Gayophytum ramosissimum</i>	branching groundsmoke	Native	Pres	May-Aug	X	X	X	X		
Plantaginaceae	<i>Plantago patagonica</i>	woolly plantain	Native	Rep	Mar-Aug	X	X	X	X		
Polemoniaceae	<i>Collomia linearis</i>	small collomia	Native	Pres	May-Aug	X		X	X		
Polemoniaceae	<i>Gilia ophthalmoides</i>	eyelash gilia	Native	Pres	Apr-Jul		X	X			Adobe Hills, Mancos Shale
Polemoniaceae	<i>Linanthus harknessii</i> var. <i>septentrionalis</i>	northern linanthus	Native	Pres	May-Aug	X		X			
Polemoniaceae	<i>Microsteris gracilis</i>	slender phlox	Native	Pres	Mar-Jun	X	X	X	X		
Polemoniaceae	<i>Navarretia breweri</i>	yellow navarretia	Native	Pres	May-Jul	X	X	X	X		
Polygonaceae	<i>Eriogonum gordonii</i>	Gordon's wild buckwheat	Native	Pres	May-Oct		X				Adobe Hills, Mancos Shale
Polygonaceae	<i>Polygonum arenastrum</i>	yard knotweed	Intro	Pres	May-Oct	X		X			Disturbed areas
Polygonaceae	<i>Polygonum douglasii</i>	Douglas' knotweed	Native	Pres	Jun-Oct	X	X	X	X		
Polygonaceae	<i>Polygonum polygaloides</i> ssp. <i>kelloggii</i>	Kellogg's knotweed	Native	Pres	Jun-Sep	X		X	X		
Primulaceae	<i>Androsace occidentalis</i>	western rock-jasmine	Native	Pres	Apr-Jun	X	X	X		X	
Primulaceae	<i>Androsace septentrionalis</i>	pygmy-flower rock-jasmine	Native	Pres	May-Aug	X	X	X	X		
Ranunculaceae	<i>Ceratocephala orthoceras</i>	bur buttercup	Intro	Pres	Apr-Jun	X	X				Disturbed areas
Ranunculaceae	<i>Hecatonia scelerata</i>	blister buttercup	Native	Pres	May-Sep					X	
Ranunculaceae	<i>Myosurus cupulatus</i>	horseshoe mouse-tail	Native	Pres	Apr-May	X		X			
Rosaceae	<i>Potentilla norvegica</i>	Norwegian cinquefoil	Intro	Pres	Jun-Aug					X	
Rubiaceae	<i>Galium bifolium</i>	twin-leaf bedstraw	Native	Pres	May-Aug	X		X	X		
Rubiaceae	<i>Galium spurium</i>	cleavers	Native	Pres	Apr-Jun	X	X	X	X	X	
Scrophulariaceae	<i>Collinsia parviflora</i>	blue-eyed Mary	Native	Pres	Apr-Jun	X	X	X	X		
Scrophulariaceae	<i>Mimulus floribundus</i>	seep monkeyflower	Native	Pres	May-Jul					X	Rocky slopes

Appendix D. Confirmed, historical, and reported taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes, cont.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/ Grs	Pin/ Jun	Oak/ MtBr	Dg- fir	Wet	Comments
<i>Annual Forbs, cont.</i>											
Scrophulariaceae	<i>Mimulus rubellus</i>	reddish monkeyflower	Native	Pres	Apr–Jun	X	X	X	X		
Scrophulariaceae	<i>Orthocarpus luteus</i>	yellow owl-clover	Native	Pres	Jul–Aug	X		X	X	X	
Scrophulariaceae	<i>Pocilla biloba</i>	two-lobe speedwell	Intro	Pres	May–Jun	X	X	X			Disturbed areas
Scrophulariaceae	<i>Veronica peregrina</i> var. <i>xalapensis</i>	purslane speedwell	Native	Pres	Jun–Aug					X	
Urticaceae	<i>Parietaria pennsylvanica</i>	Pennsylvania pellitory	Native	Pres	Mar–Aug					X	
Perennial Graminoids											
Cyperaceae	<i>Carex egglestonii</i>	Eggleston's sedge	Native	Rep	Jul–Aug	X			X		
Cyperaceae	<i>Carex geophila</i>	White Mountain sedge	Native	Pres	May–Aug		X	X	X		
Cyperaceae	<i>Carex geyeri</i>	elk sedge	Native	Pres	Apr–Jul			X	X		
Cyperaceae	<i>Carex lanuginosa</i>	woolly sedge	Native	Pres	May–Sep					X	
Cyperaceae	<i>Carex microptera</i>	small-wing sedge	Native	Pres	Jun–Aug					X	
Cyperaceae	<i>Carex occidentalis</i>	western sedge	Native	Pres	Jun–Aug		X	X	X		
Cyperaceae	<i>Carex petasata</i>	Liddon sedge	Native	Pres	May–Jul	X		X			
Cyperaceae	<i>Carex praegracilis</i>	blackcreeper sedge	Native	Pres	May–Aug					X	
Cyperaceae	<i>Carex rossii</i>	Ross' sedge	Native	Pres	May–Aug	X	X	X	X		
Cyperaceae	<i>Carex vallicola</i>	valley sedge	Native	Pres	May–Jul	X		X	X		
Cyperaceae	<i>Carex xerantica</i>	dryland sedge	Native	Pres	Jul–Aug	X					
Cyperaceae	<i>Eleocharis bolanderi</i>	Bolander's spikerush	Native	Pres	May–Jul					X	
Cyperaceae	<i>Eleocharis macrostachya</i>	common spikerush	Native	Pres	May–Aug					X	
Cyperaceae	<i>Schoenoplectus lacustris</i> ssp. <i>acutus</i>	hardstem bulrush	Native	Rep	Jun–Aug					X	
Juncaceae	<i>Juncus arcticus</i> ssp. <i>ater</i>	Baltic rush	Native	Pres	May–Jul					X	
Juncaceae	<i>Juncus confusus</i>	perplexing rush	Native	Pres	Jun–Aug				X	X	
Juncaceae	<i>Juncus dudleyi</i>	slender rush	Native	Pres	Jun–Aug					X	
Juncaceae	<i>Juncus longistylis</i>	longstyle rush	Native	Pres	Jun–Aug					X	
Juncaceae	<i>Juncus saximontanus</i>	mountain rush	Native	Pres	Jun–Aug					X	
Juncaceae	<i>Juncus torreyi</i>	Torrey's rush	Native	Rep	Jun–Aug					X	
Poaceae (Gramineae)	<i>Achnatherum hymenoides</i>	Indian ricegrass	Native	Pres	May–Jul	X	X	X	X		

Appendix D. Confirmed, historical, and reported taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes, cont.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Grs	Pin/Jun	Oak/MtBr	Dg-fir	Wet	Comments
<i>Perennial Graminoids, cont.</i>											
Poaceae (Gramineae)	<i>Achnatherum lettermanii</i>	Letterman's needlegrass	Native	Pres	Jul-Sep	X	X	X	X		
Poaceae (Gramineae)	<i>Achnatherum nelsonii</i>	Nelson's needlegrass	Native	Pres	Jun-Sep	X	X	X			
Poaceae (Gramineae)	<i>Achnatherum pinetorum</i>	pine needlegrass	Native	Pres	Jun-Aug	X	X	X	X		
Poaceae (Gramineae)	<i>Achnatherum x bloomeri</i>	Bloomer's ricegrass	Native	Pres	Jun-Aug	X	X	X			
Poaceae (Gramineae)	<i>Agropyron desertorum</i>	clustered wheatgrass	Intro	Pres	Jun-Aug	X		X			Disturbed areas
Poaceae (Gramineae)	<i>Agropyron mongolicum</i>	crested wheatgrass	Intro	Pres	Jun-Aug	X	X	X			Disturbed areas
Poaceae (Gramineae)	<i>Agrostis gigantea</i>	redtop	Intro	Pres	Jun-Sep				X	X	Disturbed areas
Poaceae (Gramineae)	<i>Agrostis scabra</i>	ticklegass	Native	Pres	Jul-Aug			X	X	X	
Poaceae (Gramineae)	<i>Alopecurus aequalis</i>	shortawn foxtail	Native	Pres	Jun-Aug					X	
Poaceae (Gramineae)	<i>Aristida purpurea</i> var. <i>longiseta</i>	purple three-awn	Native	Pres	Mar-Sep	X	X	X	X		
Poaceae (Gramineae)	<i>Blepharoneuron tricholepis</i>	pine dropseed	Native	Pres	Jul-Sep			X	X		
Poaceae (Gramineae)	<i>Bromopsis canadensis</i>	fringed brome	Native	Pres	Jul-Sep				X		
Poaceae (Gramineae)	<i>Bromopsis inermis</i>	smooth brome	Intro	Pres	Jun-Aug		X	X	X	X	Disturbed areas
Poaceae (Gramineae)	<i>Bromopsis lanatipes</i>	woolly brome	Native	Pres	Jun-Aug				X		
Poaceae (Gramineae)	<i>Bromopsis porteri</i>	nodding brome	Native	Pres	Jun-Aug	X	X	X	X		
Poaceae (Gramineae)	<i>Calamagrostis scopolorum</i>	Jones' reedgrass	Native	Rep	Jul-Aug					X	
Poaceae (Gramineae)	<i>Calamagrostis stricta</i>	slimstem reedgrass	Native	Pres	Jul-Aug					X	

Appendix D. Confirmed, historical, and reported taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes, cont.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Grass	Pin/Jun	Oak/MtBr	Dg-fir	Wet	Comments
<i>Perennial Graminoids, cont.</i>											
Poaceae (Gramineae)	<i>Ceratochloa carinata</i>	mountain brome	Native	Pres	May-Aug	X		X			
Poaceae (Gramineae)	<i>Chondrosium gracile</i>	blue grama	Native	Pres	Jul-Sep	X	X		X		
Poaceae (Gramineae)	<i>Critesion jubatum</i>	foxtail barley	Native	Pres	Jun-Aug	X	X	X	X	X	
Poaceae (Gramineae)	<i>Dactylis glomerata</i>	orchard grass	Intro	Pres	Jun-Aug	X		X	X		
Poaceae (Gramineae)	<i>Elymus canadensis</i>	Canada wildrye	Native	Pres	Jul-Aug					X	
Poaceae (Gramineae)	<i>Elymus elymoides</i>	squirreltail	Native	Pres	May-Aug	X	X	X	X	X	
Poaceae (Gramineae)	<i>Elymus glaucus</i>	blue wildrye	Native	Rep	Jul-Aug			X	X	X	
Poaceae (Gramineae)	<i>Elymus lanceolatus</i>	thickspike wheatgrass	Native	Pres	Jun-Aug	X	X	X	X	X	
Poaceae (Gramineae)	<i>Elymus longifolius</i>	bottlebrush squirreltail	Native	Pres	May-Aug	X		X			Disturbed areas
Poaceae (Gramineae)	<i>Elymus trachycaulus</i>	slender wheatgrass	Native	Pres	Jun-Aug	X		X	X	X	
Poaceae (Gramineae)	<i>Elytrigia repens</i>	quackgrass	Intro	Pres	Jun-Aug			X		X	Disturbed areas
Poaceae (Gramineae)	<i>Festuca arizonica</i>	Arizona fescue	Native	Rep	Jul-Aug				X		
Poaceae (Gramineae)	<i>Festuca arundinacea</i>	tall fescue	Intro	Pres	May-Jul	X					Disturbed areas
Poaceae (Gramineae)	<i>Festuca idahoensis</i>	Idaho fescue	Native	Pres	May-Aug	X		X	X		
Poaceae (Gramineae)	<i>Festuca saximontana</i>	Rocky Mountain fescue	Native	Pres	Jul-Aug			X	X		
Poaceae (Gramineae)	<i>Festuca thurberi</i>	Thurber's fescue	Native	Pres	Jul-Aug			X	X		
Poaceae (Gramineae)	<i>Hesperostipa comata</i>	needle-and-thread	Native	Pres	May-Jul	X	X	X	X		

Appendix D. Confirmed, historical, and reported taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes, cont.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Gr	Pin/Jun	Oak/MtBr	Dg-fir	Wet	Comments
<i>Perennial Graminoids, cont.</i>											
Poaceae (Gramineae)	<i>Hilaria jamesii</i>	galleta	Native	Pres	May–Aug	X	X				Adobe Hills, Mancos Shale
Poaceae (Gramineae)	<i>Koeleria macrantha</i>	Junegrass	Native	Pres	Jun–Aug	X	X	X	X		
Poaceae (Gramineae)	<i>Leymus cinereus</i>	Great Basin wildrye	Native	Pres	Jun–Aug	X	X	X	X		
Poaceae (Gramineae)	<i>Leymus salina</i>	Salina wildrye	Native	Pres	Jun–Jul	X	X				Adobe Hills, Mancos Shale
Poaceae (Gramineae)	<i>Melica porteri</i>	Porter’s melic	Native	Pres	Jul–Oct				X		
Poaceae (Gramineae)	<i>Muhlenbergia asperifolia</i>	scratchgrass	Native	Pres	Jul–Aug					X	
Poaceae (Gramineae)	<i>Muhlenbergia racemosa</i>	green muhly	Native	Pres	Jul–Sep					X	
Poaceae (Gramineae)	<i>Pascopyrum smithii</i>	western wheatgrass	Native	Pres	Jun–Aug	X	X	X			
Poaceae (Gramineae)	<i>Phalaroides arundinacea</i>	reed canary grass	Native	Pres	Jun–Aug					X	
Poaceae (Gramineae)	<i>Phleum pratense</i>	timothy	Intro	Pres	Jun–Sep				X	X	
Poaceae (Gramineae)	<i>Piptatherum micranthum</i>	littleseed ricegrass	Native	Pres	Jun–Aug	X	X	X			
Poaceae (Gramineae)	<i>Poa agassizensis</i>	Agassiz’s bluegrass	Native	Pres	May–Aug			X			
Poaceae (Gramineae)	<i>Poa bulbosa</i>	bulbous bluegrass	Intro	Pres	Apr–Jul	X	X	X	X	X	Disturbed areas
Poaceae (Gramineae)	<i>Poa compressa</i>	Canada bluegrass	Intro	Pres	Jun–Aug				X	X	
Poaceae (Gramineae)	<i>Poa fendleriana</i>	muttongrass	Native	Pres	May–Aug	X	X	X	X		
Poaceae (Gramineae)	<i>Poa glaucifolia</i>	pale-leaf bluegrass	Native	Pres	Jun–Aug	X	X				
Poaceae (Gramineae)	<i>Poa nemoralis</i> ssp. <i>interior</i>	interior bluegrass	Native	Pres	Jun–Aug				X		

Appendix D. Confirmed, historical, and reported taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes, cont.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Grass	Pin/Jun	Oak/MtBr	Dg-fir	Wet	Comments
<i>Perennial Graminoids, cont.</i>											
Poaceae (Gramineae)	<i>Poa pratensis</i>	Kentucky bluegrass	Intro	Pres	May-Aug	X	X	X	X	X	
Poaceae (Gramineae)	<i>Poa secunda</i>	Sandberg's bluegrass	Native	Pres	Apr-Sep	X	X	X	X	X	
Poaceae (Gramineae)	<i>Pseudoroegneria spicata</i>	bluebunch wheatgrass	Native	Pres	Jun-Aug	X	X	X	X		
Poaceae (Gramineae)	<i>Sporobolus cryptandrus</i>	sand dropseed	Native	Pres	Jun-Aug	X	X				
Poaceae (Gramineae)	<i>Thinopyrum intermedium</i> ssp. <i>barbulatum</i>	intermediate wheatgrass	Intro	Pres	Jun-Aug	X					Disturbed areas
Poaceae (Gramineae)	<i>Thinopyrum intermedium</i> ssp. <i>intermedium</i>	intermediate wheatgrass	Intro	Pres	Jun-Aug	X	X	X	X		Disturbed areas
Typhaceae	<i>Typha latifolia</i>	broad-leaved cattail	Native	Pres	Jun-Aug					X	
Annual Graminoids											
Juncaceae	<i>Juncus bufonius</i>	toad rush	Native	Pres	Jun-Aug					X	
Poaceae (Gramineae)	<i>Anisantha tectorum</i>	cheatgrass	Intro	Pres	May-Jul	X	X				Disturbed areas
Poaceae (Gramineae)	<i>Eremopyrum triticeum</i>	annual wheatgrass	Intro	Pres	May-Jul	X	X				Adobe Hills, Mancos Shale
Poaceae (Gramineae)	<i>Monroa squarrosa</i>	false buffalograss	Native	Pres	Jun-Sep	X	X				
Poaceae (Gramineae)	<i>Poa bigelovii</i>	Bigelow's bluegrass	Native	Rep	Mar-May	X	X				
Ferns and Allies											
Aspidiaceae (Polypodiaceae, Aspleniaceae)	<i>Dryopteris filix-mas</i>	male fern	Native	Pres	NA			X	X		Rock crevices
Aspleniaceae (Polypodiaceae)	<i>Cystopteris fragilis</i>	brittle bladder fern	Native	Pres	NA			X	X	X	Rock crevices
Aspleniaceae (Polypodiaceae)	<i>Cystopteris reevesiana</i>	southwestern bladder fern	Native	Pres	NA				X		Rock crevices
Equisetaceae	<i>Equisetum arvense</i>	field horsetail	Native	Pres	NA	X	X	X		X	

Appendix D. Confirmed, historical, and reported taxa of Black Canyon of the Gunnison National Park, organized by life form with ecological notes, cont.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/ Grs	Pin/ Jun	Oak/ MtBr	Dg-fir	Wet	Comments
<i>Ferns and Allies, cont.</i>											
Equisetaceae	<i>Hippochaete hyemalis</i> var. <i>affinis</i>	tall scouring-rush	Native	Pres	NA					X	
Equisetaceae	<i>Hippochaete laevigata</i>	smooth scouring-rush	Native	Pres	NA					X	
Equisetaceae	<i>Hippochaete x ferrissii</i>	Ferriss' horsetail	Native	Pres	NA					X	
Selaginellaceae	<i>Selaginella densa</i>	dense spike-moss	Native	Pres	NA	X	X	X			
Selaginellaceae	<i>Selaginella mutica</i>	blunt-leaf spike-moss	Native	Pres	NA	X	X		X		Rock crevices
Sinopteridaceae (Polypodiaceae, Adiantaceae)	<i>Argyrochosma fendleri</i>	Fendler's cloak-fern	Native	Pres	NA						Rock crevices
Sinopteridaceae (Polypodiaceae, Adiantaceae)	<i>Cheilanthes feei</i>	slender lip-fern	Native	Pres	NA	X	X	X	X		Rock crevices
Woodsiaceae (Polypodiaceae, Aspleniaceae)	<i>Woodsia oregana</i> ssp. <i>cathartiana</i>	Oregon woodsia	Native	Pres	NA	X	X	X	X		Rock crevices

The Department of the Interior protects and manages the nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its special responsibilities to American Indians, Alaska Natives, and affiliated Island Communities.

NPS 144/100146, July 2009

National Park Service
U.S. Department of the Interior



Natural Resource Program Center
1201 Oak Ridge Drive, Suite 150
Fort Collins, Colorado 80525

www.nature.nps.gov