



# Annotated Checklist of Vascular Flora

## *Bryce Canyon National Park*

Natural Resource Technical Report NPS/NCPN/NRTR-2009/153



**ON THE COVER**

Matted prickly-phlox (*Leptodactylon caespitosum*), Bryce Canyon National Park, Utah. Photograph by Walter Fertig.

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### **Author**

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

Sarah Topp  
Northern Colorado Plateau Network  
P.O. Box 848  
Moab, UT 84532

### **Editing and Design**

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

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# 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 Bryce Canyon National Park. This entailed a thorough review of existing literature, re-examination of specimens from the Bryce Canyon National Park herbarium and other state and national museum collections, and additional field work to corroborate unverified species reports or locate new species. Based on this study, 587 vascular plant taxa have been confirmed or reliably reported as occurring in the park (553 are known from validated herbarium specimens and 34 from unvouchered literature reports). Another 76 species formerly considered part of the park flora have now been shown to be falsely reported. The current flora of Bryce Canyon National Park represents 16.3% of the known flora of Utah, and 36.5% of the flora of the Utah High Plateaus ecoregion. Although no species are federally listed as threatened or endangered, 50 plant taxa from the park were formerly candidates for potential listing, are considered sensitive by the U.S. Forest Service and Bureau of Land Management, or are considered species of concern by the state’s natural heritage program. Introduced plants make up 10.2% of the park flora (60 species), of which only 7 species are considered noxious weeds by the State of Utah. Further surveys in Bryce Canyon National Park are likely to find additional new species (298 are known from similar habitats outside the park boundary), especially among late season flowering, weedy, or wetland taxa.



# Acknowledgements

We would like to thank the following individuals for their assistance with this project. Botanist Dr. Angela Evenden, former leader of the Northern Colorado Plateau Network in Moab, Utah, was an active proponent of this project and helped secure funding for field work and herbarium studies in 2006. Kristin Legg, former Chief of Natural Resources for Bryce Canyon National Park (BRCA), assisted with herbarium access and permitting. Jan Stock, curator of museum collections for BRCA, provided access to all mounted and unmounted herbarium specimens from the park. Bruce Condie helped record specimen label data from all mounted collections in the BRCA herbarium. Libby Nance, former database specialist with the NCPN, 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. Drs. Stanley Welsh and Duane Atwood provided access to herbarium collections at Brigham Young University (BRY). Dr. Michael Piep provided access to collections at the Utah State University (Intermountain) herbarium. Dr. Ron Hartman and Ernie Nelson provided access and specimen loans from the Rocky Mountain Herbarium at the University of Wyoming. Mark Madsen, botanist with Dixie National Forest, shared data from his Master's thesis at Brigham Young University on the Claron flora of the Paunsaugunt Plateau. Thanks to the technical reviewers (Dr. Angela Evenden, Dr. Dusty Perkins, and Libby Nance) for their comments and suggestions. To any others whom we may have inadvertently forgotten, please accept our apologies (and thanks).

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# 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 Bryce Canyon National Park (NP), in southern Utah. 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 NPS 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.<sup>†</sup> 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 Bryce Canyon National Park, based on a review of herbarium collections and past literature.
2. Develop an annotated checklist of the flora of Bryce Canyon National Park, with supplemental information on taxonomic synonyms, distribution, within-park abundance, flowering period, growth form, nativity, habitat, and sources for each record.

## 1.1 Study area

### 1.1.1 History and setting

Native American cultures have occupied the area surrounding Bryce Canyon for several thousand years, but little physical evidence remains to suggest that the high-elevation badlands of the park, itself, were utilized for anything more than hunting and gathering. Following a period of region-wide severe drought around 1200 A.D., the valleys bordering the Paunsaugunt Plateau and Bryce Canyon were sparsely inhabited by transitory bands of Paiutes. The Paiutes referred to the colorful hoodoos, spires, fins, and chimneys of the Bryce area as Angka-ku-wass-a-wits (“red-painted faces”) or Unka-timpe-wa-wince-pock-ich (“red rock standing like men in a bowl-shaped recess”) (Davis and Pollock 2003).

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<sup>†</sup>Taxa refer to all named species, subspecies, and varieties.

Mormon pioneers arrived in the area in the mid-1870s and established several small settlements, including Clifton (later abandoned), Tropic, Cannonville, and Henrieville. Ebenezer Bryce was an early settler who built a road and ditch to water the fields of Clifton in the canyon that would bear his name (Belknap 1958). Eventually, most of the Paunsaugunt Plateau in the Bryce Canyon area would be transferred to the U.S. Forest Service (as part of Powell National Forest, now known as Dixie National Forest), while the surrounding valleys were mostly converted to agriculture.

J. W. Humphrey, an early forest supervisor who recognized the tourism potential of Bryce's scenic wonders, persuaded the Union Pacific Railroad to construct roads into the area, along with a visitor lodge near Sunset Point, in the late 1910s and early 1920s. Local settler Reuben "Ruby" Syrett also built a tourist lodge that remains a local landmark (Davis and Pollock 2003). In June 1923, President Warren Harding used the Antiquities Act to create Bryce Canyon National Monument, under the administration of the U.S. Forest Service. Congress passed legislation in June 1924 to expand the monument and rename it Utah National Park. The park was renamed Bryce Canyon National Park and permanently transferred to the National Park Service in February 1928. Over the next several decades, the park's boundaries were redrawn and expanded on several occasions, until reaching its current size of 35,835 acres (14,502 ha) (Evenden et al. 2002).

Bryce Canyon National Park is located on the eastern flank of the Paunsaugunt Plateau in Garfield and Kane counties, Utah (Figure 1.3.1). The park is located approximately 50 air miles east of Cedar City and 30 air miles northeast of Kanab. Elevations range from 6,100 feet (1,859 m) along the eastern border to 9,100 feet (2,774 m) in the highlands at the park's southern end. Annual precipitation averages 16.3 inches (414 mm), with 6.7 inches falling as rain during the main growing season from June to September. Average annual air temperature is 41°F (5.2°C), with a low of 9.3°F (-12.6°C) in January and a high of 77.8°F (25.4°C) in July (Madsen 2001).

### **1.1.2 Geology**

The oldest rocks exposed within Bryce Canyon National Park are outcrops of the Cretaceous-age Dakota Sandstone and Tropic Shale found along the park's easternmost boundary. The Dakota consists of sandstones, siltstones, and conglom-

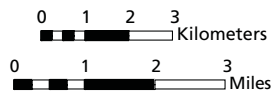
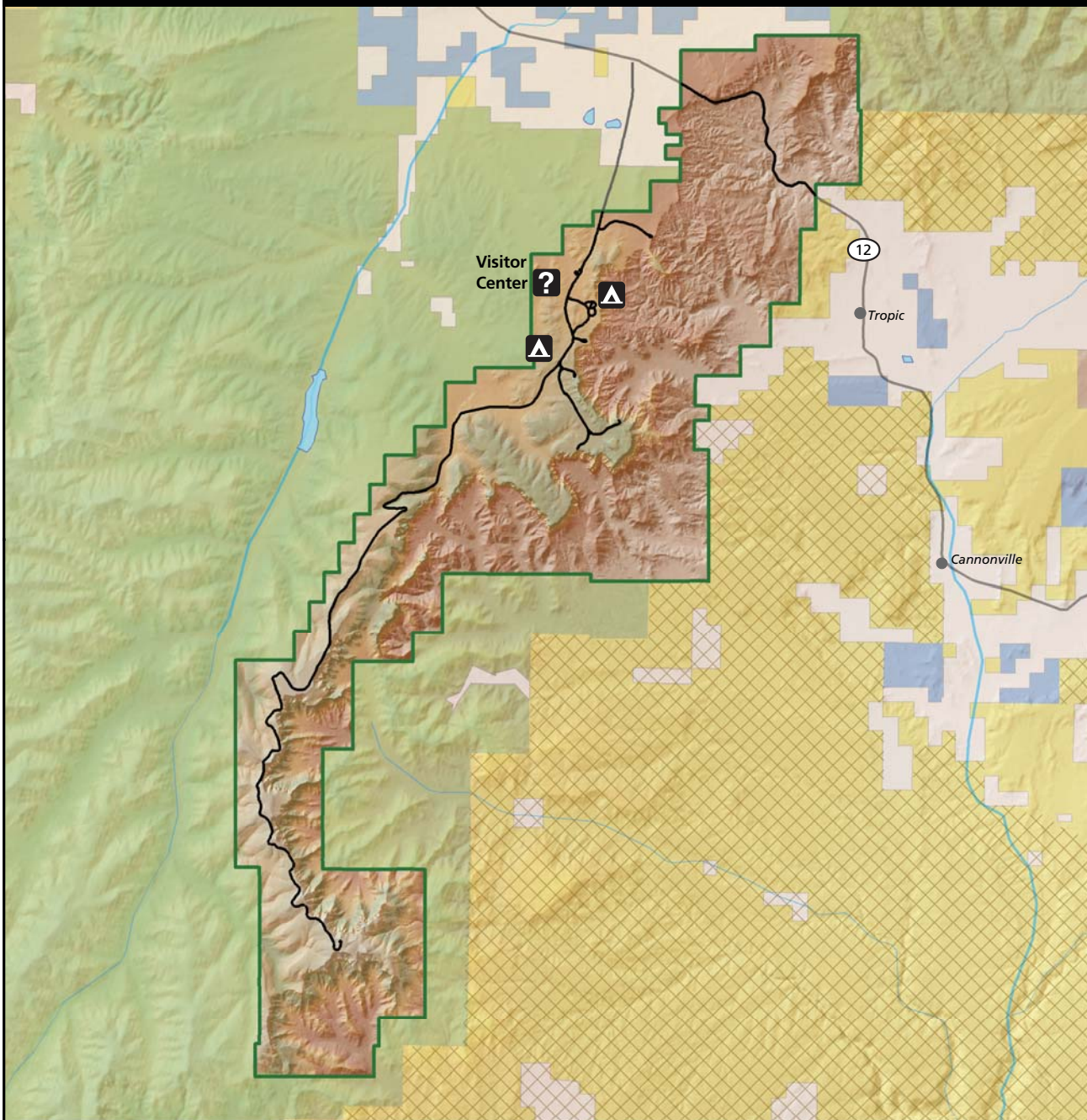
erates laid down about 96 million years ago in a coastal environment of fluctuating marine lagoons and river deltas (Davis and Pollock 2003). Lying above the Dakota are beds of black or dark-gray shales of the Tropic Formation (named for the nearby town of Tropic) that were deposited in deep marine waters during the last major incursion of the inter-continental Cretaceous seaway that bisected North America. Younger deposits of the Straight Cliffs Formation form the "gray cliffs" of the Grand Staircase and can be as thick as 1,700 feet (515 m) in the Bryce area (Davis and Pollock 2003). The Straight Cliffs consist of alternating beds of sandstone and shale interspersed with coal seams that were deposited in a coastal area with periodically advancing and retreating marine waters. Topping the Straight Cliffs is the late Cretaceous Wahweap Sandstone, which was formed in a river delta.

Bryce's pink cliffs consist of a thick mantle of Eocene-age limey sandstones of the Claron Formation (formerly called the Wasatch Formation). The Claron was deposited 40–60 million years ago in a large freshwater lake (slightly larger than modern Lake Erie) that extended from near the Nevada state line to Boulder Mountain (Chronic 1988). Most of the Claron at Bryce Canyon consists of the lower, red member, with the upper, white member persisting only at the higher elevations of the Paunsaugunt Plateau (most of it has eroded away elsewhere on the plateau). The red member is not homogeneous, but consists of alternating bands of more-resistant limestone or conglomerate. A small area of Oligocene or Miocene-age conglomerates deposited in a small lake persists on top of Boat Mesa. The park's youngest strata consist of Quaternary alluvium in the major drainages carving the eastern flank of the Paunsaugunt Plateau (Davis and Pollock 2003).

The fantastic hoodoos, rock spires, pinnacles, chimeys, fins, and windows that characterize the Bryce Canyon area were carved primarily by the freezing and thawing of water acting on the cracks and fissures created by the regional faulting that uplifted the Paunsaugunt Plateau along the Sevier and Paunsaugunt faults. Erosion by running water formed deep gullies and sliced the eastern wall of the plateau into a series of rock fins. The natural acidity of water acted to further erode the fins into arch-like windows or solitary, chimney-like hoodoos, held in place by a caprock of less-resistant limestone or conglomerate. Ultimately, even these fall, but new erosional features continue to form as the Paria River and its tributaries march

# Bryce Canyon National Park

Utah



Established June 8, 1923  
 1,859–2,774 m elevation  
 (6,100–8,000 ft elevation)  
 14,502 ha (35,835 ac)



### Legend

- Perennial streams
- Rivers
- Paved roads
- Unpaved roads
- Unimproved/4WD roads
- Park boundary (NPS)
- Grand Staircase-Escalante NM (BLM)
- U.S. Bureau of Land Management
- Private
- State
- U.S. Forest Service
- Water

MAP CREATED BY ANETH WIGHT, NCPN (DERIVED FROM EVENDEN ET AL. 2002)

Figure 1.3.1. Location of Bryce Canyon National Park, Garfield and Kane counties, Utah.

headward against the red Claron beds at a rate of four feet (1.2 m) per century toward its ultimate capture of the East Fork of the Sevier River in 1-2 million years (Davis and Pollock 2003).

### 1.1.3 Vegetation

The vegetation of Bryce Canyon National Park has been described in detail elsewhere (Buchanan 1960, 1971, Buchanan et al. 1981; NCPN in ed.; Roberts et al. 1992). Buchanan (1992) presented a relatively simple vegetation classification that subdivided the park's flora into four main communities arranged within three elevational belts.

The harshest environments for plant growth within Bryce Canyon are found on the badlands slopes and breaks along the eastern escarpment of the Paunsaugunt Plateau, within the pinyon-juniper woodland belt (Buchanan 1992). Violent summer rainstorms, high winds, and freeze-thaw in winter and spring conspire to prevent deep soils from forming on barren slopes and favor cushion plants or perennial shrubs and trees. Many of the park's Claron endemic plants are restricted to these colorful badland slopes. Western bristlecone pine (*Pinus longaeva*) may be locally common on barren slopes or co-occur with ponderosa pine (*P. ponderosa*). Lower slopes and more sheltered sites may support open woodlands of two-needle pinyon (*P. edulis*), Utah juniper (*Juniperus osteosperma*) and scattered big sagebrush (*Artemisia tridentata*).

More-moderate slopes with better soil development characterize the submontane forest belt. This zone, located mostly below 8,500 feet, consists of extensive forests of ponderosa pine with an open understory of greenleaf manzanita (*Arctostaphylos patula*), antelope bitterbrush (*Purshia tridentata*), and Fendler's mountain-lilac (*Ceanothus fendleri*). Ponderosa pine forests are replaced by montane sagebrush meadows dominated by black sagebrush (*Artemisia nova*), greenish rabbitbrush (*Chrysothamnus nauseosus*), spineless horsebrush (*Tetradymia canescens*), and a variety of perennial bunchgrasses and forbs on sites with deeper soils and cold air drainage (Buchanan 1992).

Above 8,500 feet, the forests of Bryce Canyon NP are dominated by Douglas-fir (*Pseudotsuga menziesii*), Engelmann spruce (*Picea engelmannii*), and white fir (*Abies concolor*). Quaking aspen (*Populus tremuloides*) may have been historically more prevalent in the area but has apparently declined

due to long-term fire suppression. Montane forests (with the exception of aspen groves) tend to have a sparse understory of shade-tolerant shrubs and forbs, such as common juniper (*Juniperus communis*), mountain snowberry (*Symphoricarpos oreophilus*), and mountain-lover (*Pachystima myrsinites*) (Buchanan 1992).

Due to the presence of the Paunsaugunt Fault, porous sandstone overlies relatively impervious Tropic Shale along the eastern margin of the park, creating suitable conditions for small seeps and springs. Additional areas of riparian vegetation occur in drainage bottoms and along the Tropic Ditch. Wetland vegetation in Bryce Canyon NP is locally dominated by coyote willow (*Salix exigua*), yellow willow (*S. lutea*), narrow-leaved cottonwood (*Populus angustifolia*), Baltic rush (*Juncus arcticus*), and Nebraska sedge (*Carex nebrascensis*).

### 1.1.4 Previous botanical studies

The Pink Cliffs area was explored by the Powell Survey in 1872, under the direction of John Wesley Powell's brother-in-law, Almon Thompson. Botanist Lester Ward worked for later Powell surveys and collected extensively in the Aquarius and Fish Lake plateaus, but apparently did not collect specimens in the Bryce area as suggested by Evenden et al. (2002). Utah's preeminent pioneer botanist, Marcus E. Jones, was apparently the first plant collector to explore the immediate vicinity of Bryce Canyon. Jones procured at least two specimens from the "canyon above Tropic" near the northeast boundary of the park in 1894 (Table 1.3.4). These specimens represented types of silvery primrose (*Primula incana*) and King's flax (*Linum kingii* var. *pinetorum*, now considered taxonomically negligible). Although *Linum kingii* is known from several locations in the park today, *Primula incana* has not been relocated.

The first collector to secure specimens within Bryce Canyon National Park (earlier workers had collected in Red Canyon and other areas of adjacent Dixie National Forest) was apparently Walter Cottam, of Brigham Young University, who discovered at least eight new species starting in 1926 (Table 1.3.4, Figure 1.3.4). Mildred Mathias collected the first type specimen from the park when she discovered least lomatium (*Lomatium minimum*) in 1929. George Goodman and C. Leo Hitchcock were the first among a cadre of noteworthy taxonomists from outside Utah to collect within the park, adding at least four new



**Table 1.3.4. Chronology of plant-collecting efforts in Bryce Canyon National Park.**

Year	Collector(s)	# of new taxa	Comments
1894	M. E. Jones	1 reported	Marcus E. Jones collected the types of <i>Primula incana</i> and <i>Linum kingii</i> var. <i>pinetorum</i> from "canyon above Tropic" in the vicinity of Bryce Canyon National Park. <i>Linum kingii</i> has since been discovered within the park, but no confirmed records have been found for <i>Primula incana</i> .
1912	W. W. Eggleston	0	W. W. Eggleston collected the type of Breaks bladderpod ( <i>Physaria</i> [ <i>Lesquerella</i> ] <i>rubicundula</i> ) from Red Canyon, NW of Bryce Canyon
1916	H. E. Malmsten	0	H. E. Malmsten, a U.S. Forest Service employee, collected the type of Podunk groundsel ( <i>Senecio malmstenii</i> ) from Little Podunk Creek, apparently just outside the boundary of Bryce Canyon NP.
1926–1929	W. P. Cottam, F. W. Hunnewell, & M. E. Mathias	13	Walter Cottam made the earliest-known collections from within Bryce Canyon NP, documenting at least 8 species from 1926 to 1929. F. W. Hunnewell added at least 3 new species while collecting for the New York Botanical Garden in 1928. Mildred Mathias collected the holotype of <i>Lomatium minimum</i> from Bryce Canyon in 1929.
1930–1935	G. Goodman, C. L. Hitchcock, K. E. Weight, J. A. Rowe, F. M. Stone, M. C. Ferguson, A. M. Ottley, A. Eastwood, & J. T. Howell	152	George Goodman and C. L. Hitchcock discovered 4 new species for the park in 1930. Kenneth Weight established the BRCA herbarium and initiated the first major floristic study of Bryce Canyon in 1931, documenting 144 new species over the next four years. Weight (1933) developed the first checklist of the park and vicinity, listing 286 taxa. J. A. Rowe, F. M. Stone, M. C. Ferguson, and A. M. Ottley contributed 4 additional new species during this period. In 1933, Alice Eastwood and John Howell collected the holotypes of Red Canyon penstemon ( <i>Penstemon bracteatus</i> ) and Bryce Canyon townsendia ( <i>Townsendia montana</i> var. <i>minima</i> ) from Red Canyon, just west of the park.
1938	W. S. Boyle	3	W. S. Boyle discovered 3 new species for the park.
1940–1946	H. R. Shephard, E. Gifford, J. D. Slade, J. W. Vogt, W. S. Boyle, O. Degener, L. Peiler, & B. Maguire	28	Bassett Maguire collected the type of <i>Silene petersonii</i> from Red Canyon (outside Bryce Canyon NP) in 1940. H. R. Shephard, E. Gifford, J. D. Slade, and J. W. Vogt made more than 40 collections in the park and added 17 new species to the flora in 1940–1941. W. S. Boyle contributed nearly 50 specimens to the park herbarium and 9 new species in 1942. Otto Degener, Leroy Peiler, and L. J. Mitchell added two additional species from 1942 to 1945.
1947	D. Ripley & R. Barneby	0	Dwight Ripley and Rupert Barneby collected the holotype of Jones' locoweed ( <i>Oxytropis oreophila</i> var. <i>jonesii</i> ) from Red Canyon, west of Bryce Canyon NP.
1950–1954	H. H. Hall & B. F. Harrison	2	Heber Hall and Bertrand Harrison collected two new species for the park from 1950 to 1954.
1956–1959	H. Buchanan	94	Hayle Buchanan, then a graduate student at the University of Utah, discovered 94 species in Bryce Canyon NP while conducting research on the vegetation of the park (Buchanan 1960).
1965	N. Holmgren & J. Reveal	2	Noel Holmgren and James Reveal collected the type of Reveal's paintbrush ( <i>Castilleja parvula</i> var. <i>revealii</i> ) from Bryce Canyon NP.
1968	L. Higgins	0	Larry Higgins collected the type of yellowish cryptanth ( <i>Cryptantha ochroleuca</i> ) at Red Canyon, west of Bryce Canyon NP.
1969–1970	H. Buchanan	3	Hayle Buchanan added 3 new species to the park flora while conducting research on forest ecology of Bryce Canyon. Buchanan and Nebeker (1971) compiled a checklist of the park flora citing 218 taxa.
1971–1973	G. Stebbins & H. Buchanan	4	Gary Stebbins discovered 3 new species in 1971–1972; Hayle Buchanan added one new taxon in 1973.
1977	R. Foster & D. Foster	3	Robert Foster discovered 3 new species in 1977.
1978–1979	H. Buchanan	9	Beginning in 1978, Hayle Buchanan conducted a follow-up study to his doctoral work in the park, examining successional patterns with Robert Graybosch and Kimball Harper.

**Table 1.3.4. Chronology of plant collecting efforts in Bryce Canyon National Park, cont.**

Year	Collector(s)	# of new taxa	Comments
1980–1981	R. Graybosch	138 + 10 reported	Robert Graybosch collaborated with Hayle Buchanan to study vegetation and endemic plants of Bryce Canyon NP and added 148 new species to the park flora. Buchanan and Graybosch (1981) published a revised checklist with 446 species.
1982	R. Shaw	1	Richard Shaw added Colorado Plateau bladderpod ( <i>Lesquerella rectipes</i> ) to the park flora.
1986–1987	L. Gottschalk & G. Hallsten	8	Linda Gottschalk and Gregory Hallsten of Utah State University collected 8 new species for Bryce Canyon NP in 1986–1987. Hallsten and Roberts (1988) published a short paper listing 27 new species not previously reported for the park.
1989–1991	C. Schelz, J. M. Passek, and M. W. Britten	6	Charles Schelz, J. M. Passek, and M. W. Britten added 6 new species to the park flora while conducting rare plant and invasive weed studies.
1993–1994	R. Foster	24	Robert Foster discovered 24 new species for the park (specimens mostly at BRY), including the earliest collection of Barkley's groundsel ( <i>Senecio werneriiifolius</i> var. <i>barkleyi</i> , described as a new taxon by Welsh et al. in 2003).
1998	B. Buchanan, K. Kitchen, & J. Ames-Curtis	23	Beth Buchanan, Karen Kitchen, and Juli Ames-Curtis conducted a weed survey and discovered 22 new non-native species for the park, including 4 new Utah state noxious weeds.
2004–2007	S. Topp, K. Andersen, L. Ballenger, A. Tendick, & W. Fertig	40 + 12 reported	Dewey and Andersen (2005) reported leafy spurge ( <i>Euphorbia esula</i> ) as a new invasive species for Bryce Canyon during their 2004 weed survey. Sarah Topp, Amy Tendick, and Liz Ballenger of the NCPN vegetation mapping crew vouchered 37 new species and reported 11 others (without vouchers) while conducting field sampling from 2004 to 2007 (NCPN in ed., Topp 2007). W. Fertig added 3 new species in 2006 (Topp 2007).

species to the flora in 1930. In subsequent years, Alice Eastwood, John T. Howell, Dwight Ripley, Rupert Barneby, Bassett Maguire, Larry Higgins, Noel Holmgren, and James Reveal would visit the area and collect holotypes of Claron endemics, though most of these were collected in Red Canyon (on Dixie National Forest) rather than in Bryce Canyon National Park (Welsh 1982).

Kenneth Weight initiated the first major floristic study of Bryce Canyon NP in 1931. Over the next four years, Weight collected over 180 specimens for the nascent Bryce Canyon NP herbarium (BRCA) and documented 144 new species for the park. In 1933, Weight published the first checklist of the park's flora and vicinity, listing 286 taxa (Weight 1933). Over the next decades, a number of other park employees and visitors (most notably, W. S. Boyle, H. R. Shephard, and E. Gifford) contributed about 30 additional species to the park flora.

The next major floristic study of Bryce Canyon National Park began in 1956, with the work of Hayle Buchanan. During the late 1950s, Buchanan discovered 94 new species for the park flora

while conducting research toward his doctoral dissertation at the University of Utah on the vegetation of Bryce Canyon (Buchanan 1960). Buchanan returned to the park in the late 1960s and late 1970s to conduct follow-up research on successional dynamics (Buchanan 1971, Buchanan et al. 1981) and co-authored a revised park checklist in 1971 (Buchanan and Nebeker 1971).

From 1978 to 1981, Buchanan worked with graduate student Robert Graybosch on a new study of vegetation and endemic plants of Bryce Canyon NP that resulted in the discovery of 157 new taxa and increased the park's flora by nearly 33%. Buchanan and Graybosch (1981) published a revised checklist reporting 446 species for the park.

More than 100 new species have been added to the park flora in the past two decades. Linda Gottschalk and Gregory Hallsten, of Utah State University, discovered nine new species in the mid 1980s (Hallsten and Roberts 1988). Charles Schelz, Beth Buchanan, Karen Kitchen, Juli Ames-Curtis, and other park employees discovered 29 new weed species during surveys in 1989–1991 and 1998. John Spence conducted vegetation

monitoring studies in Bryce Canyon in the early 1990s, and co-authored a revised plant checklist with Hayle Buchanan in 1993, listing 458 taxa and correcting some errors from previous lists (Spence and Buchanan 1993). Robert Foster collected extensively in 1993–1994 and added 24 new species to the flora. Most recently, Sarah Topp, Amy Tendick, Liz Ballenger, and colleagues from the NCPN vegetation mapping team discovered or reported 48 new taxa for Bryce Canyon NP from

2004–2007 (NCPN in ed., Topp 2007). Dewey and Andersen (2005) added one additional species report while conducting a mapping survey of invasive weeds. Walter Fertig contributed three new species and relocated several historic records in 2006.

Additional details on plant-collecting efforts at Bryce Canyon NP can be found in Table 1.3.4.

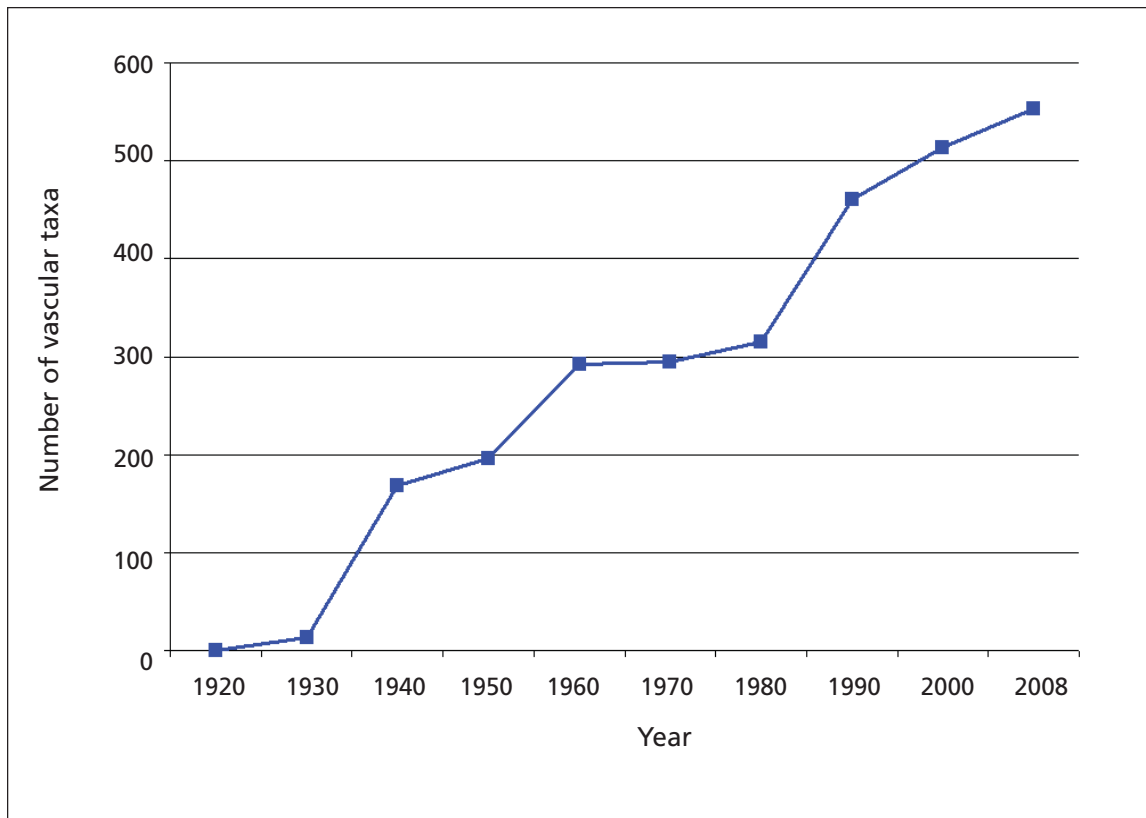


Figure 1.3.4. Increase in the number of plant taxa confirmed as present in Bryce Canyon National Park by decade, 1920–2008.



## 2 Methods

In April 2005, we reviewed all mounted specimens in the Bryce Canyon National Park herbarium to determine whether each was correctly identified to species, subspecies, or variety following the nomenclature of Welsh et al. (2003). As necessary, corrections and annotations were made 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 (Buchanan and Graybosch 1981; Hallsten and Roberts 1988; Spence and Buchanan 1993), 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) A list of potential species ("unconfirmed" in NPSpecies) known from the vicinity of Bryce Canyon NP using an unpublished list generated by Dr. N. Duane Atwood of Brigham Young University, Albee et al. (1988), Madsen (2001), Spence and Buchanan (1993), and Welsh et al. (1978) (Appendix B); and
4. A list of species that were known to be misidentified by Spence and Buchanan (1993) or highly questionable (Appendix C).

Each list was annotated with supplemental information on life form, geographic range (within the context of Utah), population size in the park (derived from 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; Weber and Wittmann 2001). The annotations to these lists and label data from the BRCA herbarium review were then incorporated into the NPSpecies database for the park.

Work in 2005–2007 focused on confirmation of reported and potential species for the park flora through field surveys and review of collections from state and regional herbaria. We made several collecting trips to Bryce Canyon NP in the spring, summer, and fall of 2005, 2006, and 2007 to target missing species, emphasizing under-sampled wetland, weedy, and late-flowering taxa. Herbarium studies were undertaken at Brigham Young University (BRY), Utah State University (USU), and the University of Wyoming (RM) in March, June, and October 2006 and February and March 2007. We also documented park specimens from the Virtual Herbarium website of the New York Botanical Garden (<http://sciweb.nybg.org/science2/hcol/intf/index.asp>). Finally, we found additional new species reports by examining unmounted collections and reviewing plot data from recent vegetation mapping studies (NCPN in ed.).



# 3 Results

## 3.1 Summary of the flora of Bryce Canyon National Park

Of the 1,245 vascular-plant vouchers in the main BRCA herbarium and the park's resource management collection that we examined in 2005, 124 were misidentified (10.0%), 54 were revised to a more current name (4.3%), 291 had variety or subspecies names added (23.4%), and 776 were found to be correctly determined (62.3%). Based solely on these collections, the confirmed flora of Bryce Canyon National Park stood at 467 taxa (Fertig 2006). From 2005 to 2007, we located an additional 49 taxa (mostly species reported in Spence and Buchanan 1993, but without a duplicate voucher deposited in the BRCA herbarium)

from collections at Brigham Young University, Utah State University, and the New York Botanical Garden Virtual Herbarium. Field surveys from 2005 to 2007 netted another 37 new species (Topp 2007). Overall, the documented flora of Bryce Canyon NP has increased by 86 species (15.6%), bringing the total number of taxa to 553 (Table 3.1, Appendices A, D).

Currently, 34 additional taxa have been reported for Bryce Canyon NP but have yet to be corroborated with a voucher specimen (Table 3.1, Appendix A). Of these, 27 were reported by Buchanan and Graybosch (1981), Spence and Buchanan (1993), or from observations by recent vegetation mapping and wetland research crews (NCPN in ed.). Taken together, the number of confirmed and reported vascular plant taxa in Bryce Canyon NP stands at 587 taxa (Table 3.1, Appendix A).

**Table 3.1. Statistical summary of the flora of Bryce Canyon National Park.**

Category	Number confirmed in park	Number additionally reported for park	Total
<b>Taxonomic diversity</b>			
Total taxa (including varieties and subspecies)	553	34	587
Full species (excluding varieties and subspecies)	526	27	553
Families	73	0	73
<b>Life form diversity</b>			
Tree taxa	18	0	18
Shrub taxa	72	2	74
Perennial forb taxa	316	23	339
Annual forb taxa	58	6	64
Perennial graminoid taxa	77	3	80
Annual graminoid taxa	7	0	7
Fern taxa	5	0	5
<b>Biogeographic diversity</b>			
Introduced taxa	58	2	60
Native taxa			
Locally endemic taxa	19	3	22
Regionally endemic taxa	45	4	49
Disjunct taxa	3	0	3
Peripheral taxa	2	0	2
Sparse taxa	10	0	10
Widespread taxa	416	25	441
<i>Total native taxa</i>	<i>495</i>	<i>32</i>	<i>527</i>

The number of taxa and families is based on taxonomic concepts of Welsh et al. (2003). See Appendices, "Codes and Definitions", for an explanation of the various categories.

At the start of the 2006 field season, we recognized 327 taxa as potentially occurring in Bryce Canyon NP, based on the proximity of the park to known populations (Albee et al. 1988; Madsen 2001; Fertig 2006). At least 29 of these species have recently been found in the park based on field collections or relocated herbarium specimens. The current number of potential species that we are recognizing for Bryce Canyon NP is 298 (Appendix B).

Of the original pool of species documented or reported for the park, we found that 70 taxa were falsely reported based on misidentified voucher specimens in the BRCA and BRY herbaria and the work of Spence and Buchanan (1993). We consider an additional six species cited (but not vouchered) by Spence and Buchanan (1993) and the NCPN vegetation mapping team (NCPN in ed.) to be questionable based on the absence of suitable habitat or the distance of Bryce Canyon NP to the known or expected range of each species (Appendix C).

The confirmed and reported flora of Bryce Canyon NP represents 16.3% of the 3,594 native and naturalized taxa documented for the state of Utah by Welsh et al. (2003) and 48.3% of the state's 151 plant families. Within Garfield and Kane counties, the park flora captures 34.1% of the 1,719 taxa reported by Welsh et al. (2003). At the ecoregional scale, Bryce Canyon NP contains 36.5% of the 1,608 species reported for the Utah High Plateaus (Shultz et al. 2006).

### 3.2 Life form and biogeographic diversity

Although ecologically dominant, tree and shrub species make up only 15.7% of the confirmed and reported plant taxa of Bryce Canyon NP (Table 3.1). Perennial forbs are the most species-rich life form in the park's flora, with 339 known and reported taxa (57.8% of the total flora). Only 12.1% of the flora is composed of annual forbs and grass-like plants. Like trees and shrubs, perennial graminoids are ecologically important but relatively species-poor, representing less than 14% of the total flora. The diversity of ferns and fern-allies in Bryce Canyon NP is particularly low (0.9%) (Table 3.1).

Of the park's 527 native taxa, 441 (83.7%) are widespread across Utah and western North America. Only 22 species (4.2% of the park's total 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 more complete definitions of biogeographic categories). Regional endemics (largely restricted to the Utah High Plateaus ecoregion or Colorado Plateau) comprise an additional 9.3% of the park flora (Table 3.1). Less than 3% of the park flora consists of species with disjunct, peripheral, or sparse geographic distribution patterns.

### 3.3 Plants of special concern

Bryce Canyon National Park has no plants listed as threatened or endangered under the U.S. Endangered Species Act. At least 21 park taxa were formerly candidates for potential listing (Category 2 or 3C) under the act (Table 3.3; UDWR 1998). Another 12 species are currently listed as sensitive by the U.S. Forest Service or Utah Bureau of Land Management. The Utah Division of Wildlife Resources Conservation Data Center (UTCDC) lists 50 species from Bryce Canyon NP as species of concern based on state or range-wide rarity or lack of sufficient data (UDWR 1998). Barkley's groundsel (*Senecio werneriiifolius* var. *barkleyi*) is a local endemic that was described as a new taxon by Welsh et al. (2003), but currently is not tracked by the state's natural heritage program and has no formal legal status.

Peabody (1995) conducted an extensive survey of rare plants of Bryce Canyon NP, focusing primarily on species being considered for listing under the U.S. Endangered Species Act. In addition to plotting locations and describing habitat requirements, Peabody also established long-term monitoring plots to assess changes in population size. Schelz (1990) compiled information on rare plants of Bryce Canyon NP from herbarium records and data from the state's natural heritage program. Hallsten and Roberts (1990) conducted a detailed study of the autecology of the Paria breadroot (*Pediomelum pariense*).

### 3.4 Non-native and noxious weeds

Introduced plant species (not historically native to Utah or North America) make up 10.2% of the confirmed and reported flora of Bryce Canyon National Park (Table 3.1). This figure is lower than the statewide average of 13.5% non-native species (Fetig 2007, Welsh et al. 2003). Of the 60 introduced plant species confirmed or reported for Bryce Canyon NP, seven are listed as noxious by the State of Utah (State of Utah Department of Agriculture and Food 2007) (Table 3.4). Four of the park's noxious weed species were discovered



during a survey of non-native plants by Beth Buchanan, Karen Kitchen, and Juli Ames-Curtis in 1998. Dewey and

Andersen (2005) also mapped invasive plants in 2004 and reported one new noxious species.

**Table 3.3. Plant species of conservation concern from Bryce Canyon National Park.**

Family	Species	Common name	TNC global rank	Federal legal status	UTCDC status
Asclepiadaceae	<i>Asclepias hallii</i>	Hall's milkweed	G3		Watch, S1
Boraginaceae	* <i>Cryptantha cinerea</i> var. <i>arenicola</i>	sand cryptanth	G5T3?	USFWS: former C2	Watch, S3?
Boraginaceae	<i>Cryptantha ochroleuca</i>	yellowish cryptanth	G1?	USFS Region 4: Sensitive; USFWS: former C2	Rare, S1?
Caryophyllaceae	<i>Silene petersonii</i>	Peterson's campion	G2G3	USFS Region 4: Sensitive; USFWS: former C2	Watch, S2S3
Compositae (Asteraceae)	<i>Artemisia ludoviciana</i> ssp. <i>candicans</i>	Louisiana wormwood	G5T5		Periph., S1
Compositae (Asteraceae)	<i>Aster wasatchensis</i> var. <i>wasatchensis</i>	Markagunt aster	G3?TNR		Watch, S3?
Compositae (Asteraceae)	<i>Chrysopsis jonesii</i>	Jones' golden-aster	G2	USFWS: former 3C	Rare, S2
Compositae (Asteraceae)	<i>Erigeron abajoensis</i>	Abajo daisy	G1G2	USFS Region 4: Sensitive	Add. Data, S1S2
Compositae (Asteraceae)	<i>Erigeron canus</i>	hoary daisy	G4		Periph., S2?
Compositae (Asteraceae)	<i>Erigeron pumilus</i> var. <i>condensatus</i>	vernal daisy	G4G5 T3T4		Infreq., S2?
Compositae (Asteraceae)	<i>Haplopappus scopulorum</i> var. <i>hirtellus</i>	spindly goldenbush	G4TNR	USFWS: former 3C	Watch, S2S3
Compositae (Asteraceae)	<i>Haplopappus zionis</i>	Cedar Breaks goldenbush	G2	BLM (UT): Sensitive; USFWS: former C2	Rare, S2
Compositae (Asteraceae)	<i>Heterotheca jonesii</i>	Jones' golden-aster	G2	USFS Region 4: Sensitive; USFWS: former 3C	Rare, S2
Compositae (Asteraceae)	<i>Senecio hartianus</i>	Hart's groundsel	G3G4		Add. Data, S1
Compositae (Asteraceae)	<i>Senecio werneriiifolius</i> var. <i>barkleyi</i>	Barkley's groundsel	G5TNR		
Compositae (Asteraceae)	<i>Sphaeromeria capitata</i>	cluster-head chicken-sage	G3	USFS Region 4: Sensitive	Periph., S1
Compositae (Asteraceae)	<i>Townsendia montana</i> var. <i>minima</i>	Bryce Canyon townsendia	G4T3	USFWS: former 3C	Watch, S3
Compositae (Asteraceae)	<i>Viguiera longifolia</i> var. <i>annua</i>	southern goldeneye	G4G5 TNR		Periph., S2?
Cruciferae (Brassicaceae)	<i>Arabis demissa</i>	nodding rockcross	G5T4	USFWS: former 3C	Watch, S2?
Cruciferae (Brassicaceae)	<i>Draba subalpina</i>	Breaks draba	G3	USFWS: former 3C	Watch, S3
Cruciferae (Brassicaceae)	<i>Lepidium montanum</i> var. <i>claronense</i>	Claron pepperwort	G5?T1?	BLM (UT): Sensitive	Rare, S1?
Cruciferae (Brassicaceae)	<i>Physaria arizonica</i>	Arizona bladderpod	G3?		Watch, S2

**Table 3.3. Plant species of conservation concern from Bryce Canyon National Park, cont.**

Family	Species	Common name	TNC global rank	Federal legal status	UTCDC status
Cruciferae (Brassicaceae)	<i>Physaria chambersii</i> var. <i>membranacea</i>	lepidote twinpod	G3T2?		Rare, S2?
Cruciferae (Brassicaceae)	<i>Physaria chambersii</i> var. <i>sobolifera</i>	Claron twinpod	G4TNR		Tax. Prob., S2?
Cruciferae (Brassicaceae)	<i>Physaria rubicundula</i> var. <i>rubicundula</i>	Breaks bladderpod	G3	USFWS: former 3C	Watch, S3
Cruciferae (Brassicaceae)	<i>Thelypodopsis sagittata</i> var. <i>ovalifolia</i>	Palmer's thelypody	G4T2	USFWS: former 3C	Rare, S2
Cyperaceae	<i>Carex oederi</i> var. <i>viridula</i>	green sedge	G5		Periph., S2
Hydrophyllaceae	<i>Phacelia mammillariensis</i>	Nipple Bench phacelia	G3	USFWS: former 3C	Watch, S3
Labiatae (Lamiaceae)	<i>Hedeoma nanum</i>	dwarf pennyroyal	G5		Periph., S1
Leguminosae (Fabaceae)	<i>Astragalus hallii</i> var. <i>fallax</i>	Hall's milkvetch	G4T4		Periph., S1
Leguminosae (Fabaceae)	<i>Astragalus wardii</i>	Ward's milkvetch	G3		Watch, S3
Leguminosae (Fabaceae)	<i>Lupinus kingii</i> var. <i>argillaceus</i>	King's lupine	G3G4 TNR		Tax. Prob., S1
Leguminosae (Fabaceae)	<i>Lupinus sericeus</i> var. <i>marianus</i>	Marysvale lupine	G5T3		Tax.Prob., S3
Leguminosae (Fabaceae)	<i>Oxytropis oreophila</i> var. <i>jonesii</i>	Jones' locoweed	G5T3	USFWS: former 3C	Watch, S3
Leguminosae (Fabaceae)	<i>Pediomelum pariense</i>	Paria breadroot	G2G3	USFS Region 4: Sensitive; USFWS: former C2	Watch, S2S3
Liliaceae (Anthericaceae)	<i>Leucocrinum montanum</i>	star-lily	G5		Periph., S2
Linaceae	<i>Linum australe</i>	small yellow flax	G5		Periph., S2
Polemoniaceae	<i>Phlox gladiiformis</i>	daggerleaf phlox	G3?	USFWS: former 3C	Watch, S2S3
Polygonaceae	* <i>Eriogonum aretioides</i>	Widtsoe wild buckwheat	G2	USFS Region 4: Sensitive; USFWS: former C2	Rare, S2
Polygonaceae	<i>Eriogonum subreniforme</i>	kidney-shaped wild buckwheat	G3G4		Watch, S3?
Primulaceae	<i>Primula incana</i>	silvery primrose	G4G5		Periph., S1
Pyrolaceae (Ericaceae)	<i>Pyrola picta</i>	whiteveined wintergreen	G4G5		Infreq., S1
Rosaceae	* <i>Potentilla concinna</i> var. <i>modesta</i>	modest cinquefoil	G5?T4T5Q		Tax. Ques., S?
Rosaceae	<i>Potentilla plattensis</i>	Platte River cinquefoil	G4		Periph., S1
Scrophulariaceae	<i>Castilleja parvula</i> var. <i>revealii</i>	Reveal's paintbrush	G2	USFS Region 4: Sensitive; USFWS: former C2	Rare, S2
Scrophulariaceae	<i>Orthocarpus purpureoalbus</i>	violet owl-clover	G3G4		Periph., S1S2
Scrophulariaceae	<i>Penstemon bracteatus</i>	Red Canyon penstemon	G2	USFS Region 4: Sensitive; USFWS: former C2	Rare, S2

**Table 3.3. Plant species of conservation concern from Bryce Canyon National Park, cont.**

Family	Species	Common name	TNC global rank	Federal legal status	UTCDC status
Scrophulariaceae	<i>Penstemon caespitosus</i> var. <i>desertipicti</i>	painted penstemon	G5T3?		Watch, S2?
Scrophulariaceae	<i>Penstemon procerus</i> var. <i>aberrans</i>	smallflower penstemon	G5T3?		Add. Data, S3?
Umbelliferae (Apiaceae)	<i>Cymopterus minimus</i>	least spring-parsley	G1G2Q	USFS Region 4: Sensitive; USFWS: former C2	Rare, S1S2
Umbelliferae (Apiaceae)	<i>Lomatium minimum</i>	least lomatium	G3	USFWS: former 3C	Watch, S3

This list is derived from the Utah Division of Wildlife Resources (1998) for UTCDC status.

All species are confirmed as present in the park except those indicated with an \* (reported).

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, U = unknown, and NR = not ranked. A comparable scoring system is used to measure state abundance (S) in Utah under the column UTCDC status.

Under **legal status**, USFWS = US Fish and Wildlife Service. C2 = category 2 candidate (a former category used for taxa that might warrant being proposed for Threatened or Endangered status following additional research). 3C = category 3 candidates (species dropped from consideration for listing). USFS = U.S. Forest Service. BLM = U.S. Bureau of Land Management.

**UTCDC status** includes conservation categories adopted by the state natural heritage program to prioritize endemic and rare plant taxa (Utah Division of Wildlife Resources 1998). These categories include: Historical (presumed extinct or only known historically through their range), Rare (plants with rangewide viability concerns), Watch (regional endemics without rangewide viability concerns), Peripheral (rare or uncommon in Utah, but more common rangewide), Infrequent (plants occur infrequently over western US), Taxonomic Problems (validity of species, subspecies, or variety has been questioned), Additional Data (species appear rare, but more information needed before being assigned to a different category).

**Table 3.4. Noxious weed species of Bryce Canyon National Park.**

Family	Species	Common name	Park status
Compositae (Asteraceae)	<i>Carduus nutans</i>	musk thistle	Present
Compositae (Asteraceae)	<i>Centaurea maculosa</i>	spotted knapweed	Present
Compositae (Asteraceae)	<i>Centaurea repens</i>	Russian knapweed	Present
Compositae (Asteraceae)	<i>Cirsium arvense</i>	Canada thistle	Present
Convolvulaceae	<i>Convolvulus arvensis</i>	field bindweed	Present
Cruciferae (Brassicaceae)	<i>Cardaria draba</i>	whitetop	Present
Euphorbiaceae	<i>Euphorbia esula</i>	leafy spurge	Reported

This list is derived from the State of Utah Department of Agriculture and Food (2007) and Dewey and Andersen (2005).



## 4 Discussion

Since the publication of Weight's 1933 checklist of 286 species, the confirmed and reported flora of Bryce Canyon National Park has more than doubled to 587 taxa (Table 3.1, Figure 1.3.4, Appendix A). Based on available habitats and proximity, at least another 298 plant taxa may occur within the park (Appendix B). Should all of these potential species be found, the documented flora of the park would increase by nearly 33%. Many of the "missing" potential or reported taxa consist of cryptic species that flower late in the grow-

ing season, or occur in undersampled wetland or weedy habitats. A large number of weedy species that are known for the park from specimens in the resource management collection are not yet represented in the official herbarium and should be the target of additional collection efforts. 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).



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# Appendices

The following appendices contain annotated checklists of the vascular flora of Bryce Canyon 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 which have been reliably reported for the park in the literature (Buchanan and Graybosch 1981; Dewey and Andersen 2005; Hallsten and Roberts 1988; NCPN in ed.; Spence and Buchanan 1993). Vouchers were examined from the BRCA herbarium, including the separate resource management (BRCA-RM) repository, and collections from Brigham Young University (BRY), Utah State University (USU), the University of Wyoming (RM), and the digital museum database of the New York Botanical Garden (NY). Species entries in Appendix A are organized alphabetically by family and genus.

Appendix B includes species that may potentially occur within Bryce Canyon National Park 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 Bryce Canyon National Park 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 *A Utah Flora, third edition* (Welsh et al. 2003). Alternative family names and treatments from other regional floras (Dorn 2001; Flora of North America Editorial Committee 1993, 2002b; Holmgren et al. 2005; Weber and Wittman 2001) are listed in parentheses.

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

Nomenclature for scientific names and taxonomic concepts are derived from Welsh et al. (2003). 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; Holmgren et al. 2005; Weber and Wittmann 2001). 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 et al. (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 Utah and the state's contribution to the plant's overall global range. **Disjunct (Disj)** taxa have their Utah 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 Utah or North America but 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 km<sup>2</sup> (ca 6,370 mi<sup>2</sup>, 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 Utah 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 km<sup>2</sup> (an area about the size of the state of Wyoming). **Sparse** taxa occur widely across Utah or North America but their range within Utah is small and patchy, with populations restricted to specialized or uncommon habitats. **Widespread (Wide)** taxa have global ranges exceeding 250,000 km<sup>2</sup> 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 Bryce Canyon National Park. 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 (Buchanan and Graybosch 1981; Dewey and Andersen 2005; Hallsten and Roberts 1988; NCPN in ed.; Spence and Buchanan 1993), but have not been corroborated with a voucher specimen. Species that may potentially occur in Bryce Canyon 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 Bryce Canyon NP. Abundance data are derived from Northern Colorado Plateau Network (in ed.), and personal observations. Abundant (**Abun**) taxa have large populations, have 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 Bryce Canyon National Park herbarium (**BRCA**) Bryce Canyon National Park resource

management collection (**BRCA-RM**), Brigham Young University (**BRY**), Utah State University (**USU**), New York Botanical Garden (**NY**), and the University of Wyoming's Rocky Mountain Herbarium (**RM**).

### Year doc. (Appendix A)

Year documented indicates the first year in which a species was confirmed or reported to occur in Bryce Canyon National Park. 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 mostly 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 Utah or Introduced (**Intro**) based on Fertig (2007).

### 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 Bryce Canyon National Park is indicated by an “x” in the columns Sage/Grs through Wet and is derived from the vegetation classification of Buchanan (1992), Madsen (2001), and Welsh et al. (2003). **Sage/Grs**=black sagebrush (*Artemisia nova*) grasslands and montane meadows dominated by perennial grasses and herbaceous species. **PinJun**=Pinyon-Juniper woodlands of two-needle pinyon (*Pinus edulis*) and Utah juniper (*Juniperus osteosperma*). **MontConf**=montane brush and conifer forests of ponderosa pine (*Pinus ponderosa*), Gambel oak (*Quercus gambelii*), Douglas-fir (*Pseudotsuga menziesii*), and white fir (*Abies concolor*). **Wet**=Wetlands (including wet meadows, ponds, swampy forests, and 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 Bryce Canyon 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> var. <i>glabrum</i>	Includes vars. <i>neomexicanum</i> , <i>douglasii</i> , & <i>tripartitum</i>	Rocky Mountain maple	Shrub	Wide	Pres	Com	Graybosch 770 (BRCA)	1931	
Aceraceae	<i>Acer grandidentatum</i>		bigtooth maple	Tree	Wide	Pres	Unc	Buchanan 371 (BRCA)	1958	
Agavaceae	<i>Yucca angustissima</i>	<i>Y. angustissima</i> var. <i>angustissima</i>	narrowleaved yucca	Shrub	RegEn	Pres	Unc	Buchanan 156 (BRCA)	1932	
Agavaceae	<i>Yucca baccata</i>	<i>Y. baccata</i> var. <i>baccata</i>	datil yucca	Shrub	Wide	Pres	Rare	Topp ST09190702 (BRCA)	2007	
Agavaceae	<i>Yucca harrimaniae</i> var. <i>harrimaniae</i>		Harriman's yucca	Shrub	Wide	Pres	Unc	Graybosch 932 (BRCA)	1980	Type locality is Helper, Carbon Co., UT (Trelease s.n. MO)
Amaranthaceae	<i>Amaranthus bitoides</i>	<i>A. graecizans</i>	prostrate pigweed	AnnF	Wide	Hist	?	Weight B-32/295 (BRCA)	1932	
Anacardiaceae	<i>Rhus aromatica</i> var. <i>trilobata</i>	<i>R. trilobata</i> var. <i>trilobata</i>	squawbush	Shrub	Wide	Pres	Com	Graybosch 851 (BRCA)	1932	
Apocynaceae	<i>Apocynum androsaemifolium</i> var. <i>androsaemifolium</i>		spreading dogbane	PerF	Wide	Pres	Unc	Buchanan 245 (BRCA)	1934	
Apocynaceae	<i>Apocynum cannabinum</i>	Includes vars. <i>cannabinum</i> , <i>glaberrimum</i> , & <i>angustifolium</i>	common dogbane	PerF	Wide	Pres	Unc	Graybosch 1361 (BRCA)	1981	
Asclepiadaceae	<i>Asclepias asperula</i> var. <i>asperula</i>		spider milkweed	PerF	Wide	Pres	Unc	Graybosch 957 (BRCA)	1980	
Asclepiadaceae	<i>Asclepias hallii</i>		Hall's milkweed	PerF	Sparse	Pres	Rare	Topp ST08140506 (BRCA)	2005	
Asclepiadaceae	<i>Asclepias speciosa</i>		showy milkweed	PerF	Wide	Pres	Rare	Gottschalk 6 (UTC)	1986	
Berberidaceae	<i>Mahonia fremontii</i>	<i>Berberis fremontii</i>	Fremont's mahonia	Shrub	Wide	Pres	Com	Graybosch 1354 (BRCA)	1931	
Berberidaceae	<i>Mahonia repens</i>	<i>Berberis repens</i>	Oregon-grape	Shrub	Wide	Pres	Unc	Buchanan 136 (BRCA)	1928	
Betulaceae	<i>Betula occidentalis</i>	<i>B. fontinalis</i>	water birch	Tree	Wide	Pres	Unc	Boyle 1155 (BRCA)	1931	
Boraginaceae	<i>Cryptantha abata</i>		low cryptanth	PerF	RegEn	Pres	Unc	Boyle 1117 (BRCA)	1932	

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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>Cryptantha bakeri</i>	<i>Oreocarya bakeri</i>	Baker's cryptanth	PerF	RegEn	Pres	Unc	Graybosch 756 (BRCA)	1934	
Boraginaceae	<i>Cryptantha cinerea</i> var. <i>arenicola</i>		sand cryptanth	PerF	LocEn	Rep	?	Van Pelt and Schelz (1991)	NA	Foster (10866 BRY) is from "near Bryce Canyon NP". Type locality is Lone Pine Point, Johnson Canyon, Kane Co., UT (Higgins, Welsh, & Thorne 14297 BRY). USFWS: former C2 candidate
Boraginaceae	<i>Cryptantha cinerea</i> var. <i>cinerea</i>	Includes <i>C. atwoodii</i>	ashy cryptanth	PerF	Wide	Pres	Unc	Graybosch 966 (BRCA)	1980	
Boraginaceae	<i>Cryptantha confertiflora</i>		basin yellow cryptanth	PerF	Wide	Pres	Unc	Graybosch 940 (BRCA)	1980	
Boraginaceae	<i>Cryptantha fendleri</i>		sand dune cryptanth	AnnF	Wide	Hist	?	Weight B-32/300 (BRCA)	1932	
Boraginaceae	<i>Cryptantha flava</i>	<i>Oreocarya flava</i>	plateau yellow cryptanth	PerF	Wide	Pres	Unc	Graybosch 758 (BRCA)	1980	
Boraginaceae	<i>Cryptantha fulvocanescens</i>	<i>Oreocarya fulvocanescens</i> , includes var. <i>echinooides</i> .	plateau cryptanth	PerF	RegEn	Hist	?	Weight B-32/203 (BRCA)	1932	Type locality of var. <i>echinooides</i> is Paria Canyon, Garfield Co., UT (Jones 5297p POM)
Boraginaceae	<i>Cryptantha humilis</i>	<i>Oreocarya humilis</i> ssp. <i>nana</i>	dwarf cryptanth	PerF	Wide	Pres	Unc	Buchanan 3046 (BRCA)	1957	

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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>Cryptantha ochroleuca</i>	Included in <i>C. compacta</i> by some authors	yellowish cryptanth	PerF	LocEn	Pres	Com	Graybosch 891 (BRCA)	1932	Type locality is Red Canyon, Garfield Co., UT (Higgins 1788 BRY). USFS: Region 4 Sensitive, USFWS: former C2 candidate
Boraginaceae	<i>Cryptantha setosissima</i>		bristly cryptanth	PerF	RegEn	Pres	Unc	Buchanan 2974 (BRCA)	1931	Type locality is Fish Lake, Sevier Co., UT (Ward s.n. GH)
Boraginaceae	<i>Cynoglossum officinale</i>		common hound's-tongue	PerF	Intro	Pres	Unc	Heyn s.n. (BRCA)	1998	Native to Eurasia
Boraginaceae	<i>Lappula occidentalis</i> var. <i>cupulata</i>	<i>L. texana</i> , <i>L. redowskii</i> var. <i>cupulata</i> , <i>L. marginata</i>	cupseed stickseed	AnnF	Wide	Pres	Unc	Topp ST06040601 (BRCA)	1934	
Boraginaceae	<i>Lappula occidentalis</i> var. <i>occidentalis</i>	<i>L. redowskii</i> var. <i>redowskii</i>	western stickseed	AnnF	Wide	Pres	Unc	Buchanan 70 (BRCA)	1956	
Boraginaceae	<i>Lithospermum incisum</i>		showy stoneseed	PerF	Wide	Pres	Unc	Shepherd s.n. (BRCA)	1940	
Boraginaceae	<i>Lithospermum multiflorum</i>		southwestern stoneseed	PerF	Wide	Pres	Com	Boyle 1114 (BRCA)	1938	
Boraginaceae	<i>Mertensia arizonica</i>		aspen bluebell	PerF	Wide	Pres	Unc	Foster & Foster 5529 (BRY)	1977	
Cactaceae	<i>Coryphantha vivipara</i> var. <i>arizonica</i>	<i>Escobaria vivipara</i> var. <i>arizonica</i> . Vars. not recognized in <i>Flora of North America</i> (2003)	Arizona pincushion	PerF	Wide	Pres	Rare	Foster 10796 (BRY)	1993	
Cactaceae	<i>Echinocereus 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	Foster 11077 (BRY)	1994	

**Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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>Opuntia erinacea</i> var. <i>erinacea</i>	<i>O. polyacantha</i> var. <i>erinacea</i>	common pricklypear	PerF	Wide	Hist	?	Weight B-32 /234 (BRCA)	1932	
Cactaceae	<i>Opuntia fragilis</i>		brittle pricklypear	PerF	Wide	Pres	Rate	Topp ST06140601 (BRCA)	2006	
Cactaceae	<i>Opuntia polyacantha</i> var. <i>polyacantha</i>	<i>Flora of North America</i> (2003) includes vars. <i>rufispina</i> & <i>trichophora</i>	plains pricklypear	PerF	Wide	Rep	Unc	Northern Colorado Plateau Network (in ed.)	2005	
Cactaceae	<i>Pediocactus simpsonii</i>	Includes vars. <i>minor</i> & <i>simpsonii</i>	Simpson's hedgehog cactus	PerF	Wide	Pres	Unc	Graybosch 791a (BRCA)	1980	
Cactaceae	<i>Sclerocactus whipplei</i> var. <i>roseus</i>	<i>S. parviflorus</i> , <i>S. whipplei</i> var. <i>intermedius</i>	small-flower fishhook cactus	PerF	Wide	Pres	Unc	Hallsten 2454 (UTC)	1987	
Campanulaceae	<i>Campanula parryi</i>	<i>C. parryi</i> var. <i>parryi</i>	Parry's harebell	PerF	Wide	Pres	Unc	Graybosch 1043 (BRCA)	1931	
Capparaceae (Cleomaceae)	<i>Cleome lutea</i>		yellow beeplant	AnnF	Wide	Hist	?	Weight B-32 /238 (BRCA)	1932	
Capparaceae (Cleomaceae)	<i>Cleomella palmeriana</i> var. <i>palmeriana</i>		Palmer's stinkweed	AnnF	RegEn	Pres	Rare	Topp ST07280602 (BRCA)	2006	Type locality is Green River, Emery Co., UT (Jones s.n. POM)
Caprifoliaceae (Adoxaceae)	<i>Sambucus caerulea</i>	<i>S. nigra</i> ssp. <i>caerulea</i> , <i>S. cerulea</i>	blue elderberry	Shrub	Wide	Pres	Unc	Buchanan 183 (BRCA)	1931	
Caprifoliaceae	<i>Symphoricarpos oreophilus</i> var. <i>utahensis</i>	<i>S. rotundifolius</i> , includes vars. <i>parishii</i> & <i>oreophilus</i> according to some authors	mountain snowberry	Shrub	Wide	Pres	Com	Boyle 1132 (BRCA)	1931	



*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Caryophyllaceae (Asteraceae)	<i>Arenaria fendleri</i> var. <i>glabrescens</i>	<i>Eremogone kingii</i> var. <i>glabrescens</i> , <i>E. kingii</i> var. <i>uintahensis</i> , <i>A. kingii</i> ssp. <i>uintahensis</i> , <i>compacta</i> , & <i>plateauensis</i>	basin sandwort	PerF	Wide	Pres	Com	Buchanan 2045 (BRCA)	1938	
Caryophyllaceae	<i>Lychnis drummondii</i>	<i>Silene drummondii</i> ssp. <i>drummondii</i> & ssp. <i>striata</i> , includes vars. <i>striata</i> , <i>kruckebergii</i> , & <i>drummondii</i> , <i>Gastrolychnis</i> <i>drummondii</i>	Drummond's catchfly	PerF	Wide	Pres	Unc	Buchanan 275 (BRCA)	1957	
Caryophyllaceae (Asteraceae)	<i>Paronychia</i> <i>sessiliflora</i>		Creeping nailwort	PerF	Wide	Pres	Unc	Graybosch 962 (BRCA)	1980	
Caryophyllaceae	<i>Silene petersonii</i>	Includes vars. <i>minor</i> & <i>petersonii</i> & <i>S.</i> <i>clokeyi</i>	Peterson's campion	PerF	RegEn	Pres	Unc	Graybosch 1360 (BRCA)	1980	Type locality is Wasatch Plateau, 1 mile above Baldy Ranger Station, Sanpete Co., UT (Maguire 20000 NY). Type locality of var. <i>minor</i> is Red Canyon, Garfield Co., UT (Maguire 19550 NY). USFS: Region 4 Sensitive, USFWS: former C2 candidate
Caryophyllaceae (Asteraceae)	<i>Stellaria jamesiana</i>	<i>Pseudostellaria</i> <i>jamesiana</i>	James' chickweed	PerF	Wide	Pres	Unc	Graybosch 1098 (BRCA)	1980	

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Caryophyllaceae (Asteraceae)	<i>Stellaria longipes</i> var. <i>longipes</i>	<i>S. longipes</i> spp. <i>stricta</i> , includes var. <i>monantha</i> in <i>Flora</i> of <i>North America</i> (2005)	long-stalk starwort	PerF	Wide	Pres	Rare	Graybosch 1114 (BRCA)	1980	
Celastraceae	<i>Pachystima</i> <i>mysinites</i>	<i>Pachystima</i> <i>mysinites</i> , <i>Pachystima</i> <i>mysinites</i>	mountain-lover	Shrub	Wide	Pres	Unc	Buchanan 132 (BRCA)	1931	
Chenopodiaceae	<i>Atriplex canescens</i> var. <i>canescens</i>	<i>A. canescens</i> var. <i>occidentalis</i>	fourwing saltbush	Shrub	Wide	Pres	Unc	Graybosch 847 (BRCA)	1980	
Chenopodiaceae	<i>Atriplex confertifolia</i>		shadscale	Shrub	Wide	Pres	Unc	Ballenger EB07270601 (BRCA)	2006	
Chenopodiaceae	<i>Atriplex gardneri</i> var. <i>utahensis</i>	<i>A. tridentata</i> , includes <i>A.</i> <i>tridentata</i> var. <i>robusta</i>	basin saltbush	Shrub	Wide	Pres	Unc	Graybosch 946 (BRCA)	1980	
Chenopodiaceae	<i>Atriplex powellii</i> var. <i>powellii</i>		Powell's orach	AnnF	Wide	Pres	Rare	Topp ST07280604 (BRCA)	2006	
Chenopodiaceae	<i>Bassia scoparia</i>	<i>Kochia scoparia</i> , <i>B.</i> <i>sieversiana</i>	summer-cypress	AnnF	Intro	Pres	Unc	Topp ST07280607 (BRCA)	2006	Native to Eurasia
Chenopodiaceae	<i>Chenopodium</i> <i>album</i> var. <i>album</i>	<i>C. album</i>	lambquarter	AnnF	Intro	Rep	Unc	Northern Colorado Plateau Network (in ed.)	2005	Native to Eurasia
Chenopodiaceae	<i>Chenopodium</i> <i>atrovirens</i>	<i>C. fremontii</i> var. <i>atrovirens</i>	mountain goosefoot	AnnF	Wide	Hist	?	Weight B-31/137 (BRCA)	1931	
Chenopodiaceae	<i>Chenopodium</i> <i>capitatum</i> var. <i>parvicapitatum</i>	<i>C. overi</i> , <i>C. foliosum</i>	smallhead goosefoot	AnnF	Wide	Pres	Unc	Kitchen s.n. (BRCA)	1998	Type locality is Indian Creek, Tushar Mtns, Beaver Co., UT (Martin & Welsh 17148 BRY)
Chenopodiaceae	<i>Chenopodium</i> <i>fremontii</i> var. <i>incanum</i>	<i>C. incanum</i> var. <i>incanum</i> , <i>C.</i> <i>incanum</i> var. <i>occidentale</i>	silvery goosefoot	AnnF	Wide	Pres	Unc	Graybosch 955 (BRCA)	1980	

**Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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>Chenopodium leptophyllum</i>		narrow-leaf goosefoot	AnnF	Wide	Pres	Unc	Buchanan 2960 (BRCA)	1978	
Chenopodiaceae	<i>Halogeton glomeratus</i>		halogeton	AnnF	Intro	Pres	Rare	Topp ST07280609 (BRCA)	2004	Native to Eurasia
Chenopodiaceae	<i>Krascheninnikovia lanata</i> var. <i>lanata</i>	<i>Ceratooides lanata</i> , <i>Eurotia lanata</i> . Vars. not recognized in in <i>Flora of North America</i> (2003)	winterfat	Shrub	Wide	Pres	Unc	Buchanan 462 (BRCA)	1959	
Chenopodiaceae	<i>Salsola tragus</i>	<i>S. kali</i> , <i>S. iberica</i> , <i>S. pestifer</i> , <i>S. australis</i>	Russian thistle	AnnF	Intro	Pres	Unc	Topp ST07280608 (BRCA)	1931	Native to Asia
Chenopodiaceae (Sarcobataceae)	<i>Sarcobatus vermiculatus</i>		greasewood	Shrub	Wide	Pres	Unc	Tendick AT06290601 (BRCA)	2006	
Chenopodiaceae	<i>Suaeda torreyana</i> var. <i>torreyana</i>	<i>S. moquini</i> , <i>S. nigra</i> , <i>S. fruticosa</i>	Torrey's seepweed	AnnF	Wide	Pres	Rare	Topp ST07280605 (BRCA)	2006	
Chenopodiaceae	<i>Zuckia brandegei</i> var. <i>plummeri</i>	<i>Z. brandegeei</i> var. <i>plummeri</i> , <i>Grayia brandegei</i> var. <i>plummeri</i>	Plummer's siltbush	Shrub	RegEn	Pres	Rare	Topp ST07280603 (BRCA)	2006	
Compositae (Asteraceae)	<i>Achillea millefolium</i> ssp. <i>lanulosa</i>	<i>A. lanulosa</i> , <i>A. millefolium</i> var. <i>occidentalis</i> . Vars. not recognized in <i>Flora of North America</i> (2006)	common yarrow	PerF	Wide	Pres	Unc	Buchanan 254b (BRCA)	1957	
Compositae (Asteraceae)	<i>Agoseris aurantiaca</i> var. <i>aurantiaca</i>		orange agoseris	PerF	Wide	Rep	Unc	Buchanan & Graybosch (1981)	1980	
Compositae (Asteraceae)	<i>Agoseris aurantiaca</i> var. <i>purpurea</i>		purplish agoseris	PerF	Wide	Pres	Unc	Graybosch 1061 (BRCA)	1980	
Compositae (Asteraceae)	<i>Agoseris glauca</i> var. <i>glauca</i>		pale agoseris	PerF	Wide	Pres	Unc	Graybosch 908 (BRCA)	1980	
Compositae (Asteraceae)	<i>Agoseris glauca</i> var. <i>laciniata</i>	<i>A. parviflora</i>	cutleaf agoseris	PerF	Wide	Pres	Unc	Buchanan 208 (BRCA)	1956	
Compositae (Asteraceae)	<i>Antennaria dimorpha</i>		low pussytoes	PerF	Wide	Rep	? ?	Buchanan & Graybosch (1981)	1980	

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Compositae (Asteraceae)	<i>Antennaria microphylla</i>	Includes <i>A. rosea</i>	small-leaf pussyoes	PerF	Wide	Pres	Unc	Buchanan 369 (BRCA)	1957	
Compositae (Asteraceae)	<i>Antennaria parvifolia</i>		common pussytoes	PerF	Wide	Pres	Unc	Buchanan 16 (BRCA)	1956	
Compositae (Asteraceae)	<i>Antennaria rosulata</i>		Breaks pussytoes	PerF	Wide	Pres	Unc	Buchanan 3082 (BRCA)	1973	
Compositae (Asteraceae)	<i>Arctium minus</i>		burdock	PerF	Intro	Pres	Unc	Buchanan s.n. (BRCA)	1998	Native to Eurasia
Compositae (Asteraceae)	<i>Arnica chamissonis var. foliosa</i>	<i>A. chamissonis</i> var. <i>andina</i>	Chamisso's arnica	PerF	Wide	Pres	Unc	Graybosch 1116 (BRCA)	1980	
Compositae (Asteraceae)	<i>Arnica cordifolia</i> var. <i>cordifolia</i>	Vars. not recognized in <i>Flora of North America</i> (2006). Misspelled var. <i>cordata</i> in Welsh et al. 2003	heartleaf arnica	PerF	Wide	Pres	Unc	Graybosch 987 (BRCA)	1958	
Compositae (Asteraceae)	<i>Artemisia campestris var. scouleriana</i>	<i>Oligosporus campestris</i> ssp. <i>pacificus</i> , <i>O. pacificus</i>	sand wormwood	PerF	Wide	Pres	Rare	Graybosch 1101 (BRCA)	1980	
Compositae (Asteraceae)	<i>Artemisia carruthii</i>		Carruth's wormwood	PerF	Wide	Pres	Unc	Buchanan 2951 (BRCA)	1956	
Compositae (Asteraceae)	<i>Artemisia dracunculus</i> var. <i>glauca</i>	<i>Oligosporus dracunculus</i> . Vars. not recognized in <i>Flora of North America</i> (2006)	tarragon	PerF	Wide	Pres	Unc	Buchanan 525 (BRCA)	1959	
Compositae (Asteraceae)	<i>Artemisia frigida</i>		fringed sagebrush	Shrub	Wide	Pres	Unc	Boyle 1167 (BRCA)	1942	
Compositae (Asteraceae)	<i>Artemisia ludoviciana</i> var. <i>albula</i>		Louisiana wormwood	PerF	Wide	Pres	Unc	Buchanan 322 (BRCA)	1942	
Compositae (Asteraceae)	<i>Artemisia ludoviciana</i> var. <i>latiloba</i>	<i>Artemisia ludoviciana</i> ssp. <i>candicans</i>	Louisiana wormwood	PerF	Sparse	Pres	Unc	Topp ST08100502 (BRCA)	2005	

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Compositae (Asteraceae)	<i>Artemisia nova</i> var. <i>nova</i>	<i>Artemisia arbuscula</i> var. <i>nova</i> , <i>Seriphidium novum</i> . Vars. not recognized in <i>Flora of North America</i> (2006)	black sagebrush	Shrub	Wide	Pres	Com	Weight B-32/251 (BRCA)	1932	
Compositae (Asteraceae)	<i>Artemisia pygmaea</i>	<i>Seriphidium pygmaeum</i>	pygmy sagebrush	Shrub	Wide	Pres	Rare	Graybosch 964 (BRCA)	1980	
Compositae (Asteraceae)	<i>Artemisia tridentata</i> var. <i>tridentata</i>	<i>Seriphidium tridentatum</i> spp. <i>tridentatum</i>	basin big sagebrush	Shrub	Wide	Pres	Unc	Buchanan 540 (BRCA)	1959	
Compositae (Asteraceae)	<i>Artemisia tridentata</i> var. <i>wyomingensis</i>	<i>Seriphidium tridentatum</i> spp. <i>wyomingense</i>	Wyoming big sagebrush	Shrub	Wide	Rep	Unc	Northern Colorado Plateau Network (in ed.)	2005	
Compositae (Asteraceae)	<i>Aster ascendens</i>	<i>A. chilensis</i> spp. <i>ascendens</i> , <i>A. ascendens</i> , <i>Symphotrichum ascendens</i> , <i>Virgularia ascendens</i>	Pacific aster	PerF	Wide	Pres	Com	Boyle 1168 (BRCA)	1931	
Compositae (Asteraceae)	<i>Aster eatonii</i>	<i>Symphotrichum eatonii</i> , <i>A. bracteolatus</i>	Eaton's aster	PerF	Wide	Pres	Unc	Graybosch 1070 (BRCA)	1980	
Compositae (Asteraceae)	<i>Aster glaucodes</i>	<i>Eucephalus glaucus</i> , <i>Eurybia glauca</i> , <i>Herrickia glauca</i> var. <i>glauca</i>	blueleaf aster	PerF	Wide	Pres	Unc	Graybosch 1069 (BRCA)	1931	
Compositae (Asteraceae)	<i>Aster hesperius</i>	<i>A. lanceolatus</i> var. <i>hesperius</i> , <i>Symphotrichum lanceolatum</i> var. <i>hesperium</i>	Siskiyou aster	PerF	Wide	Pres	Rare	Tendick AT07290601 (BRCA)	2006	
Compositae (Asteraceae)	<i>Aster spathulatus</i>	<i>A. occidentalis</i> , <i>Symphotrichum spathulatum</i>	western aster	PerF	Wide	Pres	Unc	Buchanan 304 (BRCA)	1957	

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Compositae (Asteraceae)	<i>Aster wasatchensis</i> var. <i>wasatchensis</i>	<i>Eurybia wasatchensis</i> , <i>Herrickia wasatchensis</i>	Markagunt aster	PerF	LocEn	Pres	Unc	Buchanan 403 (BRCA)	1958	Type locality is Tate Mine near Marysvale, Plute Co., UT (Jones 5861 POM).
Compositae (Asteraceae)	<i>Balsamorhiza sagittata</i>		arrowleaf balsamroot	PerF	Wide	Pres	Unc	Buchanan 15 (BRCA)	1940	
Compositae (Asteraceae)	<i>Brickellia oblongifolia</i> var. <i>linifolia</i>		Mohave brickellbush	Shrub	Wide	Pres	Unc	Buchanan 466 (BRCA)	1959	Type locality is American Fork, Jordan Valley, Utah Co., UT (Watson 493 YU)
Compositae (Asteraceae)	<i>Carduus nutans</i>	Includes ssp. <i>leiophyllus</i> & <i>macrolepis</i>	musk thistle	PerF	Intro	Pres	Unc	Buchanan s.n. (BRCA)	1998	Utah state noxious weed. Native to Eurasia
Compositae (Asteraceae)	<i>Centaurea maculosa</i>	<i>C. biebersteinii</i> , <i>Centaurea stoebe</i> ssp. <i>micranthos</i> , <i>Acosta maculosa</i>	spotted knapweed	PerF	Intro	Pres	Unc	Kitchen & Buchanan s.n. (BRCA)	1998	Utah state noxious weed. Native to Europe
Compositae (Asteraceae)	<i>Centaurea repens</i>	<i>Acroptilon repens</i>	Russian knapweed	PerF	Intro	Pres	Unc	Graybosch 954 (BRCA)	1980	UT state noxious weed. Native to Eurasia
Compositae (Asteraceae)	<i>Chaenactis douglasii</i>	Includes vars. <i>douglasii</i> & <i>montana</i>	hoary dusty- maiden	PerF	Wide	Pres	Unc	Boyle 1140 (BRCA)	1931	
Compositae (Asteraceae)	<i>Chaetopappa ericoides</i>	<i>Leucelene ericoides</i> , <i>Aster arenosus</i>	rose-heath	PerF	Wide	Pres	Unc	Buchanan 1122 (BRCA)	1931	
Compositae (Asteraceae)	<i>Chrysopsis jonesii</i>	<i>Heterotheca jonesii</i>	Jones' golden- aster	PerF	LocEn	Pres	Rare	Graybosch 924 (BRCA)	1980	Type locality is Springdale, Washington Co., UT (Jones 5249u US). USFS: Region 4 Sensitive, USFWS: 3C

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Compositae (Asteraceae)	<i>Chrysopsis villosa</i> var. <i>minor</i>	<i>C. villosa</i> var. <i>hispidata</i> , <i>Heterotheca villosa</i> var. <i>hispidata</i> , <i>H. villosa</i> var. <i>minor</i>	hispid golden-aster	PerF	Wide	Pres	Unc	Graybosch 1090 (BRCA)	1980	
Compositae (Asteraceae)	<i>Chrysothamnus depressus</i>		dwarf rabbitbrush	Shrub	Wide	Pres	Com	Schelz s.n. (BRCA)	1989	
Compositae (Asteraceae)	<i>Chrysothamnus linifolius</i>	<i>Lorandersonia linifolia</i>	spear-leaf rabbitbrush	Shrub	Wide	Pres	Unc	Topp ST07280601 (BRCA)	2006	
Compositae (Asteraceae)	<i>Chrysothamnus nauseosus</i> var. <i>consimilis</i>	<i>Ericameria nauseosa</i> var. <i>consimilis</i> , included in <i>C. nauseosus</i> var. <i>oreophilus</i> by some authors	greenish rabbitbrush	Shrub	Wide	Pres	Com	Fertig 23058 (BRCA)	1950	
Compositae (Asteraceae)	<i>Chrysothamnus nauseosus</i> var. <i>gnaphalodes</i>	<i>C. nauseosus</i> var. <i>hololeucus</i>	graystem rabbitbrush	Shrub	Wide	Pres	Com	Fertig 23060 (BRCA)	2006	
Compositae (Asteraceae)	<i>Chrysothamnus nauseosus</i> var. <i>graveolens</i>	<i>Ericameria nauseosa</i> var. <i>graveolens</i> , <i>E. nauseosa</i> var. <i>glabrata</i> , includes <i>C. nauseosus</i> var. <i>oreophilus</i> according to some authors	glabrate rabbitbrush	Shrub	Wide	Hist	?	Cottam & Hutchings 2775 (BRY)	1927	
Compositae (Asteraceae)	<i>Chrysothamnus parryi</i> var. <i>affinis</i>	<i>Ericameria parryi</i> var. <i>affinis</i>	Parry's rabbitbrush	Shrub	Wide	Pres	Unc	Buchanan 2984 (BRCA)	1931	
Compositae (Asteraceae)	<i>Chrysothamnus parryi</i> var. <i>parryi</i>	<i>Ericameria parryi</i> var. <i>parryi</i>	Parry's rabbitbrush	Shrub	Sparse	Pres	Unc	Topp ST09070502 (BRCA)	2005	
Compositae (Asteraceae)	<i>Chrysothamnus vaseyi</i>		Vasey's rabbitbrush	Shrub	Wide	Pres	Unc	Boyle 1165 (BRCA)	1942	
Compositae (Asteraceae)	<i>Chrysothamnus viscidiflorus</i> var. <i>lanceolatus</i>		lanceleaf rabbitbrush	Shrub	Wide	Pres	Unc	Buchanan 71 (BRCA)	1931	

**Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Compositae (Asteraceae)	<i>Chrysothamnus viscidiflorus</i> var. <i>stenophyllus</i>	Included in var. <i>viscidiflorus</i> by some authors	slenderleaf rabbitbrush	Shrub	Wide	Rep	Rare	Northern Colorado Plateau Network (in ed.)	2005	
Compositae (Asteraceae)	<i>Chrysothamnus viscidiflorus</i> var. <i>viscidiflorus</i>		green rabbitbrush	Shrub	Wide	Pres	Unc	Topp ST08250701 (BRCA)	2007	
Compositae (Asteraceae)	<i>Cichorium intybus</i>		chicory	PerF	Intro	Pres	Unc	Buchanan s.n. (BRCA)	1998	Native to Eurasia
Compositae (Asteraceae)	<i>Cirsium arizonicum</i>	Includes vars. <i>arizonicum</i> & <i>nidulum</i>	Arizona thistle	PerF	Wide	Pres	Unc	Graybosch 1068 (BRCA)	1956	Type locality of var. <i>nidulum</i> is Paria, Kane Co., UT (Jones 5290a POM).
Compositae (Asteraceae)	<i>Cirsium arvense</i>	Includes vars. <i>horridum</i> & <i>integrifolium</i> , <i>Breea arvensis</i>	Canada thistle	PerF	Intro	Pres	Unc	Buchanan s.n. (BRCA)	1998	Utah state noxious weed. Native to Eurasia
Compositae (Asteraceae)	<i>Cirsium calcareum var. pulchellum</i>	Var. not recognized in Cronquist (1994). Included in <i>C. arizonicum</i> var. <i>bipinnatum</i> in <i>Flora of North America</i> (2006)	pretty thistle	PerF	Wide	Pres	Unc	RS 9-21-04 (BRCA)	2004	
Compositae (Asteraceae)	<i>Cirsium neomexicanum</i> var. <i>neomexicanum</i>	Vars. not recognized in <i>Flora of North America</i> (2006)	New Mexico thistle	PerF	Wide	Pres	Rare	Hallsten 2446 (UTC)	1987	
Compositae (Asteraceae)	<i>Cirsium scariosum var. scariosum</i>		elk thistle	PerF	Wide	Pres	Unc	Topp ST07110602 (BRCA)	1993	
Compositae (Asteraceae)	<i>Cirsium undulatum var. tracyi</i>	<i>C. tracyi</i>	Tracy's thistle	PerF	RegEn	Pres	Rare	Buchanan 512 (BRCA)	1959	
Compositae (Asteraceae)	<i>Cirsium undulatum var. undulatum</i>	<i>C. undulatum</i>	wavy-leaved thistle	PerF	Wide	Pres	Unc	Graybosch 953 (BRCA)	1957	
Compositae (Asteraceae)	<i>Cirsium vulgare</i>		bull thistle	PerF	Intro	Pres	Unc	Passek s.n. (BRCA)	1990	Native to Europe



**Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Compositae (Asteraceae)	<i>Cirsium wheeleri</i> var. <i>wheeleri</i>	Vars. not recognized in <i>Flora of North America</i> (2006)	Wheeler's thistle	PerF	Wide	Pres	Com	Boyle 1166 (BRCA)	1931	
Compositae (Asteraceae)	<i>Conyza canadensis</i> var. <i>glabrata</i>	Includes var. <i>canadensis</i> . Vars. not recognized in <i>Flora of North America</i> (2006)	Canadian horseweed	AnnF	Wide	Pres	Unc	Foster 11012 (BRY)	1993	
Compositae (Asteraceae)	<i>Crepis intermedia</i>	<i>Psilochenia intermedia</i>	gray hawksbeard	PerF	Wide	Pres	Unc	Buchanan 461a (BRCA)	1959	
Compositae (Asteraceae)	<i>Crepis occidentalis</i> var. <i>occidentalis</i>	<i>Psilochenia occidentalis</i>	western hawksbeard	PerF	Wide	Pres	Unc	Graybosch 836 (BRCA)	1980	
Compositae (Asteraceae)	<i>Crepis runcinata</i> var. <i>glauca</i>		glaucous hawksbeard	PerF	Wide	Rep	Unc	Buchanan & Graybosch (1981)	1980	
Compositae (Asteraceae)	<i>Crepis runcinata</i> var. <i>hispidulosa</i>		hispidulous hawksbeard	PerF	Wide	Pres	Unc	Graybosch 867 (BRCA)	1957	
Compositae (Asteraceae)	<i>Erigeron abajoensis</i>	Includes <i>E. awapensis</i> according to some authors	Abajo daisy	PerF	LocEn	Pres	Unc	Atwood 6128 (BRY)	1927	Type locality is Abajo Mtns, San Juan Co., UT (Rydberg & Garrett 9755 NY). USFS: Region 4 Sensitive
Compositae (Asteraceae)	<i>Erigeron aphanactis</i> var. <i>aphanactis</i>		hairy daisy	PerF	Wide	Hist	?	Weight 6676 (BRY)	1935	
Compositae (Asteraceae)	<i>Erigeron canus</i>		hoary daisy	PerF	Disj	Pres	Unc	Boyle 2289 (BRCA)	1931	
Compositae (Asteraceae)	<i>Erigeron compositus</i> var. <i>glabratus</i>		cut-leaved daisy	PerF	Wide	Rep	?	Spence & Buchanan (1993)	NA	
Compositae (Asteraceae)	<i>Erigeron divergens</i> var. <i>divergens</i>		spreading daisy	PerF	Wide	Pres	Unc	Graybosch 1095 (BRCA)	1980	
Compositae (Asteraceae)	<i>Erigeron eatonii</i>	<i>E. eatonii</i> var. <i>eatonii</i>	Eaton's daisy	PerF	Wide	Pres	Unc	Graybosch 838 (BRCA)	1957	
Compositae (Asteraceae)	<i>Erigeron flagellaris</i>		trailing daisy	PerF	Wide	Pres	Unc	Buchanan 289 (BRCA)	1940	

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Compositae (Asteraceae)	<i>Erigeron lonchophyllus</i>	<i>Trimorpha lonchophylla</i>	longleaf daisy	PerF	Wide	Pres	Unc	Buchanan 305 (BRCA)	1957	
Compositae (Asteraceae)	<i>Erigeron pumilus</i> var. <i>concinus</i>	<i>E. concinns</i> var. <i>concinus</i> , includes var. <i>subglaber</i>	Navajo fleabane	PerF	Wide	Pres	Unc	Foster 10775 (BRY)	1993	
Compositae (Asteraceae)	<i>Erigeron pumilus</i> var. <i>condensatus</i>	<i>E. concinns</i> var. <i>condensatus</i>	vernal daisy	PerF	Wide	Pres	Unc	Gifford s.n. (BRCA)	1940	
Compositae (Asteraceae)	<i>Erigeron speciosus</i> var. <i>macranthus</i>		aspen daisy	PerF	Wide	Pres	Com	Buchanan 2915 (BRCA)	1931	
Compositae (Asteraceae)	<i>Erigeron ursinus</i> var. <i>ursinus</i>	Vars. not recognized in <i>Flora of North America</i> (2007)	bear daisy	PerF	Wide	Pres	Unc	Graybosch 1120 (BRCA)	1980	
Compositae (Asteraceae)	<i>Erigeron vagus</i>		Payson's daisy	PerF	Wide	Pres	Unc	Graybosch 1341 (BRCA)	1980	Type locality is Mount Tomasaki, La Sal Mtns, UT (Payson & Payson 4033 RM)
Compositae (Asteraceae)	<i>Grindelia squarrosa</i> var. <i>serrulata</i>	Vars. not recognized in <i>Flora of North America</i> (2006)	curly-cup gumweed	PerF	Wide	Hist	?	Mitchell 16 (BRCA)	1946	
Compositae (Asteraceae)	<i>Gutierrezia sarothrae</i>		broom snakeweed	Shrub	Wide	Pres	Com	Buchanan 532 (BRCA)	1932	
Compositae (Asteraceae)	<i>Haplopappus acaulis</i> var. <i>acaulis</i>	<i>Stenotus acaulis</i> var. <i>acaulis</i>	stemless goldenweed	PerF	Wide	Rep	?	Spence & Buchanan (1993)	NA	
Compositae (Asteraceae)	<i>Haplopappus armerioides</i> var. <i>armerioides</i>	<i>Stenotus armerioides</i> var. <i>armerioides</i>	thrift goldenweed	PerF	Wide	Pres	Com	Peabody 29 (BRCA)	1931	
Compositae (Asteraceae)	<i>Haplopappus macronema</i>	<i>H. macronema</i> var. <i>linearis</i> , <i>H. macronema</i> var. <i>canescens</i> , <i>Ericameria discoidea</i> var. <i>linearis</i> , <i>Macronema discoideum</i>	narrowleaf goldenweed	Shrub	Wide	Pres	Unc	Buchanan 48 (BRCA)	1956	

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Compositae (Asteraceae)	<i>Haplopappus scopulorum</i> var. <i>hirtellus</i>	<i>Hesperodoria scopulorum</i> , <i>Chrysothamnus scopulorum</i>	spindly goldenbush	Shrub	RegEn	Pres	Unc	Graybosch 1100 (BRCA)	1959	Type locality is Cedar Canyon, Iron Co., UT (Garrett 6051 US). USFWS: 3C
Compositae (Asteraceae)	<i>Haplopappus zionis</i>	<i>Ericameria zionis</i>	Cedar Breaks goldenbush	Shrub	LocEn	Pres	Rare	Gottschalk 10 (BRY)	1986	Type locality is Cedar Canyon, Iron Co., UT (Anderson, Welsh, & Chatterley 5094 BRY). UT BLM: Sensitive, USFWS: former C2 candidate
Compositae (Asteraceae)	<i>Helianthella uniflora</i>		little sunflower	PerF	Wide	Pres	Unc	Graybosch 1022 (BRY)	1978	
Compositae (Asteraceae)	<i>Helianthus annuus</i> var. <i>lenticularis</i>	Ssp. not recognized in <i>Flora of North America</i> (2006).	common sunflower	AnnF	Wide	Pres	Unc	Weight B-32/331 (BRCA)	1932	
Compositae (Asteraceae)	<i>Hymenopappus filifolius</i> var. <i>cinereus</i>	<i>H. filifolius</i> var. <i>lugens</i> , <i>H. filifolius</i> var. <i>pauciflorus</i> , <i>H. filifolius</i> var. <i>megacephalus</i> , <i>H. filifolius</i> var. <i>tomentosus</i>	common hyalineherb	PerF	Wide	Pres	Com	Graybosch 797 (BRCA)	1931	
Compositae (Asteraceae)	<i>Hymenopappus filifolius</i> var. <i>nanus</i>		Great Basin hyalineherb	PerF	Wide	Pres	Unc	Peabody 13 (BRCA)	1991	
Compositae (Asteraceae)	<i>Hymenopappus filifolius</i> var. <i>nudipes</i>		alpine hyalineherb	PerF	RegEn	Pres	Unc	Foster & Foster 4363 (BRY)	1977	Type locality is 15 miles N of Orderville, Kane Co., UT (Maguire 18740 NY)
Compositae (Asteraceae)	<i>Hymenoxys acaulis</i> var. <i>arizonica</i>	<i>Tetranneuris acaulis</i> var. <i>arizonica</i>	Arizona hymenoxys	PerF	Wide	Pres	Com	Buchanan 209 (BRCA)	1957	

**Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Compositae (Asteraceae)	<i>Hymenoxys richardsonii</i> var. <i>floribunda</i>	<i>Picradenia richardsonii</i> var. <i>floribunda</i>	Colorado rubber-plant	PerF	Wide	Pres	Unc	Boyle 1158 (BRCA)	1931	
Compositae (Asteraceae)	<i>Iva axillaris</i>	<i>I. axillaris</i> var. <i>axillaris</i>	poverty-weed	PerF	Wide	Pres	Unc	Buchanan 2945 (BRCA)	1978	
Compositae (Asteraceae)	<i>Lactuca serriola</i>		prickly lettuce	AnnF	Intro	Pres	Unc	Graybosch 1080 (BRCA)	1980	Native to Europe
Compositae (Asteraceae)	<i>Lactuca tatarica</i> var. <i>pulchella</i>	<i>L. pulchella</i> , <i>L. oblongifolia</i> , <i>Mulgedium pulchellum</i>	blue lettuce	PerF	Wide	Pres	Rare	Buchanan 97 (BRCA)	1956	
Compositae (Asteraceae)	<i>Lygodesmia grandiflora</i> var. <i>grandiflora</i>	<i>L. grandiflora</i>	showy rush-pink	PerF	Wide	Pres	Unc	Cottam 2771 (BRY)	1927	
Compositae (Asteraceae)	<i>Lygodesmia spinosa</i>	<i>Stephanomeria spinosa</i> , <i>Pleiacanthus spinosus</i>	thorny wire-lettuce	AnnF	Wide	Pres	Unc	Buchanan 2986 (BRCA)	1956	
Compositae (Asteraceae)	<i>Machaeranthera canescens</i> var. <i>aristata</i>	<i>M. linearis</i> , <i>M. rigida</i> , <i>M. canescens</i> var. <i>vacans</i> , <i>Dieteria canescens</i> var. <i>aristata</i>	aristate aster	PerF	RegEn	Rep	?	Buchanan & Graybosch (1981)	1980	Type locality is Willow Creek, San Juan Co., UT (Eastwood 45 CAS)
Compositae (Asteraceae)	<i>Machaeranthera canescens</i> var. <i>canescens</i>	<i>Aster canescens</i> , <i>Dieteria canescens</i> var. <i>canescens</i>	hoary aster	PerF	Wide	Pres	Unc	Buchanan 287 (BRCA)	1957	
Compositae (Asteraceae)	<i>Machaeranthera grindeliooides</i> var. <i>grindeliooides</i>	<i>Haplopappus nuttallii</i> , <i>Xanthisma grindeliooides</i> var. <i>grindeliooides</i>	gumweed aster	PerF	Wide	Pres	Com	Buchanan 396 (BRCA)	1931	
Compositae (Asteraceae)	<i>Petradoria pumila</i> var. <i>pumila</i>	<i>Solidago petradoria</i>	rock-goldenrod	PerF	Wide	Pres	Com	Graybosch 1356 (BRCA)	1956	Var. <i>graminea</i> reported by Doug Stone.
Compositae (Asteraceae)	<i>Psilostrophe sparsiflora</i>		greenstem paperflower	PerF	RegEn	Pres	Unc	Foster 10959 (BRY)	1993	Type locality is "Southern Utah" (Thompson s.n. GH)

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Compositae (Asteraceae)	<i>Senecio atratus</i>		black groundsel	PerF	Wide	Pres	Unc	Buchanan 98 (BRCA)	1931	
Compositae (Asteraceae)	<i>Senecio hartianus</i>	<i>Packera hartiana</i>	Hart's groundsel	PerF	RegEn	Pres	Rare	Graybosch 896 (BRCA)	1980	
Compositae (Asteraceae)	<i>Senecio hydrophilus</i>		water groundsel	PerF	Wide	Pres	Rare	Ballenger EB07290601 (BRCA)	2006	
Compositae (Asteraceae)	<i>Senecio multilobatus</i>	<i>Packera multilobata</i>	basin groundsel	PerF	Wide	Pres	Com	Graybosch 1311 (BRCA)	1931	
Compositae (Asteraceae)	<i>Senecio spartioides</i> var. <i>spartioides</i>	<i>S. spartioides</i> . Vars. not recognized in <i>Flora of North</i> <i>America</i> (2006).	broom groundsel	PerF	Wide	Pres	Com	Weight B-31/151 (BRCA)	1931	
Compositae (Asteraceae)	<i>Senecio wernerifolius</i> var. <i>barkleyi</i>	Vars. not recognized in <i>Flora</i> of <i>North America</i> (2006).	Barkley's groundsel	PerF	LocEn	Pres	Rare	Foster 11044 (BRY)	1994	Type locality is Proctor Canyon, Garfield Co., UT (Madsen & Madsen 516 BRY)
Compositae (Asteraceae)	<i>Solidago parryi</i>	<i>Haplopappus parryi</i> , <i>Oreochrysum parryi</i>	Parry's goldenweed	PerF	Wide	Pres	Unc	Graybosch 1107 (BRCA)	1980	
Compositae (Asteraceae)	<i>Solidago simplex</i>	<i>S. spathulata</i> , includes vars. <i>nana</i> & <i>simplex</i>	coast goldenrod	PerF	Wide	Pres	Unc	Buchanan 2962 (BRCA)	1980	
Compositae (Asteraceae)	<i>Solidago velutina</i>	<i>S. sparsiflora</i> , <i>S. velutina</i> var. <i>sparsiflora</i>	three-nerve goldenrod	PerF	Wide	Pres	Com	Buchanan 257 (BRCA)	1931	
Compositae (Asteraceae)	<i>Sonchus asper</i>		spiny-leaf sow- thistle	AnnF	Intro	Pres	Unc	Ames-Curtis & Kitchen s.n. (BRCA)	1998	Native to Europe
Compositae (Asteraceae)	<i>Sonchus uliginosus</i>	<i>S. arvensis</i> var. <i>glabrescens</i> , <i>S. arvensis</i> ssp. <i>uliginosus</i>	marsh sow-thistle	PerF	Intro	Pres	Unc	Buchanan s.n. (BRCA)	1998	Native to Europe
Compositae (Asteraceae)	<i>Sphaeromeria capitata</i>	<i>Tanacetum capitatum</i>	cluster-head chicken-sage	PerF	Disj	Pres	Rare	Graybosch 1044 (BRCA)	1980	USFS: Region 4 Sensitive

**Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Compositae (Asteraceae)	<i>Stephanomeria tenuifolia</i> var. <i>tenuifolia</i>	<i>S. minor</i> var. <i>minor</i> . Vars. not recognized in <i>Flora of North America</i> (2006)	slender wirelettuce	PerF	Wide	Pres	Unc	Graybosch 1059 (BRCA)	1956	
Compositae (Asteraceae)	<i>Taraxacum officinale</i>		common dandelion	PerF	Intro	Pres	Unc	Graybosch 990 (BRCA)	1980	Native to Eurasia
Compositae (Asteraceae)	<i>Tetradymia canescens</i>		spineless horsebrush	Shrub	Wide	Pres	Unc	Boyle 1160 (BRCA)	1931	
Compositae (Asteraceae)	<i>Townsendia exscapa</i>		stemless townsendia	PerF	Wide	Pres	Unc	Buchanan 435 (BRCA)	1940	
Compositae (Asteraceae)	<i>Townsendia incana</i>		hoary townsendia	PerF	Wide	Pres	Unc	Graybosch 901 (BRCA)	1980	
Compositae (Asteraceae)	<i>Townsendia montana</i> var. <i>minima</i>	<i>T. alpigena</i> var. <i>minima</i> , <i>T. minima</i>	Bryce Canyon townsendia	PerF	LocEn	Pres	Unc	Peabody 96 (BRCA)	1959	Type locality is rim of Bryce Canyon, Bryce Canyon NP, Garfield Co., Utah (Eastwood & Howell 727 CAS). USFWS: 3C
Compositae (Asteraceae)	<i>Tragopogon dubius</i>	<i>T. dubius</i> var. <i>major</i>	yellow salsify	PerF	Intro	Pres	Unc	Buchanan 196 (BRCA)	1957	Native to Europe
Compositae (Asteraceae)	<i>Verbesina encelioides</i> var. <i>exauriculata</i>	<i>Ximnesia encelioides</i>	golden crownbeard	AnnF	Wide	Hist	?	Weight B-32/343 (BRCA)	1932	
Compositae (Asteraceae)	<i>Viguiera longifolia</i> var. <i>annua</i>	<i>V. annua</i> , <i>Heliomeris longifolia</i> var. <i>annua</i>	southern goldeneye	AnnF	Wide	Pres	Rare	Topp ST09190701 (BRCA)	2007	
Compositae (Asteraceae)	<i>Viguiera multiflora</i> var. <i>nevadensis</i>	<i>Heliomeris multiflora</i> var. <i>nevadensis</i>	showy goldeneye	PerF	Wide	Pres	Unc	Buchanan 2987 (BRCA)	1956	
Convolvulaceae	<i>Convolvulus arvensis</i>		field bindweed	PerF	Intro	Pres	Unc	Graybosch 914 (BRCA)	1980	Utah state noxious weed. Native to Eurasia

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Cornaceae	<i>Cornus sericea</i> var. <i>sericea</i>	<i>C. stolonifera</i> , <i>Swida sericea</i>	red-osier dogwood	Shrub	Wide	Pres	Unc	Buchanan 154 (BRCA)	1932	
Cruciferae (Brassicaceae)	<i>Arabis demissa</i>	<i>Boechea demissa</i> var. <i>languida</i> , <i>B. demissa</i> var. <i>demissa</i>	nodding rockcross	PerF	Wide	Pres	Unc	Graybosch 743 (BRCA)	1958	USFWS: 3C
Cruciferae (Brassicaceae)	<i>Arabis drummondii</i>	<i>Boechea angustifolia</i> , <i>B. drummondii</i> , <i>B. stricta</i>	Drummond's rockcross	PerF	Wide	Rep	Unc	Northern Colorado Plateau Network (in ed.)	2005	
Cruciferae (Brassicaceae)	<i>Arabis holboellii</i> var. <i>fendleri</i>	<i>A. fendleri</i> , <i>Boechea fendleri</i> var. <i>spatifolia</i> , <i>B. fendleri</i>	Fendler's rockcross	PerF	Wide	Hist	?	Weight B-32/181 (BRCA)	1932	
Cruciferae (Brassicaceae)	<i>Arabis holboellii</i> var. <i>pinetorum</i>	<i>Boechea holboellii</i> var. <i>pinetorum</i> , Name may be misapplied, according to Holmgren et al. (2005)	Holboell's rockcross	PerF	Wide	Hist	?	Weight B-31/5 (BRCA)	1931	
Cruciferae (Brassicaceae)	<i>Arabis holboellii</i> var. <i>secunda</i>	<i>A. holboellii</i> var. <i>retrofracta</i> , <i>Boechea holboellii</i> var. <i>secunda</i> , <i>B. retrofracta</i>	Holboell's rockcross	PerF	Wide	Pres	Unc	Graybosch 831 (BRCA)	1980	
Cruciferae (Brassicaceae)	<i>Arabis perennans</i> var. <i>perennans</i>	<i>Boechea perennans</i>	perennial rockcross	PerF	Wide	Pres	Unc	Graybosch 799 (BRCA)	1980	
Cruciferae (Brassicaceae)	<i>Arabis selbyi</i>	<i>Boechea selbyi</i>	Selby's rockcross	PerF	Wide	Pres	Unc	Topp ST06150604 (BRCA)	2006	
Cruciferae (Brassicaceae)	<i>Brassica nigra</i>	<i>Sinapsis nigra</i>	black mustard	AnnF	Intro	Hist	?	Weight B-32/204 (BRCA)	1932	Native to Europe
Cruciferae (Brassicaceae)	<i>Capsella bursa-pastoris</i>		shepherd's-purse	AnnF	Intro	Pres	Unc	Graybosch 1097 (BRCA)	1980	Native to Europe
Cruciferae (Brassicaceae)	<i>Cardaria draba</i>	<i>Lepidium draba</i> , <i>C. draba</i> var. <i>draba</i>	whitetop	PerF	Intro	Pres	Unc	Kitchen s.n. (BRCA)	1998	UT State Noxious Weed. Native to Europe

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Cruciferae (Brassicaceae)	<i>Caulanthus crassicaulis</i> var. <i>crassicaulis</i>		spindlestem	PerF	Wide	Pres	Unc	Graybosch 862 (BRCA)	1980	
Cruciferae (Brassicaceae)	<i>Conringia orientalis</i>		hare's-ear mustard	AnnF	Intro	Pres	Unc	Graybosch 950 (BRCA)	1980	Native to Europe
Cruciferae (Brassicaceae)	<i>Descurainia incana</i> var. <i>sonnei</i>	<i>D. richardsonii</i> var. <i>sonnei</i> ; <i>D. incisa</i> var. <i>incisa</i> ; <i>D. incana</i> ssp. <i>incisa</i> ; <i>D. incana</i> var. <i>incana</i>	mountain tansy-mustard	AnnF	Wide	Rep	?	Spence & Buchanan (1993)	NA	
Cruciferae (Brassicaceae)	<i>Descurainia pinnata</i> var. <i>intermedia</i>	Included in <i>D. pinnata</i> var. <i>osmiarum</i> by some authors	western tansy-mustard	AnnF	Wide	Pres	Unc	Buchanan s.n. (BRCA)	1998	
Cruciferae (Brassicaceae)	<i>Descurainia pinnata</i> var. <i>osmiarum</i>	<i>D. pinnata</i> ssp. <i>halictorum</i>	western tansy-mustard	AnnF	Wide	Pres	Unc	Graybosch 860 (BRCA)	1932	
Cruciferae (Brassicaceae)	<i>Descurainia sophia</i>		flixweed	AnnF	Intro	Pres	Unc	Buchanan 113 (BRCA)	1957	Native to Europe
Cruciferae (Brassicaceae)	<i>Draba subalpina</i>		Breaks draba	PerF	LocEn	Pres	Unc	Buchanan 3051 (BRCA)	1934	Type locality is Cedar Breaks, Cedar Breaks NM, Iron Co., UT (Goodman & Hitchcock 1622 MO). USFWS: 3C
Cruciferae (Brassicaceae)	<i>Erysimum asperum</i> var. <i>purshii</i>	<i>E. asperum</i> var. <i>arkansanum</i> , included in var. <i>capitatum</i> by some authors	sand dune wallflower	PerF	Wide	Pres	Com	Boyle 1107 (BRCA)	1934	
Cruciferae (Brassicaceae)	<i>Erysimum inconspicuum</i>		shy wallflower	PerF	Wide	Pres	Unc	Buchanan 36 (BRCA)	1956	
Cruciferae (Brassicaceae)	<i>Lepidium densiflorum</i> var. <i>densiflorum</i>	Some authors include var. <i>macrocarpum</i>	prairie pepperwort	AnnF	Wide	Pres	Unc	Graybosch 919 (BRCA)	1980	



*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Cruciferae (Brassicaceae)	<i>Lepidium montanum</i> var. <i>claronense</i>		Claron pepperwort	PerF	LocEn	Pres	Unc	Foster 10968 (BRCA)	1932	Type locality is Casto Canyon, Garfield Co., UT (Atwood, Franklin, & Reynolds 13744 BRY). UT BLM: Sensitive
Cruciferae (Brassicaceae)	<i>Lepidium perfoliatum</i>		clasping pepperwort	AnnF	Intro	Pres	Unc	Kitchen s.n. (BRCA)	1998	Native to Europe
Cruciferae (Brassicaceae)	<i>Malcolmia africana</i>		African mustard	AnnF	Intro	Pres	Unc	Graybosch 1075 (BRCA)	1980	Native to Africa
Cruciferae (Brassicaceae)	<i>Physaria arizonica</i>	<i>Lesquerella arizonica</i>	Arizona bladderpod	PerF	RegEn	Hist	?	Stone 240 (BRY)	1934	
Cruciferae (Brassicaceae)	<i>Physaria chambersii</i> var. <i>membranacea</i>	<i>P. lepidota</i> var. <i>membranacea</i> , <i>P. lepidota</i> var. <i>lepidota</i>	lepidote twinpod	PerF	LocEn	Pres	Unc	Buchanan 3056 (BRCA)	1931	Type locality of var. <i>membranacea</i> is Red Canyon, Garfield Co., UT (Rollins & Chambers 2448 GH).
Cruciferae (Brassicaceae)	<i>Physaria chambersii</i> var. <i>sobolifera</i>		Claron twinpod	PerF	LocEn	Pres	Rare	Foster 11052 (BRY)	1994	Type locality is head of Sweetwater Creek, Escalante Mts E of Widtsoe, Garfield Co., UT (Atwood 8164 BRY)
Cruciferae (Brassicaceae)	<i>Physaria intermedia</i>	<i>Lesquerella intermedia</i> , <i>L. alpina</i> var. <i>intermedia</i>	Watson's bladderpod	PerF	Wide	Pres	Com	Boyle 1128 (BRCA)	1932	
Cruciferae (Brassicaceae)	<i>Physaria kingii</i> var. <i>parvifolia</i>	<i>Lesquerella kingii</i> . Holmgren et al. (2005) include <i>P.</i> <i>wardii</i> .	King's bladderpod	PerF	Wide	Pres	Unc	Graybosch 796 (BRCA)	1980	

**Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Cruciferae (Brassicaceae)	<i>Physaria rectipes</i>	<i>Lesquerella rectipes</i>	Colorado Plateau bladderpod	PerF	RegEn	Pres	Unc	Shaw 2871 (BRY)	1982	
Cruciferae (Brassicaceae)	<i>Physaria rubicundula</i> var. <i>rubicundula</i>	<i>Lesquerella rubicundula</i> , L. <i>hitchcockii</i> , P. <i>rubicundula</i>	Breaks bladderpod	PerF	LocEn	Pres	Unc	Graybosch 1335 (BRCA)	1957	Type locality is Red Canyon, Garfield Co., UT (Eggleston 8198 US). USFWS: 3C
Cruciferae (Brassicaceae)	<i>Schoenocrambe linifolia</i>	<i>Sisymbrium linifolium</i>	flax-leaved plainmustard	PerF	Wide	Pres	Unc	Foster 10922 (BRY)	1932	
Cruciferae (Brassicaceae)	<i>Stanleya pinnata</i>	<i>S. pinnata</i> var. <i>pinnata</i>	prince's-plume	PerF	Wide	Pres	Unc	Graybosch 943 (BRCA)	1980	
Cruciferae (Brassicaceae)	<i>Streptanthus cordatus</i>	<i>S. cordatus</i> var. <i>cordatus</i>	heart-leaf jewelflower	PerF	Wide	Pres	Unc	Buchanan 3333 (BRCA)	1932	
Cruciferae (Brassicaceae)	<i>Thelypodopsis sagittata</i> var. <i>ovalifolia</i>	<i>Thelypodium sagittatum</i> var. <i>ovalifolium</i>	Palmer's thelypod	PerF	RegEn	Pres	Rare	Topp ST07110601 (BRCA)	2006	Type locality is Panguitch Lake, Garfield Co., UT (Jones 6015e US). USFWS: 3C
Cruciferae (Brassicaceae)	<i>Thlaspi arvense</i>		field pennycress	AnnF	Intro	Pres	Unc	Graybosch 805 (BRCA)	1974	Native to Europe
Cruciferae (Brassicaceae)	<i>Thlaspi montanum</i> var. <i>montanum</i>	<i>Nocca montana</i> var. <i>montana</i>	alpine pennycress	PerF	Wide	Pres	Rare	Fertig 22534 (BRCA)	2006	
Cupressaceae	<i>Juniperus communis</i> var. <i>depressa</i>	<i>Juniperus communis</i> <i>ssp. alpina</i>	common juniper	Shrub	Wide	Pres	Unc	Buchanan 60 (BRCA)	1932	
Cupressaceae	<i>Juniperus osteosperma</i>	<i>Sabina osteosperma</i>	Utah juniper	Shrub	Wide	Pres	Com	Buchanan 226 (BRCA)	1931	
Cupressaceae	<i>Juniperus scopulorum</i>	<i>Sabina scopulorum</i>	Rocky Mountain juniper	Tree	Wide	Pres	Com	Buchanan 164 (BRCA)	1931	
Cyperaceae	<i>Carex athrostachya</i>		slender-beaked sedge	PerG	Wide	Pres	Rare	Graybosch 996 (BRCA)	1980	
Cyperaceae	<i>Carex aurea</i>	<i>C. garberi</i>	golden sedge	PerG	Wide	Pres	Unc	Graybosch 865 (BRCA)	1980	
Cyperaceae	<i>Carex douglasii</i>		Douglas' sedge	PerG	Wide	Pres	Unc	Buchanan 67 (BRCA)	1956	

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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 duriuscula</i>	<i>C. eleocharis</i> , <i>C. stenophylla</i> , <i>C. stenophylla</i> ssp. <i>eleocharis</i>	narrowleaf sedge	PerG	Wide	Pres	Rare	Topp ST06140601(BRCA)	2006	
Cyperaceae	<i>Carex interior</i>		inland sedge	PerG	Wide	Pres	Rare	Tendick AT07290602 (BRCA)	2006	
Cyperaceae	<i>Carex microptera</i>	<i>C. microptera</i> var. <i>microptera</i> , <i>C. festivella</i> , <i>C. macloviana</i> var. <i>microptera</i>	small-wing sedge	PerG	Wide	Pres	Unc	Graybosch 1013 (BRCA)	1980	
Cyperaceae	<i>Carex nebrascensis</i>		Nebraska sedge	PerG	Wide	Rep	?	Buchanan & Graybosch (1981)	1980	
Cyperaceae	<i>Carex oederi</i> var. <i>viridula</i>	<i>C. viridula</i> var. <i>viridula</i>	green sedge	PerG	Sparse	Pres	Rare	Graybosch 1125 (BRCA)	1980	
Cyperaceae	<i>Carex pellita</i>	<i>C. lanuginosa</i>	woolly sedge	PerG	Wide	Pres	Unc	Topp ST06280603 (BRCA)	2006	
Cyperaceae	<i>Carex praegracilis</i>		blackcreeper sedge	PerG	Wide	Pres	Unc	Graybosch 878 (BRCA)	1932	
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	Com	Buchanan 3054 (BRCA)	1969	
Cyperaceae	<i>Carex utriculata</i>	<i>C. rostrata</i> (sensu lato)	beaked sedge	PerG	Wide	Pres	Unc	Graybosch 1012 (BRCA)	1980	
Cyperaceae	<i>Carex vallicola</i>		valley sedge	PerG	Wide	Pres	Unc	Graybosch 915 (BRCA)	1980	
Cyperaceae	<i>Eleocharis palustris</i>	Includes <i>E. macrostachya</i> , <i>E. erythropoda</i> , & <i>E. uniglumis</i>	common spikerush	PerG	Wide	Pres	Unc	Gottschalk 4 (UTC)	1986	
Cyperaceae	<i>Eleocharis quinqueflora</i>	<i>E. pauciflora</i> , <i>E. suksdorfiana</i>	few-flower spikerush	PerG	Wide	Pres	Unc	Graybosch 777 (BRCA)	1980	
Cyperaceae	<i>Eleocharis rostellata</i>		beaked spikerush	PerG	Wide	Rep	?	Buchanan & Graybosch (1981)	1980	

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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>Scirpus pungens</i> var. <i>longispicatus</i>	<i>Scirpus pungens</i> var. <i>polyphyllus</i> , <i>Schoenoplectus pungens</i> var. <i>longispicatus</i> , <i>Schoenoplectus pungens</i> var. <i>polyphyllus</i>	three-square bulrush	PerG	Wide	Pres	Unc	Graybosch 863 (BRCA)	1980	
Elaeagnaceae	<i>Elaeagnus angustifolia</i>		Russian olive	Tree	Intro	Pres	Unc	Topp ST06150603 (BRCA)	2004	Native to Europe
Elaeagnaceae	<i>Shepherdia argentea</i>		silver buffaloberry	Shrub	Wide	Pres	Unc	Buchanan 528 (BRCA)	1959	
Elaeagnaceae	<i>Shepherdia canadensis</i>		Canada buffaloberry	Shrub	Wide	Pres	Unc	Buchanan 348 (BRCA)	1957	
Elaeagnaceae	<i>Shepherdia rotundifolia</i>		roundleaf buffaloberry	Shrub	RegEn	Pres	Unc	Graybosch 802 (BRCA)	1931	Type locality is upper valley of the Virgin, Kane Co., UT (Siler s.n. ISC)
Ephedraceae	<i>Ephedra viridis</i> var. <i>viridis</i>	<i>E. viridis</i>	green ephedra	Shrub	Wide	Pres	Unc	Foster 10973 (BRY)	1957	
Equisetaceae	<i>Equisetum arvense</i>		field horsetail	Fern	Wide	Pres	Unc	Buchanan 463 (BRCA)	1959	
Equisetaceae	<i>Equisetum laevigatum</i>	<i>Hippochaeta laevigata</i> , <i>E. kansanum</i>	smooth scouring-rush	Fern	Wide	Pres	Unc	Buchanan 249 (BRCA)	1957	
Equisetaceae	<i>Equisetum x nelsonii</i>	Hybrid between <i>E. laevigatum</i> x <i>E. variegatum</i>	Nelson's scouring-rush	Fern	Sparse	Pres	Rare	Buchanan 486 (BRCA)	1959	
Ericaceae	<i>Arctostaphylos patula</i>	<i>A. patula</i> ssp. <i>platyphylla</i>	greenleaf manzanita	Shrub	Wide	Pres	Com	Buchanan 110 (BRCA)	1934	
Ericaceae	<i>Arctostaphylos uva-ursi</i>	<i>A. uva-ursi</i> var. <i>uva-ursi</i> , <i>A. uva-ursi</i> ssp. <i>coactilis</i> . Vars. not recognized in Holmgren et al. (2005)	bearberry	Shrub	Wide	Pres	Unc	Buchanan 59 (BRCA)	1956	

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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 fendleri</i>	<i>Euphorbia fendleri</i>	Fendler's spurge	PerF	Wide	Pres	Unc	Buchanan 372 (BRCA)	1932	
Euphorbiaceae	<i>Euphorbia brachycera</i>	<i>E. robusta</i> , <i>E. brachycera</i> var. <i>robusta</i> , <i>E. montana</i> , <i>E. lurida</i> , <i>Tithymalus brachyceras</i>	shorthorn spurge	PerF	Wide	Pres	Unc	Graybosch 768 (BRCA)	1932	
Euphorbiaceae	<i>Euphorbia esula</i>	<i>Euphorbia esula</i> var. <i>esula</i> , <i>Tithymalus esula</i>	leafy spurge	PerF	Intro	Rep	Unc	Dewey & Andersen (2005)	2004	Utah state noxious weed. Native to Europe
Fagaceae	<i>Quercus gambelii</i> var. <i>gambelii</i>		Gambel oak	Tree	Wide	Pres	Unc	Buchanan 163 (BRCA)	1932	
Fumariaceae	<i>Corydalis aurea</i> var. <i>occidentalis</i>	<i>C. curvisiliqua</i> ssp. <i>occidentalis</i>	golden corydalis	PerF	Wide	Hist	?	Stone 266 (NY)	1934	
Gentianaceae	<i>Gentiana affinis</i> var. <i>affinis</i>	<i>Pneumonanthe affinis</i>	Rocky Mountain gentian	PerF	Wide	Pres	Unc	Buchanan 83 (BRCA)	1956	
Gentianaceae	<i>Gentiana parryi</i>	<i>Pneumonanthe parryi</i>	Parry's gentian	PerF	Wide	Rep	?	Spence & Buchanan (1993)	NA	
Gentianaceae	<i>Gentianella heterosepala</i>	<i>Gentianella amarella</i> var. <i>heterosepala</i> , <i>Gentiana scopulorum</i>	Engelmann's gentian	PerF	Wide	Pres	Unc	Buchanan 2943 (BRCA)	1978	
Gentianaceae	<i>Gentianella tortuosa</i>	<i>Gentiana tortuosa</i>	Jones' gentian	AnnF	RegEn	Pres	Unc	Graybosch 1029 (BRCA)	1927	Type locality is Panguitch Lake, Garfield Co., UT (Jones 6008 POM)
Gentianaceae	<i>Gentianopsis detonsa</i> var. <i>elegans</i>	<i>Gentianella detonsa</i> var. <i>elegans</i> , <i>Gentiana detonsa</i> , <i>Gentianopsis thermalis</i>	meadow gentian	AnnF	Wide	Pres	Unc	Graybosch 1123 (BRCA)	1980	
Gentianaceae	<i>Swertia radiata</i>	<i>Frasera speciosa</i>	elkweed	PerF	Wide	Pres	Unc	Boyle 1134 (BRCA)	1934	
Geraniaceae	<i>Erodium cicutarium</i>		stork's-bill	AnnF	Intro	Pres	Unc	Kitchen s.n. (BRCA)	1998	Native to Europe

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Geraniaceae	<i>Geranium caespitosum</i> var. <i>marginale</i>	<i>G. atropurpureum</i> var. <i>cowerii</i> , <i>G. atropurpureum</i> , <i>G. caespitosum</i> ssp. <i>atropurpureum</i>	small-leaf geranium	PerF	Wide	Pres	Com	Boyle 392 (BRCA)	1931	Type locality is Aquarius Plateau, head of Poison Creek, Garfield Co., UT (Rydberg & Carlton 7401 NY)
Geraniaceae	<i>Geranium richardsonii</i>		Richardson's crane's-bill	PerF	Wide	Rep	Unc	Northern Colorado Plateau Network (in ed.)	2005	Previous reports from BRCA are based on misidentified specimens of <i>G. caespitosum</i> var. <i>marginale</i>
Gramineae (Poaceae)	<i>Agropyron cristatum</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. desertorum</i> , <i>A. fragile</i> , <i>A. mongolicum</i>	crested wheatgrass	PerG	Intro	Pres	Unc	Buchanan 56 (BRCA)	1956	Native to Eurasia
Gramineae (Poaceae)	<i>Agrostis stolonifera</i>	<i>A. alba</i> , <i>A. gigantea</i>	redtop	PerG	Intro	Pres	Unc	Graybosch 1126 (BRCA)	1956	Native to Eurasia and Africa
Gramineae (Poaceae)	<i>Aristida purpurea</i>	<i>A. glauca</i> , <i>A. purpurea</i> var. <i>fendleriana</i> , <i>A. fendleriana</i> , <i>A. purpurea</i> var. <i>longiseta</i>	purple three-awn	PerG	Wide	Pres	Unc	Graybosch 780 (BRCA)	1980	
Gramineae (Poaceae)	<i>Bouteloua gracilis</i>	<i>Chondrosium gracile</i>	blue grama	PerG	Wide	Pres	Unc	Buchanan 284 (BRCA)	1957	

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Gramineae (Poaceae)	<i>Bromus anomalus</i>	<i>Bromus porteri</i> , <i>Bromus frondosus</i> , <i>Bromus lanatipes</i> , <i>Bromopsis porteri</i> . According to FNA (2007) material ascribed to <i>B.</i> <i>anomalus</i> in regional floras is mostly <i>B. porteri</i> or <i>B. lanatipes</i> .	nodding brome	PerG	Wide	Pres	Unc	Buchanan 54 (BRCA)	1931	
Gramineae (Poaceae)	<i>Bromus carinatus</i>	<i>B. marginatus</i> , <i>B. polyanthus</i> , <i>Ceratochloa</i> <i>carinata</i>	mountain brome	PerG	Wide	Pres	Unc	Graybosch 1021 (BRCA)	1980	
Gramineae (Poaceae)	<i>Bromus ciliatus</i>	Includes vars. <i>ciliatus</i> & <i>richardsonii</i> , <i>Bromopsis</i> <i>canadensis</i>	fringed brome	PerG	Wide	Pres	Unc	Graybosch 939 (BRCA)	1957	
Gramineae (Poaceae)	<i>Bromus inermis</i> var. <i>inermis</i>	<i>Bromopsis inermis</i>	smooth brome	PerG	Intro	Pres	Com	Boyle 1130 (BRCA)	1942	Native to Eurasia
Gramineae (Poaceae)	<i>Bromus japonicus</i>	<i>B. arvensis</i> , includes <i>B. commutatus</i>	Japanese chess	AnnG	Intro	Pres	Unc	Graybosch 1082 (BRCA)	1980	Native to Eurasia
Gramineae (Poaceae)	<i>Bromus tectorum</i>	<i>Anisantha tectorum</i>	cheatgrass	AnnG	Intro	Pres	Unc	Boyle 1125 (BRCA)	1932	Native to Eurasia
Gramineae (Poaceae)	<i>Calamagrostis</i> <i>scopulorum</i>		Jones' reedgrass	PerG	Wide	Pres	Unc	Boyle 1153 (BRCA)	1942	Type locality is Springdale, Washington Co., UT (Jones 6075 POM)
Gramineae (Poaceae)	<i>Calamagrostis stricta</i>	<i>C. neglecta</i> , <i>C.</i> <i>inexpansa</i>	slimstem reedgrass	PerG	Wide	Pres	Unc	Graybosch 1131 (BRCA)	1980	
Gramineae (Poaceae)	<i>Dactylis glomerata</i>		orchard grass	PerG	Intro	Pres	Unc	Buchanan 423 (BRCA)	1942	Native to Eurasia and Africa
Gramineae (Poaceae)	<i>Deschampsia</i> <i>cespitosa</i>		tufted hairgrass	PerG	Wide	Pres	Unc	Graybosch 1129 (BRCA)	1980	

**Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Gramineae (Poaceae)	<i>Distichlis spicata</i>	<i>D. spicata</i> var. <i>stricta</i> , <i>D. stricta</i>	desert saltgrass	PerG	Wide	Pres	Rare	Topp ST07280606 (BRCA)	2006	
Gramineae (Poaceae)	<i>Elymus canadensis</i>	<i>E. canadensis</i> var. <i>canadensis</i>	Canada wildrye	PerG	Wide	Pres	Unc	Graybosch 1076 (BRCA)	1980	
Gramineae (Poaceae)	<i>Elymus cinereus</i>	<i>Leymus cinereus</i>	Great Basin wildrye	PerG	Wide	Pres	Unc	Ames-Curtis & Buchanan s.n. (BRCA)	1998	
Gramineae (Poaceae)	<i>Elymus elymoides</i>	<i>E. elymoides</i> var. <i>elymoides</i> , <i>Sitanion hystrix</i>	squirreltail	PerG	Wide	Pres	Com	Fertig 22542 (BRCA)	1931	
Gramineae (Poaceae)	<i>Elymus glaucus</i>	<i>E. glaucus</i> var. <i>glaucus</i>	blue wildrye	PerG	Wide	Pres	Rare	Hallsten 2537 (UTC)	1987	
Gramineae (Poaceae)	<i>Elymus hispidus</i>	<i>E. hispidus</i> var. <i>hispidus</i> , <i>Agropyron intermedium</i> , <i>Elytrigia intermedia</i> , <i>Thinopyrum intermedium</i>	intermediate wheatgrass	PerG	Intro	Pres	Unc	Graybosch 895 (BRCA)	1980	Native to Eurasia
Gramineae (Poaceae)	<i>Elymus junceus</i>	<i>Psathyrostachys juncea</i>	Russian wildrye	PerG	Intro	Pres	Unc	Graybosch 921 (BRCA)	1980	Native to Russia
Gramineae (Poaceae)	<i>Elymus lanceolatus</i>	<i>E. lanceolatus</i> var. <i>lanceolatus</i> , <i>Agropyron dasystachyum</i> var. <i>dasystachyum</i> & var. <i>riparium</i> , <i>A. albicans</i> var. <i>albicans</i> , & var. <i>griffithsii</i>	thickspike wheatgrass	PerG	Wide	Pres	Unc	Buchanan 326 (BRCA)	1957	
Gramineae (Poaceae)	<i>Elymus salinus</i>	<i>E. salinus</i> , <i>Leymus salinus</i> , <i>L. salina</i> , <i>L. ambiguus</i>	Salina wildrye	PerG	Wide	Pres	Com	Buchanan 300 (BRCA)	1931	Type locality is top of Salina Pass, Sevier Co., UT (Jones 5447 POM)
Gramineae (Poaceae)	<i>Elymus scribneri</i>	<i>Agropyron scribneri</i>	Scribner wheatgrass	PerG	Wide	Pres	Unc	Graybosch 1363 (BRCA)	1980	



**Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Gramineae (Poaceae)	<i>Elymus smithii</i>	<i>Agropyron smithii</i> , <i>Pascopyrum smithii</i> , includes vars. <i>smithii</i> & <i>palmeri</i>	western wheatgrass	PerG	Wide	Pres	Unc	Boyle 1142 (BRCA)	1942	
Gramineae (Poaceae)	<i>Elymus spicatus</i>	<i>Agropyron spicatum</i> , <i>Pseudoroegneria spicata</i> , includes <i>ssp. inermis</i> & <i>spicata</i>	bluebunch wheatgrass	PerG	Wide	Pres	Unc	Buchanan 53 (BRCA)	1956	
Gramineae (Poaceae)	<i>Elymus trachycaulus</i>	<i>E. trachycaulus</i> var. <i>trachycaulus</i> , <i>E. alaskanus</i> ssp. <i>latiglumis</i> , <i>Agropyron caninum</i> , <i>A. subsecundum</i> , <i>A. trachycaulum</i> , <i>A. latiglume</i>	slender wheatgrass	PerG	Wide	Pres	Unc	Boyle 1141 (BRCA)	1942	
Gramineae (Poaceae)	<i>Festuca octoflora</i>	Includes vars. <i>glauca</i> , <i>hirtella</i> , & <i>octoflora</i> , <i>Vulpia octoflora</i>	six-weeks fescue	AnnG	Wide	Pres	Unc	Graybosch 1322 (BRCA)	1981	
Gramineae (Poaceae)	<i>Festuca ovina</i> var. <i>saximontana</i>	<i>F. ovina</i> var. <i>rydbergii</i> , <i>F. saximontana</i>	Rocky Mountain fescue	PerG	Wide	Pres	Unc	Graybosch 1028 (BRCA)	1980	
Gramineae (Poaceae)	<i>Festuca pratensis</i>	<i>Lolium pratense</i> , <i>Schedonorus pratensis</i> , <i>F. elatior</i>	meadow fescue	PerG	Intro	Pres	Unc	Boyle 1145 (BRCA)	1942	Native to Eurasia
Gramineae (Poaceae)	<i>Glyceria striata</i>	Includes <i>G. elata</i>	fowl mannagrass	PerG	Wide	Pres	Unc	Buchanan 303 (BRCA)	1957	
Gramineae (Poaceae)	<i>Hilaria jamesii</i>	<i>Pleuraphis jamesii</i>	galleta	PerG	Wide	Pres	Unc	Graybosch 845 (BRCA)	1957	
Gramineae (Poaceae)	<i>Hordeum brachyantherum</i>	<i>Critesion brachyantherum</i>	meadow barley	PerG	Wide	Pres	Unc	Graybosch 1127 (BRCA)	1980	
Gramineae (Poaceae)	<i>Hordeum jubatum</i>	<i>Critesion jubatum</i>	foxtail barley	PerG	Wide	Pres	Unc	Buchanan 57 (BRCA)	1932	

**Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Gramineae (Poaceae)	<i>Koeleria macrantha</i>	<i>K. cristata</i> , <i>K. pyramidata</i> , <i>K. nitida</i>	junegrass	PerG	Wide	Pres	Com	Topp ST08130504 (BRCA)	1931	
Gramineae (Poaceae)	<i>Muhlenbergia andina</i>		foxtail muhly	PerG	Wide	Pres	Unc	Graybosch 1077 (BRCA)	1980	
Gramineae (Poaceae)	<i>Muhlenbergia asperifolia</i>		scratchgrass	PerG	Wide	Pres	Unc	Graybosch 1078 (BRCA)	1980	
Gramineae (Poaceae)	<i>Muhlenbergia filiformis</i>		pullup muhly	AnnG	Wide	Pres	Unc	Topp ST09100502 (BRCA)	2005	
Gramineae (Poaceae)	<i>Muhlenbergia montana</i>	Includes <i>M. filiculmis</i>	mountain muhly	PerG	Wide	Pres	Unc	Buchanan 285 (BRCA)	1956	
Gramineae (Poaceae)	<i>Muhlenbergia pungens</i>		sandhill muhly	PerG	Wide	Pres	Unc	Graybosch 1102 (BRCA)	1980	
Gramineae (Poaceae)	<i>Muhlenbergia richardsonis</i>		mat muhly	PerG	Wide	Pres	Unc	Buchanan 2949 (BRCA)	1956	
Gramineae (Poaceae)	<i>Oryzopsis micrantha</i>	<i>Piptatherum micranthum</i>	littleseed ricegrass	PerG	Wide	Pres	Unc	Graybosch 1071 (BRCA)	1980	
Gramineae (Poaceae)	<i>Panicum capillare</i>	<i>P. capillare</i> var. <i>occidentale</i>	witchgrass	AnnG	Wide	Pres	Unc	Buchanan s.n. (BRCA)	1998	
Gramineae (Poaceae)	<i>Phleum pratense</i>		timothy	PerG	Intro	Pres	Unc	Graybosch 1074 (BRCA)	1980	Native to Eurasia
Gramineae (Poaceae)	<i>Phragmites australis</i>	<i>P. communis</i>	common reed	PerG	Wide	Pres	Unc	Graybosch 1103 (BRCA)	1980	
Gramineae (Poaceae)	<i>Poa compressa</i>		Canada bluegrass	PerG	Intro	Pres	Unc	Graybosch 907 (BRCA)	1980	Native to Eurasia
Gramineae (Poaceae)	<i>Poa fendleriana</i>	<i>P. longiligula</i> , <i>P. fendleriana</i> ssp. <i>longiligula</i>	muttongrass	PerG	Wide	Pres	Com	Buchanan 130 (BRCA)	1931	
Gramineae (Poaceae)	<i>Poa glauca</i> var. <i>glauca</i>	<i>P. nemoralis</i> ssp. <i>interior</i> , <i>P. interior</i>	interior bluegrass	PerG	Wide	Pres	Unc	Buchanan 282 (BRCA)	1957	
Gramineae (Poaceae)	<i>Poa pratensis</i>	<i>P. agassizensis</i>	Kentucky bluegrass	PerG	Intro	Pres	Unc	Buchanan 452 (BRCA)	1931	Native to Europe

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Gramineae (Poaceae)	<i>Poa secunda</i>	Includes <i>P. gracillima</i> , <i>P. juncifolia</i> , <i>P. sandbergii</i> , <i>P. canbyi</i> , <i>P. scabrella</i> , <i>P. nevadensis</i> , <i>P. ampla</i> and all vars. of <i>P. secunda</i>	Sandberg's bluegrass	PerG	Wide	Pres	Unc	Graybosch 911 (BRCA)	1980	
Gramineae (Poaceae)	<i>Puccinellia nuttalliana</i>	<i>P. airoides</i>	Nuttall's alkaligrass	PerG	Wide	Pres	Rare	Graybosch 1336 (BRCA)	1981	
Gramineae (Poaceae)	<i>Schizachyrium scoparium</i>	<i>Andropogon scoparius</i> , <i>S. scoparium</i> var. <i>neomexicanum</i>	little bluestem	PerG	Wide	Pres	Unc	Graybosch 1334 (BRCA)	1981	
Gramineae (Poaceae)	<i>Setaria viridis</i>		green bristlegrass	AnnG	Intro	Pres	Unc	Buchanan s.n. (BRCA)	1998	Native to Eurasia
Gramineae (Poaceae)	<i>Spartina gracilis</i>		alkali cordgrass	PerG	Wide	Pres	Rare	Topp ST06150607 (BRCA)	2006	
Gramineae (Poaceae)	<i>Sporobolus airoides</i> var. <i>airoides</i>	<i>S. airoides</i>	alkali sacaton	PerG	Wide	Pres	Unc	Graybosch 947 (BRCA)	1980	
Gramineae (Poaceae)	<i>Sporobolus cryptandrus</i>		sand dropseed	PerG	Wide	Pres	Unc	Tendick AT07280601 (BRCA)	2006	
Gramineae (Poaceae)	<i>Stipa comata</i> var. <i>comata</i>	<i>Hesperostipa comata</i> var. <i>comata</i>	needle-and-thread	PerG	Wide	Pres	Com	Buchanan 445 (BRCA)	1940	
Gramineae (Poaceae)	<i>Stipa hymenoides</i>	<i>Oryzopsis hymenoides</i> , <i>Achnatherum hymenoides</i>	Indian ricegrass	PerG	Wide	Pres	Com	Buchanan 69 (BRCA)	1931	
Gramineae (Poaceae)	<i>Stipa lettermanii</i>	<i>Achnatherum lettermanii</i>	Letterman's needlegrass	PerG	Wide	Pres	Unc	Graybosch 916 (BRCA)	1957	
Gramineae (Poaceae)	<i>Stipa nelsonii</i> var. <i>nelsonii</i>	<i>Achnatherum nelsonii</i> var. <i>nelsonii</i> , <i>S. columbiana</i> var. <i>nelsonii</i>	Nelson's needlegrass	PerG	Wide	Pres	Unc	Buchanan 265 (BRCA)	1957	

**Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Gramineae (Poaceae)	<i>Stipa pinetorum</i>	<i>Achnatherum pinetorum</i>	pine needlegrass	PerG	Wide	Rep	Unc	Hallsten & Roberts (1988)	1988	Type locality is Panguitch Lake, Garfield Co., UT (Jones 6023 POM)
Gramineae (Poaceae)	<i>Stipa x bloomeri</i>	<i>Stiporyzopsis x bloomeri</i> , <i>Achnatherum x bloomeri</i> . Hybrids between <i>S. hymenoides</i> and other <i>Stipa</i> species except <i>S. comata</i>	Bloomer's ricegrass	PerG	Wide	Pres	Unc	Buchanan 2969 (BRCA)	1978	
Guttiferae (Hypericaceae)	<i>Hypericum formosum</i>	<i>H. scouleri</i> , <i>H. formosum</i> var. <i>scouleri</i>	western St. John's-wort	PerF	Wide	Pres	Unc	Kitchen s.n. (BRCA)	1998	
Hydrophyllaceae	<i>Phacelia demissa</i> var. <i>demissa</i>	<i>P. demissa</i>	brittle phacelia	AnnF	RegEn	Rep	Rare	Sarah Topp, personal obs.	2006	
Hydrophyllaceae	<i>Phacelia mammillarensis</i>	Included in <i>P. crenulata</i> by some authors	Nipple Bench phacelia	AnnF	LocEn	Pres	Unc	Topp ST06150606 (BRCA)	2006	Type locality is Nipple Bench, Kane Co., UT (Welsh & Atwood 9809 BRY). USFWS: Category 3C
Iridaceae	<i>Iris missouriensis</i>		Rocky Mountain iris	PerF	Wide	Pres	Unc	Boyle 1110 (BRCA)	1931	
Iridaceae	<i>Sisyrinchium idahoense</i>	<i>S. idahoense</i> var. <i>occidentale</i>	Idaho blue-eyed grass	PerF	Wide	Pres	Unc	Stebbins s.n. (BRCA)	1972	
Juncaceae	<i>Juncus arcticus</i>	<i>J. arcticus</i> var. <i>balticus</i> , <i>J. arcticus</i> ssp. <i>ater</i> , <i>J. balticus</i> var. <i>montanus</i> , includes var. <i>mexicanus</i>	Baltic rush	PerG	Wide	Pres	Unc	Buchanan 64 (BRCA)	1932	

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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 bufonius</i>	Includes vars. <i>bufonius</i> , <i>occidentalis</i> , <i>halophilus</i> , & <i>ambiguus</i>	toad rush	AnnG	Wide	Pres	Unc	Buchanan 3342 (BRCA)	1980	
Juncaceae	<i>Juncus ensifolius</i> var. <i>brunnescens</i>	Included in <i>J. ensifolius</i> var. <i>montanus</i> by some authors, <i>J. saximontanus</i> forma <i>brunnescens</i>	Tracy's rush	PerG	Wide	Pres	Unc	Graybosch 209 (BRCA)	1980	
Juncaceae	<i>Juncus longistylus</i>		longstyle rush	PerG	Wide	Pres	Unc	Graybosch 1063 (BRCA)	1980	
Juncaceae	<i>Juncus torreyi</i>		Torrey's rush	PerG	Wide	Pres	Unc	Graybosch 959 (BRCA)	1980	
Juncaginaceae	<i>Triglochin maritima</i> var. <i>elata</i>	Includes <i>T. concinnum</i>	seaside arrowgrass	PerG	Wide	Pres	Unc	Graybosch 866 (BRCA)	1980	
Juncaginaceae	<i>Triglochin palustris</i>		marsh arrowgrass	PerG	Wide	Pres	Unc	Graybosch 774 (BRCA)	1980	
Labiatae (Lamiaceae)	<i>Dracocephalum parviflorum</i>	<i>Moldavica parviflora</i>	smallflower dragonhead	PerF	Wide	Pres	Unc	Graybosch 1000 (BRCA)	1931	
Labiatae (Lamiaceae)	<i>Hedeoma drummondii</i>		mock pennyroyal	PerF	Wide	Pres	Unc	Buchanan 331 (BRCA)	1957	
Labiatae (Lamiaceae)	<i>Hedeoma nanum</i>	<i>Hedeoma nana</i>	dwarf pennyroyal	PerF	Periph	Pres	Rare	Foster 11076 (BRCA)	1994	
Labiatae (Lamiaceae)	<i>Marrubium vulgare</i>		common horehound	PerF	Intro	Pres	Unc	Buchanan 543 (BRCA)	1932	Native to Eurasia
Labiatae (Lamiaceae)	<i>Mentha arvensis</i> var. <i>glabrata</i>	<i>M. arvensis</i> var. <i>canadensis</i>	field mint	PerF	Wide	Pres	Unc	Schelz s.n. (BRCA)	1990	
Labiatae (Lamiaceae)	<i>Monarda odoratissima</i>	<i>M. odoratissima</i> var. <i>glauca</i> , <i>M. glauca</i>	stinking horsemint	PerF	Wide	Pres	Unc	Graybosch 936 (BRCA)	1931	
Labiatae (Lamiaceae)	<i>Prunella vulgaris</i> var. <i>lanceolata</i>		self-heal	PerF	Wide	Pres	Unc	Buchanan 224 (BRCA)	1957	
Labiatae (Lamiaceae)	<i>Salvia reflexa</i>		annual sage	PerF	Sparse	Pres	Unc	Buchanan s.n. (BRCA)	1998	

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Leguminosae (Fabaceae)	<i>Astragalus agrestis</i>	<i>A. dasyglottis</i>	field milkvetch	PerF	Wide	Pres	Unc	Buchanan 3128 (BRCA)	1979	
Leguminosae (Fabaceae)	<i>Astragalus amphioxys</i> var. <i>amphioxys</i>		crescent milkvetch	PerF	Wide	Pres	Unc	Graybosch 853 (BRCA)	1980	
Leguminosae (Fabaceae)	<i>Astragalus amphioxys</i> var. <i>vespertinus</i>		Sheldon's milkvetch	PerF	RegEn	Pres	Unc	Foster 10785 (BRY)	1993	
Leguminosae (Fabaceae)	<i>Astragalus argophyllus</i> var. <i>panguicensis</i>		Panguitch milkvetch	PerF	RegEn	Pres	Unc	Graybosch 989 (BRCA)	1957	Type locality is Panguitch Lake, Garfield Co., UT (Jones 6023f POM)
Leguminosae (Fabaceae)	<i>Astragalus bisulcatus</i> var. <i>major</i>	Included in var. <i>bisulcatus</i> by Barneby (1989)	Johnson milkvetch	PerF	Wide	Pres	Unc	Graybosch 844 (BRCA)	1974	Type locality is Johnson, Kane Co., UT (Jones s.n. POM)
Leguminosae (Fabaceae)	<i>Astragalus calycosus</i> var. <i>calycosus</i>	<i>A. calycosus</i>	Torrey's milkvetch	PerF	Wide	Pres	Unc	Buchanan 3116 (BRCA)	1931	
Leguminosae (Fabaceae)	<i>Astragalus convallarius</i> var. <i>convallarius</i>	<i>A. diversifolius</i> var. <i>campestris</i>	lesser rushy milkvetch	PerF	Wide	Pres	Unc	Graybosch 1339 (BRCA)	1931	
Leguminosae (Fabaceae)	<i>Astragalus desperatus</i> var. <i>desperatus</i>	<i>A. desperatus</i>	rimrock milkvetch	PerF	RegEn	Pres	Unc	Peabody 2 (BRCA)	1991	Type locality is near Cisco, Grand Co., UT (Jones s.n. POM)
Leguminosae (Fabaceae)	<i>Astragalus hallii</i> var. <i>fallax</i>		Hall's milkvetch	PerF	RegEn	Pres	Unc	Atwood 6130 (BRY)	1932	
Leguminosae (Fabaceae)	<i>Astragalus humistratus</i> var. <i>humivagans</i>		groundcover milkvetch	PerF	RegEn	Pres	Unc	Buchanan 338 (BRCA)	1930	
Leguminosae (Fabaceae)	<i>Astragalus kentrophyta</i> var. <i>elatus</i>	<i>A. impensus</i>	tall kentrophyta	PerF	Wide	Pres	Unc	Peabody 41 (BRCA)	1931	
Leguminosae (Fabaceae)	<i>Astragalus kentrophyta</i> var. <i>tegetarius</i>	<i>A. kentrophyta</i> var. <i>implexus</i>	mountain kentrophyta	PerF	Wide	Pres	Unc	Foster 10832 (BRY)	1993	

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Leguminosae (Fabaceae)	<i>Astragalus lentiginosus</i> var. <i>araneosus</i>	<i>A. lentiginosus</i> var. <i>diphysus</i>	cobweb milkvetch	PerF	RegEn	Pres	Rare	Foster 11019 (BRY)	1994	Type locality is Frisco, Beaver Co., UT (Jones 180 MINN)
Leguminosae (Fabaceae)	<i>Astragalus lonchocarpus</i>		great rushy milkvetch	PerF	Wide	Pres	Rare	Graybosch 793 (BRCA)	1980	Type locality is "southern Utah", (Parry 32 ISC)
Leguminosae (Fabaceae)	<i>Astragalus megacarpus</i> var. <i>parryi</i>	Includes var. <i>megacarpus</i> . Vars. not recognized in Barneby (1989)	great bladderly milkvetch	PerF	Wide	Pres	Unc	Buchanan 214 (BRCA)	1934	Type locality is Cedar Canyon, Iron Co., UT (Parry 51 GH)
Leguminosae (Fabaceae)	<i>Astragalus miser</i> var. <i>oblongifolius</i>		Rydberg's weedy milkvetch	PerF	Wide	Pres	Unc	Buchanan 32 (BRCA)	1934	
Leguminosae (Fabaceae)	<i>Astragalus mollissimus</i> var. <i>thompsoniae</i>		woolly milkvetch	PerF	Wide	Pres	Unc	Foster 11014 (BRY)	1994	Type locality is Kanab, Kane Co., UT (Thompson s.n. GH)
Leguminosae (Fabaceae)	<i>Astragalus praelongus</i> var. <i>praelongus</i>		stinking milkvetch	PerF	Wide	Pres	Unc	Foster 11015 (BRY)	1994	
Leguminosae (Fabaceae)	<i>Astragalus tenellus</i>		pulse milkvetch	PerF	Wide	Pres	Unc	Graybosch 1104 (BRCA)	1931	
Leguminosae (Fabaceae)	<i>Astragalus wardii</i>		Ward's milkvetch	PerF	RegEn	Pres	Rare	Foster 11041 (BRY)	1994	Type locality is Aquarius Plateau, Garfield Co., UT (Ward 424 GH)
Leguminosae (Fabaceae)	<i>Hedysarum boreale</i> var. <i>boreale</i>	Some authors include var. <i>pabulare</i>	northern sweetvetch	PerF	Wide	Pres	Unc	Buchanan 2891 (BRCA)	1931	
Leguminosae (Fabaceae)	<i>Lathyrus brachycalyx</i> var. <i>zionis</i>		Zion sweetpea	PerF	RegEn	Pres	Rare	Harrison 12318 (BRY)	1954	Type locality is 10 miles E of Zion NP, Kane Co., UT (Hitchcock 19013 isotype NY)

**Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Leguminosae (Fabaceae)	<i>Lotus utahensis</i>		Utah trefoil	PerF	RegEn	Pres	Unc	Graybosch 887 (BRCA)	1956	Type locality is W of Carmel, Kane Co., UT (Ferguson & Ottley 5613 NY)
Leguminosae (Fabaceae)	<i>Lupinus argenteus</i> var. <i>argenteus</i>		silvery lupine	PerF	Wide	Pres	Unc	Graybosch 975 (BRCA)	1980	
Leguminosae (Fabaceae)	<i>Lupinus argenteus</i> var. <i>rubricaulis</i>		subalpine lupine	PerF	Wide	Pres	Unc	Graybosch 982 (BRCA)	1980	
Leguminosae (Fabaceae)	<i>Lupinus caudatus</i> var. <i>argophyllus</i>	<i>L. caudatus</i> , <i>L. argenteus</i> var. <i>argophyllus</i> , <i>L. caudatus</i> var. <i>cutleri</i>	silverleaf lupine	PerF	Wide	Pres	Unc	Foster 10782 (BRY)	1993	
Leguminosae (Fabaceae)	<i>Lupinus kingii</i> var. <i>argillaceus</i>		King's lupine	AnnF	RegEn	Pres	?	Hall s.n. (BRY)	1934	BRCA reports may represent var. <i>kingii</i> .
Leguminosae (Fabaceae)	<i>Lupinus kingii</i> var. <i>kingii</i>		King's lupine	AnnF	Wide	Pres	Unc	Graybosch 974 (BRCA)	1931	
Leguminosae (Fabaceae)	<i>Lupinus sericeus</i> var. <i>barbiger</i>	<i>L. barbiger</i> . Vars. not recognized by Barneby (1989)	sink lupine	PerF	RegEn	Pres	Unc	Foster & Foster 4382 (BRY)	1977	Type locality is Kane Co., UT (Siler s.n. GH)
Leguminosae (Fabaceae)	<i>Lupinus sericeus</i> var. <i>marianus</i>		Marysville lupine	PerF	LocEn	Rep	?	Buchanan and Graybosch (1981)	1980	Reports may be based on var. <i>sericeus</i> . Type locality is Bullion Cr., Plute Co., Rydberg & Carlton 7024 (NY)
Leguminosae (Fabaceae)	<i>Lupinus sericeus</i> var. <i>sericeus</i>	Vars. not recognized by Barneby (1989)	silky lupine	PerF	Wide	Pres	Unc	Buchanan 28 (BRCA)	1956	
Leguminosae (Fabaceae)	<i>Medicago lupulina</i>		black medick	AnnF	Intro	Pres	Unc	Buchanan 373 (BRCA)	1958	Native to Europe
Leguminosae (Fabaceae)	<i>Medicago sativa</i>	<i>M. sativa</i> var. <i>sativa</i>	alfalfa	PerF	Intro	Hist	?	Rowe 178 (BRY)	1931	Native to Europe
Leguminosae (Fabaceae)	<i>Melilotus officinalis</i>		yellow sweet-clover	PerF	Intro	Pres	Unc	Buchanan 450 (BRCA)	1959	Native to Europe



*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Leguminosae (Fabaceae)	<i>Oxytropis deflexa</i> var. <i>sericea</i>		nodding locoweed	PerF	Wide	Pres	Unc	Graybosch 1117 (BRCA)	1980	
Leguminosae (Fabaceae)	<i>Oxytropis lambertii</i> var. <i>bigelovii</i>	Includes var. <i>lambertii</i>	Lambert's locoweed	PerF	Wide	Pres	Unc	Foster 11021 (BRY)	1994	
Leguminosae (Fabaceae)	<i>Oxytropis oreophila</i> var. <i>jonesii</i>		Jones' locoweed	PerF	RegEn	Pres	Unc	Graybosch 813 (BRCA)	1931	Type locality is Red Canyon, Garfield Co., UT (Ripley & Barneby 8550 CAS). USFWS: 3C
Leguminosae (Fabaceae)	<i>Oxytropis oreophila</i> var. <i>juniperina</i>		Bicknell locoweed	PerF	RegEn	Pres	Unc	Foster 11046 (BRY)	1994	Type locality is 1 mile E of Bicknell, Wayne Co., UT (Welsh & Moore 13828 BRY)
Leguminosae (Fabaceae)	<i>Oxytropis oreophila</i> var. <i>oreophila</i>		mountain locoweed	PerF	Wide	Pres	Unc	Graybosch 889b (BRCA)	1980	Type locality is Aquarius Plateau, Garfield Co., UT (Ward 541 G)
Leguminosae (Fabaceae)	<i>Pediomelum</i> <i>pariense</i>	<i>Psoralea pariensis</i>	Paria breadroot	PerF	LocEn	Pres	Unc	Welsh & Murdock 12859 (BRY)	1931	Type locality is Bryce Canyon NP, Garfield Co., UT (Welsh & Murdock 12859 BRY). USFS: Region 4 Sensitive, USFWS: CZ
Leguminosae (Fabaceae)	<i>Trifolium</i> <i>gymnocarpon</i>	<i>T. gymnocarpon</i> var. <i>gymnocarpon</i>	dwarf clover	PerF	Wide	Pres	Unc	Britten s.n. (BRCA)	1990	
Leguminosae (Fabaceae)	<i>Trifolium repens</i>		white clover	PerF	Intro	Pres	Unc	Graybosch 1011 (BRCA)	1957	Native to Europe
Leguminosae (Fabaceae)	<i>Vicia americana</i> var. <i>americana</i>		American vetch	PerF	Wide	Pres	Unc	Graybosch 784 (BRCA)	1932	
Liliaceae (Alliaceae)	<i>Allium acuminatum</i>		taper-tip onion	PerF	Wide	Hist	?	Weight B-32/323 (BRCA)	1932	

**Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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 (Alliaceae)	<i>Allium bisceptrum</i>	Includes vars. <i>bisceptrum</i> & <i>palmeri</i>	twincrest onion	PerF	Wide	Hist	?	Weight B-32/155 (BRCA)	1932	
Liliaceae (Alliaceae)	<i>Allium nevadense</i>	Welsh et al. (2003) include <i>A. atrorubens</i> var. <i>crisatum</i>	Nevada onion	PerF	Wide	Pres	Rare	Graybosch 1015 (BRCA)	1980	
Liliaceae (Asparagaceae)	<i>Asparagus officinalis</i>		asparagus	PerF	Intro	Pres	Unc	Graybosch 1079 (BRCA)	1980	Native to Eurasia
Liliaceae (Calochortaceae)	<i>Calochortus nuttallii</i>		sego-lily	PerF	Wide	Pres	Unc	Buchanan 30 (BRCA)	1931	
Liliaceae	<i>Fritillaria atropurpurea</i>		leopard-lily	PerF	Wide	Pres	Unc	Buchanan 140 (BRCA)	1957	
Liliaceae (Anthericaceae)	<i>Leucocrinum montanum</i>		star-lily	PerF	Periph	Pres	Unc	Buchanan 3069 (BRCA)	1940	
Liliaceae (Convallariaceae, Ruscaceae)	<i>Smilacina stellata</i>	<i>Maianthemum stellatum</i>	starry false Solomon's-seal	PerF	Wide	Pres	Unc	Graybosch 820 (BRCA)	1932	
Liliaceae (Melanthiaceae)	<i>Zigadenus elegans</i>	<i>Anticlea elegans</i>	mountain death camas	PerF	Wide	Pres	Unc	Buchanan 383 (BRCA)	1957	
Linaceae	<i>Linum australe</i>	<i>Mesynium australe</i>	small yellow flax	AnnF	Sparse	Pres	Unc	Graybosch 918 (BRCA)	1980	
Linaceae	<i>Linum kingii</i>	<i>Mesyniopsis kingii</i>	King's yellow flax	PerF	Wide	Pres	Unc	Boyle 1127 (BRCA)	1894	
Linaceae	<i>Linum perenne</i> ssp. <i>lewisii</i>	<i>L. lewisii</i> var. <i>lewisii</i> , <i>Adenolinum lewisii</i>	blue flax	PerF	Wide	Pres	Unc	Buchanan 29 (BRCA)	1940	
Loasaceae	<i>Mentzelia multiflora</i>	<i>M. multiflora</i> var. <i>multiflora</i> , <i>Nuttallia multiflora</i>	desert stickleaf	PerF	Wide	Pres	Unc	Graybosch 965 (BRCA)	1980	
Malvaceae	<i>Malva neglecta</i>		common mallow	AnnF	Intro	Pres	Unc	Kitchen s.n. (BRCA)	1998	Native to Eurasia
Malvaceae	<i>Sphaeralcea coccinea</i>	Includes ssp. <i>coccinea</i> , <i>elata</i> , & <i>dissecta</i>	scarlet globe-mallow	PerF	Wide	Pres	Unc	Graybosch 834 (BRCA)	1931	
Malvaceae	<i>Sphaeralcea parvifolia</i>		small-leaf globemallow	PerF	Wide	Pres	Unc	Graybosch 1081 (BRCA)	1980	
Monotropaceae (Ericaceae)	<i>Pterospora andromedea</i>		woodland pinedrops	PerF	Wide	Pres	Unc	Topp ST08240701 (BRCA)	1941	

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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 fragrans</i>	<i>A. elliptica</i> , <i>A. fragrans</i> var. <i>elliptica</i> , <i>A. nana</i> var. <i>harrisi</i>	fragrant sand-verbena	PerF	Wide	Pres	Unc	Graybosch 905 (BRCA)	1980	Type locality is near Beaver City, Beaver Co., UT (Palmer 404)
Nyctaginaceae	<i>Abronia nana</i>	<i>A. nana</i> var. <i>nana</i>	low sand-verbena	PerF	RegEn	Pres	Unc	Graybosch 858 (BRCA)	1980	Type locality is near Beaver City, Beaver Co., UT (Palmer 404)
Nyctaginaceae	<i>Mirabilis linearis</i> var. <i>linearis</i>	<i>Oxybaphus linearis</i> , <i>O. decumbens</i> , some authors include <i>M. glabra</i>	narrowleaf four-o'clock	PerF	Wide	Rep	Unc	Northern Colorado Plateau Network (in ed.)	2005	
Onagraceae	<i>Calylophus lavandulifolius</i>	<i>C. hartwegii</i> ssp. <i>lavandulifolius</i>	lavender-leaf sundrops	PerF	Wide	Pres	Unc	Graybosch 755 (BRCA)	1938	
Onagraceae	<i>Camissonia scapoidea</i> var. <i>scapoidea</i>	<i>Oenothera scapoidea</i>	Paiute suncup	AnnF	Wide	Rep	Rare	Sarah Topp, personal obs.	2006	
Onagraceae	<i>Epilobium angustifolium</i> var. <i>canescens</i>	<i>Chamerion angustifolium</i> var. <i>canescens</i> , <i>C. angustifolium</i> ssp. <i>circumvagum</i> , <i>C. danielsii</i>	fireweed	PerF	Wide	Rep	?	Spence & Buchanan (1993)	NA	
Onagraceae	<i>Epilobium halleanum</i>		Hall's willow-herb	PerF	Wide	Pres	?	Weight B-32/287 (BRCA)	1932	
Onagraceae	<i>Gayophytum racemosum</i>		raceme groundsmoke	AnnF	Wide	Pres	Unc	Buchanan 3120 (BRCA)	1957	
Onagraceae	<i>Gayophytum ramosissimum</i>		branching groundsmoke	AnnF	Wide	Pres	Unc	Graybosch 902 (BRCA)	1980	
Onagraceae	<i>Oenothera albicaulis</i>		white-stem evening-primrose	AnnF	Wide	Pres	Unc	Graybosch 782 (BRCA)	1980	
Onagraceae	<i>Oenothera caespitosa</i> var. <i>critica</i>		Jones' evening-primrose	PerF	Wide	Pres	Unc	Gifford s.n. (BRCA)	1940	Type locality is Rabbit Valley, Wayne Co., UT (Ward 526 US)

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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> var. <i>marginata</i>	<i>O. caespitosa</i> var. <i>marginata</i>	long-tube evening-primrose	PerF	Wide	Pres	Unc	Buchanan 362 (BRCA)	1958	
Onagraceae	<i>Oenothera coronopifolia</i>		hairy-throat evening-primrose	PerF	Wide	Hist	?	Boyle 1162 (BRCA)	1931	
Onagraceae	<i>Oenothera flava</i> var. <i>flava</i>	<i>O. flava</i>	yellow evening-primrose	PerF	Wide	Pres	Unc	Graybosch 881 (BRCA)	1932	
Onagraceae	<i>Oenothera howardii</i>	<i>O. brachycarpa</i>	bronze evening-primrose	PerF	Wide	Pres	Unc	Graybosch 884 (BRCA)	1931	
Onagraceae	<i>Oenothera longissima</i>		Bridges evening-primrose	PerF	RegEn	Rep	?	Spence & Buchanan (1993)	NA	Type locality is Armstrong & White canyons (Natural Bridges NM), San Juan Co., UT (Rydberg & Garrett 9410 NY)
Onagraceae	<i>Oenothera pallida</i> var. <i>pallida</i>	Welsh et al. (2003). Includes var. <i>runcinata</i>	pale evening-primrose	PerF	Wide	Pres	Unc	Buchanan 61 (BRCA)	1956	
Orchidaceae	<i>Corallorhiza maculata</i>	<i>C. maculata</i> var. <i>maculata</i>	spotted coral-root	PerF	Wide	Pres	Unc	Buchanan 205 (BRCA)	1957	
Orchidaceae	<i>Corallorhiza striata</i>	<i>C. striata</i> var. <i>striata</i>	striped coral-root	PerF	Wide	Pres	Unc	Mueller s.n. (BRCA)	1980	
Orchidaceae	<i>Epipactis gigantea</i>		giant helleborine	PerF	Wide	Pres	Rare	Graybosch 1055 (BRCA)	1980	
Orchidaceae	<i>Habenaria dilatata</i>	<i>Platanthera dilatata</i> var. <i>leucostachys</i> , <i>P. leucostachys</i>	Lindley's white bog-orchid	PerF	Wide	Rep	?	Spence & Buchanan (1993)	NA	
Orchidaceae	<i>Habenaria sparsiflora</i> var. <i>sparsiflora</i>	<i>Platanthera sparsiflora</i> . Vars. not recognized in <i>Flora of North America</i> (2002)	slender bog orchid	PerF	Wide	Pres	Unc	Topp ST06290501 (BRCA)	1980	
Orobanchaceae	<i>Orobanche fasciculata</i>	<i>Aphyllon fasciculatum</i>	clustered broomrape	PerF	Wide	Pres	Unc	Graybosch 945 (BRCA)	1980	

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Papaveraceae	<i>Eschscholzia californica</i>	<i>E. californica</i> sp. <i>californica</i>	California poppy	AnnF	Intro	Pres	?	Buchanan 13 (BRCA)	1956	Native to SW USA but introduced in Utah.
Pinaceae	<i>Abies concolor</i>		white fir	Tree	Wide	Pres	Com	Buchanan 307 (BRCA)	1932	
Pinaceae	<i>Picea pungens</i>		blue spruce	Tree	Wide	Pres	Unc	Buchanan 133 (BRCA)	1957	State tree of UT and CO
Pinaceae	<i>Pinus edulis</i>		two-needle pinyon	Tree	Wide	Pres	Abun	Cottam 4364 (BRCA)	1927	
Pinaceae	<i>Pinus flexilis</i>		limber pine	Tree	Wide	Pres	Unc	Boyle Z283 (BRCA)	1938	
Pinaceae	<i>Pinus longaeva</i>	<i>P. aristata</i>	western bristlecone pine	Tree	Wide	Pres	Unc	Buchanan 100 (BRCA)	1928	
Pinaceae	<i>Pinus ponderosa</i> var. <i>scopulorum</i>		ponderosa pine	Tree	Wide	Pres	Com	Buchanan 251 (BRCA)	1957	
Pinaceae	<i>Pseudotsuga menziesii</i> var. <i>glauca</i>		Douglas-fir	Tree	Wide	Pres	Com	Buchanan 106 (BRCA)	1957	
Plantaginaceae	<i>Plantago eriopoda</i>		woolly-base plantain	PerF	Wide	Pres	Unc	Graybosch 913 (BRCA)	1980	
Plantaginaceae	<i>Plantago lanceolata</i>		English plantain	PerF	Intro	Pres	Unc	Graybosch 1072 (BRCA)	1980	Native to Eurasia
Polemoniaceae	<i>Ipomopsis aggregata</i> var. <i>aggregata</i>	<i>Gilia aggregata</i> var. <i>aggregata</i>	scarlet gilia	PerF	Wide	Pres	Unc	Graybosch 882 (BRCA)	1980	
Polemoniaceae	<i>Ipomopsis aggregata</i> var. <i>maculata</i>	<i>Gilia aggregata</i> var. <i>maculata</i> , <i>I. aggregata</i> ssp. <i>formosissima</i>	scarlet gilia	PerF	Wide	Pres	Com	Boyle 1115 (BRCA)	1932	
Polemoniaceae	<i>Ipomopsis congesta</i> var. <i>frutescens</i>	<i>Gilia congesta</i> var. <i>frutescens</i>	shrubby gilia	PerF	RegEn	Pres	Unc	Graybosch 1035 (BRCA)	1980	Type locality is Springdale, Washington Co., UT (Jones 5247 NY)

Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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>Leptodactylon caespitosum</i>	<i>Linanthus caespitosus</i>	matted prickly-phlox	PerF	Sparse	Pres	Unc	Graybosch 1048 (BRCA)	1940	This species has been called <i>Phlox bryoides</i> , <i>P. diffusa</i> , and <i>P. austromontana</i> in the BRCA herbarium & previous checklists.
Polemoniaceae	<i>Leptodactylon pungens</i>	<i>Leptodactylon pungens</i> var. <i>pungens</i> , <i>Linanthus pungens</i>	prickly-phlox	Shrub	Wide	Pres	Unc	Buchanan 26 (BRCA)	1956	
Polemoniaceae	<i>Linanthastrum nuttallii</i>	<i>Linanthastrum nuttallii</i> var. <i>nuttallii</i> , <i>Leptosiphon nuttallii</i> , <i>Linanthus nuttallii</i> ssp. <i>nuttallii</i>	Nuttall's linanthus	PerF	Wide	Hist	?	Cottam 4399 (BRY)	1929	
Polemoniaceae	<i>Phlox austromontana</i> var. <i>austromontana</i>	Var. not recognized in Cronquist et al. (1984)	desert phlox	PerF	Wide	Pres	Unc	Graybosch 811 (BRCA)	1980	Type locality is Beaver Dam Mtns, Washington Co., UT (Fremont 447 US)
Polemoniaceae	<i>Phlox gladiiformis</i>	<i>P. caesia</i>	daggerleaf phlox	PerF	RegEn	Pres	Rare	Buchanan 1720 (BRCA)	1970	Type locality is Cedar Canyon, Iron Co., UT (Jones 5208c POM). USFWS: 3C
Polemoniaceae	<i>Phlox hoodii</i> var. <i>canescens</i>	Includes ssp. <i>glabrata</i> , <i>hoodii</i> , & <i>viscidula</i>	carpet phlox	PerF	Wide	Pres	Unc	Graybosch 886 (BRCA)	1980	
Polemoniaceae	<i>Phlox longifolia</i>	Includes vars. <i>longifolia</i> & <i>stansburyi</i>	long-leaf phlox	PerF	Wide	Pres	Unc	Graybosch 752 (BRCA)	1932	

**Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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>Polemonium caeruleum</i> var. <i>pterospermum</i>	<i>P. occidentale</i> , <i>P. caeruleum</i> ssp. <i>amygdalinum</i>	western Jacob's-ladder	PerF	Wide	Pres	Unc	Graybosch 1005 (BRCA)	1980	
Polygonaceae	<i>Eriogonum alatum</i>	<i>E. alatum</i> var. <i>alatum</i> , <i>Pterogonum alatum</i>	winged wild buckwheat	PerF	Wide	Pres	Unc	Buchanan 166 (BRCA)	1928	
Polygonaceae	<i>Eriogonum aretioides</i>		Widtsoe wild buckwheat	PerF	LocEn	Rep	?	Van Pelt and Schelz (1991)	NA	Type locality is Widtsoe, Garfield Co., UT (Ripley & Barneby 8570 CAS). USFS: Region 4 Sensitive
Polygonaceae	<i>Eriogonum cernuum</i> var. <i>cernuum</i>	Vars. not recognized in <i>Flora of North America</i> (2005)	nodding wild buckwheat	AnnF	Wide	Pres	Rare	Topp ST08220701 (BRCA)	2007	
Polygonaceae	<i>Eriogonum corymbosum</i> var. <i>corymbosum</i>	Includes var. <i>velutinum</i> & <i>E. lancifolium</i> in Welsh et al. 2003	crisp-leaf wild buckwheat	Shrub	Wide	Pres	Unc	Buchanan 542 (BRCA)	1931	
Polygonaceae	<i>Eriogonum microthecum</i> var. <i>laxiflorum</i>		slender wild buckwheat	Shrub	Wide	Pres	Unc	Foster 11009 (BRY)	1993	
Polygonaceae	<i>Eriogonum microthecum</i> var. <i>simpsonii</i>	<i>E. microthecum</i> var. <i>foliosum</i>	slender wild buckwheat	PerF	Wide	Pres	Unc	Buchanan 318 (BRCA)	1957	
Polygonaceae	<i>Eriogonum panguicense</i>	Includes vars. <i>panguicense</i> & <i>alpestre</i>	Panguitch wild buckwheat	PerF	RegEn	Pres	Unc	Buchanan 2992 (BRCA)	1930	Type locality of var. <i>panguicense</i> is near Panguitch, Garfield Co., UT (Jones s.n. POM).
Polygonaceae	<i>Eriogonum racemosum</i> var. <i>racemosum</i>	<i>E. racemosum</i>	redroot wild buckwheat	PerF	Wide	Pres	Unc	Buchanan 35 (BRCA)	1931	

**Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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 subreniforme</i>		kidney-shaped wild buckwheat	AnnF	RegEn	Pres	Rare	Graybosch 846 (BRCA)	1980	Type locality is Virgin River Valley, Washington Co., UT (Parry 237 ISC)
Polygonaceae	<i>Eriogonum umbellatum</i> var. <i>porteri</i>		Porter's wild buckwheat	PerF	RegEn	Pres	Unc	Topp ST08110503 (BRCA)	2005	
Polygonaceae	<i>Eriogonum umbellatum</i> var. <i>subaridum</i>		arid wild buckwheat	PerF	Wide	Pres	Unc	Buchanan 88 (BRCA)	1932	
Polygonaceae	<i>Polygonum aviculare</i>	<i>P. arenastrum</i> , <i>P. aviculare</i> ssp. <i>aviculare</i>	yard knotweed	AnnF	Intro	Pres	Unc	Graybosch 1064 (BRCA)	1932	Native to Eurasia
Polygonaceae	<i>Polygonum convolvulus</i>	<i>Fallopia convolvulus</i>	black-bindweed	AnnF	Intro	Pres	?	Not provided (BRCA)	NA	Native to Europe
Polygonaceae	<i>Polygonum douglasii</i> var. <i>johnstonii</i>	<i>P. sawatchense</i> var. <i>sawatchense</i>	Sawatch knotweed	AnnF	Wide	Pres	Unc	Graybosch 967 (BRCA)	1957	
Polygonaceae	<i>Polygonum viviparum</i>	<i>Bistorta vivipara</i>	alpine bistort	PerF	Wide	Pres	Unc	Graybosch 1111 (BRCA)	1980	
Polygonaceae	<i>Rumex crispus</i>		curly dock	PerF	Intro	Pres	Unc	Foster 10841 (BRY)	1932	Native to Eurasia
Polygonaceae	<i>Rumex salicifolius</i> ssp. <i>triangulivalvis</i>	<i>R. mexicanus</i> , <i>R. salicifolius</i> var. <i>mexicanus</i> , <i>R. utahensis</i> , <i>R. triangulivalvis</i>	willow dock	PerF	Wide	Rep	?	Buchanan & Graybosch (1981)	1980	
Polypodiaceae (Adiantaceae)	<i>Cheilanthes feei</i>		slender lip-fern	Fern	Wide	Pres	Unc	Graybosch 769 (BRCA)	1980	
Polypodiaceae (Dennstaedtiaceae)	<i>Pteridium aquilinum</i> var. <i>pubescens</i>	<i>P. aquilinum</i> var. <i>lanuginosum</i>	bracken fern	Fern	Wide	Pres	Rare	Graybosch 1039 (BRCA)	1980	
Primulaceae	<i>Androsace septentrionalis</i>	Includes ssp. <i>puberulenta</i> , <i>subumbellata</i> , & var. <i>subbilifera</i>	pygmy-flower rock-jasmine	AnnF	Wide	Pres	Unc	Buchanan 356 (BRCA)	1940	



*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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>Dodecatheon pulchellum</i> var. <i>pulchellum</i>	<i>D. pauciflorum</i> . Includes "subvars" from <i>UT Flora coriaceum</i> , <i>atwoodii</i> , & <i>huberi</i>	dark-throat shooting-star	PerF	Wide	Pres	Unc	Graybosch 874 (BRCA)	1932	
Primulaceae	<i>Primula incana</i>		silvery primrose	PerF	Wide	Rep	?	Jones 5312av (POM)	1894	Jones' specimen from "canyon above Tropic" is the holotype. The UT Conservation Data Center considers this location to be in Bryce Canyon NP, but exact site is not known
Pyrolaceae (Ericaceae)	<i>Pyrola asarifolia</i>	<i>P. rotundifolia</i> ssp. <i>asarifolia</i>	pink wintergreen	PerF	Wide	Pres	Unc	Graybosch 1033 (BRCA)	1980	
Pyrolaceae (Ericaceae)	<i>Pyrola chlorantha</i>	<i>P. virens</i>	green-flowered wintergreen	PerF	Wide	Pres	Unc	Graybosch 980 (BRCA)	1980	
Pyrolaceae (Ericaceae)	<i>Pyrola picta</i>	<i>P. picta</i> var. <i>picta</i> , includes <i>P. dentata</i>	whiteveined wintergreen	PerF	Wide	Pres	Unc	Topp ST08090505 (BRCA)	1932	
Ranunculaceae (Helleboraceae)	<i>Aconitum columbianum</i> var. <i>columbianum</i>	Includes var. <i>ochroleucum</i>	Columbian monkshood	PerF	Wide	Pres	Unc	Graybosch 1108 (BRCA)	1980	
Ranunculaceae (Helleboraceae)	<i>Anemone multifida</i> var. <i>tetonensis</i>	<i>A. tetonensis</i> , includes vars. <i>multifida</i> , <i>saxicola</i> , & <i>stylosa</i>	cutleaf anemone	PerF	Wide	Pres	Unc	Graybosch 1027 (BRCA)	1932	
Ranunculaceae (Helleboraceae)	<i>Aquilegia coerulea</i>	Includes vars. <i>ochroleuca</i> & <i>pinetorum</i>	Colorado columbine	PerF	Wide	Pres	Unc	Buchanan 161 (BRCA)	1957	
Ranunculaceae (Helleboraceae)	<i>Aquilegia scopulorum</i> var. <i>scopulorum</i>		rock columbine	PerF	RegEn	Pres	Unc	Graybosch 1349 (BRCA)	1940	Type locality is Wasatch Peak, Sanpete Co., UT (Tidestrom 1788 US)

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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>Clematis columbiana</i>	<i>C. pseudoalpina</i> , <i>Atragene columbiana</i>	Columbian virgin's-bower	PerF	Wide	Pres	Com	Graybosch 771 (BRCA)	1934	
Ranunculaceae	<i>Clematis ligusticifolia</i>		white virgin's-bower	PerF	Wide	Pres	Unc	Buchanan 401 (BRCA)	1932	
Ranunculaceae (Helleboraceae)	<i>Delphinium andersonii</i> var. <i>scaposum</i>	<i>D. scaposum</i>	pale larkspur	PerF	Wide	Pres	Unc	Graybosch 848 (BRCA)	1980	
Ranunculaceae (Helleboraceae)	<i>Delphinium nuttallianum</i>	<i>Delphinium nelsonii</i>	Nuttall's larkspur	PerF	Wide	Pres	Unc	Foster 10894 (BRY)	1993	
Ranunculaceae	<i>Ranunculus cymbalaria</i>	<i>R. cymbalaria</i> var. <i>cymbalaria</i> , <i>Halerpestes cymbalaria</i> ssp. <i>saximontana</i>	marsh buttercup	PerF	Wide	Pres	Unc	Graybosch 772 (BRCA)	1932	
Ranunculaceae	<i>Ranunculus inamoenus</i>	<i>R. inamoenus</i> var. <i>inamoenus</i> . Includes var. <i>alpeophilus</i>	drab buttercup	PerF	Wide	Pres	Unc	Graybosch 875 (BRCA)	1980	
Ranunculaceae (Thalictraceae)	<i>Thalictrum alpinum</i>		alpine meadow-rue	PerF	Wide	Pres	Rare	Topp ST09100501 (BRCA)	2005	
Ranunculaceae (Thalictraceae)	<i>Thalictrum fendleri</i>		Fendler's meadow-rue	PerF	Wide	Pres	Unc	Buchanan 272 (BRCA)	1932	
Rhamnaceae	<i>Ceanothus fendleri</i>		Fendler's mountain-lilac	Shrub	Wide	Pres	Unc	Buchanan 2955 (BRCA)	1978	
Rhamnaceae	<i>Ceanothus martinii</i>		Utah mountain-lilac	Shrub	Wide	Pres	Com	Boyle 1113 (BRCA)	1940	Type locality is Manti Canyon, Sanpete Co., UT (Jones s.n. POM)
Rosaceae	<i>Amelanchier utahensis</i>		Utah serviceberry	Shrub	Wide	Pres	Unc	Buchanan 150 (BRCA)	1940	Type locality is Toquerville, Washington Co., UT (Jones 1716 GH)

Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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>Cercocarpus ledifolius</i> var. <i>intercedens</i> <i>intermontanus</i>	<i>C. ledifolius</i> var. <i>intercedens</i>	curl-leaf mountain mahogany	Shrub	Wide	Pres	Unc	Buchanan 92 (BRCA)	1932	Type locality is ca 10 km E of Oak City, Millard Co., UT (Holmgren & Holmgren 11298 NY)
Rosaceae	<i>Cercocarpus montanus</i>		alder-leaf mountain mahogany	Shrub	Wide	Pres	Unc	Buchanan 115 (BRCA)	1940	
Rosaceae	<i>Fallugia paradoxa</i>		Apache plume	Shrub	Wide	Pres	Unc	Graybosch 942 (BRCA)	1959	
Rosaceae	<i>Fragaria virginiana</i>	Includes ssp. <i>glauca</i> & <i>platypetala</i>	Virginia strawberry	PerF	Wide	Pres	Unc	Graybosch 877 (BRCA)	1980	
Rosaceae	<i>Holodiscus dumosus</i>		bush oceanspray	Shrub	Wide	Pres	Unc	Buchanan 217 (BRCA)	1957	
Rosaceae	<i>Ivesia gordonii</i>		Gordon's ivesia	PerF	Wide	Hist	?	Cottam 2782 (BRY)	1927	
Rosaceae	<i>Ivesia kingii</i>		King's ivesia	PerF	Sparse	Hist	?	Weight B-32/327 (BRCA)	1932	
Rosaceae	<i>Ivesia sabulosa</i>		Sevier ivesia	PerF	RegEn	Pres	Unc	Graybosch 1046 (BRCA)	1931	Type locality is head of Sevier River 25 miles S of Panguitch, Garfield Co., UT (Jones 6032 POM)
Rosaceae	<i>Malus pumila</i>	<i>Pyrus malus</i>	common apple	Tree	Intro	Pres	Rare	Kitchen s.n. (BRCA)	1998	Native to Eurasia
Rosaceae	<i>Peraphyllum ramosissimum</i>		squaw-apple	Shrub	Wide	Pres	Unc	Buchanan 219 (BRCA)	1957	
Rosaceae	<i>Potentilla anserina</i>	<i>Argentina anserina</i>	silverweed	PerF	Wide	Pres	Unc	Graybosch 775 (BRCA)	1932	
Rosaceae	<i>Potentilla concinna</i> var. <i>bicrenata</i>	<i>P. bicrenata</i>	bicrenate cinquefoil	PerF	Wide	Pres	Unc	Buchanan 1480 (BRCA)	1970	
Rosaceae	<i>Potentilla concinna</i> var. <i>modesta</i>	<i>P. concinna</i> . Included in <i>P. rubricaulis</i> in Holmgren et al. (1997)	modest cinquefoil	PerF	RegEn	Rep	Unc	Northern Colorado Plateau Network (in ed.)	2005	Type locality is Mt. Barrette near Marysvale, Plute Co., UT (Rydberg & Carlton 7261 NY)

**Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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>Potentilla crinita</i>		hair-tuft cinquefoil	PerF	Wide	Pres	Unc	Boyle 1137 (BRCA)	1931	
Rosaceae	<i>Potentilla fruticosa</i>	<i>Pentaphylloides fruticosa</i> , <i>Pentaphylloides floribunda</i> , <i>Dasiphora fruticosa</i> ssp. <i>floribunda</i> , <i>D. floribunda</i>	shrubby cinquefoil	Shrub	Wide	Pres	Unc	Buchanan 299 (BRCA)	1931	
Rosaceae	<i>Potentilla hippiana</i>	<i>P. hippiana</i> var. <i>hippiana</i>	woolly cinquefoil	PerF	Wide	Pres	Unc	Buchanan 2998 (BRCA)	1931	
Rosaceae	<i>Potentilla pennsylvanica</i>		Pennsylvania cinquefoil	PerF	Wide	Pres	Rare	Topp ST06280602 (BRCA)	2006	
Rosaceae	<i>Potentilla plattensis</i>		Platte River cinquefoil	PerF	Disj	Pres	Unc	Graybosch 1017 (BRCA)	1980	
Rosaceae	<i>Prunus virginiana</i> var. <i>melanocarpa</i>	<i>Padus virginiana</i> ssp. <i>melanocarpa</i>	western chokecherry	Shrub	Wide	Pres	Unc	Buchanan 165 (BRCA)	1931	
Rosaceae	<i>Purshia mexicana</i> var. <i>stansburyana</i>	<i>P. stansburyana</i> , <i>Cowania mexicana</i>	cliff-rose	Shrub	Wide	Pres	Unc	Topp ST06160601 (BRCA)	1931	
Rosaceae	<i>Purshia tridentata</i>		antelope bitterbrush	Shrub	Wide	Pres	Com	Boyle 1106 (BRCA)	1940	
Rosaceae	<i>Rosa nutkana</i> var. <i>hispidata</i>		Nootka rose	Shrub	Wide	Hist	?	Boyle Z295 (BRCA)	1932	
Rosaceae	<i>Rosa woodsii</i>	<i>R. woodsii</i> var. <i>ultramontana</i> . Includes <i>R. manca</i>	Woods' rose	Shrub	Wide	Pres	Unc	Graybosch 910 (BRCA)	1931	
Rosaceae	<i>Rubus idaeus</i> var. <i>strigosus</i>	<i>R. idaeus</i> var. <i>aculeatissimus</i> , <i>R. idaeus</i> ssp. <i>melanolasius</i> , <i>R. idaeus</i> var. <i>sachalinensis</i>	common red raspberry	Shrub	Wide	Pres	Unc	Graybosch 979 (BRCA)	1980	
Rubiaceae	<i>Galium trifidum</i>	Includes ssp. <i>columbianum</i> , <i>trifidum</i> & <i>subbiflorum</i>	small bedstraw	PerF	Wide	Pres	Unc	Graybosch 1113 (BRCA)	1980	

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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>Kelloggia galioides</i>		milky kelloggia	PerF	Wide	Pres	Unc	Graybosch 917 (BRCA)	1980	
Salicaceae	<i>Populus angustifolia</i>		narrow-leaved cottonwood	Tree	Wide	Pres	Unc	Buchanan 227 (BRCA)	1931	
Salicaceae	<i>Populus fremontii</i> var. <i>fremontii</i>	<i>P. deltoides</i> var. <i>fremontii</i>	Fremont cottonwood	Tree	Wide	Pres	Unc	Topp ST06150602 (BRCA)	1932	
Salicaceae	<i>Populus tremuloides</i>		quaking aspen	Tree	Wide	Pres	Unc	Buchanan 308 (BRCA)	1957	
Salicaceae	<i>Populus x intercurrents</i>	<i>P. acuminata</i> , <i>P. x acuminata</i> . Hybrid of <i>P. fremontii</i> x <i>P. angustifolia</i>	lance-leaf cottonwood	Tree	Wide	Pres	Unc	Topp ST06150601 (BRCA)	2006	
Salicaceae	<i>Salix bebbiana</i>		Bebb's willow	Shrub	Wide	Pres	Unc	Buchanan 465 (BRCA)	1959	
Salicaceae	<i>Salix brachycarpa</i>		short-fruit willow	Shrub	Wide	Pres	Rare	Foster 11006 (BRY)	1993	
Salicaceae	<i>Salix eriocephala</i> var. <i>watsonii</i>	<i>S. lutea</i> , <i>S. rigida</i> var. <i>watsonii</i>	yellow willow	Shrub	Wide	Pres	Unc	Topp ST06270602 (BRCA)	2006	
Salicaceae	<i>Salix exigua</i> var. <i>stenophylla</i>	<i>S. exigua</i> var. <i>exigua</i>	coyote willow	Shrub	Wide	Pres	Unc	Buchanan 158 (BRCA)	1931	
Salicaceae	<i>Salix geyeriana</i>		Geyer's willow	Shrub	Wide	Pres	Unc	Graybosch 1008 (BRCA)	1980	
Santalaceae	<i>Comandra umbellata</i> var. <i>pallida</i>		bastard toadflax	PerF	Wide	Pres	Unc	Graybosch 749 (BRCA)	1958	
Saxifragaceae	<i>Lithophragma tenellum</i>	<i>L. tenella</i>	slender woodlandstar	PerF	Wide	Pres	Unc	Graybosch 824 (BRCA)	1980	
Saxifragaceae (Parnassiaceae)	<i>Parnassia palustris</i> var. <i>montanensis</i>	Includes var. <i>tenuis</i>	marsh grass-of-Parnassus	PerF	Wide	Pres	Unc	Buchanan 301 (BRCA)	1957	
Saxifragaceae (Grossulariaceae)	<i>Ribes aureum</i>	<i>R. aureum</i> var. <i>aureum</i>	golden currant	Shrub	Wide	Hist	?	Weight s.n. (BRCA)	1932	
Saxifragaceae (Grossulariaceae)	<i>Ribes cereum</i> var. <i>inebrians</i>	<i>R. cereum</i> var. <i>pedicellare</i>	wax currant	Shrub	Wide	Pres	Unc	Graybosch 1362 (BRCA)	1932	
Saxifragaceae (Grossulariaceae)	<i>Ribes inerme</i>		whitestem gooseberry	Shrub	Wide	Pres	Unc	Foster 11083 (BRCA)	1994	

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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>Castilleja chromosa</i>	<i>C. angustifolia</i> var. <i>dubia</i> , <i>C. applegatei</i> <i>ssp. martinii</i>	desert paintbrush	PerF	Wide	Pres	Unc	Graybosch 787 (BRCA)	1980	
Scrophulariaceae	<i>Castilleja linariifolia</i>	<i>C. linariaefolia</i>	Wyoming paintbrush	PerF	Wide	Pres	Com	Buchanan 22 (BRCA)	1932	
Scrophulariaceae	<i>Castilleja parvula</i> var. <i>revealii</i>	<i>C. revealii</i>	Reveal's paintbrush	PerF	LocEn	Pres	Unc	Holmgren & Reveal 2017 (NY)	1965	Type locality is along road to Bryce Point, Bryce Canyon NP, Garfield Co., UT (Holmgren & Reveal 2017 NY). USFS: Region 4 Sensitive, USFWS: former C2 candidate
Scrophulariaceae	<i>Cordylanthus kingii</i> var. <i>kingii</i>		King's bird's-beak	AnnF	RegEn	Pres	Unc	Buchanan 2963 (BRCA)	1957	
Scrophulariaceae	<i>Cordylanthus parviflorus</i>		smallflower bird's-beak	AnnF	Wide	Rep	?	Spence and Buchanan (1993)	NA	
Scrophulariaceae	<i>Cordylanthus wrightii</i>		Wright's bird's- beak	AnnF	Wide	Rep	Unc	Northern Colorado Plateau Network (in ed.)	2005	Previous reports from BRCA were based on misidentified specimens
Scrophulariaceae	<i>Mimulus guttatus</i>		yellow monkeyflower	PerF	Wide	Pres	Unc	Graybosch 1099 (BRCA)	1971	
Scrophulariaceae	<i>Mimulus rubellus</i>		reddish monkeyflower	AnnF	Wide	Pres	Unc	Graybosch 817 (BRCA)	1980	
Scrophulariaceae	<i>Orthocarpus luteus</i>		yellow owl-clover	AnnF	Wide	Pres	Unc	Graybosch 1060 (BRCA)	1941	
Scrophulariaceae	<i>Orthocarpus purpureoalbus</i>	<i>O. purpureo-albus</i>	violet owl-clover	AnnF	RegEn	Pres	Rare	Graybosch 1047 (BRCA)	1980	
Scrophulariaceae	<i>Pedicularis centranthera</i>		dwarf lousewort	PerF	Wide	Pres	Unc	Buchanan 3071 (BRCA)	1931	

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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 bracteatus</i>		Red Canyon penstemon	PerF	LocEn	Pres	Unc	Graybosch 791b (BRCA)	1971	Type locality is Red Canyon, Garfield Co., UT (Eastwood & Howell 783 CAS). USFS: Region 4 Sensitive, US FWS: former C2 candidate
Scrophulariaceae	<i>Penstemon caespitosus</i> var. <i>desertipicti</i>		painted penstemon	PerF	RegEn	Pres	Unc	Boyle 1138 (BRCA)	1930	
Scrophulariaceae	<i>Penstemon comarrhenus</i>		dusty penstemon	PerF	RegEn	Pres	Unc	Topp ST08130503 (BRCA)	1930	Type locality is Aquarius Plateau, Garfield Co., UT (Ward 462 GH)
Scrophulariaceae	<i>Penstemon eatonii</i> var. <i>eatonii</i>		Eaton's firecracker	PerF	Wide	Pres	Unc	Foster 11040 (BRY)	1994	Type locality is lower Provo Canyon, Utah Co., UT (Watson 776 GH)
Scrophulariaceae	<i>Penstemon eatonii</i> var. <i>undosus</i>		undulate penstemon	PerF	Wide	Pres	Unc	Graybosch 1034 (BRCA)	1980	Type locality is St. George, Washington Co., UT (Jones 5110h US)
Scrophulariaceae	<i>Penstemon leiophyllus</i> var. <i>leiophyllus</i>	" <i>Penstemon brycensis</i> " was never validly published.	Markagunt penstemon	PerF	LocEn	Pres	Unc	Boyle 1131 (BRCA)	1931	Type locality is Mammoth Creek, Markagunt Plateau, Garfield Co., UT (Jones 6026b US)
Scrophulariaceae	<i>Penstemon pachyphyllus</i> var. <i>congestus</i>		Rockville penstemon	PerF	Wide	Pres	Unc	Foster 11038 (BRY)	1994	Type locality is near Canaan Ranch, Rockville, Washington Co., UT (Jones 5262 POM)

*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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 procerus</i> <i>var. aberrans</i>		smallflower penstemon	PerF	RegEn	Pres	Unc	Graybosch 1007 (BRCA)	1980	
Scrophulariaceae	<i>Penstemon</i> <i>rostriflorus</i>	<i>P. bridgesii</i>	beaked penstemon	PerF	Wide	Pres	Unc	Graybosch 1091 (BRCA)	1980	
Scrophulariaceae	<i>Penstemon strictus</i>		Rocky Mountain penstemon	PerF	Wide	Pres	Rate	Gottschalk 14 (UTC)	1986	
Scrophulariaceae	<i>Penstemon</i> <i>utahensis</i>		Utah penstemon	PerF	Wide	Pres	Unc	Graybosch 849 (BRCA)	1929	Type locality is between Hatch's Wash & Monticello, San Juan Co., UT (Eastwood s.n. CAS)
Scrophulariaceae	<i>Verbascum thapsus</i>		woolly mullein	PerF	Intro	Pres	Unc	Graybosch 1093 (BRCA)	1980	Native to Eurasia
Scrophulariaceae	<i>Veronica americana</i>		American brooklime	PerF	Wide	Pres	Unc	Graybosch 1009 (BRCA)	1972	
Solanaceae	<i>Solanum rostratum</i>		buffalobur	AnnF	Intro	Pres	Unc	Buchanan s.n. (BRCA)	1998	Native to C North America but introduced to UT
Solanaceae	<i>Solanum</i> <i>sarrachoides</i>	<i>S. villosum</i> , <i>S.</i> <i>physalifolium</i> var. <i>nitidibaccatum</i>	ground-cherry nightshade	AnnF	Intro	Pres	Unc	Buchanan s.n. (BRCA)	1998	Native to Eurasia
Solanaceae	<i>Solanum triflorum</i>		cut-leaf nightshade	AnnF	Wide	Hist	?	Weight B-32/290 (BRCA)	1932	Native to C North America, may be adventive in UT.
Tamaricaceae	<i>Tamarix chinensis</i>	<i>T. pentandra</i> , <i>T.</i> <i>ramosissima</i>	five-stamen tamarisk	Shrub	Intro	Pres	Unc	Graybosch 944 (BRCA)	1980	Native to Eurasia
Typhaceae	<i>Typha latifolia</i>		common cattail	PerG	Wide	Pres	Rare	Ballenger EB07290602 (BRCA)	2006	
Ulmaceae	<i>Ulmus pumila</i>		Siberian elm	Tree	Intro	Pres	Unc	Fertig 22543 (BRCA)	2006	Native to Asia
Umbelliferae (Apiaceae)	<i>Angelica pinnata</i>		pinnate angelica	PerF	Wide	Pres	Unc	Graybosch 1110 (BRCA)	1980	



*Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Umbelliferae (Apiaceae)	<i>Berula erecta</i> var. <i>incisa</i>		cutleaf water- parsnip	PerF	Wide	Pres	Unc	Hallsten 2556 (BRY)	1987	
Umbelliferae (Apiaceae)	<i>Cymopterus lemmonii</i>	<i>Pseudocymopterus montanus</i>	Lemmon's spring- parsley	PerF	Wide	Pres	Com	Buchanan 108 (BRCA)	1932	
Umbelliferae (Apiaceae)	<i>Cymopterus minimus</i>		least spring- parsely	PerF	LocEn	Pres	Unc	Peabody 28 (BRCA)	1931	BRCA material approaches <i>C. purpureus</i> var. <i>purpureus</i> . Type locality is Cedar Breaks, Cedar Breaks NM, Iron Co., UT (Mathias 703 MO). USFS: Region 4 Sensitive, USFWS: former C2 candidate.
Umbelliferae (Apiaceae)	<i>Cymopterus purpureus</i> var. <i>purpureus</i>	<i>C. purpureus</i>	Colorado Plateau spring-parsley	PerF	RegEn	Pres	Com	Graybosch 1316 (BRCA)	1979	
Umbelliferae (Apiaceae)	<i>Ligusticum porteri</i>		southern ligusticum	PerF	Wide	Pres	Unc	Graybosch 986 (BRCA)	1931	
Umbelliferae (Apiaceae)	<i>Lomatium minimum</i>		least lomatium	PerF	LocEn	Pres	Unc	Buchanan 3359 (BRCA)	1929	Type locality is Bryce Canyon, Garfield Co., UT (Mathias 670 MO). USFWS: 3C
Umbelliferae (Apiaceae)	<i>Lomatium parryi</i>		Parry's lomatium	PerF	Wide	Pres	Unc	Graybosch 922 (BRCA)	1980	Type locality is "Southern Utah" (Parry 85)
Valerianaceae	<i>Valeriana acutiloba</i>	<i>V. acutiloba</i> var. <i>pubicarpa</i>	mountain valerian	PerF	Wide	Pres	Unc	Buchanan 3064 (BRCA)	1979	
Valerianaceae	<i>Valeriana edulis</i>		tobacco-root	PerF	Wide	Pres	Unc	Graybosch 734 (BRCA)	1980	
Verbenaceae	<i>Verbena bracteata</i>		prostrate vervain	PerF	Wide	Pres	Unc	Buchanan 464 (BRCA)	1959	

**Appendix A. Confirmed, historical, and reported vascular plant taxa of Bryce Canyon 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
Violaceae	<i>Viola adunca</i>	<i>V. montanensis</i>	hook-spur violet	PerF	Wide	Pres	Unc	Graybosch 995 (BRCA)	1932	
Violaceae	<i>Viola nephrophylla</i>	<i>V. sororia</i> var. <i>affinis</i>	northern bog violet	PerF	Wide	Pres	Unc	Graybosch 876 (BRCA)	1980	
Violaceae	<i>Viola purpurea</i> var. <i>venosa</i>		goose-foot violet	PerF	Wide	Rep	?	Buchanan & Graybosch (1981)	1980	
Viscaceae	<i>Arceuthobium cyanocarpum</i>	<i>A. campylopodum</i> var. <i>cyanocarpum</i>	limber pine dwarf-mistletoe	PerF	Sparse	Pres	Unc	Buchanan 306 (BRCA)	1957	Typically parasitic on <i>Pinus flexilis</i>
Viscaceae	<i>Arceuthobium divaricatum</i>		pinyon dwarf-mistletoe	PerF	Wide	Pres	Unc	Buchanan 527 (BRCA)	1959	Typically parasitic on <i>Pinus edulis</i> & <i>P. monophylla</i>
Viscaceae	<i>Arceuthobium douglasii</i>		Douglas-fir dwarf-mistletoe	PerF	Wide	Pres	Unc	Buchanan 310 (BRCA)	1957	Typically parasitic on <i>Pseudotsuga menziesii</i> (rarely on <i>Abies</i> or <i>Picea</i> species)
Viscaceae	<i>Arceuthobium vaginatum</i> var. <i>cryptopodium</i>		southwestern dwarf-mistletoe	PerF	Wide	Rep	?	Buchanan & Graybosch (1981)	1980	Typically parasitic on <i>Pinus ponderosa</i>
Viscaceae	<i>Phoradendron juniperinum</i>		juniper mistletoe	PerF	Wide	Pres	Unc	Graybosch 319 (BRCA)	1931	Typically parasitic on <i>Juniperus osteosperma</i>

**Appendix B. Potential (unconfirmed) taxa of Bryce Canyon National Park.**

Family	Species name	Synonyms/Taxonomic notes	Common name	Life form	Range	Comments
Aceraceae	<i>Acer negundo</i>	<i>A. negundo</i> var. <i>interius</i> , <i>Negundo aceroides</i> sp. <i>interius</i>	box elder	Tree	Wide	
Anacardiaceae	<i>Toxicodendron rydbergii</i>	<i>Rhus radicans</i> , <i>T. radicans</i>	western poison ivy	Shrub	Wide	
Asclepiadaceae	<i>Asclepias cryptoceras</i> var. <i>cryptoceras</i>	<i>A. cryptoceras</i>	pallid milkweed	PerF	Wide	
Asclepiadaceae	<i>Asclepias tuberosa</i> var. <i>interior</i>	<i>A. tuberosa</i> sp. <i>terminalis</i>	orange milkweed	PerF	Wide	
Boraginaceae	<i>Cryptantha crassisejala</i> var. <i>elachantha</i>		thick-sepaled cryptanth	AnnF	Wide	
Boraginaceae	<i>Cryptantha flavoculata</i>	<i>Oreocarya flavoculata</i>	yellow-eye cryptanth	PerF	Wide	
Boraginaceae	<i>Cryptantha gracilis</i>		slender cryptanth	AnnF	Wide	
Boraginaceae	<i>Hackelia floribunda</i>		showy stickseed	PerF	Wide	
Boraginaceae	<i>Hackelia micrantha</i>	<i>H. jessicae</i>	smallflower stickseed	PerF	Wide	
Boraginaceae	<i>Hackelia patens</i> var. <i>patens</i>		spotted stickseed	PerF	Wide	
Boraginaceae	<i>Heliotropium curassavicum</i> var. <i>obovatum</i>		salt heliotrope	PerF	Wide	
Boraginaceae	<i>Lappula squarrosa</i>	<i>L. squarrosa</i> var. <i>squarrosa</i> , <i>L. echinata</i>	European stickseed	AnnF	Intro	Native to Eurasia. Native race ( <i>L. erecta</i> ) from the Rocky Mountains is probably extralimital
Boraginaceae	<i>Mertensia fusiformis</i>	Included in <i>M. oblongifolia</i> by some authors	spindle-rooted bluebell	PerF	RegEn	
Boraginaceae	<i>Plagiobothrys scouleri</i> var. <i>penicillatus</i>	<i>Plagiobothrys scouleri</i> var. <i>hispidulus</i>	meadow popcorn-flower	AnnF	Wide	
Cactaceae	<i>Echinocereus engelmannii</i> var. <i>variegatus</i>	<i>E. engelmannii</i> var. <i>decumbens</i> . Vars. not recognized in <i>Flora of North America</i> (2003)	Glen Canyon hedgehog cactus	PerF	RegEn	
Capparaceae (Cleomaceae)	<i>Cleome serrulata</i>		Rocky Mountain beeplant	AnnF	Wide	
Caprifoliaceae	<i>Lonicera involucrata</i>	<i>Distegia involucrata</i>	black twinberry	Shrub	Wide	
Caprifoliaceae (Adoxaceae)	<i>Sambucus racemosa</i> var. <i>microbotrys</i>	<i>S. microbotrys</i> , included in <i>S. racemosa</i> var. <i>racemosa</i> by some authors	red elderberry	Shrub	Wide	
Caryophyllaceae (Alsiniaceae)	<i>Arenaria lateriflora</i>	<i>Moehringia lateriflora</i>	blunt-leaf sandwort	PerF	Wide	

Appendix B. Potential (unconfirmed) taxa of Bryce Canyon National Park, cont.

Family	Species name	Synonyms/Taxonomic notes	Common name	Life form	Range	Comments
Caryophyllaceae (Aisinaceae)	<i>Arenaria macradenia</i>	<i>Eremogone macradenia</i> var. <i>macradenia</i>	shrubby sandwort	PerF	Periph	
Caryophyllaceae (Aisinaceae)	<i>Arenaria rubella</i> var. <i>rubella</i>	<i>Minuartia rubella</i> , <i>Tryphane rubella</i>	reddish sandwort	PerF	Wide	
Caryophyllaceae (Aisinaceae)	<i>Cerastium arvense</i>	<i>C. strictum</i> , <i>C. arvense</i> ssp. <i>strictum</i>	field chickweed	PerF	Wide	
Caryophyllaceae (Aisinaceae)	<i>Cerastium beeringianum</i>	<i>C. beeringianum</i> ssp. <i>earlei</i> , <i>C. beeringianum</i> var. <i>capillare</i>	Bering chickweed	PerF	Wide	
Caryophyllaceae (Aisinaceae)	<i>Sagina saginoides</i>		alpine pearlwort	PerF	Wide	
Caryophyllaceae	<i>Silene menziesii</i>	<i>S. menziesii</i> var. <i>menziesii</i> , <i>Anotites menziesii</i> var. <i>menziesii</i>	Menzies' campion	PerF	Wide	
Caryophyllaceae (Aisinaceae)	<i>Stellaria umbellata</i>		umbrella starwort	PerF	Wide	
Chenopodiaceae	<i>Bassia americana</i>	<i>Kochia americana</i>	greenmolly	PerF	Wide	
Chenopodiaceae	<i>Chenopodium desiccatum</i>	Includes <i>C. pratericola</i>	desert goosefoot	AnnF	Sparse	
Chenopodiaceae	<i>Chenopodium fremontii</i> var. <i>fremontii</i>	<i>C. fremontii</i>	Fremont's goosefoot	AnnF	Wide	
Chenopodiaceae	<i>Corispermum americanum</i>	Includes vars. <i>americanum</i> & <i>rydbergii</i>	American bugseed	AnnF	Wide	
Chenopodiaceae	<i>Cycloloma atriplicifolia</i>	<i>C. atriplicifolium</i>	winged pigweed	AnnF	Wide	
Chenopodiaceae	<i>Monolepis nuttalliana</i>		Nuttall's poverty-weed	AnnF	Wide	
Chenopodiaceae	<i>Salsola paulsenii</i>		barbwire Russian thistle	AnnF	Intro	Native to Eurasia
Chenopodiaceae	<i>Suaeda calceoliformis</i>	<i>S. depressa</i>	broom seepweed	AnnF	Wide	
Compositae (Asteraceae)	<i>Agoseris glauca</i> var. <i>agrestis</i>	Included in var. <i>dasycephala</i> by some authors	field agoseris	PerF	Sparse	
Compositae (Asteraceae)	<i>Agoseris glauca</i> var. <i>dasycephala</i>		short agoseris	PerF	Wide	
Compositae (Asteraceae)	<i>Ambrosia acanthicarpa</i>	<i>Franseria acanthicarpa</i>	bur ragweed	AnnF	Wide	
Compositae (Asteraceae)	<i>Ambrosia artemisiifolia</i>	<i>A. artemisiifolia</i> var. <i>elatior</i>	common ragweed	AnnF	Wide	
Compositae (Asteraceae)	<i>Antennaria pulcherrima</i>	<i>A. pulcherrima</i> ssp. <i>pulcherrima</i>	showy pussytoes	PerF	Sparse	

Appendix B. Potential (unconfirmed) taxa of Bryce Canyon National Park, cont.

Family	Species name	Synonyms/Taxonomic notes	Common name	Life form	Range	Comments
Compositae (Asteraceae)	<i>Antennaria umbrinella</i>		mountain pussytoes	Perf	Wide	
Compositae (Asteraceae)	<i>Arnica mollis</i>	Includes <i>A. ovata</i>	hairy arnica	Perf	Wide	
Compositae (Asteraceae)	<i>Arnica parryi</i>	<i>A. parryi</i> var. <i>parryi</i>	rayless arnica	Perf	Wide	
Compositae (Asteraceae)	<i>Artemisia biennis</i>	<i>A. biennis</i> var. <i>biennis</i>	biennial wormwood	Perf	Wide	
Compositae (Asteraceae)	<i>Artemisia bigelovii</i>		Bigelow's sagebrush	Shrub	Wide	
Compositae (Asteraceae)	<i>Artemisia cana</i> var. <i>viscidula</i>	<i>Seriphidium canum</i> ssp. <i>viscidulum</i>	silver sagebrush	Shrub	Wide	
Compositae (Asteraceae)	<i>Artemisia filifolia</i>	<i>Oligosporus filifolius</i>	sand sagebrush	Shrub	Wide	
Compositae (Asteraceae)	<i>Artemisia ludoviciana</i> var. <i>ludoviciana</i>		Louisiana wormwood	Perf	Wide	
Compositae (Asteraceae)	<i>Artemisia ludoviciana</i> var. <i>mexicana</i>		Louisiana wormwood	Perf	Wide	
Compositae (Asteraceae)	<i>Artemisia spinescens</i>	<i>Picrothamnus desertorum</i>	budsage	Shrub	Wide	
Compositae (Asteraceae)	<i>Artemisia tridentata</i> var. <i>vaseyana</i>	Includes <i>A. tridentata</i> var. <i>pauciflora</i> , <i>Seriphidium vaseyanum</i>	mountain big sagebrush	Shrub	Wide	
Compositae (Asteraceae)	<i>Aster brachyactis</i>	<i>Symphotrichum ciliatum</i> , <i>Brachyactis ciliata</i> ssp. <i>angusta</i>	rayless alkali aster	AnnF	Wide	
Compositae (Asteraceae)	<i>Aster foliaceus</i> var. <i>apricus</i>	<i>Symphotrichum foliaceum</i> var. <i>apricum</i>	spruce aster	Perf	Sparse	
Compositae (Asteraceae)	<i>Aster welshii</i>	<i>Symphotrichum welshii</i>	Welsh's aster	Perf	LocEn	Type locality is Zion Canyon, Zion NP, Washington Co., UT (Welsh & Hays 24379 BRY).
Compositae (Asteraceae)	<i>Bahia dissecta</i>	<i>Amariopsis dissecta</i>	cutleaf	Perf	Wide	
Compositae (Asteraceae)	<i>Bidens cernua</i>		nodding bur-marigold	Perf	Wide	

Family	Species name	Synonyms/Taxonomic notes	Common name	Life form	Range	Comments
Compositae (Asteraceae)	<i>Brickellia atractyloides</i>	<i>B. atractyloides</i> var. <i>atractyloides</i>	spiny brickellbush	Shrub	Wide	
Compositae (Asteraceae)	<i>Brickellia californica</i>		California brickellbush	Shrub	Wide	
Compositae (Asteraceae)	<i>Brickellia grandiflora</i>		tassel-flower brickellbush	PerF	Wide	
Compositae (Asteraceae)	<i>Brickellia longifolia</i>	<i>B. longifolia</i> var. <i>longifolia</i>	longleaf brickellbush	Shrub	Wide	
Compositae (Asteraceae)	<i>Centaurea virgata</i> var. <i>squarrosa</i>	<i>C. triumfettii</i>	squarrose knapweed	PerF	Intro	Utah state noxious weed. Native to Eurasia
Compositae (Asteraceae)	<i>Chamaechaenactis scaposa</i>	<i>C. scaposa</i> var. <i>parva</i>	Eastwood-plant	PerF	Wide	
Compositae (Asteraceae)	<i>Chrysothamnus Greenei</i>		Greene's rabbitbrush	Shrub	Wide	
Compositae (Asteraceae)	<i>Chrysothamnus nauseosus</i> var. <i>juncea</i>	<i>Ericameria nauseosa</i> var. <i>juncea</i>	rush rabbitbrush	Shrub	RegEn	
Compositae (Asteraceae)	<i>Chrysothamnus nauseosus</i> var. <i>leiospermus</i>	<i>Ericameria nauseosa</i> var. <i>leiosperma</i>	smoothseed rabbitbrush	Shrub	RegEn	Type locality is St. George, Washington Co., UT (Palmer s.n. NY)
Compositae (Asteraceae)	<i>Chrysothamnus parryi</i> var. <i>howardii</i>	<i>C. parryi</i> var. <i>attenuatus</i> , <i>Ericameria parryi</i> var. <i>howardii</i>	longbract rabbitbrush	Shrub	Wide	
Compositae (Asteraceae)	<i>Chrysothamnus viscidiflorus</i> var. <i>puberulus</i>		puberulent rabbitbrush	Shrub	Wide	
Compositae (Asteraceae)	<i>Cirsium calcareum</i> var. <i>bipinnatum</i>	Var. not recognized by Cronquist (1994), <i>C. arizonicum</i> var. <i>bipinnatum</i>	wingless thistle	PerF	RegEn	
Compositae (Asteraceae)	<i>Cirsium clavatum</i> var. <i>clavatum</i>		Fish Lake thistle	PerF	RegEn	Type locality is Fish Lake, Sevier Co., UT (Jones 5715 NY)
Compositae (Asteraceae)	<i>Cirsium scariosum</i> var. <i>thorneae</i>		Thorne's thistle	PerF	LocEn	Type locality is Otter Creek, Grass Valley, Piute Co., UT (Welsh 14369 BRY).
Compositae (Asteraceae)	<i>Crepis acuminata</i>	<i>Psilochenia acuminata</i>	mountain hawksbeard	PerF	Wide	
Compositae (Asteraceae)	<i>Crepis atribarba</i>	<i>Psilochenia atribarba</i>	slender hawksbeard	PerF	Wide	

Appendix B. Potential (unconfirmed) taxa of Bryce Canyon National Park, cont.

Family	Species name	Synonyms/Taxonomic notes	Common name	Life form	Range	Comments
Compositae (Asteraceae)	<i>Erigeron argentatus</i>		silver daisy	PerF	Wide	
Compositae (Asteraceae)	<i>Erigeron eximius</i>	<i>E. superbus</i> , included in <i>E. formosissimus</i> by some authors	splendid daisy	PerF	Wide	
Compositae (Asteraceae)	<i>Erigeron formosissimus</i>		beautiful daisy	PerF	Wide	
Compositae (Asteraceae)	<i>Erigeron leiomerus</i>		smooth daisy	PerF	Wide	
Compositae (Asteraceae)	<i>Erigeron nauseosus</i>		Marysvale daisy	PerF	RegEn	Type locality is Marysvale, Piute Co., UT (Jones 5386 POM)
Compositae (Asteraceae)	<i>Erigeron sionis</i>	<i>E. proselyticus</i> , <i>E. sionis</i> var. <i>sionis</i> , <i>E. flagellaris</i> var. <i>trilobatus</i>	Zion daisy	PerF	LocEn	Type locality is Zion NP, Washington Co., UT (Pilsbry s.n. PH). USFWS: former C2 candidate
Compositae (Asteraceae)	<i>Erigeron utahensis</i> var. <i>utahensis</i>		Utah daisy	PerF	RegEn	Type locality is Kanab, Kane Co., UT (Thompson s.n. GH)
Compositae (Asteraceae)	<i>Eupatorium herbaceum</i>	<i>Ageratina herbacea</i>	white thoroughwort	PerF	Wide	
Compositae (Asteraceae)	<i>Gaillardia parryi</i>		Parry's blanketflower	PerF	RegEn	Type locality is "Southern Utah" (Parry 120 GH)
Compositae (Asteraceae)	<i>Gnaphalium palustre</i>		lowland cudweed	AnnF	Wide	
Compositae (Asteraceae)	<i>Haplopappus clementis</i>	<i>Pyrrocoma clementis</i> var. <i>clementis</i>	Clement's goldenweed	PerF	Wide	
Compositae (Asteraceae)	<i>Haplopappus lanceolatus</i>	<i>Pyrrocoma lanceolata</i>	meadow goldenweed	PerF	Wide	
Compositae (Asteraceae)	<i>Helenium hoopesii</i>	<i>Hymenoxys hoopesii</i> , <i>Dugaldia hoopesii</i>	orange sneezeweed	PerF	Wide	
Compositae (Asteraceae)	<i>Helianthella microcephala</i>		purpldisk sunflower	PerF	RegEn	Type locality is Abajo Mountains, San Juan Co., UT (Newberry s.n. GH)

Appendix B. Potential (unconfirmed) taxa of Bryce Canyon National Park, cont.

Family	Species name	Synonyms/Taxonomic notes	Common name	Life form	Range	Comments
Compositae (Asteraceae)	<i>Helianthella quinquenervis</i>		five-nerve sunflower	PerF	Wide	
Compositae (Asteraceae)	<i>Hymenoxys acaulis</i> var. <i>caespitosa</i>	<i>H. acaulis</i> var. <i>lanata</i> , <i>Tetranneuris acaulis</i> var. <i>caespitosa</i> , <i>T. brevifolia</i>	lanate hymenoxys	PerF	Wide	
Compositae (Asteraceae)	<i>Hymenoxys acaulis</i> var. <i>nana</i>	<i>H. depressa</i> , <i>Tetranneuris acaulis</i> var. <i>nana</i>	low hymenoxys	PerF	LocEn	Type locality is E of the Muddy River, San Rafael Reef, Emery Co., UT (Atwood & Goodrich 8652 BRY). USFWS: former C2 candidate
Compositae (Asteraceae)	<i>Hymenoxys cooperi</i>	<i>Actinella cooperi</i>	Cooper's hymenoxys	PerF	Wide	
Compositae (Asteraceae)	<i>Iva xanthifolia</i>	<i>Cyclachaena xanthifolia</i>	marsh-elder	AnnF	Wide	
Compositae (Asteraceae)	<i>Machaeranthera commixta</i>	<i>M. bigelovii</i> var. <i>commixta</i> , <i>Dieteria bigelovii</i> var. <i>commixta</i>	Bigelow's aster	PerF	RegEn	Type locality is Bromide Pass, Henry Mountains, Garfield Co., UT (Jones 5695y US)
Compositae (Asteraceae)	<i>Senecio canus</i>	<i>Packera cana</i>	woolly groundsel	PerF	Wide	
Compositae (Asteraceae)	<i>Senecio douglasii</i> var. <i>longilobus</i>	<i>S. longilobus</i> , <i>S. flaccidus</i> var. <i>flaccidus</i> , <i>S. flaccidus</i> var. <i>douglasii</i>	Douglas' groundsel	PerF	Wide	
Compositae (Asteraceae)	<i>Senecio eremophilus</i> var. <i>kingii</i>		cut-leaved groundsel	PerF	Wide	
Compositae (Asteraceae)	<i>Senecio integerrimus</i> var. <i>exaltatus</i>		western groundsel	PerF	Wide	



Appendix B. Potential (unconfirmed) taxa of Bryce Canyon National Park, cont.

Family	Species name	Synonyms/Taxonomic notes	Common name	Life form	Range	Comments
Compositae (Asteraceae)	<i>Senecio malmstenii</i>		Podunk groundsel	PerF	LocEn	Type locality is "Little Podunk Creek", Kane Co., UT (Malmsten 131 US) believed by Madsen (2001) to be just outside the SW corner of Bryce Canyon NP. USFS: Region 4 Sensitive, USFWS: former C2 candidate.
Compositae (Asteraceae)	<i>Senecio neomexicanus</i> var. <i>mutabilis</i>	<i>Packera neomexicana</i> var. <i>mutabilis</i>	New Mexico groundsel	PerF	Wide	
Compositae (Asteraceae)	<i>Senecio pauperculus</i>	<i>Packera paupercula</i>	balsam groundsel	PerF	Wide	
Compositae (Asteraceae)	<i>Senecio streptanthifolius</i> var. <i>streptanthifolius</i>	<i>Packera streptanthifolia</i> var. <i>streptanthifolia</i> . Vars. not recognized in <i>Flora of North America</i> (2006)	Rocky Mountain groundsel	PerF	Wide	
Compositae (Asteraceae)	<i>Solidago canadensis</i> var. <i>salebrosa</i>	<i>S. altissima</i> , <i>S. lepida</i> var. <i>salebrosa</i>	Canadian goldenrod	PerF	Wide	
Compositae (Asteraceae)	<i>Solidago multiradiata</i> var. <i>scopulorum</i>	Vars. not recognized in <i>Flora of North America</i> (2006).	Rocky Mountain goldenrod	PerF	Wide	
Compositae (Asteraceae)	<i>Solidago nana</i>		baby goldenrod	PerF	Wide	
Compositae (Asteraceae)	<i>Stephanomeria exigua</i>	<i>S. exigua</i> ssp. <i>exigua</i>	white-plume wire-lettuce	AnnF	Wide	
Compositae (Asteraceae)	<i>Tetradymia glabrata</i>		littleleaf horsebrush	Shrub	Wide	
Compositae (Asteraceae)	<i>Thelesperma subnudum</i> var. <i>subnudum</i>	Vars. not recognized in <i>Flora of North America</i> (2006).	scapose greenthread	PerF	Wide	Type locality is "Southern Utah" (Parry 109 GH)
Compositae (Asteraceae)	<i>Viguiera multiflora</i> var. <i>multiflora</i>	<i>Heliomeris multiflora</i> var. <i>multiflora</i>	showy goldeneye	PerF	Wide	
Compositae (Asteraceae)	<i>Wyethia arizonica</i>		Arizona mulesears	PerF	RegEn	

Appendix B. Potential (unconfirmed) taxa of Bryce Canyon National Park, cont.

Family	Species name	Synonyms/Taxonomic notes	Common name	Life form	Range	Comments
Crassulaceae	<i>Sedum lanceolatum</i>	<i>Amerosedum lanceolatum</i> , includes ssp. <i>lanceolatum</i> & <i>subalpinum</i>	lance-leaved stonecrop	PerF	Wide	
Cruciferae (Brassicaceae)	<i>Arabis lemmonii</i> var. <i>lemmonii</i>	<i>Boechea lemmonii</i> var. <i>lemmonii</i> . Vars. not recognized in Holmgren et al. (2005)	soldier rockcress	PerF	Wide	
Cruciferae (Brassicaceae)	<i>Cardamine cordifolia</i> var. <i>cordifolia</i>		heartleaf bittercress	PerF	Wide	
Cruciferae (Brassicaceae)	<i>Chorispora tenella</i>		blue mustard	AnnF	Intro	Native to Asia
Cruciferae (Brassicaceae)	<i>Descurainia californica</i>		California tansy-mustard	PerF	Wide	
Cruciferae (Brassicaceae)	<i>Draba aurea</i>		golden draba	PerF	Wide	
Cruciferae (Brassicaceae)	<i>Draba cuneifolia</i> var. <i>cuneifolia</i>		wedgeleaf draba	AnnF	Wide	
Cruciferae (Brassicaceae)	<i>Draba rectifracta</i>		mountain draba	AnnF	RegEn	
Cruciferae (Brassicaceae)	<i>Draba stenoloba</i> var. <i>nana</i>	<i>D. albertina</i>	slender whitlow-grass	PerF	Wide	
Cruciferae (Brassicaceae)	<i>Lepidium densiflorum</i> var. <i>ramosum</i>	Includes var. <i>macrocarpum</i>	prairie pepperwort	AnnF	Wide	
Cruciferae (Brassicaceae)	<i>Lepidium lasiocarpum</i> var. <i>lasiocarpum</i>		hairy-pod pepperwort	AnnF	Wide	
Cruciferae (Brassicaceae)	<i>Lepidium montanum</i> var. <i>jonesii</i>		Jones' pepperwort	PerF	Wide	Type locality is St. George, Washington Co., UT (Jones 1636 NY)
Cruciferae (Brassicaceae)	<i>Nasturtium officinale</i>	<i>Rorippa nasturtium-aquaticum</i>	watercress	PerF	Intro	Native to Europe
Cruciferae (Brassicaceae)	<i>Physaria acutifolia</i> var. <i>acutifolia</i>	<i>P. australis</i>	sharp-leaf twinpod	PerF	Wide	
Cruciferae (Brassicaceae)	<i>Physaria ludoviciana</i>	<i>Lesquerella ludoviciana</i>	silver bladderpod	PerF	Wide	

Appendix B. Potential (unconfirmed) taxa of Bryce Canyon National Park, cont.

Family	Species name	Synonyms/Taxonomic notes	Common name	Life form	Range	Comments
Cruciferae (Brassicaceae)	<i>Physaria wardii</i>	<i>Lesquerella wardii</i> , included in <i>P. kingii</i> var. <i>parvifolia</i> by Holmgren et al. (2005)	Ward's bladderpod	PerF	RegEn	Type locality is Aquarius Plateau, Garfield Co., UT (Ward 589 GH)
Cruciferae (Brassicaceae)	<i>Rorippa curvipes</i> var. <i>alpina</i>	<i>R. alpina</i>	alpine yellowcress	PerF	Wide	
Cruciferae (Brassicaceae)	<i>Rorippa curvipes</i> var. <i>curvipes</i>		blunt-leaf yellowcress	PerF	Wide	
Cruciferae (Brassicaceae)	<i>Rorippa tenerrima</i>		low yellowcress	AnnF	Wide	
Cruciferae (Brassicaceae)	<i>Sisymbrium altissimum</i>		tumble mustard	AnnF	Intro	Native to Europe
Cruciferae (Brassicaceae)	<i>Sisymbrium loeselii</i>		false London rocket	AnnF	Intro	Native to Eurasia
Cruciferae (Brassicaceae)	<i>Thelypodium integrifolium</i> var. <i>integrifolium</i>	<i>T. integrifolium</i>	entire-leaf thelypody	PerF	Wide	
Cyperaceae	<i>Carex aquatilis</i>	<i>C. aquatilis</i> var. <i>aquatilis</i>	water sedge	PerG	Wide	
Cyperaceae	<i>Carex bella</i>		beautiful sedge	PerG	Wide	
Cyperaceae	<i>Carex dioica</i>	<i>C. gynocrates</i> , <i>C. dioica</i> ssp. <i>gynocrates</i>	northern bog sedge	PerG	Wide	
Cyperaceae	<i>Carex disperma</i>		soft-leaved sedge	PerG	Wide	
Cyperaceae	<i>Carex ebenea</i>		ebony sedge	PerG	Wide	
Cyperaceae	<i>Carex egglestonii</i>		Eggleston's sedge	PerG	RegEn	
Cyperaceae	<i>Carex haydeniana</i>		Hayden's sedge	PerG	Wide	
Cyperaceae	<i>Carex obtusata</i>		blunt sedge	PerG	Wide	
Cyperaceae	<i>Carex occidentalis</i>		western sedge	PerG	Wide	
Cyperaceae	<i>Carex petasata</i>		Liddon sedge	PerG	Wide	
Cyperaceae	<i>Carex simulata</i>		analogue sedge	PerG	Wide	
Cyperaceae	<i>Eleocharis parishii</i>		Parish's spikerush	PerG	Wide	
Cyperaceae	<i>Scirpus acutus</i>	<i>Schoenoplectus acutus</i> var. <i>occidentalis</i> , <i>Schoenoplectus lacustris</i> ssp. <i>acutus</i> , <i>Schoenoplectus acutus</i> var. <i>acutus</i>	hardstem bulrush	PerG	Wide	

Appendix B. Potential (unconfirmed) taxa of Bryce Canyon National Park, cont.

Family	Species name	Synonyms/Taxonomic notes	Common name	Life form	Range	Comments
Cyperaceae	<i>Scirpus maritimus</i>	<i>Scirpus maritimus</i> var. <i>paludosus</i> , <i>Schoenoplectus maritimus</i> , <i>Bolboschoenus maritimus</i> var. <i>paludosus</i>	alkali bulrush	PerG	Wide	
Elaeagnaceae	<i>Elaeagnus commutata</i>		silverberry	Shrub	Periph	
Ephedraceae	<i>Ephedra torreyana</i>		Torrey's ephedra	Shrub	Wide	
Gramineae (Poaceae)	<i>Agrostis exarata</i>		spike bentgrass	PerG	Wide	
Gramineae (Poaceae)	<i>Agrostis scabra</i>	<i>A. hiemalis</i> , <i>A. geminata</i>	ticklegass	PerG	Wide	
Gramineae (Poaceae)	<i>Alopecurus aequalis</i>	<i>A. aequalis</i> var. <i>aequalis</i>	shortawn foxtail	PerG	Wide	
Gramineae (Poaceae)	<i>Catabrosa aquatica</i>		brookgrass	PerG	Wide	
Gramineae (Poaceae)	<i>Danthonia intermedia</i>		timber oatgrass	PerG	Wide	
Gramineae (Poaceae)	<i>Elymus elongatus</i>	<i>E. elongatus</i> var. <i>ponticus</i> , <i>Agropyron elongatum</i> , <i>Thinopyrum ponticum</i>	tall wheatgrass	PerG	Intro	Native to Eurasia
Gramineae (Poaceae)	<i>Festuca dasyclada</i>	<i>Argillochloa dasyclada</i>	Utah fescue	PerG	RegEn	Type locality is "central Utah", Emery Co?, UT (Parry 93 US). USFWS: 3C
Gramineae (Poaceae)	<i>Festuca thurberi</i>		Thurber's fescue	PerG	Wide	
Gramineae (Poaceae)	<i>Lolium perenne</i>		perennial ryegrass	PerG	Intro	Native to Eurasia and Africa
Gramineae (Poaceae)	<i>Phalaris arundinacea</i>	<i>Phalaroides arundinacea</i>	reed canary grass	PerG	Wide	
Gramineae (Poaceae)	<i>Poa annua</i>		annual bluegrass	AnnG	Intro	Native to Eurasia and W North America, but introduced in Utah.
Gramineae (Poaceae)	<i>Poa leptocoma</i>		bog bluegrass	PerG	Wide	
Gramineae (Poaceae)	<i>Puccinellia distans</i>		weeping alkaligrass	PerG	Intro	Native to Eurasia
Gramineae (Poaceae)	<i>Trisetum spicatum</i>	Includes ssp. <i>alaskanum</i> & <i>congozii</i> , <i>T. montanum</i>	spike trisetum	PerG	Wide	
Haloragaceae	<i>Myriophyllum spicatum</i>	<i>M. exalbenscens</i> , <i>M. spicatum</i> var. <i>exalbenscens</i>	European milfoil	PerF	Intro	Native to Europe.
Hydrophyllaceae	<i>Phacelia alba</i>	<i>P. neomexicana</i> var. <i>alba</i>	white scorpion-weed	AnnF	Wide	
Hydrophyllaceae	<i>Phacelia hastata</i>	Includes vars. <i>hastata</i> , <i>leucophylla</i> , & <i>alpina</i>	lanceleaf phacelia	PerF	Wide	

Appendix B. Potential (unconfirmed) taxa of Bryce Canyon National Park, cont.

Family	Species name	Synonyms/Taxonomic notes	Common name	Life form	Range	Comments
Hydrophyllaceae	<i>Phacelia heterophylla</i>	Includes ssp. <i>heterophylla</i> & var. <i>virgata</i>	wand phacelia	PerF	Wide	
Juncaceae	<i>Juncus ensifolius</i> var. <i>montanus</i>	<i>J. saximontanus</i> , includes <i>J. tracyi</i> , <i>J. xiphoides</i>	mountain rush	PerG	Wide	
Juncaceae	<i>Juncus mertensianus</i>		Mertens' rush	PerG	Wide	
Juncaceae	<i>Juncus nevadensis</i>	Includes vars. <i>badius</i> & <i>nevadensis</i>	Nevada rush	PerG	Wide	
Juncaceae	<i>Juncus nodosus</i>		knotted rush	PerG	Wide	
Labiatae (Lamiaceae)	<i>Agastache urticifolia</i>		nettle-leaf horsemint	PerF	Wide	
Labiatae (Lamiaceae)	<i>Stachys palustris</i> var. <i>pilosa</i>	<i>S. pilosa</i> var. <i>pilosa</i>	hairy hedge-nettle	PerF	Wide	
Leguminosae (Fabaceae)	<i>Astragalus cibarius</i>		browse milkvetch	PerF	Wide	
Leguminosae (Fabaceae)	<i>Astragalus cicer</i>		chickpea milkvetch	PerF	Intro	Native to Europe
Leguminosae (Fabaceae)	<i>Astragalus lentiginosus</i> var. <i>palans</i>		straggling milkvetch	PerF	RegEn	Type locality is Montezuma Canyon, San Juan Co., UT (Eastwood s.n. POM)
Leguminosae (Fabaceae)	<i>Astragalus limnocharis</i> var. <i>tabulaeus</i>	Included in <i>A. limnocharis</i> var. <i>montii</i> by Barneby (1989)	Table Cliff milkvetch	PerF	LocEn	Type locality is 6 miles E of Widtsoe Junction, Garfield Co., UT (Welsh 20666 BRY). USFS: Region 4 Sensitive, USFWS: former C2 candidate
Leguminosae (Fabaceae)	<i>Astragalus subcinereus</i> var. <i>silerianus</i>	Vars. not recognized by Barneby (1989)	Siler's milkvetch	PerF	RegEn	Type locality is Sink Valley (near Alton), Kane Co., UT (Jones s.n. POM)
Leguminosae (Fabaceae)	<i>Astragalus welshii</i>	Included in <i>A. loanus</i> by some authors	Welsh's milkvetch	PerF	LocEn	Type locality is W of Loa Pass, 0.8 mi E of Piute Co line, Wayne Co., UT (Welsh, Isely, & Moore 6473 BRY)
Leguminosae (Fabaceae)	<i>Dalea searlsiae</i>		Searls' prairie-clover	PerF	Wide	

Appendix B. Potential (unconfirmed) taxa of Bryce Canyon National Park, cont.

Family	Species name	Synonyms/Taxonomic notes	Common name	Life form	Range	Comments
Leguminosae (Fabaceae)	<i>Glycyrrhiza lepidota</i>	<i>G. lepidota</i> var. <i>lepidota</i>	Nuttall's licorice	PerF	Wide	
Leguminosae (Fabaceae)	<i>Lathyrus lanszwertii</i> var. <i>laetivirens</i>	<i>L. laetivirens</i>	largeflower sweetpea	PerF	RegEn	
Leguminosae (Fabaceae)	<i>Lotus plebeius</i>	<i>L. longibracteatus</i>	longbracted trefoil	PerF	Wide	
Leguminosae (Fabaceae)	<i>Lupinus caudatus</i> var. <i>utahensis</i>	<i>L. argenteus</i> var. <i>utahensis</i>	Utah lupine	PerF	Wide	
Leguminosae (Fabaceae)	<i>Lupinus lepidus</i> var. <i>utahensis</i>	<i>L. lepidus</i> var. <i>caespitosus</i> , <i>L. caespitosus</i> var. <i>utahensis</i>	stemless lupine	PerF	Wide	
Leguminosae (Fabaceae)	<i>Lupinus polyphyllus</i> var. <i>humicola</i>	<i>L. wyethii</i>	Wyeth's lupine	PerF	Wide	
Leguminosae (Fabaceae)	<i>Sophora stenophylla</i>		silvery sophora	PerF	Wide	
Leguminosae (Fabaceae)	<i>Trifolium fragiferum</i>		strawberry clover	PerF	Intro	Native to Europe
Leguminosae (Fabaceae)	<i>Trifolium kingii</i> var. <i>kingii</i>		King's clover	PerF	RegEn	
Leguminosae (Fabaceae)	<i>Trifolium longipes</i> var. <i>rusbyi</i>	<i>T. longipes</i> var. <i>brachypus</i>	Rusby's clover	PerF	Wide	
Leguminosae (Fabaceae)	<i>Trifolium pratense</i>		red clover	PerF	Intro	Native to Europe
Liliaceae (Alliaceae)	<i>Allium brevistylum</i>		short-style onion	PerF	Wide	
Liliaceae (Alliaceae)	<i>Allium cernuum</i>	Includes vars. <i>cernuum</i> & <i>obtusum</i>	nodding onion	PerF	Wide	
Liliaceae (Alliaceae)	<i>Allium geyeri</i> var. <i>geyeri</i>		Geyer's onion	PerF	Wide	
Liliaceae (Melanthiaceae)	<i>Zigadenus paniculatus</i>	<i>Toxicoscordion paniculatum</i>	foothills death camas	PerF	Wide	
Linaceae	<i>Linum puberulum</i>	<i>Mesynium puberulum</i>	downy flax	AnnF	Wide	
Loasaceae	<i>Mentzelia rusbyi</i>	<i>Nuttallia rusbyi</i>	Rusby's stickleaf	PerF	Periph	
Malvaceae	<i>Sidalcea candida</i>	Includes vars. <i>candida</i> & <i>glabrata</i>	white checker-mallow	PerF	Wide	
Malvaceae	<i>Sidalcea neomexicana</i>	Includes vars. <i>crenulata</i> & <i>neomexicana</i>	New Mexico checker-mallow	PerF	Wide	
Onagraceae	<i>Camissonia breviflora</i>	<i>Oenothera breviflora</i>	dandelion camissonia	PerF	Wide	
Onagraceae	<i>Epilobium brachycarpum</i>	<i>E. paniculatum</i> var. <i>paniculatum</i>	autumn willow-herb	AnnF	Wide	

Appendix B. Potential (unconfirmed) taxa of Bryce Canyon National Park, cont.

Family	Species name	Synonyms/Taxonomic notes	Common name	Life form	Range	Comments
Onagraceae	<i>Epilobium glandulosum</i>	<i>E. ciliatum</i> var. <i>glandulosum</i>	glandular willow-herb	PerF	Wide	
Onagraceae	<i>Epilobium hornemannii</i> var. <i>hornemannii</i>		Hornemann's willow-herb	PerF	Wide	
Onagraceae	<i>Epilobium saximontanum</i>		Rocky Mountain willow-herb	PerF	Wide	
Onagraceae	<i>Gayophytum decipiens</i>		deceptive groundsmoke	AnnF	Wide	
Onagraceae	<i>Gayophytum diffusum</i> var. <i>strictipes</i>	<i>G. diffusum</i> ssp. <i>parviflorum</i> , <i>G. lasiospermum</i>	diffuse groundsmoke	AnnF	Wide	
Onagraceae	<i>Oenothera caespitosa</i> var. <i>navajoensis</i>		Paria evening-primrose	PerF	RegEn	Type locality is Paria River, Kane Co., UT (Cronquist 10202 MO)
Onagraceae	<i>Oenothera elata</i>	<i>O. elata</i> ssp. <i>hirsutissima</i>	western evening-primrose	PerF	Wide	
Ophioglossaceae	<i>Botrychium simplex</i>	Includes vars. <i>compositum</i> & <i>tenebrosum</i>	little grapefern	Fern	Sparse	
Orchidaceae	<i>Corallorhiza trifida</i>		early coralroot	PerF	Wide	
Orchidaceae	<i>Habenaria hyperborea</i>	<i>Limnorchis hyperborea</i> , includes <i>Platanthera aquilonis</i> , <i>P. huronensis</i>	northern bog orchid	PerF	Wide	
Orobanchaceae	<i>Orobanche corymbosa</i>		flat-topped broomrape	PerF	Wide	
Pinaceae	<i>Abies lasiocarpa</i>	<i>A. bifolia</i>	subalpine fir	Tree	Wide	
Pinaceae	<i>Picea engelmannii</i>		Engelmann spruce	Tree	Wide	
Plantaginaceae	<i>Plantago tweedyi</i>		Tweedy's plantain	PerF	Wide	
Polemoniaceae	<i>Collomia linearis</i>		small collomia	AnnF	Wide	
Polemoniaceae	<i>Gilia inconspicua</i>	Includes vars. <i>inconspicua</i> & <i>sinuata</i> , <i>G. ophthalmoides</i> , <i>G. sinuata</i> , <i>G. clokeyi</i>	shy gilia	AnnF	Wide	
Polemoniaceae	<i>Ipomopsis aggregata</i> var. <i>macrospilon</i>	<i>I. tenuituba</i> , <i>Gilia aggregata</i> var. <i>macrospilon</i>	scarlet gilia	PerF	Wide	
Polemoniaceae	<i>Leptodactylon watsonii</i>	<i>Linanthus watsonii</i>	Watson's prickly-phlox	PerF	Wide	
Polemoniaceae	<i>Microsteris gracilis</i> var. <i>humilior</i>	<i>Phlox gracilis</i> ssp. <i>humilis</i>	slender phlox	AnnF	Wide	
Polemoniaceae	<i>Navarretia intertexta</i>	<i>N. intertexta</i> var. <i>propinqua</i>	Great Basin navarretia	AnnF	Sparse	
Polemoniaceae	<i>Polemonium pulcherrimum</i> var. <i>dellcatum</i>	<i>P. pulcherrimum</i> var. <i>pulcherrimum</i>	pretty Jacob's-ladder	PerF	Wide	
Polygonaceae	<i>Eriogonum hookeri</i>		Hooker's wild buckwheat	AnnF	Wide	

Appendix B. Potential (unconfirmed) taxa of Bryce Canyon National Park, cont.

Family	Species name	Synonyms/Taxonomic notes	Common name	Life form	Range	Comments
Polygonaceae	<i>Eriogonum umbellatum</i> var. <i>majus</i>	<i>E. umbellatum</i> var. <i>subalpinum</i> , <i>E. subalpinum</i> , includes vars. <i>dichrocephalum</i> & <i>desereticum</i>	cream wild buckwheat	PerF	Wide	
Polygonaceae	<i>Eriogonum umbellatum</i> var. <i>umbellatum</i>	Includes var. <i>aureum</i> from Flora of North America (2005)	sulfur wild buckwheat	PerF	Wide	
Polygonaceae	<i>Polygonum amphibium</i>	<i>Polygonum amphibium</i> var. <i>emersum</i> , <i>Polygonum coccineum</i> , <i>Persicaria coccinea</i> , <i>Persicaria amphibia</i>	water smartweed	PerF	Wide	
Polygonaceae	<i>Polygonum douglasii</i> var. <i>douglasii</i>	<i>P. douglasii</i>	Douglas' knotweed	AnnF	Wide	
Polygonaceae	<i>Polygonum kelloggii</i>	<i>P. polygaloides</i> ssp. <i>kelloggii</i> , <i>P. kelloggii</i> var. <i>kelloggii</i>	Kellogg's knotweed	AnnF	Wide	
Polygonaceae	<i>Rumex occidentalis</i>	<i>R. aquaticus</i> var. <i>fenestratus</i> , <i>R. aquaticus</i> ssp. <i>occidentalis</i>	western dock	PerF	Wide	
Polygonaceae	<i>Rumex paucifolius</i>	<i>Acetosella paucifolia</i>	alpine sorrel	PerF	Wide	
Polypodiaceae (Aspleniaceae, Athyriaceae)	<i>Athyrium filix-femina</i> var. <i>cyclosorum</i>	<i>A. filix-femina</i> var. <i>californicum</i>	lady fern	Fern	Wide	
Polypodiaceae (Aspleniaceae, Athyriaceae)	<i>Cystopteris fragilis</i>	Includes <i>C. utahensis</i> , <i>C. reevesiana</i> , & <i>C. tenuis</i>	brittle bladder fern	Fern	Wide	
Polypodiaceae (Aspleniaceae, Aspidiaceae)	<i>Dryopteris filix-mas</i>		male fern	Fern	Wide	
Polypodiaceae (Aspleniaceae, Woodsiaceae)	<i>Woodsia oregana</i>	<i>W. oregana</i> ssp. <i>oregana</i>	Oregon woodsia	Fern	Periph	
Polypodiaceae (Aspleniaceae, Woodsiaceae)	<i>Woodsia scopulina</i>	<i>W. scopulina</i> ssp. <i>scopulina</i>	Rocky Mountain woodsia	Fern	Wide	
Portulacaceae	<i>Lewisia pygmaea</i>	<i>Oreobroma pygmaea</i> . Some authors include <i>L. nevadensis</i> .	alpine bitter-root	PerF	Wide	
Portulacaceae	<i>Montia chamissoi</i>	<i>Crunocallis chamissoi</i>	Chamisso's candy-flower	PerF	Wide	
Portulacaceae	<i>Talinum parviflorum</i>	<i>PheMERANTHUS parviflorus</i> , <i>P. confertiflorus</i>	small-flowered fame-flower	PerF	Wide	



Appendix B. Potential (unconfirmed) taxa of Bryce Canyon National Park, cont.

Family	Species name	Synonyms/Taxonomic notes	Common name	Life form	Range	Comments
Potamogetonaceae	<i>Potamogeton filiformis</i> var. <i>occidentalis</i>	<i>Stuckenia filiformis</i> var. <i>occidentalis</i>	slenderleaf pondweed	PerF	Wide	
Potamogetonaceae	<i>Potamogeton vaginatus</i>	<i>Stuckenia vaginata</i> , <i>Coleogeton vaginatus</i>	sheathed pondweed	PerF	Periph	
Pyrolaceae (Ericaceae)	<i>Pyrola secunda</i>	<i>Orthilia secunda</i>	sidebells pyrola	PerF	Wide	
Ranunculaceae (Helleboraceae)	<i>Actaea rubra</i>	<i>A. rubra</i> ssp. <i>arguta</i>	red baneberry	PerF	Wide	
Ranunculaceae (Helleboraceae)	<i>Aquilegia elegantula</i>		elegant columbine	PerF	Wide	
Ranunculaceae (Helleboraceae)	<i>Caltha leptosepala</i>	<i>C. biflora</i> , <i>Psychrophila leptosepala</i>	white marsh-marshmarigold	PerF	Wide	
Ranunculaceae (Helleboraceae)	<i>Delphinium barbeyi</i>		subalpine larkspur	PerF	RegEn	
Ranunculaceae	<i>Ranunculus alismifolius</i> var. <i>montanus</i>		plantain buttercup	PerF	Wide	
Ranunculaceae	<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>R. trichophyllus</i> var. <i>trichophyllus</i> , <i>Batrachium longirostre</i> , <i>B. circinatum</i> ssp. <i>subrigidum</i> , <i>B. trichophyllum</i>	thread water-buttercup	PerF	Wide	
Ranunculaceae	<i>Ranunculus cardiophyllus</i>		heart-leaf buttercup	PerF	Wide	
Ranunculaceae	<i>Ranunculus glaberrimus</i> var. <i>ellipticus</i>	Includes <i>R. oreogenes</i>	sagebrush buttercup	PerF	Wide	
Ranunculaceae	<i>Ranunculus macounii</i>		Macoun's buttercup	PerF	Wide	
Ranunculaceae	<i>Ranunculus testiculatus</i>	<i>Ceratocephala orthoceras</i> , <i>C. testiculata</i>	bur buttercup	AnnF	Intro	Native to Eurasia
Ranunculaceae (Thalictraceae)	<i>Thalictrum sparsiflorum</i>	<i>T. sparsiflorum</i> var. <i>saximontanum</i>	few-flower meadow-rue	PerF	Wide	
Rosaceae	<i>Amelanchier alnifolia</i>		Saskatoon serviceberry	Shrub	Wide	
Rosaceae	<i>Geum macrophyllum</i> var. <i>perincisum</i>		large-leaved avens	PerF	Wide	
Rosaceae	<i>Petrophyton caespitosum</i>	<i>Spiraea caespitosa</i>	rock spiraea	PerF	Wide	
Rosaceae	<i>Potentilla arguta</i> var. <i>convallaria</i>	<i>Drymocalis arguta</i> , includes ssp. <i>arguta</i>	tall cinquefoil	PerF	Wide	

Appendix B. Potential (unconfirmed) taxa of Bryce Canyon National Park, cont.

Family	Species name	Synonyms/Taxonomic notes	Common name	Life form	Range	Comments
Rosaceae	<i>Potentilla biennis</i>		biennial cinquefoil	AnnF	Wide	
Rosaceae	<i>Potentilla diversifolia</i> var. <i>diversifolia</i>		wedgeleaf cinquefoil	PerF	Wide	
Rosaceae	<i>Potentilla glandulosa</i> var. <i>pseudorupestris</i>	<i>Drymocallis glandulosa</i> , includes var. <i>intermedia</i> .	sticky cinquefoil	PerF	Wide	
Rosaceae	<i>Potentilla gracilis</i> var. <i>brunnescens</i>	Included in <i>P. gracilis</i> var. <i>elmeri</i> by some authors	glandular cinquefoil	PerF	Wide	
Rosaceae	<i>Potentilla norvegica</i>	<i>P.norvegica</i> ssp. <i>monspeliensis</i>	Norwegian cinquefoil	AnnF	Intro	Native to Europe and possibly E North America
Rosaceae	<i>Potentilla ovina</i> var. <i>ovina</i>		sheep cinquefoil	PerF	Wide	
Rubiaceae	<i>Galium aparine</i> var. <i>echinospermon</i>	<i>G. spurium</i>	cleavers	AnnF	Wide	
Rubiaceae	<i>Galium multiflorum</i> var. <i>multiflorum</i>		shrubby bedstraw	PerF	Wide	
Rubiaceae	<i>Galium triflorum</i>		sweet-scented bedstraw	PerF	Wide	
Salicaceae	<i>Salix boothii</i>		Booth's willow	Shrub	Wide	
Salicaceae	<i>Salix planifolia</i>	<i>S. phyllicifolia</i> , includes vars. <i>monica</i> & <i>planifolia</i>	planeleaf willow	Shrub	Wide	
Salicaceae	<i>Salix scouleriana</i>		Scouler's willow	Shrub	Wide	
Saxifragaceae	<i>Heuchera rubescens</i> var. <i>versicolor</i>	<i>H. versicolor</i>	hairy alumroot	PerF	Wide	
Saxifragaceae (Grossulariaceae)	<i>Ribes leptanthum</i>		trumpet gooseberry	Shrub	Wide	
Saxifragaceae (Grossulariaceae)	<i>Ribes montigenum</i>		alpine prickly currant	Shrub	Wide	
Saxifragaceae (Grossulariaceae)	<i>Ribes viscosissimum</i> var. <i>viscosissimum</i>		sticky currant	Shrub	Wide	
Saxifragaceae	<i>Saxifraga odontoloma</i>	<i>S. arguta</i> , <i>Micranthes odontoloma</i>	brook saxifrage	PerF	Wide	
Saxifragaceae	<i>Saxifraga rivularis</i>	<i>S. debilis</i> , <i>S. rivularis</i> var. <i>debilis</i> , <i>S. hyperborea</i> ssp. <i>debilis</i>	pygmy saxifrage	PerF	Wide	
Scrophulariaceae	<i>Castilleja exilis</i>	<i>C. minor</i> ssp. <i>minor</i>	annual paintbrush	AnnF	Wide	
Scrophulariaceae	<i>Castilleja miniata</i>		scarlet paintbrush	PerF	Wide	

Appendix B. Potential (unconfirmed) taxa of Bryce Canyon National Park, cont.

Family	Species name	Synonyms/Taxonomic notes	Common name	Life form	Range	Comments
Scrophulariaceae	<i>Castilleja scabrida</i> var. <i>scabrida</i>		Eastwood's paintbrush	PerF	RegEn	
Scrophulariaceae	<i>Linaria vulgaris</i>		butter-and-eggs	PerF	Intro	Native to Eurasia
Scrophulariaceae	<i>Pedicularis groenlandica</i>		elephant-head	PerF	Wide	
Scrophulariaceae	<i>Penstemon barbatus</i> var. <i>barbatus</i>	<i>P. barbatus</i> var. <i>torreyi</i>	beardlip penstemon	PerF	Wide	
Scrophulariaceae	<i>Penstemon laevis</i>		smooth penstemon	PerF	RegEn	Type locality is Springdale, Washington Co., UT (Jones 5250 in part US)
Scrophulariaceae	<i>Penstemon linarioides</i> var. <i>sileri</i>		Siler's penstemon	PerF	RegEn	Type locality is Osmer, Kane Co., UT (Siler s.n. GH)
Scrophulariaceae	<i>Penstemon palmeri</i> var. <i>eglandulosus</i>		Palmer's penstemon	PerF	RegEn	Type locality is 2.5 miles N of Kanab, Kane Co., UT (Maguire, Maguire, & Piranian 12279 UTC)
Scrophulariaceae	<i>Penstemon thompsoniae</i>		Thompson's penstemon	PerF	RegEn	Type locality is near Kanab, Kane Co., UT (Thompson s.n. GH)
Scrophulariaceae	<i>Penstemon whippleanus</i>		Whipple's penstemon	PerF	Wide	
Scrophulariaceae	<i>Synthyris laciniata</i>	<i>S. pinnatifida</i> var. <i>laciniata</i>	cutleaf synthyris	PerF	RegEn	Type locality is Fish Lake Mountains, Sevier Co., UT (Ward 327 GH)
Scrophulariaceae	<i>Veronica anagallis-aquatica</i>		water speedwell	PerF	Intro	Native to Europe
Scrophulariaceae	<i>Veronica peregrina</i> var. <i>xalapensis</i>		purslane speedwell	AnnF	Wide	
Scrophulariaceae	<i>Veronica serpyllifolia</i>	<i>Veronica serpyllifolia</i> var. <i>humifusa</i> , <i>Veronica serpyllifolia</i> ssp. <i>humifusum</i>	thyme-leaved speedwell	PerF	Wide	
Scrophulariaceae	<i>Veronica wormsskoldii</i>	<i>V. nutans</i>	American alpine speedwell	PerF	Wide	
Solanaceae	<i>Datura stramonium</i>		jimson weed	AnnF	Intro	Native to tropical America
Solanaceae	<i>Nicotiana attenuata</i>		coyote tobacco	AnnF	Wide	
Sparganiaceae	<i>Sparganium eurycarpum</i>		giant burr-reed	PerF	Wide	

Appendix B. Potential (unconfirmed) taxa of Bryce Canyon National Park, cont.

Family	Species name	Synonyms/Taxonomic notes	Common name	Life form	Range	Comments
Typhaceae	<i>Typha domingensis</i>		southern cattail	PerG	Wide	
Umbelliferae (Apiaceae)	<i>Lomatium nevadense</i> var. <i>parishii</i>		Nevada lomatium	PerF	Wide	
Umbelliferae (Apiaceae)	<i>Oreoxis alpina</i>	<i>Cymopterus alpinus</i>	matted spring-parsley	PerF	Wide	
Umbelliferae (Apiaceae)	<i>Osmorhiza depauperata</i>		blunt sweet-cicely	PerF	Wide	
Urticaceae	<i>Urtica dioica</i> var. <i>occidentalis</i>	<i>U. dioica</i> ssp. <i>holosericea</i> , <i>U. gracilis</i> ssp. <i>holosericea</i>	stinging nettle	PerF	Wide	
Verbenaceae	<i>Verbena macdougallii</i>		New Mexico vervain	PerF	Periph	
Violaceae	<i>Viola canadensis</i>	<i>V. canadensis</i> var. <i>rugulosa</i> , <i>V. scopulorum</i> , <i>V. rydbergii</i>	Canadian white violet	PerF	Wide	
Violaceae	<i>Viola palustris</i>	Includes vars. <i>brevipes</i> & <i>palustris</i>	alpine marsh violet	PerF	Wide	
Zygophyllaceae	<i>Tribulus terrestris</i>		puncture vine	AnnF	Intro	Native to Eurasia

The vascular plant species listed here are known from the vicinity of Bryce Canyon National Park in Garfield and Kane counties, Utah, but have not previously been reported or confirmed for the park. Species on this list are derived from a checklist of potential species for NCPN parks prepared by Dr. N. Duane Atwood of Brigham Young University in 2001, the *Atlas of the Vascular Flora of Utah* (Albee et al. 1988), Madsen (2001), and Spence and Buchanan (1993). 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) taxa of Bryce Canyon National Park.**

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life form	Range	Park status	Comments
Berberidaceae	<i>Berberis fendleri</i>		Fendler's barberry	Shrub	RegEn	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>Mahonia fremontii</i> .
Boraginaceae	<i>Cryptantha cinerea</i> var. <i>jamesii</i>	<i>C. jamesii</i> , <i>Oreocarya suffruticosa</i>	James' cryptanth	PerF	Wide	FalsRep	Reports from BRCA herbarium are based on a misidentified specimen of <i>C. cinerea</i> var. <i>cinerea</i> .
Boraginaceae	<i>Cryptantha virginensis</i>		Virgin River cryptanth	PerF	RegEn	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>C. fulvocanescens</i> .
Cactaceae	<i>Opuntia erinacea</i> var. <i>utahensis</i>	<i>O. polyacantha</i> var. <i>hystricina</i>	Utah pricklypear	PerF	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>O. erinacea</i> var. <i>erinacea</i> .
Campanulaceae	<i>Campanula rotundifolia</i>		harebell	PerF	Periph	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>C. parryi</i> .
Caryophyllaceae (Aisinaceae)	<i>Arenaria fendleri</i> var. <i>fendleri</i>	<i>Eremogone fendleri</i>	Fendler's sandwort	PerF	Periph	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>A. fendleri</i> var. <i>glabrescens</i> .
Caryophyllaceae (Aisinaceae)	<i>Arenaria nuttallii</i>	<i>Minuartia nuttallii</i> var. <i>nuttallii</i> , <i>Minuopsis nuttallii</i>	Nuttall's sandwort	PerF	Wide	Ques?	Cited as outside range of BRCA in Spence and Buchanan 1993.
Compositae (Asteraceae)	<i>Aster integrifolius</i>	<i>Eurybia integrifolia</i>	thick-stem wood-aster	PerF	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>A. wasatchensis</i> var. <i>wasatchensis</i> .
Compositae (Asteraceae)	<i>Balsamorhiza macrophylla</i>		cutleaf balsamroot	PerF	RegEn	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>B. sagittata</i> .
Compositae (Asteraceae)	<i>Cirsium canovirens</i>	<i>C. gymosum</i> var. <i>canovirens</i>	gray-green thistle	PerF	Periph	FalsRep	Reports from BRCA are based on misidentified specimens of <i>C. undulatum</i> var. <i>undulatum</i> .
Compositae (Asteraceae)	<i>Cirsium rydbergii</i>		Rydberg's thistle	PerF	RegEn	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>C. undulatum</i> var. <i>undulatum</i> . USFWS: 3C
Compositae (Asteraceae)	<i>Erigeron caespitosus</i>		tufted fleabane	PerF	Wide	FalsRep	Report from BRCA herbarium based on a misidentified specimen of <i>E. pumilus</i> var. <i>condensatus</i> .

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

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life form	Range	Park status	Comments
Compositae (Asteraceae)	<i>Erigeron simplex</i>	Includes <i>E. grandiflorus</i>	alpine daisy	PerF	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>E. vagus</i> , not <i>E. compositus</i> as cited in Spence and Buchanan (1993).
Compositae (Asteraceae)	<i>Euthamia occidentalis</i>	<i>Solidago occidentalis</i>	western goldenrod	PerF	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>Solidago velutina</i> .
Compositae (Asteraceae)	<i>Senecio cymbalarioides</i>	<i>Packera subnuda</i> , <i>P. buekii</i>	Buek's groundsel	PerF	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>S. hartianus</i> .
Compositae (Asteraceae)	<i>Solidago missouriensis</i>	<i>S. missouriensis</i> var. <i>missouriensis</i> , includes var. <i>extraria</i>	Missouri goldenrod	PerF	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>S. velutina</i> .
Compositae (Asteraceae)	<i>Tanacetum nuttallii</i>	<i>Sphaermeria argentea</i>	silver chicken-sage	PerF	RegEn	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>Sphaermeria capitata</i> .
Cruciferae (Brassicaceae)	<i>Arabis holboellii</i> var. <i>holboellii</i>		Holboell's rockcress	PerF	Wide	Ques?	Native to Greenland, not known from Utah
Cruciferae (Brassicaceae)	<i>Arabis pendulina</i>	<i>Boechea pendulina</i> , <i>A. rabbit-ear</i> <i>rockcress oxylobula</i>	rabbit-ear rockcress	PerF	RegEn	FalsRep	Report from Buchanan and Gray-bosch (1981) based on misidentified specimens of <i>A. demissa</i> . Weish et al. (2003) do not recognize <i>A. pendulina</i> as distinct from <i>A. demissa</i> .
Cruciferae (Brassicaceae)	<i>Caulanthus cooperi</i>		Cooper's wild cabbage	AnnF	Periph	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>Streptanthus cordatus</i> .
Cruciferae (Brassicaceae)	<i>Descurainia obtusa</i>		blunt tansy mustard	PerF	Wide	FalsRep	Report from Buchanan and Graybosch (1981) probably based on misidentified specimen of <i>D. incana</i> . <i>D. obtusa</i> is native to SW US but is not known from Utah.
Cruciferae (Brassicaceae)	<i>Physaria newberryi</i>	<i>P. newberryi</i> var. <i>racemosa</i>	Newberry's twinpod	PerF	RegEn	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>P. intermedia</i> and <i>P. rubicundula</i> var. <i>rubicundula</i> .
Cruciferae (Brassicaceae)	<i>Thelypodopsis sagittata</i> var. <i>sagittata</i>	<i>Thelypodium sagittatum</i> var. <i>sagittatum</i>	arrowhead thelypodium	PerF	Wide	Ques?	Cited as outside range of BRCA in Spence and Buchanan 1993.

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

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life form	Range	Park status	Comments
Cyperaceae	<i>Carex canescens</i>	<i>C. canescens</i> var. <i>canescens</i> , <i>C. canescens</i> var. <i>subliolacea</i> , <i>C. lapponica</i>	hoary sedge	PerG	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>C. vailicola</i> .
Cyperaceae	<i>Scirpus americanus</i>	<i>Scirpus olneyi</i> , <i>Schoenoplectus americanus</i>	American bulrush	PerG	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>S. pungens</i> var. <i>longispicatus</i> .
Ericaceae	<i>Arctostaphylos pungens</i>		Mexican manzanita	Shrub	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>A. uva-ursi</i> .
Gentianaceae	<i>Gentianella amarella</i>	<i>Gentiana amarella</i> , <i>Gentianella amarella</i> ssp. <i>acuta</i> , <i>Gentianella amarella</i> var. <i>amarella</i> , <i>Gentianella acuta</i>	northern gentian	PerF	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>G. heterosepala</i> .
Gentianaceae	<i>Gentianella tenella</i>	<i>Gentiana tenella</i> , <i>Comastoma tenellum</i>	Lapland gentian	AnnF	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>G. tortuosa</i> .
Gramineae (Poaceae)	<i>Arundo donax</i>		giant reed	PerG	Intro	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>Phragmites australis</i> . Native to Eurasia
Gramineae (Poaceae)	<i>Elymus simplex</i>	<i>E. simplex</i> var. <i>simplex</i> , <i>Leymus simplex</i>	alkali wildrye	PerG	RegEn	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>E. salinus</i> .
Gramineae (Poaceae)	<i>Muhlenbergia arsenei</i>		Navajo muhly	PerG	RegEn	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>M. montana</i> .
Gramineae (Poaceae)	<i>Poa reflexa</i>		nodding bluegrass	PerG	Wide	FalsRep	Reports from BRCA herbarium based on misidentified specimen of <i>P. glauca</i> var. <i>glaucula</i> .
Iridaceae	<i>Sisyrinchium demissum</i>		blue-eyed grass	PerF	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>S. idahoense</i> .
Juncaceae	<i>Juncus filiformis</i>		thread rush	PerG	Periph	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>J. arcticus</i> .

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

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life form	Range	Park status	Comments
Labiatae (Lamiaceae)	<i>Hedeoma diffusum</i>		Flagstaff pennyroyal	PerF	LocEn	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>H. drummondii</i> . Native to Arizona and New Mexico, not known from Utah.
Leguminosae (Fabaceae)	<i>Astragalus ceramicus</i> var. <i>ceramicus</i>		painted milkvetch	PerF	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>A. convallarius</i> var. <i>convallarius</i> .
Leguminosae (Fabaceae)	<i>Astragalus miser</i> var. <i>decumbens</i>		timber milkvetch	PerF	RegEn	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>A. miser</i> var. <i>oblongifolius</i> . Native to Wyoming and Montana, not known from Utah.
Leguminosae (Fabaceae)	<i>Astragalus newberryi</i> var. <i>castoreus</i>		Beaver Dam milkvetch	PerF	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>A. argophyllus</i> var. <i>panguicensis</i> .
Leguminosae (Fabaceae)	<i>Astragalus oophorus</i>		egg milkvetch	PerF	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>A. megacarpus</i> var. <i>parryi</i> .
Leguminosae (Fabaceae)	<i>Lotus wrightii</i>		Wright's trefoil	PerF	RegEn	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>L. utahensis</i> .
Leguminosae (Fabaceae)	<i>Psoralea castorea</i>	<i>Psoralidium castoreum</i>	Beaver Dam breadroot	PerF	RegEn	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>Pediomelum pariese</i> . Native to California, Nevada, and Arizona, not known from Utah.
Leguminosae (Fabaceae)	<i>Trifolium dubium</i>		suckling clover	AnnF	Intro	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>Melilotus officinalis</i> .
Leguminosae (Fabaceae)	<i>Trifolium filiforme</i>		filiform clover	AnnF	Intro	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>Medicago lupulina</i> .
Liliaceae (Calochortaceae)	<i>Calochortus flexuosus</i>		sinuous mariposa	PerF	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>C. nuttallii</i> .



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

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life form	Range	Park status	Comments
Linaceae	<i>Linum aristatum</i>	<i>Mesynium aristatum</i>	broom-flax	AnnF	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>L. australe</i>
Loasaceae	<i>Mentzelia argillosa</i>	<i>Nuttallia argillosa</i>	Arapien stickleaf	PerF	LocEn	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>M. multiflora</i> . USFWS: former C2.
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	FalsRep	Reports from BRCA herbarium based on misidentified specimen of <i>E. halleanum</i>
Onagraceae	<i>Gayophytum humile</i>		low groundsmoke	AnnF	Periph	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>G. ramosissimum</i>
Orchidaceae	<i>Corallorhiza wisteriana</i>		Wister's coralroot	PerF	Sparse	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>C. maculata</i> .
Pinaceae	<i>Pinus aristata</i>		bristlecone pine	Tree	RegEn	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>P. longaeva</i> .
Polemoniaceae	<i>Gilia arizonica</i>	<i>Ipomopsis arizonica</i>	Arizona scarlet gilia	PerF	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>Ipomopsis aggregata</i> var. <i>maculata</i> .
Polemoniaceae	<i>Phlox condensata</i>		dwarf phlox	PerF	RegEn	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>Leptodactylon caespitosum</i> . Endemic to Colorado and New Mexico.
Polemoniaceae	<i>Phlox diffusa</i>		spreading phlox	PerF	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>Leptodactylon caespitosum</i> . Not recognized as occurring in Utah in Welsh et al. 2003.
Polemoniaceae	<i>Phlox muscoides</i>	<i>P. hoodii</i> ssp. <i>muscoides</i> , <i>P. bryoides</i>	moss phlox	PerF	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>Leptodactylon caespitosum</i> and <i>P. hoodii</i> var. <i>canescens</i> .
Polemoniaceae	<i>Phlox pulvinata</i>	<i>P. sibirica</i> ssp. <i>pulvinata</i> , <i>P. caespitosa</i>	cushion phlox	PerF	Wide	FalsRep	Reports from BRCA herbarium based on misidentified specimens of <i>Leptodactylon caespitosum</i>

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

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life form	Range	Park status	Comments
Polemoniaceae	<i>Phlox tumulosa</i>	<i>P. griseola</i> ssp. <i>tumulosa</i>	mound phlox	PerF	RegEn	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>Leptodactylon caespitosum</i> .
Polemoniaceae	<i>Polemonium viscosum</i>		sky pilot	PerF	Wide	Ques?	Cited as outside range of BRCA in Spence and Buchanan 1993.
Polygonaceae	<i>Polygonum ramosissimum</i>	<i>P. ramosissimum</i> var. <i>prolificum</i> , <i>P. ramosissimum</i> var. <i>ramosissimum</i>	bushy knotweed	AnnF	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>P. aviculare</i>
Ranunculaceae	<i>Ranunculus flammula</i> var. <i>ovalis</i>	<i>R. flammula</i> var. <i>filiformis</i> , <i>R. flammula</i> var. <i>reptans</i> , <i>R. reptans</i>	creeping buttercup	PerF	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>R. glaberrimus</i> and may be from outside the park
Rosaceae	<i>Fragaria vesca</i> var. <i>bracteata</i>		woodland strawberry	PerF	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>F. virginiana</i> .
Rosaceae	<i>Potentilla concinna</i> var. <i>proxima</i>	<i>P. proxima</i>	near cinquefoil	PerF	RegEn	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>P. anserina</i> .
Rosaceae	<i>Potentilla fissa</i>	<i>Drymocallis fissa</i>	big-flower cinquefoil	PerF	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>P. crinita</i> .
Rosaceae	<i>Potentilla gracilis</i> var. <i>pulcherrima</i>	<i>P. pulcherrima</i>	beautiful cinquefoil	PerF	Wide	FalsRep	Reports from BRCA herbarium based on misidentified specimens of <i>P. hippiana</i>
Salicaceae	<i>Populus fremontii</i> var. <i>wislizeni</i>	<i>P. deltoides</i> var. <i>wislizeni</i>	Rio Grande cottonwood	Tree	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>P. fremontii</i> var. <i>fremontii</i> .
Salicaceae	<i>Salix drummondiana</i>		Drummond's willow	Shrub	Wide	FalsRep	Reports from BRCA herbarium based on misidentified specimens of <i>S. bebbiana</i> .
Salicaceae	<i>Salix glauca</i>		gray-leaf willow	Shrub	Wide	Ques?	Reported by Northern Colorado Plateau Network (in ed.), but BRCA is well outside the known or expected range of this species.
Salicaceae	<i>Salix lucida</i> ssp. <i>caudata</i>	<i>S. lasiandra</i> var. <i>caudata</i>	whiplash willow	Shrub	Wide	FalsRep	Reports from BRCA herbarium based on misidentified specimens of <i>S. bebbiana</i>

**Appendix C. Rejected (falsely reported or questionable) taxa of Bryce Canyon National Park, cont..**

Family	Species name	Synonyms/ Taxonomic notes	Common name	Life form	Range	Park status	Comments
Saxifragaceae (Parnassiaceae)	<i>Parnassia parviflora</i>	<i>P. palustris</i> var. <i>parviflora</i>	small-flowered grass- of-Parnassus	PerF	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>P. palustris</i> var. <i>montanensis</i> .
Scrophulariaceae	<i>Penstemon humilis</i> var. <i>brevifolius</i>		shortleaf penstemon	PerF	RegEn	Ques?	Specimen cited at NY Botanical Garden, but BRCA is well outside the expected range of this taxon.
Scrophulariaceae	<i>Penstemon rydbergii</i>		Rydberg's penstemon	PerF	Periph	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>P. procerus</i> var. <i>aberrans</i> .
Umbelliferae (Apiaceae)	<i>Cicuta maculata</i> var. <i>angustifolia</i>	<i>C. douglasii</i> , <i>C.</i> <i>occidentalis</i>	water-hemlock	PerF	Wide	FalsRep	Reports from BRCA herbarium based on misidentified specimens of <i>Angelica pinnata</i>
Umbelliferae (Apiaceae)	<i>Cymopterus purpurascens</i>		basin white-cup spring-parsley	PerF	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>C. minimus</i> .
Umbelliferae (Apiaceae)	<i>Cymopterus purpureus</i> var. <i>rosei</i>	<i>C. rosei</i>	Rose's spring-parsley	PerF	RegEn	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>C. minimus</i> . USFWS: 3C.
Umbelliferae (Apiaceae)	<i>Ligusticum filicinum</i>		fernleaf ligusticum	PerF	Wide	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>L. porteri</i> .
Umbelliferae (Apiaceae)	<i>Lomatium graveolens</i> var. <i>alpinum</i>	<i>L. kingii</i>	King's lomatium	PerF	RegEn	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>L. parryi</i> .
Umbelliferae (Apiaceae)	<i>Lomatium nuttallii</i>	<i>L. megarrhizum</i> , <i>Aletes</i> <i>nuttallii</i>	Nuttall's lomatium	PerF	RegEn	FalsRep	Reports from BRCA herbarium are based on misidentified specimens of <i>L. parryi</i> . Native to Wyoming and the western Great Plains (not known from Utah).

The vascular plant species listed here have been reported for Bryce Canyon National Park from published and unpublished literature (Spence and Buchanan 1993) 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 taxa of Bryce Canyon National Park, organized by life form with ecological notes.

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/ Grs	Pin- Jun	Mont Conf	Wet	Comments
<b>Trees</b>										
Aceraceae	<i>Acer grandidentatum</i>	bigtooth maple	Native	Pres	Apr–May			x		
Betulaceae	<i>Betula occidentalis</i>	water birch	Native	Pres	Apr–May				x	
Cupressaceae	<i>Juniperus scopulorum</i>	Rocky Mountain juniper	Native	Pres	NA			x	x	
Elaeagnaceae	<i>Elaeagnus angustifolia</i>	Russian olive	Intro	Pres	May–Jul				x	
Fagaceae	<i>Quercus gambelii</i> var. <i>gambelii</i>	Gambel oak	Native	Pres	Apr–Jun	x	x	x		
Pinaceae	<i>Abies concolor</i>	white fir	Native	Pres	NA			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	x		
Pinaceae	<i>Pinus flexilis</i>	lumber pine	Native	Pres	NA			x		
Pinaceae	<i>Pinus longaeva</i>	western bristlecone pine	Native	Pres	NA			x		Claron barrens
Pinaceae	<i>Pinus ponderosa</i> var. <i>scopulorum</i>	ponderosa pine	Native	Pres	NA			x		
Pinaceae	<i>Pseudotsuga menziesii</i> var. <i>glauca</i>	Douglas-fir	Native	Pres	NA			x		
Rosaceae	<i>Malus pumila</i>	common apple	Intro	Pres	May					Cultivated
Salicaceae	<i>Populus angustifolia</i>	narrow-leaved cottonwood	Native	Pres	Apr–Jun				x	
Salicaceae	<i>Populus fremontii</i> var. <i>fremontii</i>	Fremont cottonwood	Native	Pres	Mar–Jun				x	
Salicaceae	<i>Populus tremuloides</i>	quaking aspen	Native	Pres	Mar–Jun			x	x	
Salicaceae	<i>Populus x intercurrents</i>	lance-leaf cottonwood	Native	Pres	Apr–Jun				x	
Ulmaceae	<i>Ulmus pumila</i>	Siberian elm	Intro	Pres	Mar–Apr	x	x			
<b>Shrubs</b>										
Aceraceae	<i>Acer glabrum</i> var. <i>glabrum</i>	Rocky Mountain maple	Native	Pres	Apr–Jun			x	x	
Agavaceae	<i>Yucca angustissima</i>	narrowleaved yucca	Native	Pres	May–Jul	x	x			
Agavaceae	<i>Yucca baccata</i>	datil yucca	Native	Pres	Apr–Jun	x	x			
Agavaceae	<i>Yucca harrimaniae</i> var. <i>harrimaniae</i>	Harriman's yucca	Native	Pres	Apr–May	x	x	x		
Anacardiaceae	<i>Rhus aromatica</i> var. <i>trilobata</i>	squawbush	Native	Pres	May–Jul		x	x	x	
Berberidaceae	<i>Mahonia fremontii</i>	Fremont's mahonia	Native	Pres	Apr–Jul	x	x			
Berberidaceae	<i>Mahonia repens</i>	Oregon-grape	Native	Pres	Apr–Jun	x	x	x	x	
Caprifoliaceae (Adoxaceae)	<i>Sambucus caerulea</i>	blue elderberry	Native	Pres	May–Jul	x	x	x		

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

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Gr	Pin-Jun	Mont Conf	Wet	Comments
<i>Shrubs, cont.</i>										
Caprifoliaceae	<i>Symphoricarpos oreophilus</i> var. <i>utahensis</i>	mountain snowberry	Native	Pres	Jun–Aug	x		x		
Celastraceae	<i>Pachystima myrsinites</i>	mountain-lover	Native	Pres	May–Aug	x	x	x		
Chenopodiaceae	<i>Atriplex canescens</i> var. <i>canescens</i>	fourwing saltbush	Native	Pres	May–Sep	x	x			
Chenopodiaceae	<i>Atriplex confertifolia</i>	shadscale	Native	Pres	May–Sep	x	x			Clay soils
Chenopodiaceae	<i>Atriplex gardneri</i> var. <i>utahensis</i>	basin saltbush	Native	Pres	Jun–Sep	x	x			Clay soils
Chenopodiaceae	<i>Krascheninnikovia lanata</i> var. <i>lanata</i>	winterfat	Native	Pres	May–Jul	x	x			
Chenopodiaceae (Sarcobataceae)	<i>Sarcobatus vermiculatus</i>	greasewood	Native	Pres	May–Aug				x	
Chenopodiaceae	<i>Zuckia brandegei</i> var. <i>plummeri</i>	Plummer's siltbush	Native	Pres	Jun–Aug		x			Clay soils
Compositae (Asteraceae)	<i>Artemisia frigida</i>	fringed sagebrush	Native	Pres	Jul–Sep	x	x			Disturbed areas
Compositae (Asteraceae)	<i>Artemisia nova</i> var. <i>nova</i>	black sagebrush	Native	Pres	Sep–Oct	x	x			
Compositae (Asteraceae)	<i>Artemisia pygmaea</i>	pygmy sagebrush	Native	Pres	Aug–Sep	x				
Compositae (Asteraceae)	<i>Artemisia tridentata</i> var. <i>tridentata</i>	basin big sagebrush	Native	Pres	Jul–Sep	x	x			
Compositae (Asteraceae)	<i>Artemisia tridentata</i> var. <i>wyomingensis</i>	Wyoming big sagebrush	Native	Rep	Jul–Sep	x				
Compositae (Asteraceae)	<i>Brickellia oblongifolia</i> var. <i>linifolia</i>	Mohave brickellbush	Native	Pres	Jun–Aug	x	x	x		Claron Formation
Compositae (Asteraceae)	<i>Chrysothamnus depressus</i>	dwarf rabbitbrush	Native	Pres	Jul–Sep	x	x	x		
Compositae (Asteraceae)	<i>Chrysothamnus linifolius</i>	spear-leaf rabbitbrush	Native	Pres	Jul–Sep				x	
Compositae (Asteraceae)	<i>Chrysothamnus nauseosus</i> var. <i>consimilis</i>	greenish rabbitbrush	Native	Pres	Aug–Oct	x	x	x		
Compositae (Asteraceae)	<i>Chrysothamnus nauseosus</i> var. <i>gnaphalodes</i>	graystem rabbitbrush	Native	Pres	Aug–Oct	x	x			

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

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/ Grs	Pin- Jun	Mont Conf	Wet	Comments
<i>Shrubs, cont.</i>										
Compositae (Asteraceae)	<i>Chrysothamnus nauseosus</i> var. <i>graveolens</i>	glabrate rabbitbrush	Native	Hist	Aug-Oct	x	x	x		
Compositae (Asteraceae)	<i>Chrysothamnus parryi</i> var. <i>affinis</i>	Parry's rabbitbrush	Native	Pres	Jul-Sep	x	x	x		
Compositae (Asteraceae)	<i>Chrysothamnus parryi</i> var. <i>parryi</i>	Parry's rabbitbrush	Native	Pres	Jul-Sep			x		
Compositae (Asteraceae)	<i>Chrysothamnus vaseyi</i>	Vasey's rabbitbrush	Native	Pres	Jul-Sep	x	x	x		
Compositae (Asteraceae)	<i>Chrysothamnus viscidiflorus</i> var. <i>lanceolatus</i>	lanceleaf rabbitbrush	Native	Pres	Jul-Sep	x	x	x		
Compositae (Asteraceae)	<i>Chrysothamnus viscidiflorus</i> var. <i>stenophyllus</i>	slenderleaf rabbitbrush	Native	Rep	Jul-Sep	x				
Compositae (Asteraceae)	<i>Chrysothamnus viscidiflorus</i> var. <i>viscidiflorus</i>	green rabbitbrush	Native	Pres	Jul-Sep	x	x	x		
Compositae (Asteraceae)	<i>Gutierrezia sarothrae</i>	broom snakeweed	Native	Pres	Jul-Oct	x	x			
Compositae (Asteraceae)	<i>Haplopappus macronema</i>	narrowleaf goldenweed	Native	Pres	Jul-Sep			x		
Compositae (Asteraceae)	<i>Haplopappus scopulorum</i> var. <i>hirtellus</i>	spindly goldenbush	Native	Pres	Aug-Sep	x	x	x		Sandstone
Compositae (Asteraceae)	<i>Haplopappus zionis</i>	Cedar Breaks goldenbush	Native	Pres	Jul-Aug			x		Claron barrens
Compositae (Asteraceae)	<i>Tetradymia canescens</i>	spineless horsebrush	Native	Pres	Jun-Sep	x		x		
Cornaceae	<i>Cornus sericea</i> var. <i>sericea</i>	red-osier dogwood	Native	Pres	May-Jul				x	
Cupressaceae	<i>Juniperus communis</i> var. <i>depressa</i>	common juniper	Native	Pres	NA			x		
Cupressaceae	<i>Juniperus osteosperma</i>	Utah juniper	Native	Pres	NA	x	x	x		
Elaeagnaceae	<i>Shepherdia argentea</i>	silver buffaloberry	Native	Pres	Apr-May				x	
Elaeagnaceae	<i>Shepherdia canadensis</i>	Canada buffaloberry	Native	Pres	May-Jul			x		
Elaeagnaceae	<i>Shepherdia rotundifolia</i>	roundleaf buffaloberry	Native	Pres	Mar-May	x	x	x		
Ephedraceae	<i>Ephedra viridis</i> var. <i>viridis</i>	green ephedra	Native	Pres	NA	x	x			
Ericaceae	<i>Arctostaphylos patula</i>	greenleaf manzanita	Native	Pres	Mar-Jul	x	x	x		
Ericaceae	<i>Arctostaphylos uva-ursi</i>	bearberry	Native	Pres	May-Aug			x		

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

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Gr	Pin-Jun	Mont Conf	Wet	Comments
<i>Shrubs, cont.</i>										
Polemoniaceae	<i>Leptodactylon pungens</i>	prickly-phlox	Native	Pres	May-Jul	x	x	x		
Polygonaceae	<i>Eriogonum corymbosum</i> var. <i>corymbosum</i>	crisp-leaf wild buckwheat	Native	Pres	Jul-Oct	x	x			
Polygonaceae	<i>Eriogonum microthecum</i> var. <i>laxiflorum</i>	slender wild buckwheat	Native	Pres	Jun-Oct	x	x	x		
Rhamnaceae	<i>Ceanothus fendleri</i>	Fendler's mountain-lilac	Native	Pres	Jun-Aug		x	x		
Rhamnaceae	<i>Ceanothus martinii</i>	Utah mountain-lilac	Native	Pres	Jun-Jul		x	x		
Rosaceae	<i>Amelanchier utahensis</i>	Utah serviceberry	Native	Pres	Apr-Jun	x	x	x		
Rosaceae	<i>Cercocarpus ledifolius</i> var. <i>intermontanus</i>	curl-leaf mountain mahogany	Native	Pres	May-Jun		x	x		Rocky areas
Rosaceae	<i>Cercocarpus montanus</i>	alder-leaf mountain mahogany	Native	Pres	May-Jun	x	x	x		
Rosaceae	<i>Fallugia paradoxa</i>	Apache plume	Native	Pres	Apr-Aug	x	x	x		
Rosaceae	<i>Holodiscus dumosus</i>	bush oceanspray	Native	Pres	Jun-Aug	x	x	x		Rocky areas
Rosaceae	<i>Peraphyllum ramosissimum</i>	squaw-apple	Native	Pres	May-Jun	x	x	x		
Rosaceae	<i>Potentilla fruticosa</i>	shrubby cinquefoil	Native	Pres	Jun-Aug	x		x		
Rosaceae	<i>Prunus virginiana</i> var. <i>melanocarpa</i>	western chokecherry	Native	Pres	May-Jul	x	x	x		
Rosaceae	<i>Purshia mexicana</i> var. <i>stansburyana</i>	cliff-rose	Native	Pres	May-Jun	x	x	x		
Rosaceae	<i>Purshia tridentata</i>	antelope bitterbrush	Native	Pres	Apr-Jul	x	x	x		
Rosaceae	<i>Rosa nutkana</i> var. <i>hispida</i>	Nootka rose	Native	Hist	Jun-Jul			x		
Rosaceae	<i>Rosa woodsii</i>	Woods' rose	Native	Pres	May-Jul			x		
Rosaceae	<i>Rubus idaeus</i> var. <i>strigosus</i>	common red raspberry	Native	Pres	Jun-Aug			x		
Salicaceae	<i>Salix bebbiana</i>	Bebb's willow	Native	Pres	May-Jun			x		
Salicaceae	<i>Salix brachycarpa</i>	short-fruit willow	Native	Pres	Jun-Jul			x		
Salicaceae	<i>Salix eriocephala</i> var. <i>watsonii</i>	yellow willow	Native	Pres	Apr-Jun			x		
Salicaceae	<i>Salix exigua</i> var. <i>stenophylla</i>	coyote willow	Native	Pres	Apr-Aug			x		
Salicaceae	<i>Salix geyeriana</i>	Geyer's willow	Native	Pres	May-Jun			x		
Saxifragaceae (Grossulariaceae)	<i>Ribes aureum</i>	golden currant	Native	Hist	Mar-Jul	x	x	x		
Saxifragaceae (Grossulariaceae)	<i>Ribes cereum</i> var. <i>inebrians</i>	wax currant	Native	Pres	Apr-Aug		x	x		

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

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Gr	Pin-Jun	Mont Conf	Wet	Comments
<i>Shrubs, cont.</i>										
Saxifragaceae (Grossulariaceae)	<i>Ribes inerme</i>	whitestem gooseberry	Native	Pres	Apr-Jul		x	x	x	
Tamaricaceae	<i>Tamarix chinensis</i>	five-stamen tamarisk	Intro	Pres	Apr-Sep				x	
<b>Perennial Forbs</b>										
Apocynaceae	<i>Apocynum andros-aemifolium</i> var. <i>androsaemifolium</i>	spreading dogbane	Native	Pres	Jun-Aug	x		x	x	
Apocynaceae	<i>Apocynum cannabinum</i>	common dogbane	Native	Pres	Jun-Aug			x	x	Claron barrens
Asclepiadaceae	<i>Asclepias asperula</i> var. <i>asperula</i>	spider milkweed	Native	Pres	May-Jul	x	x	x		
Asclepiadaceae	<i>Asclepias hallii</i>	Hall's milkweed	Native	Pres	Jun-Aug		x	x		
Asclepiadaceae	<i>Asclepias speciosa</i>	showy milkweed	Native	Pres	May-Aug				x	Disturbed areas
Boraginaceae	<i>Cryptantha abata</i>	low cryptanth	Native	Pres	May-Jun	x	x	x		
Boraginaceae	<i>Cryptantha bakeri</i>	Baker's cryptanth	Native	Pres	May-Jun	x	x	x		
Boraginaceae	<i>Cryptantha cinerea</i> var. <i>arenicola</i>	sand cryptanth	Native	Rep	Jun	x	x			Sandy areas
Boraginaceae	<i>Cryptantha cinerea</i> var. <i>cinerea</i>	ashy cryptanth	Native	Pres	May-Aug	x	x	x		
Boraginaceae	<i>Cryptantha confertiflora</i>	basin yellow cryptanth	Native	Pres	Apr-Jun	x	x	x		
Boraginaceae	<i>Cryptantha flava</i>	plateau yellow cryptanth	Native	Pres	Apr-Jun	x	x			
Boraginaceae	<i>Cryptantha fulvocanescens</i>	plateau cryptanth	Native	Hist	May-Jun	x	x			
Boraginaceae	<i>Cryptantha humilis</i>	dwarf cryptanth	Native	Pres	Apr-Jun	x	x			
Boraginaceae	<i>Cryptantha ochroleuca</i>	yellowish cryptanth	Native	Pres	May-Jun		x	x		Claron barrens
Boraginaceae	<i>Cryptantha setosissima</i>	bristly cryptanth	Native	Pres	May-Aug		x	x		
Boraginaceae	<i>Cynoglossum officinale</i>	common hound's-tongue	Intro	Pres	May-Jul	x	x	x		Disturbed areas
Boraginaceae	<i>Lithospermum incisum</i>	showy stoneseed	Native	Pres	Apr-Jul	x	x	x		
Boraginaceae	<i>Lithospermum multiflorum</i>	southwestern stoneseed	Native	Pres	Jun-Aug	x	x	x		
Boraginaceae	<i>Mertensia arizonica</i>	aspen bluebell	Native	Pres	Jun-Aug		x	x	x	
Cactaceae	<i>Coryphantha vivipara</i> var. <i>arizonica</i>	Arizona pincushion	Native	Pres	Apr-Aug	x	x			
Cactaceae	<i>Echinocereus triglochidiatus</i> var. <i>melanacanthus</i>	claretcup	Native	Pres	Apr-Jun	x	x			
Cactaceae	<i>Opuntia erinacea</i> var. <i>erinacea</i>	common pricklypear	Native	Hist	May-Jun	x				
Cactaceae	<i>Opuntia fragilis</i>	brittle pricklypear	Native	Pres	Jun-Jul	x	x			



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

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/ Grs	Pin- Jun	Mont Conf	Wet	Comments
Perennial Forbs, cont.										
Cactaceae	<i>Opuntia polyacantha</i> var. <i>polyacantha</i>	plains pricklypear	Native	Rep	May–Jun	x	x			
Cactaceae	<i>Pediocactus simpsonii</i>	Simpson's hedgehog cactus	Native	Pres	May–Jul	x	x	x		
Cactaceae	<i>Sclerocactus whipplei</i> var. <i>roseus</i>	small-flower fishhook cactus	Native	Pres	Apr–May	x	x	x		
Campanulaceae	<i>Campanula parryi</i>	Parry's harebell	Native	Pres	Jun–Sep			x		
Caryophyllaceae (Alsinateae)	<i>Arenaria fendleri</i> var. <i>glabrescens</i>	basin sandwort	Native	Pres	May–Aug	x	x	x		
Caryophyllaceae	<i>Lychnis drummondii</i>	Drummond's catchfly	Native	Pres	May–Sep	x	x	x		
Caryophyllaceae (Alsinateae)	<i>Paronychia sessiliflora</i>	creeping nailwort	Native	Pres	May–Aug	x	x			
Caryophyllaceae	<i>Silene petersonii</i>	Peterson's campion	Native	Pres	Jun–Sep			x		Claron barrens
Caryophyllaceae (Alsinateae)	<i>Stellaria jamesiana</i>	James' chickweed	Native	Pres	Jun–Aug	x		x		
Caryophyllaceae (Alsinateae)	<i>Stellaria longipes</i> var. <i>longipes</i>	long-stalk starwort	Native	Pres	May–Aug			x		
Compositae (Asteraceae)	<i>Achillea millefolium</i> ssp. <i>lanulosa</i>	common yarrow	Native	Pres	May–Sep	x	x	x	x	
Compositae (Asteraceae)	<i>Agoseris aurantiaca</i> var. <i>aurantiaca</i>	orange agoseris	Native	Rep	Jun–Aug	x	x	x		
Compositae (Asteraceae)	<i>Agoseris aurantiaca</i> var. <i>purpurea</i>	purplish agoseris	Native	Pres	Jun–Aug			x	x	
Compositae (Asteraceae)	<i>Agoseris glauca</i> var. <i>glauca</i>	pale agoseris	Native	Pres	May–Sep	x		x	x	
Compositae (Asteraceae)	<i>Agoseris glauca</i> var. <i>laciniata</i>	cutleaf agoseris	Native	Pres	May–Sep	x	x	x		
Compositae (Asteraceae)	<i>Antennaria dimorpha</i>	low pussytoes	Native	Rep	Apr–Jun	x	x	x		
Compositae (Asteraceae)	<i>Antennaria microphylla</i>	small-leaf pussytoes	Native	Pres	Jun–Aug	x	x	x		
Compositae (Asteraceae)	<i>Antennaria parvifolia</i>	common pussytoes	Native	Pres	May–Jul	x	x	x		
Compositae (Asteraceae)	<i>Antennaria rosulata</i>	Breaks pussytoes	Native	Pres	Jun–Aug	x		x		

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

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/ Grs	Pin- Jun	Mont Conf	Wet	Comments
<i>Perennial Forbs, cont.</i>										
Compositae (Asteraceae)	<i>Arctium minus</i>	burdock	Intro	Pres	Jul-Sep				x	Disturbed areas
Compositae (Asteraceae)	<i>Arnica chamissonis</i> var. <i>foliosa</i>	Chamisso's arnica	Native	Pres	Jun-Aug			x	x	
Compositae (Asteraceae)	<i>Arnica cordifolia</i> var. <i>cordifolia</i>	heartleaf arnica	Native	Pres	May-Aug			x		
Compositae (Asteraceae)	<i>Artemisia campestris</i> var. <i>scouleriana</i>	sand wormwood	Native	Pres	Jul-Sep	x	x			Kaiparowits Formation
Compositae (Asteraceae)	<i>Artemisia carruthii</i>	Carruth's wormwood	Native	Pres	Aug-Sep			x		
Compositae (Asteraceae)	<i>Artemisia dracunculus</i> var. <i>glauca</i>	tarragon	Native	Pres	Jul-Oct	x	x	x		
Compositae (Asteraceae)	<i>Artemisia ludoviciana</i> var. <i>albula</i>	Louisiana wormwood	Native	Pres	Jul-Oct	x	x		x	
Compositae (Asteraceae)	<i>Artemisia ludoviciana</i> var. <i>latiloba</i>	Louisiana wormwood	Native	Pres	Jul-Oct			x		
Compositae (Asteraceae)	<i>Aster ascendens</i>	Pacific aster	Native	Pres	Jul-Oct	x	x	x		
Compositae (Asteraceae)	<i>Aster eatonii</i>	Eaton's aster	Native	Pres	Jul-Sep				x	
Compositae (Asteraceae)	<i>Aster glaucodes</i>	blueleaf aster	Native	Pres	Jul-Sep	x	x	x	x	
Compositae (Asteraceae)	<i>Aster hesperius</i>	Siskiyou aster	Native	Pres	Jul-Sep				x	
Compositae (Asteraceae)	<i>Aster spathulatus</i>	western aster	Native	Pres	Jul-Sep	x			x	
Compositae (Asteraceae)	<i>Aster wasatchensis</i> var. <i>wasatchensis</i>	Markagunt aster	Native	Pres	Jul-Sep		x	x		Claron barrens
Compositae (Asteraceae)	<i>Balsamorhiza sagittata</i>	arrowleaf balsamroot	Native	Pres	Apr-Jul	x	x	x		
Compositae (Asteraceae)	<i>Carduus nutans</i>	musk thistle	Intro	Pres	Jun-Sep	x	x			Disturbed areas
Compositae (Asteraceae)	<i>Centaurea maculosa</i>	spotted knapweed	Intro	Pres	Jul-Sep					Disturbed areas
Compositae (Asteraceae)	<i>Centaurea repens</i>	Russian knapweed	Intro	Pres	Jun-Sep	x			x	

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

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/ Grs	Pin- Jun	Mont Conf	Wet	Comments
<i>Perennial Forbs, cont.</i>										
Compositae (Asteraceae)	<i>Chaenactis douglasii</i>	hoary dusty-maiden	Native	Pres	May-Sep	x	x	x		
Compositae (Asteraceae)	<i>Chaetopappa ericoides</i>	rose-heath	Native	Pres	May-Sep	x	x	x		
Compositae (Asteraceae)	<i>Chrysopsis jonesii</i>	Jones' golden-aster	Native	Pres	May-Sep			x		Kaiparowits Formation
Compositae (Asteraceae)	<i>Chrysopsis villosa</i> var. <i>minor</i>	hispid golden-aster	Native	Pres	May-Sep	x	x	x		
Compositae (Asteraceae)	<i>Cichorium intybus</i>	chicory	Intro	Pres	Jul-Oct					Disturbed areas
Compositae (Asteraceae)	<i>Cirsium arizonicum</i>	Arizona thistle	Native	Pres	Jun-Aug		x	x		
Compositae (Asteraceae)	<i>Cirsium arvense</i>	Canada thistle	Intro	Pres	Jul-Sep				x	Disturbed areas
Compositae (Asteraceae)	<i>Cirsium calcaureum</i> var. <i>pulchellum</i>	pretty thistle	Native	Pres	Jun-Sep	x	x	x		
Compositae (Asteraceae)	<i>Cirsium neomexicanum</i> var. <i>neomexicanum</i>	New Mexico thistle	Native	Pres	May-Jun	x	x			
Compositae (Asteraceae)	<i>Cirsium scariosum</i> var. <i>scariosum</i>	elk thistle	Native	Pres	Jun-Aug				x	
Compositae (Asteraceae)	<i>Cirsium undulatum</i> var. <i>tracyi</i>	Tracy's thistle	Native	Pres	Jun-Sep	x	x			
Compositae (Asteraceae)	<i>Cirsium undulatum</i> var. <i>undulatum</i>	wavy-leaved thistle	Native	Pres	Jun-Sep	x	x			
Compositae (Asteraceae)	<i>Cirsium vulgare</i>	bull thistle	Intro	Pres	Jul-Aug	x			x	Disturbed areas
Compositae (Asteraceae)	<i>Cirsium wheeleri</i> var. <i>wheeleri</i>	Wheeler's thistle	Native	Pres	Jul-Sep		x	x		
Compositae (Asteraceae)	<i>Crepis intermedia</i>	gray hawksbeard	Native	Pres	May-Jul	x	x	x		
Compositae (Asteraceae)	<i>Crepis occidentalis</i> var. <i>occidentalis</i>	western hawksbeard	Native	Pres	May-Jul	x	x	x		
Compositae (Asteraceae)	<i>Crepis runcinata</i> var. <i>glauca</i>	glaucous hawksbeard	Native	Rep	May-Aug				x	
Compositae (Asteraceae)	<i>Crepis runcinata</i> var. <i>hispidulosa</i>	hispidulous hawksbeard	Native	Pres	May-Aug				x	

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

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/ Grs	Pin- Jun	Mont Conf	Wet	Comments
<i>Perennial Forbs, cont.</i>										
Compositae (Asteraceae)	<i>Erigeron abajoensis</i>	Abajo daisy	Native	Pres	Jul-Sep		x	x		
Compositae (Asteraceae)	<i>Erigeron aphanactis</i> var. <i>aphanactis</i>	hairy daisy	Native	Hist	May-Jul	x	x			
Compositae (Asteraceae)	<i>Erigeron canus</i>	hoary daisy	Native	Pres	Jun-Jul	x	x	x		Claron barrens
Compositae (Asteraceae)	<i>Erigeron compositus</i> var. <i>glabratus</i>	cut-leaved daisy	Native	Rep	May-Aug	x		x		
Compositae (Asteraceae)	<i>Erigeron divergens</i> var. <i>divergens</i>	spreading daisy	Native	Pres	May-Sep	x	x	x	x	
Compositae (Asteraceae)	<i>Erigeron eatonii</i>	Eaton's daisy	Native	Pres	May-Jul	x	x	x		
Compositae (Asteraceae)	<i>Erigeron flagellaris</i>	trailing daisy	Native	Pres	May-Aug	x	x	x		
Compositae (Asteraceae)	<i>Erigeron lonchophyllus</i>	longleaf daisy	Native	Pres	Jun-Sep				x	
Compositae (Asteraceae)	<i>Erigeron pumilus</i> var. <i>concinus</i>	Navajo fleabane	Native	Pres	May-Aug	x	x	x		
Compositae (Asteraceae)	<i>Erigeron pumilus</i> var. <i>condensatus</i>	vernal daisy	Native	Pres	May-Aug	x	x	x		
Compositae (Asteraceae)	<i>Erigeron speciosus</i> var. <i>macranthus</i>	aspen daisy	Native	Pres	Jun-Aug			x		
Compositae (Asteraceae)	<i>Erigeron ursinus</i> var. <i>ursinus</i>	bear daisy	Native	Pres	Jun-Aug	x		x		
Compositae (Asteraceae)	<i>Erigeron vagus</i>	Payson's daisy	Native	Pres	Jun-Aug			x		Claron barrens
Compositae (Asteraceae)	<i>Grindelia squarrosa</i> var. <i>serrulata</i>	curly-cup gumweed	Native	Hist	Jul-Sep	x	x			
Compositae (Asteraceae)	<i>Haplopappus acaulis</i> var. <i>acaulis</i>	stemless goldenweed	Native	Rep	May-Jul	x	x	x		
Compositae (Asteraceae)	<i>Haplopappus armerioides</i> var. <i>armerioides</i>	thrift goldenweed	Native	Pres	May-Jun	x	x	x		
Compositae (Asteraceae)	<i>Helianthella uniflora</i>	little sunflower	Native	Pres	Jun-Aug	x	x	x		
Compositae (Asteraceae)	<i>Hymenopappus filifolius</i> var. <i>cinereus</i>	common hyalineherb	Native	Pres	May-Oct	x	x			

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

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/ Grs	Pin- Jun	Mont Conf	Wet	Comments
Perennial Forbs, cont.										
Compositae (Asteraceae)	<i>Hymenopappus filifolius</i> var. <i>nanus</i>	Great Basin hyalineherb	Native	Pres	May-Oct	x	x	x		
Compositae (Asteraceae)	<i>Hymenopappus filifolius</i> var. <i>nudipes</i>	alpine hyalineherb	Native	Pres	May-Oct	x		x		
Compositae (Asteraceae)	<i>Hymenoxys acaulis</i> var. <i>arizonica</i>	Arizona hymenoxys	Native	Pres	Apr-Jun	x	x	x		
Compositae (Asteraceae)	<i>Hymenoxys richardsonii</i> var. <i>floribunda</i>	Colorado rubber-plant	Native	Pres	May-Aug	x	x	x		
Compositae (Asteraceae)	<i>Iva axillaris</i>	poverty-weed	Native	Pres	May-Sep		x	x	x	
Compositae (Asteraceae)	<i>Lactuca tatarica</i> var. <i>pulchella</i>	blue lettuce	Native	Pres	Jun-Sep				x	
Compositae (Asteraceae)	<i>Lygodesmia grandiflora</i> var. <i>grandiflora</i>	showy rush-pink	Native	Pres	May-Jun	x	x	x		
Compositae (Asteraceae)	<i>Machaeranthera canescens</i> var. <i>aristata</i>	aristate aster	Native	Rep	Jul-Oct	x	x			
Compositae (Asteraceae)	<i>Machaeranthera canescens</i> var. <i>canescens</i>	hoary aster	Native	Pres	May-Sep	x	x	x		
Compositae (Asteraceae)	<i>Machaeranthera grindelioides</i> var. <i>grindeloides</i>	gumweed aster	Native	Pres	May-Jul	x	x			
Compositae (Asteraceae)	<i>Petrorhiza pumila</i> var. <i>pumila</i>	rock-goldenrod	Native	Pres	Jul-Sep	x	x	x		
Compositae (Asteraceae)	<i>Psilostrophe sparsiflora</i>	greenstem paperflower	Native	Pres	May-Sep	x	x			
Compositae (Asteraceae)	<i>Senecio atratus</i>	black groundsel	Native	Pres	Jul-Aug			x		
Compositae (Asteraceae)	<i>Senecio hartianus</i>	Hart's groundsel	Native	Pres	Jun-Jul			x		
Compositae (Asteraceae)	<i>Senecio hydrophilus</i>	water groundsel	Native	Pres	Jul-Aug				x	
Compositae (Asteraceae)	<i>Senecio multilobatus</i>	basin groundsel	Native	Pres	Apr-Aug	x	x	x		
Compositae (Asteraceae)	<i>Senecio spartioides</i> var. <i>spartioides</i>	broom groundsel	Native	Pres	Jun-Oct	x	x	x		
Compositae (Asteraceae)	<i>Senecio wernerii</i> var. <i>barkeleyi</i>	Barkeley's groundsel	Native	Pres	Jun-Aug			x		Claron barrens

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

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/ Grs	Pin- Jun	Mont Conf	Wet	Comments
<i>Perennial Forbs, cont.</i>										
Compositae (Asteraceae)	<i>Solidago parryi</i>	Parry's goldenweed	Native	Pres	Jul-Sep			x		
Compositae (Asteraceae)	<i>Solidago simplex</i>	coast goldenrod	Native	Pres	Jul-Sep			x		
Compositae (Asteraceae)	<i>Solidago velutina</i>	three-nerve goldenrod	Native	Pres	Aug-Oct	x	x	x		
Compositae (Asteraceae)	<i>Sonchus uliginosus</i>	marsh sow-thistle	Intro	Pres	Jul-Oct				x	
Compositae (Asteraceae)	<i>Sphaeromeria capitata</i>	cluster-head chicken-sage	Native	Pres	May-Jun		x	x		Claron barrens
Compositae (Asteraceae)	<i>Stephanomeria tenuifolia</i> var. <i>tenuifolia</i>	slender wirelettuce	Native	Pres	Jun-Sep		x	x		
Compositae (Asteraceae)	<i>Taraxacum officinale</i>	common dandelion	Intro	Pres	Apr-Dec	x	x	x	x	
Compositae (Asteraceae)	<i>Townsendia excapa</i>	stemless townsendia	Native	Pres	May-Jun			x		
Compositae (Asteraceae)	<i>Townsendia incana</i>	hoary townsendia	Native	Pres	Apr-Jul	x	x			
Compositae (Asteraceae)	<i>Townsendia montana</i> var. <i>minima</i>	Bryce Canyon townsendia	Native	Pres	Apr-Jun			x		Claron barrens
Compositae (Asteraceae)	<i>Tragopogon dubius</i>	yellow salsify	Intro	Pres	May-Jul	x			x	Disturbed areas
Compositae (Asteraceae)	<i>Viguiera multiflora</i> var. <i>nevadensis</i>	showy goldeneye	Native	Pres	Jun-Sep		x	x		
Convolvulaceae	<i>Convolvulus arvensis</i>	field bindweed	Intro	Pres	Jun-Aug					Disturbed areas
Cruciferae (Brassicaceae)	<i>Arabis demissa</i>	nodding rockcress	Native	Pres	May-Aug	x	x	x		
Cruciferae (Brassicaceae)	<i>Arabis drummondii</i>	Drummond's rockcress	Native	Rep	May-Sep	x		x		
Cruciferae (Brassicaceae)	<i>Arabis holboellii</i> var. <i>fendleri</i>	Fendler's rockcress	Native	Hist	Apr-Aug		x	x		
Cruciferae (Brassicaceae)	<i>Arabis holboellii</i> var. <i>pinetorum</i>	Holboell's rockcress	Native	Hist	May-Jul	x	x	x		
Cruciferae (Brassicaceae)	<i>Arabis holboellii</i> var. <i>secunda</i>	Holboell's rockcress	Native	Pres	May-Jul	x	x	x		

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

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/ Grs	Pin-Jun	Mont Conf	Wet	Comments
<i>Perennial Forbs, cont.</i>										
Cruciferae (Brassicaceae)	<i>Arabis perennans</i> var. <i>perennans</i>	perennial rockcross	Native	Pres	Mar-Jul	x	x	x		
Cruciferae (Brassicaceae)	<i>Arabis selbyi</i>	Selby's rockcross	Native	Pres	May-Aug	x	x	x		
Cruciferae (Brassicaceae)	<i>Cardaria draba</i>	whitetop	Intro	Pres	May-Aug	x				Disturbed areas
Cruciferae (Brassicaceae)	<i>Caulanthus crassicaulis</i> var. <i>crassicaulis</i>	spindlestem	Native	Pres	May-Jul	x	x	x		
Cruciferae (Brassicaceae)	<i>Draba subalpina</i>	Breaks draba	Native	Pres	May-Aug			x		
Cruciferae (Brassicaceae)	<i>Erysimum asperum</i> var. <i>purshii</i>	sand dune wallflower	Native	Pres	Apr-Aug	x	x	x		
Cruciferae (Brassicaceae)	<i>Erysimum inconspicuum</i>	shy wallflower	Native	Pres	Apr-Jul	x		x		
Cruciferae (Brassicaceae)	<i>Lepidium montanum</i> var. <i>claronense</i>	Claron pepperwort	Native	Pres	Apr-Sep			x		Claron barrens
Cruciferae (Brassicaceae)	<i>Physaria arizonica</i>	Arizona bladderpod	Native	Hist	Apr-Jun	x	x			
Cruciferae (Brassicaceae)	<i>Physaria chambersii</i> var. <i>membranacea</i>	lepidote twinpod	Native	Pres	May-Jul		x	x		Claron barrens
Cruciferae (Brassicaceae)	<i>Physaria chambersii</i> var. <i>sobolifera</i>	Claron twinpod	Native	Pres	Apr-Aug			x		Claron barrens
Cruciferae (Brassicaceae)	<i>Physaria intermedia</i>	Watson's bladderpod	Native	Pres	May-Aug	x	x	x		
Cruciferae (Brassicaceae)	<i>Physaria kingii</i> var. <i>parvifolia</i>	King's bladderpod	Native	Pres	Apr-Jul	x	x	x		
Cruciferae (Brassicaceae)	<i>Physaria rectipes</i>	Colorado Plateau bladderpod	Native	Pres	Apr-Aug		x	x		
Cruciferae (Brassicaceae)	<i>Physaria rubicundula</i> var. <i>rubicundula</i>	Breaks bladderpod	Native	Pres	May-Jul			x		Claron barrens
Cruciferae (Brassicaceae)	<i>Schoenocrambe linifolia</i>	flax-leaved plainsmustard	Native	Pres	Apr-Jul	x	x	x		
Cruciferae (Brassicaceae)	<i>Stanleya pinnata</i>	prince's-plume	Native	Pres	Apr-Sep	x	x			

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

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/ Grs	Pin-Jun	Mont Conf	Wet	Comments
<i>Perennial Forbs, cont.</i>										
Cruciferae (Brassicaceae)	<i>Streptanthus cordatus</i>	heart-leaf jewelflower	Native	Pres	Apr-Jul	x	x	x		
Cruciferae (Brassicaceae)	<i>Thelypodopsis sagittata</i> var. <i>ovalifolia</i>	Palmer's thelypod	Native	Pres	May-Aug				x	
Cruciferae (Brassicaceae)	<i>Thlaspi montanum</i> var. <i>montanum</i>	alpine pennycress	Native	Pres	Apr-Aug			x		
Euphorbiaceae	<i>Chamaesyce fendleri</i>	Fendler's spurge	Native	Pres	May-Sep	x	x	x		
Euphorbiaceae	<i>Euphorbia brachycera</i>	shorthorn spurge	Native	Pres	May-Jun	x	x	x		
Euphorbiaceae	<i>Euphorbia esula</i>	leafy spurge	Intro	Rep	May-Aug				x	Disturbed areas
Fumariaceae	<i>Corydalis aurea</i> var. <i>occidentalis</i>	golden corydalis	Native	Hist	Apr-Sep	x	x	x		
Gentianaceae	<i>Gentiana affinis</i> var. <i>affinis</i>	Rocky Mountain gentian	Native	Pres	Jul-Sep			x	x	
Gentianaceae	<i>Gentiana parryi</i>	Parry's gentian	Native	Rep	Jul-Sep			x		
Gentianaceae	<i>Gentianella heterosepala</i>	Engelmann's gentian	Native	Pres	Jun-Aug	x		x		
Gentianaceae	<i>Swertia radiata</i>	elkweed	Native	Pres	Jun-Aug	x		x		
Geraniaceae	<i>Geranium caespitosum</i> var. <i>marginale</i>	small-leaf geranium	Native	Pres	Jun-Aug	x	x	x		
Geraniaceae	<i>Geranium richardsonii</i>	Richardson's crane's-bill	Native	Rep	Jun-Aug		x	x		
Guttiferae (Hypericaceae)	<i>Hypericum formosum</i>	western St. John's-wort	Native	Pres	May-Sep	x	x	x	x	
Iridaceae	<i>Iris missouriensis</i>	Rocky Mountain iris	Native	Pres	May-Jul				x	
Iridaceae	<i>Sisyrinchium idahoense</i>	Idaho blue-eyed grass	Native	Pres	May-Aug				x	
Labiatae (Lamiaceae)	<i>Dracocephalum parviflorum</i>	smallflower dragonhead	Native	Pres	Jun-Aug	x	x	x		
Labiatae (Lamiaceae)	<i>Hedeoma drummondii</i>	mock pennyroyal	Native	Pres	May-Aug	x	x			
Labiatae (Lamiaceae)	<i>Hedeoma nanum</i>	dwarf pennyroyal	Native	Pres	May-Jun		x	x		
Labiatae (Lamiaceae)	<i>Marrubium vulgare</i>	common horehound	Intro	Pres	May-Oct					Disturbed areas
Labiatae (Lamiaceae)	<i>Mentha arvensis</i> var. <i>glabrata</i>	field mint	Native	Pres	Jun-Sep				x	
Labiatae (Lamiaceae)	<i>Monardella odoratissima</i>	stinking horsemint	Native	Pres	May-Aug	x	x	x		
Labiatae (Lamiaceae)	<i>Prunella vulgaris</i> var. <i>lanceolata</i>	self-heal	Native	Pres	May-Sep				x	
Labiatae (Lamiaceae)	<i>Salvia reflexa</i>	annual sage	Native	Pres	Jun-Sep	x	x			
Leguminosae (Fabaceae)	<i>Astragalus agrestis</i>	field milkvetch	Native	Pres	May-Aug	x		x		



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

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/ Grs	Pin- Jun	Mont Conf	Wet	Comments
<i>Perennial Forbs, cont.</i>										
Leguminosae (Fabaceae)	<i>Astragalus amphioxys</i> var. <i>amphioxys</i>	crescent milkvetch	Native	Pres	Mar–Jun		x			
Leguminosae (Fabaceae)	<i>Astragalus amphioxys</i> var. <i>vespertinus</i>	Sheldon's milkvetch	Native	Pres	Mar–Jun	x	x			
Leguminosae (Fabaceae)	<i>Astragalus argophyllus</i> var. <i>panguicensis</i>	Panguitch milkvetch	Native	Pres	May–Jul	x	x	x		
Leguminosae (Fabaceae)	<i>Astragalus bisulcatus</i> var. <i>major</i>	Johnson milkvetch	Native	Pres	May–Aug	x	x			
Leguminosae (Fabaceae)	<i>Astragalus calycosus</i> var. <i>calycosus</i>	Torrey's milkvetch	Native	Pres	Apr–Jul	x	x	x		
Leguminosae (Fabaceae)	<i>Astragalus convallarius</i> var. <i>convallarius</i>	lesser rushy milkvetch	Native	Pres	May–Aug	x	x	x		
Leguminosae (Fabaceae)	<i>Astragalus desperatus</i> var. <i>desperatus</i>	rimrock milkvetch	Native	Pres	May–Jul	x	x			
Leguminosae (Fabaceae)	<i>Astragalus hallii</i> var. <i>fallax</i>	Hall's milkvetch	Native	Pres	May–Jul		x			
Leguminosae (Fabaceae)	<i>Astragalus humistratus</i> var. <i>humivagans</i>	groundcover milkvetch	Native	Pres	May–Sep	x	x	x		
Leguminosae (Fabaceae)	<i>Astragalus kentrophyta</i> var. <i>elatus</i>	tall kentrophyta	Native	Pres	Jun–Sep	x	x	x		
Leguminosae (Fabaceae)	<i>Astragalus kentrophyta</i> var. <i>tegetarius</i>	mountain kentrophyta	Native	Pres	Jun–Sep			x		
Leguminosae (Fabaceae)	<i>Astragalus lentiginosus</i> var. <i>araneosus</i>	cobwed milkvetch	Native	Pres	Apr–Jun	x	x			
Leguminosae (Fabaceae)	<i>Astragalus lonchocarpus</i>	great rushy milkvetch	Native	Pres	May–Jul		x			
Leguminosae (Fabaceae)	<i>Astragalus megacarpus</i> var. <i>parryi</i>	great bladderly milkvetch	Native	Pres	Apr–Jul	x	x	x		
Leguminosae (Fabaceae)	<i>Astragalus miser</i> var. <i>oblongifolius</i>	Rydberg's weedy milkvetch	Native	Pres	Jun–Aug	x		x		
Leguminosae (Fabaceae)	<i>Astragalus mollissimus</i> var. <i>thompsoniae</i>	woolly milkvetch	Native	Pres	Feb–Jun	x	x			
Leguminosae (Fabaceae)	<i>Astragalus praelongus</i> var. <i>praelongus</i>	stinking milkvetch	Native	Pres	Apr–Jul		x			

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

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/ Grs	Pin-Jun	Mont Conf	Wet	Comments
<i>Perennial Forbs, cont.</i>										
Leguminosae (Fabaceae)	<i>Astragalus tenellus</i>	pulse milkvetch	Native	Pres	May-Aug	x	x	x		
Leguminosae (Fabaceae)	<i>Astragalus wardii</i>	Ward's milkvetch	Native	Pres	May-Sep	x	x	x		
Leguminosae (Fabaceae)	<i>Hedysarum boreale</i> var. boreale	northern sweetvetch	Native	Pres	May-Aug	x	x	x		
Leguminosae (Fabaceae)	<i>Lathyrus brachycalyx</i> var. zionis	Zion sweetpea	Native	Pres	Apr-Jun	x	x		x	
Leguminosae (Fabaceae)	<i>Lotus utahensis</i>	Utah trefoil	Native	Pres	May-Aug	x	x	x		
Leguminosae (Fabaceae)	<i>Lupinus argenteus</i> var. argenteus	silvery lupine	Native	Pres	May-Aug	x	x	x		
Leguminosae (Fabaceae)	<i>Lupinus argenteus</i> var. rubricalis	subalpine lupine	Native	Pres	May-Aug	x	x	x		
Leguminosae (Fabaceae)	<i>Lupinus caudatus</i> var. argophyllus	silverleaf lupine	Native	Pres	May-Aug	x	x	x		
Leguminosae (Fabaceae)	<i>Lupinus sericeus</i> var. barbiger	sink lupine	Native	Pres	May-Aug	x	x	x		
Leguminosae (Fabaceae)	<i>Lupinus sericeus</i> var. marianus	Marysville lupine	Native	Rep	May-Aug	x	x	x		
Leguminosae (Fabaceae)	<i>Lupinus sericeus</i> var. sericeus	silky lupine	Native	Pres	May-Aug	x	x	x		
Leguminosae (Fabaceae)	<i>Medicago sativa</i>	alfalfa	Intro	Hist	May-Sep					Disturbed areas
Leguminosae (Fabaceae)	<i>Melilotus officinalis</i>	yellow sweet-clover	Intro	Pres	May-Oct					Disturbed areas
Leguminosae (Fabaceae)	<i>Oxytropis deflexa</i> var. sericea	nodding locoweed	Native	Pres	Jun-Aug	x		x		
Leguminosae (Fabaceae)	<i>Oxytropis lambertii</i> var. bigelovii	Lambert's locoweed	Native	Pres	Apr-Sep	x	x			
Leguminosae (Fabaceae)	<i>Oxytropis oreophila</i> var. jonesii	Jones' locoweed	Native	Pres	May-Aug	x		x		
Leguminosae (Fabaceae)	<i>Oxytropis oreophila</i> var. juniperina	Bicknell locoweed	Native	Pres	May-Aug			x		
Leguminosae (Fabaceae)	<i>Oxytropis oreophila</i> var. oreophila	mountain locoweed	Native	Pres	May-Aug			x		

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

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/ Grs	Pin- Jun	Mont Conf	Wet	Comments
<i>Perennial Forbs, cont.</i>										
Leguminosae (Fabaceae)	<i>Pediomelum pariense</i>	Paria breadroot	Native	Pres	Jun–Jul		x	x		Claron barrens
Leguminosae (Fabaceae)	<i>Trifolium gymnocarpon</i>	dwarf clover	Native	Pres	Apr–Aug	x	x	x		
Leguminosae (Fabaceae)	<i>Trifolium repens</i>	white clover	Intro	Pres	Apr–Sep				x	
Leguminosae (Fabaceae)	<i>Vicia americana</i> var. <i>americana</i>	American vetch	Native	Pres	May–Aug	x	x	x		
Liliaceae (Alliaceae)	<i>Allium acuminatum</i>	taper-tip onion	Native	Hist	May–Jul	x	x	x		
Liliaceae (Alliaceae)	<i>Allium bisceptrum</i>	twincrest onion	Native	Hist	May–Jul	x	x	x		
Liliaceae (Alliaceae)	<i>Allium nevadense</i>	Nevada onion	Native	Pres	Apr–Jul	x	x			
Liliaceae (Asparagaceae)	<i>Asparagus officinalis</i>	asparagus	Intro	Pres	Jun–Jul				x	
Liliaceae (Calochortaceae)	<i>Calochortus nuttallii</i>	sego-lily	Native	Pres	Jun–Jul	x	x	x		
Liliaceae	<i>Fritillaria atropurpurea</i>	leopard-lily	Native	Pres	Apr–Jul	x	x	x		
Liliaceae (Anthericaceae)	<i>Leucocrinum montanum</i>	star-lily	Native	Pres	Apr–Jun	x	x	x		
Liliaceae (Convallariaceae, Ruscaceae)	<i>Smilacina stellata</i>	starry false Solomon's-seal	Native	Pres	Apr–Jun	x	x	x	x	
Liliaceae (Melanthiaceae)	<i>Zigadenus elegans</i>	mountain death camas	Native	Pres	Jun–Aug			x	x	
Linaceae	<i>Linum kingii</i>	King's yellow flax	Native	Pres	May–Aug	x	x	x		Claron barrens
Linaceae	<i>Linum perenne</i> ssp. <i>lewisii</i>	blue flax	Native	Pres	Apr–Aug	x	x	x		
Loasaceae	<i>Mentzelia multiflora</i>	desert stickleaf	Native	Pres	Apr–Sep	x				
Malvaceae	<i>Sphaeralcea coccinea</i>	scarlet globe-mallow	Native	Pres	Apr–Oct	x	x	x		
Malvaceae	<i>Sphaeralcea parvifolia</i>	small-leaf globemallow	Native	Pres	Mar–Oct	x	x			
Monotropaceae (Ericaceae)	<i>Pterospora andromedea</i>	woodland pinedrops	Native	Pres	Jun–Sep			x		
Nyctaginaceae	<i>Abronia fragrans</i>	fragrant sand-verbena	Native	Pres	Apr–Sep	x	x	x		
Nyctaginaceae	<i>Abronia nana</i>	low sand-verbena	Native	Pres	Apr–Sep	x	x			
Nyctaginaceae	<i>Mirabilis linearis</i> var. <i>linearis</i>	narrowleaf four-o' clock	Native	Rep	May–Aug	x	x			
Onagraceae	<i>Calylophus lavandulifolius</i>	lavender-leaf sundrops	Native	Pres	May–Aug	x	x	x		Claron barrens

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

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/ Grs	Pin-Jun	Mont Conf	Wet	Comments
<i>Perennial Forbs, cont.</i>										
Onagraceae	<i>Epilobium angustifolium</i> var. <i>canescens</i>	fireweed	Native	Rep	Jun-Sep	x		x	x	
Onagraceae	<i>Epilobium halleanum</i>	Hall's willow-herb	Native	Pres	Jun-Aug				x	
Onagraceae	<i>Oenothera caespitosa</i> var. <i>crinita</i>	Jones' evening-primrose	Native	Pres	Apr-Jun	x	x	x		
Onagraceae	<i>Oenothera caespitosa</i> var. <i>marginata</i>	long-tube evening-primrose	Native	Pres	Apr-Jun	x	x	x		
Onagraceae	<i>Oenothera coronopifolia</i>	hairy-throat evening-primrose	Native	Hist	Jun-Aug	x	x	x		
Onagraceae	<i>Oenothera flava</i> var. <i>flava</i>	yellow evening-primrose	Native	Pres	Jun-Jul	x		x	x	
Onagraceae	<i>Oenothera howardii</i>	bronze evening-primrose	Native	Pres	May-Jul	x	x	x		
Onagraceae	<i>Oenothera longissima</i>	Bridges evening-primrose	Native	Rep	Jul-Sep				x	
Onagraceae	<i>Oenothera pallida</i> var. <i>pallida</i>	pale evening-primrose	Native	Pres	May-Jul	x	x	x		
Orchidaceae	<i>Corallorhiza maculata</i>	spotted coral-root	Native	Pres	Jun-Jul			x		
Orchidaceae	<i>Corallorhiza striata</i>	striped coral-root	Native	Pres	Jun-Jul			x		
Orchidaceae	<i>Epipactis gigantea</i>	giant helleborine	Native	Pres	Apr-Aug				x	
Orchidaceae	<i>Habenaria dilatata</i>	Lindley's white bog-orchid	Native	Rep	Jun-Aug				x	
Orchidaceae	<i>Habenaria sparsiflora</i> var. <i>sparsiflora</i>	slender bog orchid	Native	Pres	Jun-Jul				x	
Orobanchaceae	<i>Orobanche fasciculata</i>	clustered broomrape	Native	Pres	Jun-Jul	x	x	x		
Plantaginaceae	<i>Plantago eriopoda</i>	woolly-base plantain	Native	Pres	May-Aug	x				
Plantaginaceae	<i>Plantago lanceolata</i>	English plantain	Intro	Pres	May-Aug				x	
Polemoniaceae	<i>Ipomopsis aggregata</i> var. <i>aggregata</i>	scarlet gilia	Native	Pres	May-Aug	x	x	x		
Polemoniaceae	<i>Ipomopsis aggregata</i> var. <i>maculata</i>	scarlet gilia	Native	Pres	May-Aug		x	x		
Polemoniaceae	<i>Ipomopsis congesta</i> var. <i>frutescens</i>	shrubby gilia	Native	Pres	Jun-Sep		x	x		
Polemoniaceae	<i>Leptodactylon caespitosum</i>	matted prickly-phlox	Native	Pres	May-Jul	x	x	x		
Polemoniaceae	<i>Linanthastrum nuttallii</i>	Nuttall's linanthus	Native	Hist	Jun-Aug	x	x	x		
Polemoniaceae	<i>Phlox austromontana</i> var. <i>austromontana</i>	desert phlox	Native	Pres	Apr-Jun	x	x	x		
Polemoniaceae	<i>Phlox gladiiformis</i>	daggerleaf phlox	Native	Pres	May-Jun		x	x		Claron barrens

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

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Grass	Pin-Jun	Mont Conf	Wet	Comments
<i>Perennial Forbs, cont.</i>										
Polemoniaceae	<i>Phlox hoodii</i> var. <i>canescens</i>	carpet phlox	Native	Pres	Apr–Jun	x	x	x		
Polemoniaceae	<i>Phlox longifolia</i>	long-leaf phlox	Native	Pres	Apr–Jul	x	x	x		
Polemoniaceae	<i>Polemonium caeruleum</i> var. <i>pterospermum</i>	western Jacob's-ladder	Native	Pres	Jun–Aug				x	
Polygonaceae	<i>Eriogonum alatum</i>	winged wild buckwheat	Native	Pres	Jun–Oct	x	x			
Polygonaceae	<i>Eriogonum aretioides</i>	Widtoe wild buckwheat	Native	Rep	May–Aug			x		Claron barrens
Polygonaceae	<i>Eriogonum microthecum</i> var. <i>simpsonii</i>	slender wild buckwheat	Native	Pres	Jun–Oct	x	x	x		
Polygonaceae	<i>Eriogonum panguicense</i>	Panguitch wild buckwheat	Native	Pres	Jun–Sep	x	x	x		Claron barrens
Polygonaceae	<i>Eriogonum racemosum</i> var. <i>racemosum</i>	redroot wild buckwheat	Native	Pres	Jun–Oct	x	x	x		
Polygonaceae	<i>Eriogonum umbellatum</i> var. <i>porteri</i>	Porter's wild buckwheat	Native	Pres	Jul–Sep			x		
Polygonaceae	<i>Eriogonum umbellatum</i> var. <i>subaridum</i>	arid wild buckwheat	Native	Pres	Jun–Oct	x	x	x		
Polygonaceae	<i>Polygonum viviparum</i>	alpine bistort	Native	Pres	Jun–Sep			x	x	
Polygonaceae	<i>Rumex crispus</i>	curly dock	Intro	Pres	May–Sep				x	Disturbed areas
Polygonaceae	<i>Rumex salicifolius</i> ssp. <i>triangulivalvis</i>	willow dock	Native	Rep	May–Sep	x	x	x		
Primulaceae	<i>Dodecatheon pulchellum</i> var. <i>pulchellum</i>	dark-throat shooting-star	Native	Pres	Mar–Aug				x	
Primulaceae	<i>Primula incana</i>	silvery primrose	Native	Rep	Jun–Aug				x	
Pyrolaceae (Ericaceae)	<i>Pyrola asarifolia</i>	pink wintergreen	Native	Pres	Jun–Aug			x	x	
Pyrolaceae (Ericaceae)	<i>Pyrola chlorantha</i>	green-flowered wintergreen	Native	Pres	Jun–Aug			x		
Pyrolaceae (Ericaceae)	<i>Pyrola picta</i>	whiteveined wintergreen	Native	Pres	Jun–Aug			x		
Ranunculaceae (Helleboraceae)	<i>Aconitum columbianum</i> var. <i>columbianum</i>	Columbian monkshood	Native	Pres	Jun–Aug				x	
Ranunculaceae	<i>Anemone multifida</i> var. <i>tetonensis</i>	cutleaf anemone	Native	Pres	Jun–Aug	x		x		
Ranunculaceae (Helleboraceae)	<i>Aquilegia coerulea</i>	Colorado columbine	Native	Pres	Jun–Aug	x	x	x		

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

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/ Grs	Pin- Jun	Mont Conf	Wet	Comments
<i>Perennial Forbs, cont.</i>										
Ranunculaceae (Helleboraceae)	<i>Aquilegia scopulorum</i> var. <i>scopulorum</i>	rock columbine	Native	Pres	Jun–Aug		x	x		Claron barrens
Ranunculaceae	<i>Clematis columbiana</i>	Columbian virgin's-bower	Native	Pres	May–Sep	x		x		
Ranunculaceae	<i>Clematis ligusticifolia</i>	white virgin's-bower	Native	Pres	Jul–Aug				x	
Ranunculaceae (Helleboraceae)	<i>Delphinium andersonii</i> var. <i>scaposum</i>	pale larkspur	Native	Pres	Apr–Jun		x			
Ranunculaceae (Helleboraceae)	<i>Delphinium nuttallianum</i>	Nuttall's larkspur	Native	Pres	Apr–Jul	x	x	x		
Ranunculaceae	<i>Ranunculus cymbalaria</i>	marsh buttercup	Native	Pres	May–Sep				x	
Ranunculaceae	<i>Ranunculus inamoenus</i>	drab buttercup	Native	Pres	Jun–Sep			x		
Ranunculaceae (Thalictraceae)	<i>Thalictrum alpinum</i>	alpine meadow-rue	Native	Pres	Jul–Aug				x	
Ranunculaceae (Thalictraceae)	<i>Thalictrum fendleri</i>	Fendler's meadow-rue	Native	Pres	Jun–Aug			x	x	
Rosaceae	<i>Fragaria virginiana</i>	Virginia strawberry	Native	Pres	Jun–Jul			x	x	
Rosaceae	<i>Ivesia gordonii</i>	Gordon's ivesia	Native	Hist	Jun–Aug			x		
Rosaceae	<i>Ivesia kingii</i>	King's ivesia	Native	Hist	Jun–Aug				x	
Rosaceae	<i>Ivesia sabulosa</i>	Sevier ivesia	Native	Pres	Jun–Aug	x	x	x		
Rosaceae	<i>Potentilla anserina</i>	silverweed	Native	Pres	May–Aug				x	
Rosaceae	<i>Potentilla concinna</i> var. <i>bicrenata</i>	bicrenate cinquefoil	Native	Pres	May–Jun	x	x	x		
Rosaceae	<i>Potentilla concinna</i> var. <i>modesta</i>	modest cinquefoil	Native	Rep	Jun–Aug		x	x		
Rosaceae	<i>Potentilla crinita</i>	hair-tuft cinquefoil	Native	Pres	Jul–Aug	x	x	x		
Rosaceae	<i>Potentilla hippiana</i>	woolly cinquefoil	Native	Pres	Jul–Aug			x		
Rosaceae	<i>Potentilla pensylvanica</i>	Pennsylvania cinquefoil	Native	Pres	Jul–Aug			x		
Rosaceae	<i>Potentilla plattensis</i>	Platte River cinquefoil	Native	Pres	Jun–Jul				x	
Rubiaceae	<i>Galium trifidum</i>	small bedstraw	Native	Pres	Jul–Aug				x	
Rubiaceae	<i>Kelloggia galioides</i>	milky kelloggia	Native	Pres	Jun–Aug			x		
Santalaceae	<i>Comandra umbellata</i> var. <i>pallida</i>	bastard toadflax	Native	Pres	Apr–Aug	x	x	x		
Saxifragaceae	<i>Lithophragma tenellum</i>	slender woodlandstar	Native	Pres	Apr–Aug	x	x	x	x	
Saxifragaceae (Parnassiaceae)	<i>Parnassia palustris</i> var. <i>montanensis</i>	marsh grass-of-Parnassus	Native	Pres	May–Oct				x	

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

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/ Grs	Pin-Jun	Mont Conf	Wet	Comments
Perennial Forbs, cont.										
Scrophulariaceae	<i>Castilleja chromosa</i>	desert paintbrush	Native	Pres	Apr–Jun	x	x			
Scrophulariaceae	<i>Castilleja linariifolia</i>	Wyoming paintbrush	Native	Pres	Jul–Aug	x	x	x		
Scrophulariaceae	<i>Castilleja parvula</i> var. <i>revealii</i>	Reveal's paintbrush	Native	Pres	Jun–Aug			x		Claron barrens
Scrophulariaceae	<i>Mimulus guttatus</i>	yellow monkeyflower	Native	Pres	Jun–Aug				x	
Scrophulariaceae	<i>Pedicularis centranthera</i>	dwarf lousewort	Native	Pres	Apr–Jun		x	x		
Scrophulariaceae	<i>Penstemon bracteatus</i>	Red Canyon penstemon	Native	Pres	May–Jul			x		Claron barrens
Scrophulariaceae	<i>Penstemon caespitosus</i> var. <i>desertipicti</i>	painted penstemon	Native	Pres	May–Jul	x	x	x		
Scrophulariaceae	<i>Penstemon comarrhenus</i>	dusty penstemon	Native	Pres	Jun–Aug		x	x		
Scrophulariaceae	<i>Penstemon eatonii</i> var. <i>eatonii</i>	Eaton's firecracker	Native	Pres	May–Jul		x	x		
Scrophulariaceae	<i>Penstemon eatonii</i> var. <i>undulosus</i>	undulate penstemon	Native	Pres	May–Jul	x	x	x		
Scrophulariaceae	<i>Penstemon leiophyllus</i> var. <i>leiophyllus</i>	Markagunt penstemon	Native	Pres	Jun–Aug	x	x	x		
Scrophulariaceae	<i>Penstemon pachyphyllus</i> var. <i>congestus</i>	Rockville penstemon	Native	Pres	May–Jul	x	x	x		
Scrophulariaceae	<i>Penstemon procerus</i> var. <i>aberrans</i>	smallflower penstemon	Native	Pres	Jun–Aug	x		x		
Scrophulariaceae	<i>Penstemon rostriflorus</i>	beaked penstemon	Native	Pres	Jun–Aug		x	x	x	
Scrophulariaceae	<i>Penstemon strictus</i>	Rocky Mountain penstemon	Native	Pres	Jun–Aug	x	x	x		
Scrophulariaceae	<i>Penstemon utahensis</i>	Utah penstemon	Native	Pres	Apr–Jun	x	x			
Scrophulariaceae	<i>Verbascum thapsus</i>	woolly mullein	Intro	Pres	Jun–Aug	x	x			
Scrophulariaceae	<i>Veronica americana</i>	American brooklime	Native	Pres	Jul–Aug				x	
Umbelliferae (Apiaceae)	<i>Angelica pinnata</i>	pinnate angelica	Native	Pres	Jun–Aug				x	
Umbelliferae (Apiaceae)	<i>Berula erecta</i> var. <i>incisa</i>	cutleaf water-parsnip	Native	Pres	Jun–Sep				x	
Umbelliferae (Apiaceae)	<i>Cymopterus lemmonii</i>	Lemmon's spring-parsley	Native	Pres	Jul–Aug			x		
Umbelliferae (Apiaceae)	<i>Cymopterus minimus</i>	least spring-parsley	Native	Pres	Jul–Aug					Claron barrens
Umbelliferae (Apiaceae)	<i>Cymopterus purpureus</i> var. <i>purpureus</i>	Colorado Plateau spring-parsley	Native	Pres	Apr–Jun	x	x	x		

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

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/ Grs	Pin- Jun	Mont Conf	Wet	Comments
<i>Perennial Forbs, cont.</i>										
Umbelliferae (Apiaceae)	<i>Ligusticum porteri</i>	southern ligusticum	Native	Pres	Jun–Aug	x		x		
Umbelliferae (Apiaceae)	<i>Lomatium minimum</i>	least lomatium	Native	Pres	May–Jun			x		Claron limestone
Umbelliferae (Apiaceae)	<i>Lomatium parryi</i>	Parry's lomatium	Native	Pres	Apr–Jun	x	x	x		
Valerianaceae	<i>Valeriana acutiloba</i>	mountain valerian	Native	Pres	Jun–Jul			x		
Valerianaceae	<i>Valeriana edulis</i>	tobacco-root	Native	Pres	Jun–Aug	x		x		
Verbenaceae	<i>Verbena bracteata</i>	prostrate vervain	Native	Pres	May–Sep	x	x	x		
Violaceae	<i>Viola adunca</i>	hook-spur violet	Native	Pres	Mar–Aug			x		
Violaceae	<i>Viola nephrophylla</i>	northern bog violet	Native	Pres	Apr–Jul				x	
Violaceae	<i>Viola purpurea</i> var. <i>venosa</i>	goose-foot violet	Native	Rep	Mar–Aug	x	x	x		
Viscaceae	<i>Arceuthobium cyanocarpum</i>	limber pine dwarf-mistletoe	Native	Pres	Aug			x		
Viscaceae	<i>Arceuthobium divaricatum</i>	pinyon dwarf-mistletoe	Native	Pres	Aug–Sep		x			
Viscaceae	<i>Arceuthobium douglasii</i>	Douglas-fir dwarf-mistletoe	Native	Pres	Mar–May			x		
Viscaceae	<i>Arceuthobium vaginatum</i> var. <i>cryptopodium</i>	southwestern dwarf-mistletoe	Native	Rep	May–Jun			x		
Viscaceae	<i>Phoradendron juniperinum</i>	juniper mistletoe	Native	Pres	Jul–Sep		x			
<b>Annual Forbs</b>										
Amaranthaceae	<i>Amaranthus blitoides</i>	prostrate pigweed	Native	Hist	Jun–Sep	x				Disturbed areas
Boraginaceae	<i>Cryptantha fendleri</i>	sand dune cryptanth	Native	Hist	May–Jul	x	x	x		
Boraginaceae	<i>Lappula occidentalis</i> var. <i>cupulata</i>	cupseed stickseed	Native	Pres	Apr–Jun	x	x	x		
Boraginaceae	<i>Lappula occidentalis</i> var. <i>occidentalis</i>	western stickseed	Native	Pres	Apr–Jun	x	x	x		
Capparaceae (Cleomaceae)	<i>Cleome lutea</i>	yellow beeplant	Native	Hist	Apr–Sep	x	x	x		
Capparaceae (Cleomaceae)	<i>Cleomella palmeriana</i> var. <i>palmeriana</i>	Palmer's stinkweed	Native	Pres	Apr–Oct		x			Clay soils
Chenopodiaceae	<i>Atriplex powellii</i> var. <i>powellii</i>	Powell's orach	Native	Pres	Jun–Sep	x	x			Clay soils
Chenopodiaceae	<i>Bassia scoparia</i>	summer-cypress	Intro	Pres	Aug–Oct	x	x			Disturbed areas



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

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/ Grs	Pin- Jun	Mont Conf	Wet	Comments
<i>Annual Forbs, cont.</i>										
Chenopodiaceae	<i>Chenopodium album</i> var. <i>album</i>	lambquarter	Intro	Rep	Jun-Sep	x				Disturbed areas
Chenopodiaceae	<i>Chenopodium atrovirens</i>	mountain goosefoot	Native	Hist	Jul-Sep	x	x	x		
Chenopodiaceae	<i>Chenopodium capitatum</i> var. <i>parvicapitatum</i>	smallhead goosefoot	Native	Pres	Jun-Sep			x		
Chenopodiaceae	<i>Chenopodium fremontii</i> var. <i>incanum</i>	silvery goosefoot	Native	Pres	Jun-Aug		x	x		
Chenopodiaceae	<i>Chenopodium leptophyllum</i>	narrow-leaf goosefoot	Native	Pres	Jul-Sep	x		x		
Chenopodiaceae	<i>Halogeton glomeratus</i>	halogeton	Intro	Pres	Jul-Aug		x			Disturbed areas
Chenopodiaceae	<i>Salsola tragus</i>	Russian thistle	Intro	Pres	Jun-Sep					Disturbed areas
Chenopodiaceae	<i>Suaeda torreyana</i> var. <i>torreyana</i>	Torrey's seepweed	Native	Pres	Jun-Sep				x	
Compositae (Asteraceae)	<i>Conyza canadensis</i> var. <i>glabrata</i>	Canadian horseweed	Native	Pres	Jul-Sep				x	
Compositae (Asteraceae)	<i>Helianthus annuus</i> var. <i>lenticularis</i>	common sunflower	Native	Pres	Jun-Sep		x			Disturbed areas
Compositae (Asteraceae)	<i>Lactuca serriola</i>	prickly lettuce	Intro	Pres	Jul-Sep	x	x			Disturbed areas
Compositae (Asteraceae)	<i>Lygodesmia spinosa</i>	thorny wire-lettuce	Native	Pres	Jul-Sep	x	x	x		
Compositae (Asteraceae)	<i>Sonchus asper</i>	spiny-leaf sow-thistle	Intro	Pres	Jul-Oct				x	
Compositae (Asteraceae)	<i>Verbesina encelloides</i> var. <i>exauriculata</i>	golden crownbeard	Native	Hist	May-Oct	x	x			
Compositae (Asteraceae)	<i>Viguiera longifolia</i> var. <i>annua</i>	southern goldeneye	Native	Pres	Jun-Oct		x			Clay soils
Cruciferae (Brassicaceae)	<i>Brassica nigra</i>	black mustard	Intro	Hist	May-Aug					Disturbed areas
Cruciferae (Brassicaceae)	<i>Capsella bursa-pastoris</i>	shepherd's-purse	Intro	Pres	Apr-Sep	x				Disturbed areas
Cruciferae (Brassicaceae)	<i>Conringia orientalis</i>	hare's-ear mustard	Intro	Pres	Apr-Aug	x	x			
Cruciferae (Brassicaceae)	<i>Descurainia incana</i> var. <i>sonnei</i>	mountain tansy-mustard	Native	Rep	Apr-Jul	x		x		

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

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/ Grs	Pin-Jun	Mont Conf	Wet	Comments
<i>Annual Forbs, cont.</i>										
Cruciferae (Brassicaceae)	<i>Descurainia pinnata</i> var. <i>intermedia</i>	western tansy-mustard	Native	Pres	Mar-Aug	x	x			
Cruciferae (Brassicaceae)	<i>Descurainia pinnata</i> var. <i>osmiarum</i>	western tansy-mustard	Native	Pres	Mar-Aug	x	x	x		
Cruciferae (Brassicaceae)	<i>Descurainia sophia</i>	flixweed	Intro	Pres	Mar-Aug	x	x			Disturbed areas
Cruciferae (Brassicaceae)	<i>Lepidium densiflorum</i> var. <i>densiflorum</i>	prairie pepperwort	Native	Pres	May-Jul	x	x	x		
Cruciferae (Brassicaceae)	<i>Lepidium perfoliatum</i>	clasping pepperwort	Intro	Pres	May-Jul	x	x			
Cruciferae (Brassicaceae)	<i>Malcolmia africana</i>	African mustard	Intro	Pres	Apr-Jul					Disturbed areas
Cruciferae (Brassicaceae)	<i>Thlaspi arvense</i>	field pennycress	Intro	Pres	May-Aug					Disturbed areas
Gentianaceae	<i>Gentianaella tortuosa</i>	Jones' gentian	Native	Pres	Jul-Aug	x		x		
Gentianaceae	<i>Gentianopsis detonsa</i> var. <i>elegans</i>	meadow gentian	Native	Pres	Jul-Sep			x	x	
Geraniaceae	<i>Erodium cicutarium</i>	stork's-bill	Intro	Pres	Feb-Oct	x	x			Disturbed areas
Hydrophyllaceae	<i>Phacelia demissa</i> var. <i>demissa</i>	brittle phacelia	Native	Rep	May-Jun	x				Tropic Shale
Hydrophyllaceae	<i>Phacelia mammillarensis</i>	Nipple Bench phacelia	Native	Pres	Apr-Jun	x				Clay soils
Leguminosae (Fabaceae)	<i>Lupinus kingii</i> var. <i>argillaceus</i>	King's lupine	Native	Pres	May-Aug		x			
Leguminosae (Fabaceae)	<i>Lupinus kingii</i> var. <i>kingii</i>	King's lupine	Native	Pres	May-Aug	x	x	x		
Leguminosae (Fabaceae)	<i>Medicago lupulina</i>	black medick	Intro	Pres	May-Oct				x	Disturbed areas
Linaceae	<i>Linum australe</i>	small yellow flax	Native	Pres	Jun-Aug	x	x	x		
Malvaceae	<i>Malva neglecta</i>	common mallow	Intro	Pres	Apr-Oct					Disturbed areas
Onagraceae	<i>Camissonia scapoidea</i> var. <i>scapoidea</i>	Paiute suncup	Native	Rep	May-Jun	x				
Onagraceae	<i>Gayophytum racemosum</i>	raceme groundsmoke	Native	Pres	May-Aug	x	x	x		
Onagraceae	<i>Gayophytum ramosissimum</i>	branching groundsmoke	Native	Pres	May-Aug	x	x	x		
Onagraceae	<i>Oenothera albicaulis</i>	white-stem evening-primrose	Native	Pres	Mar-Jun		x		x	

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

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/ Grs	Pin-Jun	Mont Conf	Wet	Comments
<i>Annual Forbs, cont.</i>										
Papaveraceae	<i>Eschscholzia californica</i>	California poppy	Intro	Pres	Apr–May					Cultivated
Polygonaceae	<i>Eriogonum cernuum</i> var. <i>cernuum</i>	nodding wild buckwheat	Native	Pres	Apr–Oct	x	x	x		
Polygonaceae	<i>Eriogonum subreniforme</i>	kidney-shaped wild buckwheat	Native	Pres	Apr–Oct	x	x			
Polygonaceae	<i>Polygonum aviculare</i>	yard knotweed	Intro	Pres	May–Oct					Disturbed areas
Polygonaceae	<i>Polygonum convolvulus</i>	black-bindweed	Intro	Pres	May–Oct					Disturbed areas
Polygonaceae	<i>Polygonum douglasii</i> var. <i>johnstonii</i>	Sawatch knotweed	Native	Pres	Jun–Aug	x	x			
Primulaceae	<i>Androsace septentrionalis</i>	pygmy-flower rock-jasmine	Native	Pres	May–Aug	x	x	x		
Scrophulariaceae	<i>Cordylanthus kingii</i> var. <i>kingii</i>	King's bird's-beak	Native	Pres	Jun–Sep	x	x	x		
Scrophulariaceae	<i>Cordylanthus parviflorus</i>	smallflower bird's-beak	Native	Rep	Aug–Sep	x	x			
Scrophulariaceae	<i>Cordylanthus wrightii</i>	Wright's bird's-beak	Native	Rep	Jul–Sep	x	x			
Scrophulariaceae	<i>Mimulus rubellus</i>	reddish monkeyflower	Native	Pres	Apr–Jun	x	x	x		
Scrophulariaceae	<i>Orthocarpus luteus</i>	yellow owl-clover	Native	Pres	Jul–Aug	x		x	x	
Scrophulariaceae	<i>Orthocarpus purpureoalbus</i>	violet owl-clover	Native	Pres	Jul–Aug		x	x		
Solanaceae	<i>Solanum rostratum</i>	buffalobur	Intro	Pres	Jun–Sep					Disturbed areas
Solanaceae	<i>Solanum sarrachooides</i>	ground-cherry nightshade	Intro	Pres	May–Oct					Disturbed areas
Solanaceae	<i>Solanum triflorum</i>	cut-leaf nightshade	Native	Hist	May–Sep	x	x			
<b>Perennial Graminoids</b>										
Cyperaceae	<i>Carex athrostachya</i>	slender-beaked sedge	Native	Pres	May–Aug				x	
Cyperaceae	<i>Carex aurea</i>	golden sedge	Native	Pres	Apr–Aug				x	
Cyperaceae	<i>Carex douglasii</i>	Douglas' sedge	Native	Pres	Apr–Aug	x	x			
Cyperaceae	<i>Carex duriuscula</i>	narrowleaf sedge	Native	Pres	Jun–Jul	x	x			
Cyperaceae	<i>Carex interior</i>	inland sedge	Native	Pres	May–Jul				x	
Cyperaceae	<i>Carex microptera</i>	small-wing sedge	Native	Pres	Jun–Aug				x	
Cyperaceae	<i>Carex nebrascensis</i>	Nebraska sedge	Native	Rep	May–Jul				x	
Cyperaceae	<i>Carex oederi</i> var. <i>viridula</i>	green sedge	Native	Pres	Jun–Aug				x	
Cyperaceae	<i>Carex pellita</i>	woolly sedge	Native	Pres	May–Sep				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		
Cyperaceae	<i>Carex utricularata</i>	beaked sedge	Native	Pres	Jun–Aug				x	

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

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/ Grs	Pin- Jun	Mont Conf	Wet	Comments
<i>Perennial Graminoids, cont.</i>										
Cyperaceae	<i>Carex valliscola</i>	valley sedge	Native	Pres	May-Jul	x		x		
Cyperaceae	<i>Eleocharis palustris</i>	common spikerush	Native	Pres	May-Aug				x	
Cyperaceae	<i>Eleocharis quinqueflora</i>	few-flower spikerush	Native	Pres	Jun-Aug				x	
Cyperaceae	<i>Eleocharis rostellata</i>	beaked spikerush	Native	Rep	Jun-Aug				x	
Cyperaceae	<i>Scirpus pungens</i> var. <i>longispicatus</i>	three-square bulrush	Native	Pres	May-Aug				x	
Gramineae (Poaceae)	<i>Agropyron cristatum</i>	crested wheatgrass	Intro	Pres	Jun-Aug	x	x	x		
Gramineae (Poaceae)	<i>Agrostis stolonifera</i>	redtop	Intro	Pres	Jun-Sep				x	
Gramineae (Poaceae)	<i>Aristida purpurea</i>	purple three-awn	Native	Pres	Mar-Sep	x	x	x		
Gramineae (Poaceae)	<i>Bouteloua gracilis</i>	blue grama	Native	Pres	Jul-Sep	x	x	x		
Gramineae (Poaceae)	<i>Bromus anomalus</i>	nodding brome	Native	Pres	Jun-Aug	x	x	x		
Gramineae (Poaceae)	<i>Bromus carinatus</i>	mountain brome	Native	Pres	May-Aug	x		x		
Gramineae (Poaceae)	<i>Bromus ciliatus</i>	fringed brome	Native	Pres	Jul-Sep			x		
Gramineae (Poaceae)	<i>Bromus inermis</i> var. <i>inermis</i>	smooth brome	Intro	Pres	Jun-Aug		x	x	x	
Gramineae (Poaceae)	<i>Calamagrostis scopolorum</i>	Jones' reedgrass	Native	Pres	Jul-Aug			x	x	
Gramineae (Poaceae)	<i>Calamagrostis stricta</i>	slimstem reedgrass	Native	Pres	Jul-Aug				x	
Gramineae (Poaceae)	<i>Dactylis glomerata</i>	orchard grass	Intro	Pres	Jun-Aug	x		x		
Gramineae (Poaceae)	<i>Deschampsia cespitosa</i>	tufted hairgrass	Native	Pres	Jul-Sep			x	x	
Gramineae (Poaceae)	<i>Distichlis spicata</i>	desert saltgrass	Native	Pres	Jun-Sep				x	
Gramineae (Poaceae)	<i>Elymus canadensis</i>	Canada wildrye	Native	Pres	Jul-Aug				x	
Gramineae (Poaceae)	<i>Elymus cinereus</i>	Great Basin wildrye	Native	Pres	Jun-Aug	x	x	x	x	
Gramineae (Poaceae)	<i>Elymus elymoides</i>	squirreltail	Native	Pres	May-Aug	x	x	x	x	
Gramineae (Poaceae)	<i>Elymus glaucus</i>	blue wildrye	Native	Pres	Jul-Aug			x		
Gramineae (Poaceae)	<i>Elymus hispidus</i>	intermediate wheatgrass	Intro	Pres	Jun-Aug	x	x	x		
Gramineae (Poaceae)	<i>Elymus junceus</i>	Russian wildrye	Intro	Pres	Jun-Jul	x	x	x		
Gramineae (Poaceae)	<i>Elymus lanceolatus</i>	thickspike wheatgrass	Native	Pres	Jun-Aug	x	x	x		
Gramineae (Poaceae)	<i>Elymus salinus</i>	Salina wildrye	Native	Pres	Jun-Jul	x	x			
Gramineae (Poaceae)	<i>Elymus scribneri</i>	Scribner wheatgrass	Native	Pres	Jul-Aug			x		
Gramineae (Poaceae)	<i>Elymus smithii</i>	western wheatgrass	Native	Pres	Jun-Aug	x	x			
Gramineae (Poaceae)	<i>Elymus spicatus</i>	bluebunch wheatgrass	Native	Pres	Jun-Aug	x	x	x		
Gramineae (Poaceae)	<i>Elymus trachycaulus</i>	slender wheatgrass	Native	Pres	Jun-Aug	x		x	x	

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

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/ Grs	Pin- Jun	Mont Conf	Wet	Comments
<i>Perennial Graminoids, cont.</i>										
Gramineae (Poaceae)	<i>Festuca ovina</i> var. <i>saximontana</i>	Rocky Mountain fescue	Native	Pres	Jul-Aug			x		
Gramineae (Poaceae)	<i>Festuca pratensis</i>	meadow fescue	Intro	Pres	Jun-Aug			x	x	
Gramineae (Poaceae)	<i>Glyceria striata</i>	fowl mannagrass	Native	Pres	Jul-Aug				x	
Gramineae (Poaceae)	<i>Hilaria jamesii</i>	galleta	Native	Pres	May-Aug	x	x			
Gramineae (Poaceae)	<i>Hordeum brachyantherum</i>	meadow barley	Native	Pres	Jun-Aug			x	x	
Gramineae (Poaceae)	<i>Hordeum jubatum</i>	foxtail barley	Native	Pres	Jun-Aug	x	x	x	x	
Gramineae (Poaceae)	<i>Koeleria macrantha</i>	junegrass	Native	Pres	Jun-Aug	x	x	x		
Gramineae (Poaceae)	<i>Muhlenbergia andina</i>	foxtail muhly	Native	Pres	Jul-Sep				x	
Gramineae (Poaceae)	<i>Muhlenbergia asperifolia</i>	scratchgrass	Native	Pres	Jul-Aug				x	
Gramineae (Poaceae)	<i>Muhlenbergia montana</i>	mountain muhly	Native	Pres	Jul-Sep			x		
Gramineae (Poaceae)	<i>Muhlenbergia pungens</i>	sandhill muhly	Native	Pres	Jul-Sep	x	x			
Gramineae (Poaceae)	<i>Muhlenbergia richardsonis</i>	mat muhly	Native	Pres	Jul-Sep	x	x	x		
Gramineae (Poaceae)	<i>Oryzopsis micrantha</i>	littleseed ricegrass	Native	Pres	Jun-Aug	x	x	x		
Gramineae (Poaceae)	<i>Phleum pratense</i>	timothy	Intro	Pres	Jun-Sep	x	x	x	x	
Gramineae (Poaceae)	<i>Phragmites australis</i>	common reed	Native	Pres	Jul-Sep				x	
Gramineae (Poaceae)	<i>Poa compressa</i>	Canada bluegrass	Intro	Pres	Jun-Aug	x	x	x	x	
Gramineae (Poaceae)	<i>Poa fendleriana</i>	muttongrass	Native	Pres	May-Aug	x	x	x		
Gramineae (Poaceae)	<i>Poa glauca</i> var. <i>glauca</i>	interior bluegrass	Native	Pres	Jun-Aug			x		
Gramineae (Poaceae)	<i>Poa pratensis</i>	Kentucky bluegrass	Intro	Pres	May-Aug	x	x	x	x	
Gramineae (Poaceae)	<i>Poa secunda</i>	Sandberg's bluegrass	Native	Pres	Apr-Sep	x	x	x	x	
Gramineae (Poaceae)	<i>Puccinellia nuttalliana</i>	Nuttall's alkaligrass	Native	Pres	May-Aug	x				
Gramineae (Poaceae)	<i>Schizachyrium scoparium</i>	little bluestem	Native	Pres	Jul-Sep	x	x	x		
Gramineae (Poaceae)	<i>Spartina gracilis</i>	alkali cordgrass	Native	Pres	Jun-Sep				x	
Gramineae (Poaceae)	<i>Sporobolus airoides</i> var. <i>airoides</i>	alkali sacaton	Native	Pres	Jun-Aug	x	x			
Gramineae (Poaceae)	<i>Sporobolus cryptandrus</i>	sand dropseed	Native	Pres	Jun-Aug	x	x			
Gramineae (Poaceae)	<i>Stipa comata</i> var. <i>comata</i>	needle-and-thread	Native	Pres	May-Jul	x	x	x		
Gramineae (Poaceae)	<i>Stipa hymenoides</i>	Indian ricegrass	Native	Pres	May-Jul	x	x	x		
Gramineae (Poaceae)	<i>Stipa lettermanii</i>	Letterman's needlegrass	Native	Pres	Jul-Sep	x	x	x		
Gramineae (Poaceae)	<i>Stipa nelsonii</i> var. <i>nelsonii</i>	Nelson's needlegrass	Native	Pres	Jun-Sep	x	x	x		
Gramineae (Poaceae)	<i>Stipa pinetorum</i>	pine needlegrass	Native	Rep	Jun-Aug	x	x	x		

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

Family	Species name	Common name	Nativity	Park status	Flower time	Sage/Gr	Pin-Jun	Mont Conf	Wet	Comments
<i>Perennial Graminoids, cont.</i>										
Gramineae (Poaceae)	<i>Stipa x bloomeri</i>	Bloomer's ricegrass	Native	Pres	Jun-Aug	x	x			
Juncaceae	<i>Juncus arcticus</i>	Baltic rush	Native	Pres	May-Jul				x	
Juncaceae	<i>Juncus ensifolius</i> var. <i>brunnescens</i>	Tracy's rush	Native	Pres	Jun-Aug				x	
Juncaceae	<i>Juncus longistylus</i>	longstyle rush	Native	Pres	Jun-Aug				x	
Juncaceae	<i>Juncus torreyi</i>	Torrey's rush	Native	Pres	Jun-Aug				x	
Juncaginaceae	<i>Triglochin maritima</i> var. <i>elata</i>	seaside arrowgrass	Native	Pres	May-Aug				x	
Juncaginaceae	<i>Triglochin palustris</i>	marsh arrowgrass	Native	Pres	Jun-Aug				x	
Typhaceae	<i>Typha latifolia</i>	common cattail	Native	Pres	Jun-Aug				x	
<b>Annual Graminoids</b>										
Gramineae (Poaceae)	<i>Bromus japonicus</i>	Japanese chess	Intro	Pres	Jun-Aug	x	x		x	
Gramineae (Poaceae)	<i>Bromus tectorum</i>	cheatgrass	Intro	Pres	May-Jul	x	x			
Gramineae (Poaceae)	<i>Festuca octoflora</i>	six-weeks fescue	Native	Pres	Apr-Jun	x	x	x		
Gramineae (Poaceae)	<i>Muhlenbergia filiformis</i>	pullup muhly	Native	Pres	Jun-Aug			x		
Gramineae (Poaceae)	<i>Panicum capillare</i>	witchgrass	Native	Pres	Jun-Sep	x			x	
Gramineae (Poaceae)	<i>Setaria viridis</i>	green bristlegrass	Intro	Pres	Jun-Sep					Disturbed areas
Juncaceae	<i>Juncus bufonius</i>	toad rush	Native	Pres	Jun-Aug				x	
<b>Ferns and Allies</b>										
Equisetaceae	<i>Equisetum arvense</i>	field horsetail	Native	Pres	NA	x		x	x	
Equisetaceae	<i>Equisetum laevigatum</i>	smooth scouring-rush	Native	Pres	NA				x	
Equisetaceae	<i>Equisetum x nelsonii</i>	Nelson's scouring-rush	Native	Pres	NA				x	
Polypodiaceae (Adiantaceae)	<i>Cheilanthes feei</i>	slender lip-fern	Native	Pres	NA	x	x	x		Rock crevices
Polypodiaceae (Dennstaedtiaceae)	<i>Pteridium aquilinum</i> var. <i>pubescens</i>	bracken fern	Native	Pres	NA			x	x	

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.

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**National Park Service**  
**U.S. Department of the Interior**



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**Natural Resource Program Center**

1201 Oak Ridge Drive, Suite 150  
Fort Collins, Colorado 80525

[www.nature.nps.gov](http://www.nature.nps.gov)