

Vascular Plant Species Checklist  
of  
Bighorn Canyon National Recreation Area,  
Montana and Wyoming

Insert 4 pictures of "new" species discoveries –  
available upon request

Prepared for the National Park Service -  
Bighorn Canyon National Recreation Area  
and the Greater Yellowstone Network

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January 2002

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Cover caption: Additions to the Bighorn Canyon National Recreation Area flora include *Castilleja exilis* (Big Horn County, WY), *Dodecatheon conjugens* (Big Horn and Carbon cos., MT), *Oxytropis besseyi* var. *ventosa* (Carbon County, Montana), and *Rosa arkansana* (Big Horn County, Montana; starting upper left, moving clockwise.)

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## ABSTRACT

Under congressional mandate, each unit of the National Park Service is required to develop comprehensive species lists that capture at least 90% of their total flora and fauna. Bighorn Canyon National Recreation Area was surveyed extensively from 1976-1984, resulting in the documentation of over 650 vascular plant taxa for the park. Rare plant surveys in 1998-99, however, resulted in the discovery of 60 additional species, calling into question whether Bighorn Canyon NRA had achieved the 90% threshold. In 2001 we were contracted to revise the existing checklist of the park's flora and conduct field surveys in under-sampled habitats to identify potentially missing species. After extensive review of the existing literature and herbarium collections at Bighorn Canyon and the Rocky Mountain Herbarium, we identified 81 species that had been falsely reported for the park and 45 additional taxa that could not be verified. Our herbarium search and fieldwork also identified over 120 additional species that had not previously been identified for Bighorn Canyon, including 22 additional weed species. Our revised checklist now contains 739 vascular plant taxa, all of which have been verified with voucher specimens or reliable observation data. We also compiled a list of 148 potential species that could occur in the study area due to the presence of suitable habitat. If we add the 44 potential species with the highest probability of occurring in the park, the current checklist would still represent over 94% of the total flora. Some relatively inaccessible areas of the National Recreation Area and cryptic or taxonomically difficult species groups remain undersampled, but overall, the known flora of Bighorn Canyon is probably at or near the 90% target level.

## ACKNOWLEDGMENTS

We thank National Park Service staff for their interest, help and support. Lane Cameron (Biological Inventory Coordinator for the Greater Yellowstone Network) provided coordination throughout the project. Field plans were coordinated with Rick Lasko (Bighorn Canyon National Recreation Area). The planning contributions of Martina Keil, and the benefit of information on BICA herbarium additions compiled by Suzanne Morstad in addition to her observations were indispensable. Boat transportation was coordinated through Chris Ryan. We appreciate the opportunities to discuss this project with Darrell Cook, Theo Hugs, and other NPS staff.

The herbarium and data resources of the University of Wyoming - Rocky Mountain Herbarium (RM) were vital and are acknowledged with deepest gratitude. B. E. Nelson, manager of the RM, shared information from his collections at Bighorn Canyon in 1979-1980. Dr. Dennis Knight of the University of Wyoming provided a box of old data forms, photos, and original notes from the floristic and ecological studies of Robert Lichvar, Ellen Collins, and Yoshiko Akashi at Bighorn Canyon in the early 1980s. We thank Scott Laursen and Melanie Arnett for help in compiling herbarium information at the RM, and Martin Miller (Montana Natural Heritage Program) for help processing the 2001 rare plant information in Montana. Stuart Markow helped greatly in specimen review. The report benefited by the reviews of Robert Dorn, B. E. Nelson, Lane Cameron and Suzanne Morstad.

This project was conducted in collaboration with the Montana Natural Heritage Program. It was supported by the Inventory and Monitoring Initiative of the National Park Service - Greater Yellowstone Network.

## INTRODUCTION

The National Park Service established Bighorn Canyon National Recreation Area\* in 1966 to promote recreational opportunities on Yellowtail Reservoir and to protect historical sites, such as the Mason-Lovell Ranch and Bad Pass Trail. Due to its location at the confluence of the Great Plains, Central Rocky Mountains, and Wyoming Basins ecoregions, Bighorn Canyon harbors an unusually rich diversity of vegetation types and over two dozen locally endemic or rare plant species (Knight et al. 1987; Heidel and Fertig 2000). From a conservation perspective, Bighorn Canyon National Recreation Area is significant because it is one of the few areas in the northern Bighorn Basin and adjacent foothills of the Bighorn/Pryor Mountains that is permanently protected and managed with an emphasis on maintaining biological processes (Merrill et al. 1996).

An important mission of the National Park Service is to conserve the natural, recreational and cultural resources of each park unit for current and future generations. In spite of this emphasis, many parks have lacked comprehensive inventories of their flora and fauna or monitoring programs to assess impacts of management actions on target species. In 1998, Congress directed the Park Service to develop a program to inventory and monitor the biological resources of the entire park system in order provide better informed management decisions. Since 1999, the Park Service has been conducting regional expert workshops to determine the state of existing knowledge on the biota of each park and to identify data gaps and research needs. The ultimate goal of this effort is to attain a 90% complete species checklist and develop monitoring programs for each park unit (National Park Service 2000).

An initial floristic survey of Bighorn Canyon by Lichvar et al. (1985) documented 656 vascular plant taxa for the National Recreation Area. In conjunction with a rare plant inventory in 1998-1999, Heidel and Fertig (2000) documented 60 additional plant taxa for the NRA, calling into question whether the existing checklist represented at least 90% of the actual flora. In April 2001, the Greater Yellowstone Network of the National Park Service contracted with the University of Wyoming's Natural Diversity Database (WYNDD) to revise the existing checklist and conduct new field surveys to assess whether the 90% representation goal had been achieved. In addition, WYNDD was charged with documenting new localities of noxious weeds and rare plants. The results of this study are summarized on the following pages. This report includes an annotated checklist of the known flora of Bighorn Canyon, lists of falsely reported and unconfirmed species, and a list of plants that potentially occur in the area.

## STUDY AREA

Bighorn Canyon National Recreation Area parallels Yellowtail Reservoir (Bighorn Lake) for 71 miles from the vicinity of Kane, Wyoming to Fort Smith, Montana (Figure 1). It encompasses 22,499 ha (55,595 acres) and ranges in elevation from 1100-2450 meters (3600-8040 ft). It also includes the Yellowtail Reservoir that has completely inundated the original Bighorn Canyon.

\* The NPS code that is used to denote Bighorn Canyon National Recreation Area is "BICA". This code is used in the report to refer to both the study area and the NPS herbarium facility in particular.

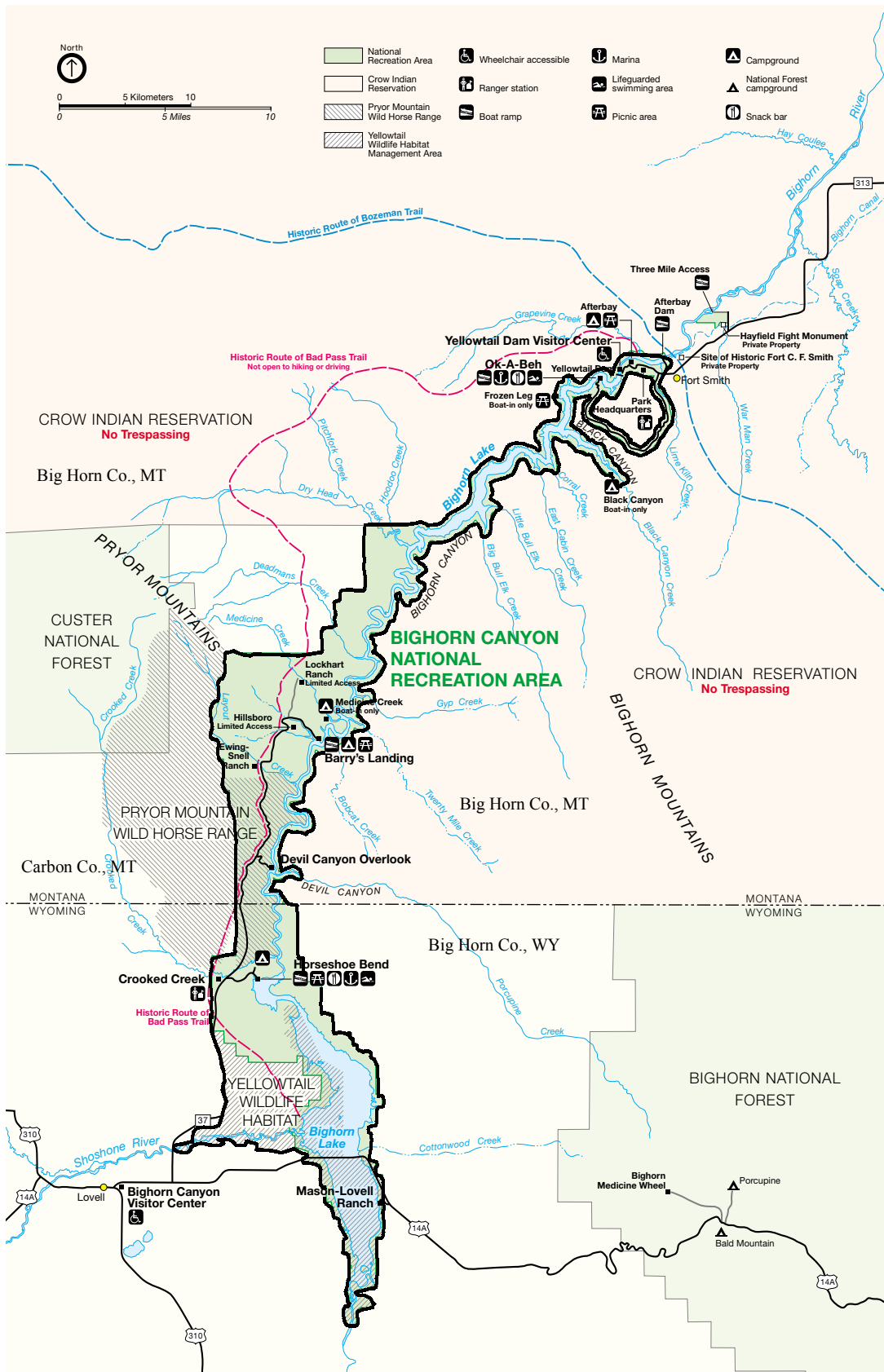
Downcutting by the Bighorn River and regional faulting and erosion have exposed thick Paleozoic limestone and dolomite cliffs, soft red Cretaceous sandstones, and Quaternary alluvium and pediments (Love and Christensen 1985). Knight et al. (1987) documented 21 main vegetation types in the study area, ranging from lakeshore marshes and floodplain woodlands to prairie grasslands and coniferous forests at higher elevations. The most common vegetation type by far, however, is Utah juniper/Curlleaf mountain mahogany, which covers over 40% of the NRA.

Based on vegetation, geology, and landforms, the Bighorn Canyn National Recreation Area can be subdivided into three distinct biogeographic units that roughly correspond with the boundaries of the three counties that intersect the park. The southernmost segment lies in Big Horn County, Wyoming. Much of this area consists of rocky outcrops of red sandstone, and desert shale barrens dominated by Utah juniper, curleaf mountain-mahogany, greasewood, shadscale, Gardner's saltbush, and other desert species with affinities to the flora of the Great Basin. This section is the driest portion of the study area and averages just 6.7 inches of annual precipitation (based on NOAA records from Lovell, WY). The southern unit also contains riparian woodlands, extensive marshes along the floodplain of Yellowtail Reservoir and uplands that are in the Yellowtail Wildlife Habitat Management Area, co-managed with the Wyoming Game and Fish Department.

The middle segment of the study area is mainly in Carbon County, Montana. It has the highest elevation of the three segments because it includes the face of the Pryor Mountains escarpment, but is primarily a dry foothills landscape, dissected by steep limestone and dolomite canyons. The vegetation consists of arid foothills grasslands, Utah juniper and curleaf mountain mahogany shrublands, and limited coniferous forests of Douglas-fir, limber pine, and Engelmann spruce and subalpine fir (Knight et al. 1987). This area also contains numerous cold water seeps that provide habitat for a number of rare wetland plants, including *Sullivantia hapemanii* (Heidel and Fertig 2000). Due to its diversity of habitats and topography, the middle segment has the highest species richness of any of the three segments comprising the study area. Lichvar et al. (1985) reported a number of subalpine and alpine taxa from this area, but most of these species were actually found on one section of state land just west of the present National Recreation Area boundaries. The southern and middle segments of the NRA contain most of its local and regional endemic species, such as *Eriogonum brevicaulis* var. *canum*, *Erigeron allocotus*, and *Rorippa calycina*. The Montana portion also contains a high percentage of rare desert plants at the northern margins of their range that are found nowhere else in that state (Dorn 1978; Heidel and Fertig 2000).

The northernmost segment of the study area lies within Big Horn County, Montana. It is the wettest segment of the study area. The area around Fort Smith has an annual precipitation averaging 18.9 inches. It is a separate unit connected to the other segments by the Yellowtail Reservoir. The land area of this northernmost unit is over 10 times smaller than the other two segments. However, it includes well-developed mesic valley bottom vegetation and perennial coldwater streams within 30 ft. of the reservoir highwater level under NPS administration, unlike the other segments. In addition, the north unit contains Great Plains vegetation, foothills woodlands, and a short reach of the free-flowing Big Horn River. The Three Mile Fishing Access area located 3 miles north of the northeastern end of the National Recreation Area was not included in this study.

Figure 1. Bighorn Canyon National Recreation Area



## METHODS

Lichvar et al. (1985) assembled a vascular plant species checklist for Bighorn Canyon National Recreation Area based on collections made during floristic and vegetation surveys in 1983-84. Heidel and Fertig (2000) amended this list to include species records from their rare plant survey work in 1998-99, as well as additional species reported by Knight et al. (1987), and additions among the collections of the Bighorn Canyon National Recreation Area Herbarium (BICA). Prior to survey work in 2001, we reevaluated every entry in our preliminary checklist to ensure that all species were corroborated by a valid voucher specimen or observation. An initial sweep of the Rocky Mountain Herbarium (RM) revealed a number of specimens that were either misidentified or were collected outside the boundaries of Bighorn Canyon National Recreation Area. In May 2001, Fertig reexamined the entire BICA collection to confirm the identity of all voucher specimens, verify their presence within the study area, and annotate the preliminary checklist with county-level distribution data. From this new information we developed a working checklist that highlighted those species still in need of confirmation in the field or from the collections at RM.

Field surveys in 2001 focused on six undersampled vegetation types that we identified during our rare plant inventory in 1998-99: riparian corridors of coldwater streams, cushion plant communities, marsh and forest riparian habitat, cliffs, montane grassland, and seeps (Heidel and Fertig 2000). We also inventoried those sites that had more difficult access and areas that required repeat visits to capture the phenological array of species. In particular, we emphasized early and late-flowering graminoids, exotics, and composites that appeared to be undersampled in previous studies. Survey locations were scattered across the three segments of the study area to ensure geographic breadth of inventory, in keeping with National Park Service inventory guidelines (USDI National Park Service 2000). We did not include species planted by the National Park Service or at the landscaped headquarters in Lovell, Wyoming. We did include species that persisted from plantings that pre-date BICA establishment in 1966.

Our herbarium work and fieldwork required four visits to Bighorn Canyon between 29 May and 11 August 2001. In the field we made collections of species that were either additions to the study area flora or which had not previously been vouchered. Collecting was done only if plant populations were sufficiently large. When necessary, we substituted detailed observation data for physical specimens. In the case of rare species or noxious weeds, we documented new location and habitat data to augment existing records within the study area. For all species we recorded county-of-distribution information within the National Recreation Area. Voucher specimens were taken to the Rocky Mountain Herbarium (RM) for identification and deposited there. Duplicate sheets were prepared for deposit at BICA.

At the conclusion of the field season, we created a revised checklist incorporating the additional species collected or observed in 2001. We also rechecked the collections of the RM for all remaining species on the initial checklist that lacked vouchers at BICA or were not relocated in the field. Using the RM's digital specimen database, we were able to locate several dozen historical records from the park, including 49 collections made by B. Ernie Nelson in 1979-80 that were not included by Lichvar et al. (1985). The entire checklist was revised to follow the standard nomenclature of Kartesz and Meacham (1999) as used in NPSpecies database for scientific and common names. Synonyms were provided if these names differed from those used in the current statewide floras of Montana and Wyoming (Dorn 1984, 2001).



Our final checklist contains all vascular plant taxa known to occur in Bighorn Canyon National Recreation Area based on verified voucher specimens or observations (Appendix A). This list has been annotated to include global heritage rank (NatureServe 2001, <http://natureserve.abi.org/>), native or exotic status (Fertig 1999a), distribution within the National Recreation Area by county, a representative voucher collection (with collector and repository), date of first documentation in the study area, and other pertinent comments. Appendix B and C contain lists of species that were previously reported for the park but have either been rejected or cannot be confirmed at present.

To test whether the flora of Bighorn Canyon has been adequately sampled, we developed an additional list of species that may potentially occur within the area, but which have not yet been documented (Appendix D). This list was created by comparing our confirmed species list with the Rocky Mountain Herbarium's digital "Atlas of the Vascular Plants of Wyoming" ([www.esb.utexas.edu/chumley/wyomap/atlas.htm](http://www.esb.utexas.edu/chumley/wyomap/atlas.htm)) and checklists of the flora of the Pryor Mountains, Bighorn Range, and Bighorn Basin (Lesica and Achuff 1992, Fertig 1999b). The probability of occurrence for each species was given a rank of high, medium, or low depending on its global abundance and the presence of suitable habitat in the study area. Additional comments are provided on where these species are most likely to be found within Bighorn Canyon.

## RESULTS

### Summary of Plant Inventory Work at Bighorn Canyon National Recreation Area

Prior to 1976, botanical studies in the Bighorn Canyon area were limited to sporadic collections or baseline ecological surveys of dominant community types (Table 1). The earliest known collection from the area is a specimen of *Sarcobatus vermiculatus* made by R.C. Snelling in 1924 (Rocky Mountain Herbarium records). During the next 50 years, only three additional species were collected and deposited at the RM from the Wyoming portion of the NRA (early records from Montana are poorly known, although W.E. Booth made a small number of collections in the vicinity of Bighorn Canyon in the 1950s and 1960s, deposited at Montana State University.)

All previous botany and vegetation studies cited by Lichvar et al. (1985) and Knight et al. (1987) are from outside the BICA study area. They did not mention and we were not able to determine the source of two unpublished plant checklists for Bighorn Canyon in 1968 (110 species) and 1975 (225 species) (Anonymous 1968, 1975). The source and authenticity of these floristic records has not been confirmed.

Robert Dorn documented 24 additional plant taxa for the NRA in 1976-77 while doing general collecting in Carbon County, Montana (Dorn 1978). M.L. Roberts, a University of Wyoming graduate student, added one species in 1976. Collections were also made by B. E. Nelson, University of Wyoming (RM) in 1979-80 as part of a multi-year floristic survey of the Bighorn Range and surrounding basins (Nelson and Hartman 1984). Nelson documented 49 additional species for the NRA at the mouth of John Blue Canyon and along Yellowtail Reservoir in Big Horn County, Wyoming. In 1981-82, Park Service employees Terry Peters, Kathy Jobe, William Messerschmidt, and Arlene Wolf made over 100 collections from Horseshoe Bend, Trail Creek, and Barrys Landing in Wyoming and Montana and added 56 additional species to the park's flora (BICA records).

Table 1. Chronology of Major Plant Collecting Efforts at Bighorn Canyon NRA

<b>Year(s)</b>	<b>Collector (main repository)</b>	<b>Number of Additional Species</b>	<b>Collection Area</b>	<b>Comments</b>
1924- 1966	R.C. Snelling, W.E. Booth, D. Despain, and E. Clausen (RM)	4	Bighorn Canyon, WY.	Identified from Rocky Mountain Herbarium digital location database.
1976- 1977	Robert Dorn (RM, MONTU) and M.L. Roberts (RM)	25	Pryor Desert and Bighorn Mountains in Montana	Cited in Lichvar et al. (1985) and highlighted in a Madrono article on significant new records of the Great Basin flora for Montana (Dorn 1978).
1979- 1980	B. E. Nelson (RM)	49	Mouth of John Blue Canyon in WY on east side of Yellowtail Reservoir (part of floristic survey the Bighorn Range) and locally on the west side	The collections include additions to the study area flora. They were not cited in Lichvar et al. (1985).
1981- 1982	Terry Peters, Kathy Jobe, William Messerschmidt, and Arlene Wolf (BICA)	56	Mostly near Horseshoe Bend Campground, Trail Creek Campground, and Barry's Landing in Wyoming and Montana	The collections include additions to the study area flora. They were not cited in Lichvar et al. (1985).
1983	Robert Lichvar, Ellen Collins, and Dennis Knight (RM, BICA, NY)	384	Throughout Bighorn Canyon NRA in Wyoming and Montana as part of floristic survey and vegetation study	Principle source of information presented in Lichvar et al. (1985)
1984	George Jones, Dale Ditolla, and Richard Myers (RM)	47	Throughout Bighorn Canyon NRA in Wyoming and Montana as part of vegetation study	The collections include additions to the study area flora. Most are reported in Knight et al. (1987), but not all are in Lichvar et al. (1985).
1994- 1996	Walter Fertig and Robert Dorn (RM)	3	Horseshoe Bend and Yellowtail Wildlife Habitat Management Unit, WY	Cited in Heidel and Fertig (2000)
1998- 1999	Bonnie Heidel, Walter Fertig, and Laura Welp (RM, MONTU, BICA)	60	Throughout Bighorn Canyon NRA in Wyoming and Montana as part of rare plant survey	Additions to the study area flora were reported in the appendix of Heidel and Fertig (2000).
2001	Bonnie Heidel, Walter Fertig, and Suzanne Morstad (RM, BICA)	111	Throughout Bighorn Canyon NRA in Wyoming and Montana as part of floristic survey	Results in this report.

The first truly systematic inventory of the flora of Bighorn Canyon National Recreation Area was conducted in 1983 by Robert Lichvar and Ellen Collins of the Wyoming Natural Heritage Program in collaboration with Dr. Dennis Knight of the University of Wyoming. Lichvar and Collins made over 600 collections (deposited at BICA, RM, and the New York Botanical Garden) and reported nearly 500 additional species for study area. In 1984, Knight and his student collaborators (George Jones, Dale Dittola, Richard Myers, and Yoshiko Akashi) added several hundred additional vouchers and at least 47 additional taxa (BICA and RM records) in the course of documenting the study area vegetation. Based on their own collections and the records of Dorn (1978), Lichvar et al. (1984, 1985) reported 656 vascular plant taxa for Bighorn Canyon. This list did not include many of the earlier records of B. E. Nelson deposited at the RM or specimens deposited at BICA by National Park Service staff. The Lichvar et al. (1985) checklist also contained at least 60 taxa that were misidentified or collected outside of Bighorn Canyon National Recreation Area and 45 species that cannot be confirmed today with vouchers. Based on our reassessment, the 1983 and 1984 collections of Lichvar, Collins, Knight, Jones, and associates added 431 additional species to the flora.

Only three species were added to the flora between 1985 and 1998. Bonnie Heidel, Walter Fertig, and Laura Welp of the Montana and Wyoming natural heritage programs documented 60 additional taxa at Bighorn Canyon National Recreation Area during rare plant surveys in 1998-99. Heidel and Fertig (2000) compiled a revised checklist containing all additional records collected since 1985 and reports from Knight et al. (1987), and the collections at BICA that were omitted by Lichvar et al. (1985). This list identified 774 vascular plant taxa for the NRA.

#### Flora of Bighorn Canyon National Recreation Area

Based on our field surveys in 2001 and review of existing voucher specimens at RM and BICA, the flora of Bighorn Canyon National Recreation Area currently consists of 739 vascular plant taxa (Table 2, Appendix A). We observed or collected 76 additional species for the area in 2001 and relocated 33 taxa previously reported by Lichvar et al. (1985) that had been misidentified or lacked corroborating voucher specimens from within Bighorn Canyon. Suzanne Morstad (NPS) discovered 2 additional species in 2001 and we located 8 additional species records from previously overlooked specimens at RM and BICA. Our surveys and herbarium work added 407 county distribution records within the NRA, increasing the size of each subunit's flora by 28-36% (Table 3, Appendix A).

Our revised checklist does not include 81 species from Heidel and Fertig (2000) or Lichvar et al. (1985) that have been shown to be falsely reported (Appendix B). Of these taxa, 51 were misidentified and 30 were collected just outside of Bighorn Canyon National Recreation Area. An additional 45 species reported from previous checklists still cannot be confirmed by authenticated voucher specimens or observations (Appendix C). According to Robert Dorn (personal communication), some of these "missing" specimens may have been deposited at the New York Botanical Garden, rather than RM or BICA (we have been unable to confirm this). We believe that at least 34 of the 81 rejected species and 37 of the 45 unconfirmed species still have some potential to be found in the study area based on their occurrence in similar habitats in the vicinity (Appendix D).

Table 2. Summary of the flora of Bighorn Canyon National Recreation Area<sup>1</sup>

Taxonomic Level	Tally in Lichvar et al. (1985)	Current Tally (2001)
Family	73	83
Genus	320	372
Species/ varieties	656	739

Table 3. Summary of the Flora of Bighorn Canyon National Recreation Area by County Subunits

County	Total # of Taxa	# of Additional Taxa Documented in 2001	Percentage Increase in # of Taxa in 2001
Big Horn, WY	342	99	+ 28.9%
Carbon, MT	493	138	+ 28.0%
Big Horn, MT	463	170	+ 36.7%

### Noxious Weed Documentation

We documented 22 additional species of non-native plants on Bighorn Canyon National Recreation Area in 2001, bringing the total number of exotic plants in the park to 105 (an increase of 21.0%). Non-natives now account for 14.2% of the total flora. By comparison, exotic plants represent only 12.6% of the flora of Wyoming (Fertig 1999a). Twelve species considered noxious weeds in Montana or Wyoming occur within the study area and one additional species has been reported, but could not be confirmed in 2001 (Table 4).

Although weeds were not the primary focus of our 2001 fieldwork, we documented several new populations of salt-cedar (*Tamarix chinensis*) and Russian knapweed (*Acroptilon [Centaurea] repens*) that were not previously recorded in Bighorn Canyon National Recreation Area noxious weed GIS database. Salt-cedar was located along several side drainages of Bighorn Canyon but was most abundant at the southern end of the study area in the Yellowtail Wildlife Habitat Management Area. Low-water conditions in 2001 exposed extensive areas of mudflats that are being rapidly colonized by Salt-cedar seedlings. Discrete patches of Russian knapweed were located along the Ok-a-Beh road and Frozen Leg picnic site, widely-distributed at the highwater margins, and colonizing on the newly-exposed mudflats at the southern end of Yellowtail Reservoir.

### Additional Rare Plant Records in Bighorn Canyon National Recreation Area

No additional rare plant species were discovered during floristic surveys in 2001, although we did identify several new locations for Sweetwater milkvetch (*Astragalus aretioides*), Lesica's bladderpod (*Lesquerella lesicii*), persistent-sepal yellowcress (*Rorippa calycina*) and Hapeman's sullivantia (*Sullivantia hapemanii* var. *hapemanii*). *Rorippa calycina* was documented at several

<sup>1</sup> Some differences in the number of families and genera between 1985 and 2001 reflect changes in taxonomic concepts rather than the documentation of new species. Following Dorn (2001), the number of families recognized in 2001 would increase to 91.

new locations on newly exposed mudflats at the south end of Yellowtail Reservoir, demonstrating the capacity of this species to rapidly colonize new habitat given a local seedbank. One new population of *Sullivantia hapemannii* was discovered and an extensive habitat complex just upstream and downstream of Yellowtail Dam was surveyed. Printouts and electronic files of all rare plant records documented in the 1998-99 and 2001 studies will be submitted separately.

Table 4. State Noxious Weeds Confirmed or Reported from Bighorn Canyon National Recreation Area. List derived from Fertig (1999a) and Montana Weed Control Association ([www.mtweed.org](http://www.mtweed.org)).

Species	Common Name	State Noxious Weed List	Distribution in Bighorn Canyon NRA
<i>Acroptilon repens</i> [ <i>Centaurea repens</i> ]	Hardheads [Russian knapweed]	WY and MT	WY-Big Horn, MT- Big Horn
<i>Arctium minus</i>	Lesser burdock	WY	WY-Big Horn, MT- Carbon, MT-Big Horn
<i>Cardaria chalepensis</i>	Lens-pod hoary-cress	MT	Reported for Bighorn Canyon NRA by Lichvar et al. (1985), but no vouchers have been relocated for confirmation and the species was not observed in the field in 2001.
<i>Cardaria pubescens</i>	Globe-pod hoary-cress	WY	WY-Big Horn
<i>Centaurea biebersteinii</i> [ <i>Centaurea maculosa</i> ]	Spotted knapweed	WY and MT	WY-Big Horn, MT- Carbon, MT-Big Horn
<i>Centaurea diffusa</i>	White knapweed [Bushy knapweed, Diffuse knapweed]	WY and MT	MT-Big Horn
<i>Cirsium arvense</i>	Canadian thistle	WY and MT	WY-Big Horn, MT- Big Horn
<i>Convolvulus arvensis</i>	Field bindweed	WY and MT	WY-Big Horn, MT- Big Horn
<i>Cynoglossum officinale</i>	Gypsy-flower [Common hound's-tongue]	WY and MT	WY-Big Horn, MT- Carbon, MT-Big Horn
<i>Elymus repens</i> [ <i>Agropyron repens</i> ]	Creeping wild rye [Quackgrass]	WY	MT-Carbon, MT-Big Horn
<i>Euphorbia esula</i> var. <i>uralensis</i>	Wolf's-milk [Leafy spurge]	WY and MT	MT-Carbon, MT-Big Horn
<i>Leucanthemum vulgare</i> [ <i>Chrysanthemum leucanthemum</i> ]	Ox-eye daisy	WY and MT	MT-Big Horn
<i>Tamarix chinensis</i>	Five-stamen tamarisk [Salt cedar]	WY and MT	WY-Big Horn, MT- Carbon, MT-Big Horn

## DISCUSSION

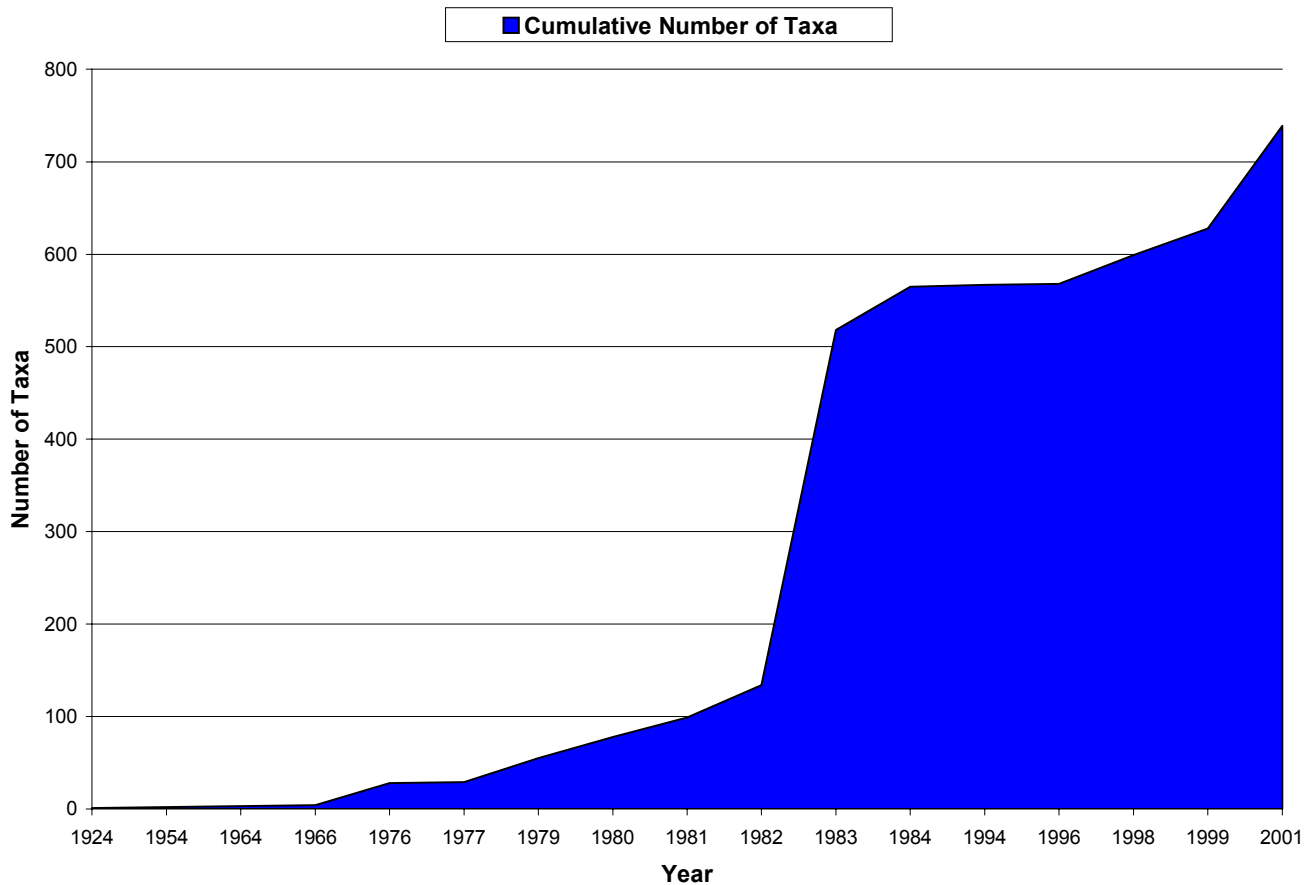
Based on our reassessment of all previous reports and review of herbarium specimens (RM and BICA), the flora of Bighorn Canyon National Recreation Area consisted of 628 confirmed taxa as of 1999 (Table 5). Fieldwork in 2001 resulted in the discovery or relocation of 111 additional species for the park, increasing the total flora to 739 species. The net increase of 15.0% confirms our suspicions that the documented flora of Bighorn Canyon National Recreation Area was below the 90% target goal of the National Park Service.

The large increase in number of additional species relative to time and collection effort (Figure 2) suggests that additional taxa remain to be found at the study area. Our potential species list (Appendix D) includes 148 taxa from adjacent areas of Montana and Wyoming that could occur within the study area. Forty-four of the potential species are considered “highly probable” because of their region-wide abundance and preference for common habitat types present in the area. If these 44 taxa were added to the Bighorn Canyon checklist, the current species count of 739 taxa would still represent 94.4% of the total flora, well over the 90% threshold. This percentage drops to 87.0% if an additional 66 species of moderate probability are included in the checklist and 83.3% if 38 low probability species are recognized. Since many of these low to moderate probability taxa are unlikely to be documented, the current checklist of Bighorn Canyon NRA is probably very close to the Park Service’s goal of 90% completeness.

Table 5. Increase in Number of Plant Taxa Recorded at Bighorn Canyon National Recreation Area, 1924-2001

Years	Additional # of Species Documented	Cumulative # of Species Documented
1924	1	1
1954	1	2
1964	1	3
1966	1	4
1976	24	28
1977	1	29
1979	26	55
1980	23	78
1981	21	99
1982	35	134
1983	384	518
1984	47	565
1994	2	567
1996	1	568
1998	31	599
1999	29	628
2001	111	739

Figure 2. Increase in Number of Plant Taxa Recorded at Bighorn Canyon National Recreation Area, 1924-2001.



Some additional geographic areas, habitats, and taxonomic groups may be targeted for future survey to ensure that Bighorn Canyon National Recreation Area meets the park service goal of a 90% complete flora. The high-elevation western boundary of the National Recreation Area on the midslopes of East Pryor Mountain was partially surveyed for rare species in 1998-99 but has not been revisited for more common plants. Some species that extend downslope from higher elevation subalpine habitat types may have been missed in our survey. Several sites along Yellowtail Reservoir are inaccessible by land and may still be undercollected. The sand dune deposits below the mouth of Big Bull Elk Creek were surveyed for rare species in 1998-99 but have not been revisited for more common plants. Disturbed habitats and wetlands yielded high numbers of additional taxa in 2001 and may still harbor undocumented species, especially in taxonomically difficult families (such as Asteraceae, Poaceae, and Cyperaceae). A number of cryptic plants, as well as species with early or very late phenologies, may still be undersampled. Some species that we consider “undocumented” may actually have valid vouchers in the collections of the New York Botanical Garden, but to confirm this will require either a visit to the facility or a specimen loan. Finally, we were not able to work at the Montana State University Herbarium, where there may be additional specimens from the study area collected by W.E. Booth. The highest priorities would be to review the list of already confirmed species and those with a high probability of occurring in the Bighorn Canyon National Recreation Area.

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## Appendix A. Annotated Checklist of the Vascular Plant Flora of Bighorn Canyon National Recreation Area.

The following species list is modified from Lichvar et al. (1985) and Heidel and Fertig (2000) and is based on new field surveys in 2001 and a thorough re-examination of specimens at the University of Wyoming's Rocky Mountain Herbarium (RM) and Bighorn Canyon National Recreation Area Herbarium (BICA). Nomenclature follows Kartesz and Meacham (1999) for scientific names and common names. Pertinent synonyms have been included for names that differ from those in the most current statewide floras of Montana and Wyoming (Dorn 1984, 2001). The list is organized alphabetically by family, following the classification adopted by Kartesz and Meacham (1999), with alternate family names included where these differ from Dorn (2001). For brevity, family names do not include the standard suffix 'aceae'. Global rank is a measure of rangewide abundance of each taxon using a scale from 1 (rarest) to 5 (most common) and is derived from the NatureServe website (<http://natureserve.abi.org/>). Native and exotic (introduced) status was determined from Fertig (1999a) and Kartesz and Meacham (1999). Presence in each of the three counties within Bighorn Canyon National Recreation Area is indicated by an "X" for species with a documented herbarium voucher and "O" if the record is based on a reliable observation. X or O indicates a new county distribution record within the study area in 2001. A "?" indicates some uncertainty regarding the identification of a species or its confirmed presence within a county. Sample voucher specimens are cited for each species and contain information on the collector, collection number, and repository (if known). The first year column indicates the year of the earliest known vouchered herbarium record or confirmed observation within Bighorn Canyon National Recreation Area. This year does not necessarily correspond with the year that the representative voucher was collected. Additional comments are provided as necessary to clarify our treatment of a particular taxon; in this column the BICA abbreviation refers to either the Bighorn Canyon National Recreation Area study area or its herbarium facility.

Family (__aceae)	Species Name [synonyms]	Common Name	Global rank	Native/ exotic	WY - Big Horn Co	MT- Carbon Co	MT- Big Horn Co	Sample Voucher	Year first collected	Comments
Acer	<i>Acer glabrum</i> var. <i>glabrum</i>	Rocky Mountain maple	G5T5	N		O	X	Lichvar 5685 (BICA)	1983	
Acer	<i>Acer negundo</i> var. <i>interius</i>	Ash-leaf maple	G5T5	N	O		X	Collins 570 (BICA)	1983	
Agav	<i>Yucca glauca</i>	Soapweed yucca	G5	N	X	O	O	Collins 695 (RM)	1983	
Amaranth	<i>Amaranthus blitoides</i>	Mat amaranth	G?	N	X	X	O	Collins 854 (RM)	1983	Includes <i>A. albus</i> reported in Knight et al. 1987.
Amaranth	<i>Amaranthus retroflexus</i>	Red-root amaranth	G?	E	O	X		Heidel 2071 (RM)	2001	
Anacardi	<i>Rhus glabra</i>	Smooth sumac	G5	N		O	X	Lichvar 6402 (RM)	1983	
Anacardi	<i>Rhus trilobata</i> [ <i>Rhus aromatica</i> var. <i>trilobata</i> ]	Ill-scented sumac	G5	N	O	O	X	Collins 552 (RM)	1982	
Anacardi	<i>Toxicodendron rydbergii</i>	Western poison-ivy	G5	N	O	X	X	Lichvar 5929 (RM)	1983	
Api	<i>Berula erecta</i>	Cut-leaf water- parsnip	G4G5	N	O	X	O	Lichvar 6911 (RM)	1983	

Family (aceae)	Species Name [synonyms]	Common Name	Global rank	Native/ exotic	WY - Big Horn Co	MT- Carbon Co	MT- Big Horn Co	Sample Voucher	Year first collected	Comments
Api	<i>Bupleurum americanum</i>	American thorough-wax	G5	N		X		Heidel 1996 (RM)	2001	Earlier reports were based on specimens collected outside of BCNRA
Api	<i>Cicuta maculata</i> var. <i>angustifolia</i>	Spotted water- hemlock	G5T5	N	X		X	Heidel 2124 (RM)	1999	
Api	<i>Conioselinum scopulorum</i>	Rock lovage	G4	N		X		Booth 54639 (RM)	1954	First report for Montana
Api	<i>Conium maculatum</i>	Poison-hemlock	G4G5	E	O	X	O	Knight 908 (RM)	1983	
Api	<i>Cymopterus acaulis</i>	Plains spring-parsley	G5	N	X	X		Lichvar 5601 (RM)	1983	
Api	<i>Heracleum maximum</i> [ <i>H. sphondylium</i> var. <i>lanatum</i> ]	American cow- parsnip	G5	N	O	O	X	Lichvar 6140 (RM)	1983	
Api	<i>Lomatium dissectum</i> var. <i>multifidum</i>	Chocolate-tips	G3G4 T?	N			X	Lichvar 6398 (RM)	1983	
Api	<i>Lomatium foeniculaceum</i>	Carrot-leaf desert- parsley	G5	N		O	X	Lichvar 5683 (RM)	1983	
Api	<i>Lomatium orientale</i>	Oriental desert- parsley	G5	N		X		Lichvar 5664 (RM)	1983	
Api	<i>Musineon divaricatum</i>	Leafy wild parsley	G5	N	X	X	O	Collins 558 (RM)	1983	
Api	<i>Musineon vaginatum</i>	Sheathed wild parsley	G3?	N		X	X	Heidel 1854 (MONTU)	1983	
Api	<i>Osmorhiza berteroi</i> [ <i>O. chilensis</i> ]	Mountain sweet- cicely	G5	N			X	Collins 807 (RM)	1983	
Api	<i>Osmorhiza depauperata</i>	Blunt-fruit sweet- cicely	G5	N			X	Heidel 2096 (BICA)	2001	Earlier report (Lichvar et al. 1985) was based on a misidentification
Api	<i>Osmorhiza longistylis</i>	Aniseroot	G5	N			X	Lichvar 6114 (RM)	1983	
Api	<i>Perideridia gairdneri</i> var. <i>borealis</i> [ <i>P. montana</i> ]	Common yampah	G5	N		O	X	Lichvar 6898 (RM)	1983	
Api	<i>Pteryxia terebinthina</i> var. <i>albiflora</i> [ <i>Cymopterus terebinthinus</i> var. <i>albiflorus</i> ]	Turpentine wavewing	G5 T4T5	N	X	O		Fertig 18385 (RM)	1983	
Api	<i>Sanicula marilandica</i>	Maryland black snakeroot	G5	N		O	X	Lichvar 6162b (RM)	1983	
Apocyn	<i>Apocynum androsaemifolium</i>	Spreading dogbane	G5	N			X	Collins 816 (RM)	1983	

Family (aceae)	Species Name [synonyms]	Common Name	Global rank	Native/ exotic	WY - Big Horn Co	MT- Carbon Co	MT- Big Horn Co	Sample Voucher	Year first collected	Comments
Apocyn	<i>Apocynum cannabinum</i>	Indian-hemp	G5	N	O	X	O	Wolf 88 (BICA)	1982	variety not determined
Asclepiad	<i>Asclepias incarnata</i>	Swamp milkweed	G5	N	X			Nelson 7020 (RM)	1980	
Asclepiad	<i>Asclepias speciosa</i>	Showy milkweed	G5	N	O	X	X	Collins 834 (RM)	1982	
Asclepiad	<i>Asclepias viridiflora</i>	Green comet milkweed	G5	N	X	O	X	Heidel 2035 (RM)	2001	
Aster	<i>Achillea millefolium</i>	Common yarrow	G5	N	O	O	X	Jones, Ditolla, and Meyers s.n. (BICA)	1984	
Aster	<i>Acroptilon repens</i> [ <i>Centaurea repens</i> ]	Hardheads [Russian knapweed]	G?	E	X		O	Fertig 18410 (RM)	1982	Noxious weed in MT and WY
Aster	<i>Agoseris glauca</i> var. <i>dasycephala</i>	Pale goat-chicory	G4G5 T?	N			X	Lichvar 6122 (BICA)	1983	
Aster	<i>Agoseris glauca</i> var. <i>glauca</i>	Pale goat-chicory	G4G5 T?	N		X		Lichvar 5572 (BICA)	1983	
Aster	<i>Agoseris glauca</i> var. <i>laciniata</i>	Pale goat-chicory	G4G5 T?	N		X		Collins 645 (RM)	1983	Duplicate specimen at BICA was misidentified
Aster	<i>Ambrosia acanthicarpa</i>	Flat-spine burr- ragweed	G5	N	X		X	Heidel 2076 (RM)	2001	
Aster	<i>Ambrosia artemisiifolia</i>	Annual ragweed	G5	N	X			Nelson 7022 (RM)	1980	
Aster	<i>Ambrosia psilostachya</i>	Perennial ragweed	G5	N	O		X	Lichvar 6928 (RM)	1983	
Aster	<i>Ambrosia trifida</i>	Great ragweed	G5	N	O		X	Collins 900 (RM)	1983	
Aster	<i>Antennaria microphylla</i>	Small-leaf pussytoes	G4G5	N		X	X	Jones, Ditolla, and Meyers s.n. (BICA)	1984	Includes misidentified <i>A.</i> <i>corymbosa</i> reported by Knight et al. (1987)
Aster	<i>Antennaria rosea</i>	Rosy pussytoes	G5	N		X		Collins 649 (RM)	1983	Specimen originally misidentified as <i>A.</i> <i>parvifolia</i>
Aster	<i>Arctium minus</i>	Lesser burdock	G?	E	X	X	O	Collins 849 (BICA)	1982	Noxious weed in WY
Aster	<i>Arnica cordifolia</i>	Heart-leaf leopardbane [Heartleaf arnica]	G5	N			X	Lichvar 6174 (BICA)	1983	
Aster	<i>Arnica fulgens</i>	Shining leopardbane	G5	N		X	X	Lichvar 5937 (BICA)	1983	
Aster	<i>Arnica latifolia</i>	Daffodil leopardbane	G5	N		X		Lichvar 5936 (BICA)	1983	
Aster	<i>Arnica sororia</i>	Twin leopardbane	G5	N			X	Lichvar 6138 (RM)	1983	
Aster	<i>Artemisia biennis</i> var. <i>biennis</i>	Biennial wormwood	G5T5	N	X	O	O	Nelson 5077 (RM)	1979	

Family (aceae)	Species Name [synonyms]	Common Name	Global rank	Native/ exotic	WY - Big Horn Co	MT- Carbon Co	MT- Big Horn Co	Sample Voucher	Year first collected	Comments
Aster	<i>Artemisia campestris</i> var. <i>scouleriana</i>	Pacific wormwood	G5 T4T5	N	X	X	X	Jones, Dittola, and Meyers s.n. (BICA)	1984	
Aster	<i>Artemisia cana</i> var. <i>cana</i>	Coaltown sagebrush [Silver sage]	G5T5	N		X	X	Messerschmidt 39 (BICA)	1981	
Aster	<i>Artemisia dracunculus</i>	Dragon wormwood [Tarragon]	G5	N	X		X	Lichvar 6887 (RM)	1983	
Aster	<i>Artemisia frigida</i>	Prairie sagebrush [Fringed sage]	G5?	N	X	X	X	Collins 891 (BICA)	1982	
Aster	<i>Artemisia ludoviciana</i> var. <i>ludoviciana</i>	White sagebrush	G5T?	N		X	X	Lichvar 6892 (RM)	1983	
Aster	<i>Artemisia michauxiana</i>	Michaux's wormwood	G4G5	N		X		Heidel 1814 (BICA)	1999	
Aster	<i>Artemisia nova</i>	Black sagebrush	G5	N	O	X		Jones, Dittola, and Meyers s.n. (BICA)	1984	
Aster	<i>Artemisia pedatifida</i>	Birdsfoot sagebrush	G4	N	X			Welp 7971 (RM)	1998	
Aster	<i>Artemisia tridentata</i> var. <i>tridentata</i>	Big sagebrush [Basin big sagebrush]	G5T4T 5	N	X	X		Jones, Dittola, and Meyers s.n. (BICA)	1984	
Aster	<i>Artemisia tridentata</i> var. <i>vaseyana</i>	Big sagebrush [Mountain big sagebrush]	G5T4T 5	N		X		Heidel 2066 (RM)	2001	
Aster	<i>Artemisia tridentata</i> var. <i>wyomingensis</i>	Big sagebrush [Wyoming big sagebrush]	G5T5	N	X	O	O	Clausen 66-237 (RM)	1966	
Aster	<i>Balsamorhiza incana</i>	Hoary balsamroot	G4	N		X		Collins 653 (BICA)	1983	
Aster	<i>Balsamorhiza sagittata</i>	Arrow-leaf balsamroot	G4G5	N		X	X	Lichvar 5654 (BICA)	1983	
Aster	<i>Bidens cernua</i>	Nodding burr- marigold	G5	N	X		X	Nelson 5064 (RM)	1979	
Aster	<i>Bidens tripartita</i> [ <i>Bidens comosa</i> ]	Three-lobed beggarticks	G5	N	X			Nelson 5067 (RM)	1979	
Aster	<i>Brickellia eupatorioides</i> var. <i>corymbulosa</i>	False boneset	G5T?	N		X	X	Heidel 2139 (RM)	1998	
Aster	<i>Brickellia grandiflora</i>	Tassel-flower brickellbush	G5	N		X		Heidel 2119 (RM)	2001	Earlier reports were based on specimens collected outside of BCNRA
Aster	<i>Centaurea biebersteinii</i> [ <i>Centaurea maculosa</i> ]	Spotted knapweed	G?	E	X	X	X	Lichvar 6418 (BICA)	1983	Noxious weed in MT and WY
Aster	<i>Centaurea diffusa</i>	White knapweed [Bushy knapweed; Diffuse knapweed]	G?	E			X	Heidel 2159 (RM)	2001	Noxious weed in MT and WY

Family (aceae)	Species Name [synonyms]	Common Name	Global rank	Native/ exotic	WY - Big Horn Co	MT- Carbon Co	MT- Big Horn Co	Sample Voucher	Year first collected	Comments
Aster	<i>Chaenactis douglasii</i> var. <i>douglasii</i> [ <i>C. douglasii</i> var. <i>montana</i> ]	Dusty-maiden	G5	N	X	X		Heidel 1831 (RM)	1983	
Aster	<i>Chrysothamnus</i> <i>linifolius</i>	Spear-leaf rabbitbrush	G5	N	X	X		Fertig 18404 (RM)	1983	
Aster	<i>Chrysothamnus</i> <i>viscidiflorus</i> var. <i>viscidiflorus</i>	Green rabbitbrush	G5T5	N	X		X	Lichvar 6886 (BICA)	1983	
Aster	<i>Cichorium intybus</i>	Chicory	G?	E			X	Collins 894 (RM)	1983	
Aster	<i>Cirsium arvense</i>	Canadian thistle	G5	E	X		X	Collins 899 (BICA)	1983	Noxious weed in MT and WY
Aster	<i>Cirsium flodmanii</i>	Flodman's thistle	G5	N	X		O	Jobe (s.n.) (BICA)	1980	
Aster	<i>Cirsium hookerianum</i>	Hooker thistle	G4	N		X		Heidel 1707 (MONTU)	1998	Earlier reports were based on specimens collected outside of BICA
Aster	<i>Cirsium undulatum</i>	Wavy-leaf thistle	G5	N		X	X	Collins 738 (BICA)	1983	
Aster	<i>Cirsium vulgare</i>	Bull thistle	G5	E	O		X	Lichvar 6417 (BICA)	1983	
Aster	<i>Conyza canadensis</i>	Canadian horseweed	G5	N	X	X	O	Nelson 7037 (RM)	1980	
Aster	<i>Crepis acuminata</i>	Long-leaf hawk's- beard	G5	N		X		Jones, Ditolla, and Meyers (BICA)	1984	
Aster	<i>Crepis atribarba</i>	Slender hawk's-beard	G5	N			X	Lichvar 6175 (RM)	1983	
Aster	<i>Crepis intermedia</i>	Limestone hawk's- beard	G5	N		X	X	Fertig 19448 (RM)	1983	
Aster	<i>Crepis modocensis</i>	Siskiyou hawk's- beard	G4G5	N		X		Lichvar 5924 (BICA)	1983	
Aster	<i>Crepis runcinata</i> var. <i>glauca</i>	Fiddle-leaf hawk's- beard	G5T?	N		X	X	Heidel 1725 (MONTU)	1983	
Aster	<i>Dyssodia papposa</i>	Fetid-marigold	G5	N		X	X	Jones, Ditolla, and Meyers s.n. (BICA)	1984	
Aster	<i>Echinacea angustifolia</i> [ <i>E. pallida</i> var. <i>angustifolia</i> ]	Blacksamson [Narrowleaf coneflower]	G4	N			X	Collins 824 (BICA)	1983	
Aster	<i>Ericameria nauseosa</i> var. <i>graveolens</i> [ <i>Chrysothamnus</i> <i>nauseosus</i> var. <i>graveolens</i> ]	Rubber rabbitbrush	G5T5	N	X	X		Nelson 7038 (RM)	1980	

Family (aceae)	Species Name [synonyms]	Common Name	Global rank	Native/ exotic	WY - Big Horn Co	MT- Carbon Co	MT- Big Horn Co	Sample Voucher	Year first collected	Comments
Aster	<i>Erigeron nauseosa</i> var. <i>nauseosa</i> [ <i>Chrysothamnus</i> <i>nauseosus</i> var. <i>nauseosus</i> ]	Rubber rabbitbrush	G5T5	N	X	X	O	Jones, Ditolla, and Meyers s.n. (BICA)	1984	
Aster	<i>Erigeron allocotus</i>	Big Horn fleabane	G3	N	X	X		Dorn 2625 (MONTU)	1976	
Aster	<i>Erigeron caespitosus</i>	Tufted fleabane	G5	N	X	X		Collins 824 (BICA)	1976	
Aster	<i>Erigeron corymbosus</i>	Long-leaf fleabane	G5	N			X	Lichvar 6357 (RM)	1983	
Aster	<i>Erigeron glabellus</i> var. <i>glabellus</i>	Streamside fleabane	G5 T4T5	N			X	Lichvar 6117 (RM)	1983	
Aster	<i>Erigeron ochroleucus</i> var. <i>ochroleucus</i>	Buff fleabane	G5T3	N	X	X	X	Lichvar 6192 (RM)	1983	
Aster	<i>Erigeron ochroleucus</i> var. <i>scribneri</i>	Buff fleabane	G5T5	N			X	Lichvar 5711 (RM)	1983	Earlier reports were based on specimens collected outside of BCNRA
Aster	<i>Erigeron pumilus</i> var. <i>pumilus</i>	Shaggy fleabane	G5T5	N	X	X		Lichvar 5599 (RM)	1983	
Aster	<i>Erigeron strigosus</i>	Prairie fleabane	G5	N	O	X		Lichvar 6132 (RM)	1983	
Aster	<i>Eupatorium maculatum</i> var. <i>bruneri</i> [ <i>Eupatoriadelphus</i> <i>maculatum</i> var. <i>bruneri</i> ]	Spotted Joe-Pye- weed	G5 T4T5Q	N	X		X	Heidel 2132 (RM)	1983	
Aster	<i>Eurybia conspicua</i> [ <i>Aster conspicuus</i> ]	Eastern showy wood- aster	G5	N			O		2001	Observed in vegetative condition by Heidel in T6S R31E Sec 19
Aster	<i>Eurybia glauca</i> [ <i>Aster glaucodes</i> , <i>Eucephalus glaucus</i> ]	Gray wood-aster	G4G5	N		X		Heidel 1927 (MONTU)	1999	
Aster	<i>Euthamia occidentalis</i> [ <i>Solidago occidentalis</i> ]	Western goldentop	G5	N			X	Heidel 2155 (RM)	2001	
Aster	<i>Gaillardia aristata</i>	Great blanket-flower	G5	N			X	Heidel 2052 (BICA)	2001	Previously reported, but no voucher specimens located for corroboration.
Aster	<i>Gnaphalium palustre</i>	Western marsh cudweed	G5	N	X		X	Nelson 5065 (RM)	1979	

Family (aceae)	Species Name [synonyms]	Common Name	Global rank	Native/ exotic	WY - Big Horn Co	MT- Carbon Co	MT- Big Horn Co	Sample Voucher	Year first collected	Comments
Aster	<i>Grindelia squarrosa</i> var. <i>squarrosa</i>	Curly-cup gumweed	G5T5	N	X	X	X	Knight K-16 (BICA)	1983	
Aster	<i>Gutierrezia sarothrae</i>	Kindlingweed [Broom snakeweed]	G5	N	X	X		Lichvar 6925 (BICA)	1981	
Aster	<i>Helianthus annuus</i>	Common sunflower	G5	N	X		O	Nelson 5079 (RM)	1979	
Aster	<i>Helianthus nuttallii</i>	Nuttall's sunflower	G5	N	O	X	X	Nelson 7029 (RM)	1980	
Aster	<i>Helianthus pauciflorus</i> var. <i>subrhomboides</i> [ <i>H. rigidus</i> var. s.]	Stiff sunflower	G5T5?	N			X	Lichvar 6924 (RM)	1983	
Aster	<i>Helianthus petiolaris</i>	Prairie sunflower	G4G5	N	X	X	O	Collins 794 (RM)	1983	
Aster	<i>Heterotheca villosa</i> var. <i>villosa</i>	Hairy false golden- aster	G5T?	N	X	O	O	Jones, Ditolla, and Meyers s.n. (BICA)	1984	
Aster	<i>Hieracium albiflorum</i>	White-flower hawkweed	G4G5	N		X		Lichvar 6390 (RM)	1983	
Aster	<i>Hieracium umbellatum</i>	Narrow-leaf hawkweed	G5?	N			X	Heidel 2141 (RM)	2001	
Aster	<i>Hymenopappus filifolius</i> var. <i>luteus</i>	Fine-leaf woolly-white	G5T?	N	X	X		Lichvar 5597 (RM)	1983	Originally determined as var. <i>filifolius</i>
Aster	<i>Hymenopappus filifolius</i> var. <i>polycephalus</i> [ <i>H. polycephalus</i> ]	Fine-leaf woolly-white	G5 T4T5	N		X		Fertig 19457 (RM)	2001	Earlier reports were based on misidentified specimens
Aster	<i>Iva axillaris</i> var. <i>robustior</i>	Deer-root [Poverty-weed]	G5	N	X	X	X	Lichvar 5992 (RM)	1982	
Aster	<i>Iva xanthifolia</i>	Carelessweed	G5	N	X			Nelson 5076 (RM)	1979	
Aster	<i>Lactuca ludoviciana</i>	[Marsh-elder]	G4G5	N			X	Lichvar 6902 (RM)	1983	
Aster	<i>Lactuca scariola</i>	Louisiana lettuce	G?	E	O	O	X	Collins 892 (RM)	1983	
Aster	<i>Lactuca tatarica</i> var. <i>pulchella</i> [ <i>L. oblongifolia</i> ]	Prickly lettuce	G5T5	N		X	X	Collins 829 (RM)	1982	
Aster	<i>Leucanthemum vulgare</i> [ <i>Chrysanthemum leucanthemum</i> ]	Ox-eye daisy	G?	E			O		1999	Noxious weed in MT and WY. Observed at T7S R31E Sec. 7 by Heidel
Aster	<i>Liatis punctata</i>	Dotted gayfeather	G5	N	X	X	X	Lichvar 6361 (RM)	1983	
Aster	<i>Logfia arvensis</i> [ <i>Filago arvensis</i> ]	Field cotton-rose	G?	E			X	Lichvar 6128 (RM)	1983	Falsely reported as native & rare by Lichvar et al. (1985)
Aster	<i>Lygodesmia juncea</i>	Rush skeleton-plant	G5	N	X	X	X	Lichvar 6133 (RM)	1983	



Family (aceae)	Species Name [synonyms]	Common Name	Global rank	Native/ exotic	WY - Big Horn Co	MT- Carbon Co	MT- Big Horn Co	Sample Voucher	Year first collected	Comments
Aster	<i>Machaeranthera canescens</i> var. <i>canescens</i>	Hoary tansy-aster	G5T5	N	X	X	O	Jones, Dittola, and Meyers s.n. (BICA)	1984	
Aster	<i>Machaeranthera grindelioides</i> [ <i>Haplopappus nuttallii</i> ]	Rayless tansy-aster	G5	N	X	O	X	Lichvar 5998 (RM)	1983	
Aster	<i>Machaeranthera tanacetifolia</i>	Tahoka-daisy [Tansy-aster]	G5	N	X	O		Lichvar 6031 (RM)	1982	
Aster	<i>Malacothrix sonchoides</i>	Yellow-saucers	G5	N	X			Lichvar 6047 (RM)	1983	
Aster	<i>Microseris nutans</i>	Nodding silverpuffs	G5	N		X		Collins 651 (RM)	1983	
Aster	<i>Nothocalais cuspidata</i>	Wavy-leaf prairie-dandelion	G5	N		O	X	Lichvar 5709 (RM)	1983	
Aster	<i>Oligoneuron rigidum</i> var. <i>humile</i> [ <i>Solidago rigida</i> var. <i>humilis</i> ]	Hard-leaf flat-top goldenrod	G5T5	N			X	Lichvar 6904 (BICA)	1983	
Aster	<i>Packera cana</i> [ <i>Senecio canus</i> ]	Silver-woolly groundsel	G5	N	X	X	X	Lichvar 5907 (RM)	1981	
Aster	<i>Packera paupercula</i> [ <i>Senecio pauperculus</i> ]	Balsam groundsel	G4G5	N			X	Lichvar 6105 (RM)	1983	
Aster	<i>Packera plattensis</i> [ <i>Senecio plattensis</i> ]	Prairie groundsel	G4	N			X	Heidel 1853 (MONTU)	1999	
Aster	<i>Packera pseudaura</i> var. <i>pseudaura</i> [ <i>Senecio pseudoureus</i> var. <i>pseudoureus</i> ]	Streambank groundsel	G5T?	N		O	X	Heidel 1922 (MONTU)	1999	
Aster	<i>Packera streptanthifolia</i> var. <i>rubricaulis</i> [ <i>Senecio streptanthifolius</i> var. <i>rubricaulis</i> ]	Rocky Mountain groundsel	G5T?	N			X	Heidel 2001 (RM)	1998	Previously reported, but no voucher specimens located for corroboration.
Aster	<i>Picrothamnus desertorum</i> [ <i>Artemisia spinescens</i> ]	Budsage	G5	N	X			Lichvar 5607 (RM)	1983	
Aster	<i>Platyschukhria integrifolia</i>	Basin-daisy	G5	N	X	X		Lichvar 6032 (RM)	1983	
Aster	<i>Ratibida columnifera</i>	Red-spike Mexican-hat	G5	N			X	Lichvar 6927 (RM)	1982	
Aster	<i>Rudbeckia laciniata</i> var. <i>amplea</i>	Green-head coneflower	G5T?	N			X	Collins 815 (BICA)	1980	
Aster	<i>Senecio eremophilus</i> var. <i>eremophilus</i>	Desert ragwort	G5T5	N			X	Lichvar 6383 (RM)	1983	

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Aster	<i>Senecio integerrimus</i> var. <i>exaltatus</i>	Lamb-tongue ragwort	G5T5	N			X	Lichvar 6383 (RM)	1983	
Aster	<i>Solidago canadensis</i> var. <i>salebrosa</i>	Canadian goldenrod	G5T5?	N		X		Knight K-34 (RM)	1983	
Aster	<i>Solidago gigantea</i>	Late goldenrod	G5	N	X		X	Nelson 7034 (RM)	1980	
Aster	<i>Solidago missouriensis</i> var. <i>missouriensis</i>	Missouri goldenrod	G5T5	N	O	X		Lichvar 6354 (RM)	1984	
Aster	<i>Solidago nemoralis</i> var. <i>longipetiolata</i>	Gray goldenrod	G5T5	N			X	Heidel 2146 (RM)	2001	
Aster	<i>Sonchus arvensis</i> ssp. <i>uliginosus</i> [ <i>S. uliginosus</i> ]	Field sow-thistle	G?	E	X	X		Wolf 142 (BICA)	1982	
Aster	<i>Sonchus asper</i>	Spiny-leaf sow-thistle	G?	E	X		X	Lichvar 6903 (BICA)	1983	
Aster	<i>Sonchus oleraceus</i>	Common sow-thistle	G?	E	X			Lichvar 6047 (RM)	1983	
Aster	<i>Sphaeromeria capitata</i>	Cluster-head chicken- sage	G3	N	X	X		Lichvar 5627 (RM)	1976	
Aster	<i>Stenotus armerioides</i> [ <i>Haplopappus</i> <i>armerioides</i> ]	Thrift mock- goldenweed	G4G5	N	X	X		Lichvar 5596 (RM)	1983	
Aster	<i>Stephanomeria minor</i> [ <i>S. tenuifolia</i> ]	Lesser wire-lettuce	G5	N		X		Heidel 1928 (BICA)	1999	
Aster	<i>Stephanomeria</i> <i>runcinata</i>	Flowering-straw	G5	N	X	O		Jones, Ditolla, and Meyers s.n. (BICA)	1984	
Aster	<i>Symphotrichum</i> <i>ciliatum</i> [ <i>Aster brachyactis</i> ]	Alkali American-aster	G5	N		X		Heidel 1929 (MONTU)	1998	
Aster	<i>Symphotrichum</i> <i>eatonii</i> [ <i>Aster bracteolatus</i> , <i>A.</i> <i>eatonii</i> ]	Bracted American- aster	G5	N			X	Collins 874 (BICA)	1983	
Aster	<i>Symphotrichum</i> <i>ericoides</i> var. <i>pansum</i> [ <i>Aster ericoides</i> var. <i>pansus</i> ]	White heath American-aster	G5T5	N	X	X		Nelson 7030 (RM)	1980	
Aster	<i>Symphotrichum</i> <i>frondosum</i> [ <i>Aster frondosus</i> ]	Leafy American-aster	G4	N	X			Heidel 2138 (RM)	2001	
Aster	<i>Symphotrichum</i> <i>lanceolatum</i> var. <i>hesperium</i> [ <i>Aster lanceolatus</i> var. <i>hesperius</i> , <i>A. h.</i> ]	White panicked American-aster	G5T5?	N			X	Heidel 2144 (RM)	1999	Previously reported, but no voucher specimens located for corroboration..

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Aster	<i>Tanacetum vulgare</i>	Common tansy	G?	E			X	Heidel 1926 (MONTU)	1999	
Aster	<i>Taraxacum laevigatum</i>	Red-seed dandelion	G?	E		X		Lichvar 5633 (BICA)	1983	
Aster	<i>Taraxacum officinale</i>	Common dandelion	G5	E		X	O	Fertig 19442 (RM)	2001	
Aster	<i>Tetradymia canescens</i>	Spineless horsebrush	G5	N	X	X		Jones, Ditolla, and Meyers s.n. (BICA)	1984	
Aster	<i>Tetraeneuris acaulis</i> var. <i>acaulis</i> [ <i>Hymenoxys acaulis</i> var. <i>acaulis</i> ]	Stemless four-nerve daisy	G5T5	N	X	X	X	Wolf 105 (BICA)	1982	
Aster	<i>Tetraeneuris torreyana</i> [ <i>Hymenoxys torreyana</i> ]	Torrey's four-nerve daisy	G4	N		X		Lichvar 5628 (RM)	1983	
Aster	<i>Townsendia hookeri</i>	Hooker's Townsend- daisy	G5	N	O	X		Lichvar 6069 (BICA)	1983	
Aster	<i>Townsendia incana</i>	Hoary Townsend- daisy	G5	N	X	X		Dorn 2628 (RM)	1976	
Aster	<i>Townsendia parryi</i>	Parry's Townsend- daisy	G4?	N		X		Lichvar 5960 (RM)	1983	
Aster	<i>Townsendia spathulata</i>	Sword Townsend- daisy	G3	N	O	X	X	Lichvar 5631 (RM)	1983	
Aster	<i>Tragopogon dubius</i>	Meadow goat's-beard	G?	E	X	X	X	Messerschmidt s.n. BICA	1981	
Aster	<i>Wyethia scabra</i>	Badland mule's-ears	G4	N	X	O		Dorn 2629 (RM)	1976	
Aster	<i>Xanthium strumarium</i> var. <i>canadense</i>	Rough cockleburr	G5T5	N	X	X		Collins 915 (RM)	1979	
Aster	<i>Xylorhiza glabriuscula</i>	Smooth woody-aster	G4	N	X	X		Jones, Ditolla, and Meyers s.n. (BICA)	1984	
Berberid	<i>Mahonia repens</i>	Creeping Oregon- grape	G5	N			X	Lichvar 5679 (RM)	1983	
Betul	<i>Betula occidentalis</i>	Water birch	G4G5	N	X	X	X	Knight 68 (RM)	1982	
Boragin	<i>Asperugo procumbens</i>	German madwort	G?	E		X	X	Lichvar 5648 (BICA)	1983	
Boragin	<i>Cryptantha ambigua</i>	Basin cat's-eye	G4	N		X		Dorn 2623 (RM)	1976	
Boragin	<i>Cryptantha cana</i>	Mountain cat's-eye	G5	N	X	X		Lichvar 6000 (RM)	1976	Includes reports of <i>C. caespitosa</i> from Knight et al. 1997
Boragin	<i>Cryptantha celosioioides</i>	Buttecandle	G5	N	X	X	X	Lichvar 5669 (RM)	1982	
Boragin	<i>Cryptantha flavoculata</i>	Rough-seed cat's-eye	G5	N	X	X		Lichvar 5591 (RM)	1976	
Boragin	<i>Cryptantha kelseyana</i>	Kelsey's cat's-eye	G4	N	X	O		Collins 710 (RM)	1983	Collins 710 originally determined as <i>C.</i> <i>watsonii</i>

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Boragin	<i>Cynoglossum officinale</i>	Gypsy-flower [Common hound's- tongue]	G?	E	O	O	X	Lichvar 6118 (RM)	1983	Noxious weed in MT and WY
Boragin	<i>Eritrichium howardii</i>	Howard's alpine forget-me-not	G4	N		O			1998	Observed above Layout Creek (T8S R28E S33) by Heidel
Boragin	<i>Hackelia deflexa</i> var. <i>americana</i>	Nodding stickseed	G5TU	N			X	Lichvar 6368 (BICA)	1983	
Boragin	<i>Hackelia floribunda</i>	Many-flower stickseed	G5?	N		X		Lichvar 6096 (BICA)	1983	
Boragin	<i>Lappula occidentalis</i> var. <i>cupulata</i> [ <i>L. redowskii</i> var. <i>cupulata</i> , <i>L. texana</i> ]	Flat-spine sheeppurr	G5T5	N	X	X	X	Lichvar 6030 (RM)	1983	
Boragin	<i>Lappula occidentalis</i> var. <i>occidentalis</i> [ <i>L. redowskii</i> var. <i>redowskii</i> ]	Flat-spine sheeppurr	G5T5	N	X	X		Collins 722 (RM)	1983	
Boragin	<i>Lappula squarrosa</i> var. <i>erecta</i>	Bristly sheeppurr	G?	E	X	X		Fertig 19428 (RM)	1984	
Boragin	<i>Lithospermum incisum</i>	Fringed gromwell	G5	N	X	X	X	Lichvar 5563 (RM)	1983	
Boragin	<i>Lithospermum ruderale</i>	Columbian puccoon	G5	N	O	X	O	Lichvar 5653 (RM)	1983	
Boragin	<i>Mertensia ciliata</i>	Tall fringe bluebells	G5	N			X	Lichvar 6164 (RM)	1983	
Boragin	<i>Mertensia oblongifolia</i>	Languid-lady [Leafy bluebells]	G5	N		X		Lichvar 5573 (RM)	1983	
Boragin	<i>Onosmodium molle</i> var. <i>occidentale</i>	Soft-hair marbleseed	G4G5 T4?	N		O	X	Lichvar 6139 (BICA)	1983	includes var. <i>molle</i> falsely reported by Lichvar et al. (1985)
Boragin	<i>Tiquilia nuttallii</i> [ <i>Coldenia nuttallii</i> ]	Rosette crinkleemat	G5	N	X			Dorn 2950 (RM)	1977	
Brassic	<i>Alyssum alyssoides</i>	Pale madwort	G?	E			X	Lichvar 5681 (RM)	1983	
Brassic	<i>Alyssum desertorum</i>	Desert madwort	G?	E	X	X	O	Fertig 19419 (RM)	2001	
Brassic	<i>Arabidopsis thaliana</i>	Thalecress	G?	E			X	Heidel 2050 (RM)	2001	
Brassic	<i>Arabis demissa</i> var. <i>languida</i> [ <i>Boecheira demissa</i> var. <i>languida</i> ]	Nodding rockcress	G5T4	N	X	X		Heidel 1995 (RM)	1983	
Brassic	<i>Arabis fendleri</i> var. <i>spatifolia</i> [ <i>Boecheira fendleri</i> var. <i>spatifolia</i> ]	Fendler's rockcress	G5T4	N	X	X		Fertig 18387 (RM)	1998	

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Brassic	<i>Arabis glabra</i>	Tower-mustard	G5	N		X	X	Heidel 2040 (BICA)	1983	
Brassic	<i>Arabis holboellii</i> var. <i>collinsii</i> [ <i>Boecheira holboellii</i> var. <i>collinsii</i> ]	Holboell's rockcress	G5T5	N		O	X	Lichvar 5687 (RM)	1983	Lichvar 5687 was originally misidentified as var. <i>retrofracta</i>
Brassic	<i>Arabis holboellii</i> var. <i>pendulocarpa</i> [ <i>A. pendulocarpa</i> var. <i>pendulocarpa</i> , <i>Boecheira exilis</i> ]	Holboell's rockcress	G5T5?	N		X		Heidel 1827 (MONTU)	1999	
Brassic	<i>Arabis holboellii</i> var. <i>pinetorum</i> [ <i>Boecheira holboellii</i> var. <i>pinetorum</i> ]	Holboell's rockcress	G5T5?	N		X		Lichvar 5923 (RM)	1983	Lichvar 5923 was originally misidentified as var. <i>retrofracta</i>
Brassic	<i>Arabis holboellii</i> var. <i>retrofracta</i> [ <i>A. holboellii</i> var. <i>secunda</i> , <i>Boecheira</i> <i>holboellii</i> var. <i>secunda</i> ]	Holboell's rockcress	G5T5	N		X	X	Lichvar 5693 (RM)	1983	Duplicate specimen at BICA may be misidentified
Brassic	<i>Arabis nuttallii</i> [ <i>Boecheira nuttallii</i> ]	Nuttall's rockcress	G5	N		X	X	Lichvar 5705 (RM)	1983	
Brassic	<i>Arabis sparsiflora</i> var. <i>subvillosa</i> [ <i>Boecheira sparsiflora</i> ]	Elegant rockcress	G5T?	N		X		Dorn 2556 (personal herbarium)	1976	
Brassic	<i>Barbarea orthoceras</i>	American yellow- rocket	G?	N			X	Lichvar 6161 (BICA)	1983	
Brassic	<i>Camelina microcarpa</i>	Little-pod false flax	G?	E		X		Collins 587 (RM)	1983	
Brassic	<i>Capsella bursa-pastoris</i>	Shepherd's-purse	G?	E		X	X	Lichvar 5718 (RM)	1983	
Brassic	<i>Cardaria pubescens</i>	Globe-pod hoarycress	G?	E	X			Lichvar 6052 (RM)	1979	Noxious weed in WY
Brassic	<i>Chorispora tenella</i>	Crossflower	G?	E		X		Lichvar 5648 (RM)	1983	
Brassic	<i>Descurainia incana</i> var. <i>incana</i>	Mountain tansy- mustard	G5T5?	N	X	X		Fertig 19425 (RM)	1984	
Brassic	<i>Descurainia pinnata</i> var. <i>halictorum</i> [ <i>D. pinnata</i> var. <i>osmiarum</i> ]	Western tansy- mustard	G5T?	N	X	O		Fertig 19431 (RM)	1983	
Brassic	<i>Descurainia pinnata</i> var. <i>intermedia</i>	Western tansy- mustard	G5T?	N		X	X	Fertig 19451 (RM)	2001	
Brassic	<i>Descurainia sophia</i>	Herb-sophia [Flixweed]	G?	E	X	O		Collins 551 (RM)	1983	
Brassic	<i>Draba albertina</i> [ <i>D. stenoloba</i> ]	Slender whitlow-grass	G4	N		X	X	Lichvar 5677 (RM)	1983	

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Brassic	<i>Draba oligosperma</i> var. <i>oligosperma</i>	Few-seed whitlow- grass	G5	N		X		Lichvar 5966 (RM)	1983	
Brassic	<i>Draba praealta</i>	Tall whitlow-grass	G5	N		X	O	Collins 665 (RM)	1983	
Brassic	<i>Draba reptans</i>	Carolina whitlow- grass	G5	N	X	X		Lichvar 5931 (RM)	1983	
Brassic	<i>Erysimum capitatum</i> var. <i>purshii</i> [ <i>E. asperum</i> , <i>E.</i> <i>capitatum</i> var. <i>argillosum</i> ]	Sand-dune wallflower	G5T?	N		X	X	Heidel 2019 (BICA)	1983	
Brassic	<i>Erysimum</i> <i>cheiranthoides</i> var. <i>altum</i>	Worm-seed wallflower	G5	N			X	Lichvar 6113 (RM)	1983	
Brassic	<i>Erysimum</i> <i>inconspicuum</i>	Shy wallflower	G4G5	N	X?	O		Lichvar 6085 (RM)	1983	Voucher at BICA may be misidentified
Brassic	<i>Hesperis matronalis</i>	Mother-of-the- Evening [Dame's rocket]	G4G5	E			X	Lichvar 5714 (RM)	1983	
Brassic	<i>Lepidium densiflorum</i> var. <i>macrocarpum</i>	Miner's pepperwort	G5T5	N	X	X		Collins 691 (RM)	1983	
Brassic	<i>Lepidium perfoliatum</i>	Clasping pepperwort	G?	E			X	Lichvar 5719 (RM)	1983	
Brassic	<i>Lesquerella alpina</i>	Alpine bladderpod	G4	N	X	X	X	Lichvar 6463 (RM)	1983	Includes vars. <i>alpina</i> and <i>spathulata</i>
Brassic	<i>Lesquerella lesicii</i>	Pryor Mountains bladderpod	G1	N		X		Heidel 2022 (RM)	1998	
Brassic	<i>Lesquerella ludoviciana</i>	Louisiana bladderpod	G5	N	X		X	Lichvar 6187 (RM)	1983	
Brassic	<i>Malcolmia africana</i>	African adder's-mouth	G?	E	X	X		Dorn 2540 (RM)	1976	
Brassic	<i>Physaria acutifolia</i>	Sharp-leaf twinpod	G5	N	O	X		Lichvar 5872 (RM)	1983	
Brassic	<i>Physaria didymocarpa</i>	Common twinpod	G5	N	X	X	X	Lichvar 5636 (BICA)	1983	Some non-fruiting specimens may actually be <i>P.</i> <i>acutifolia</i>
Brassic	<i>Rorippa calycina</i>	Persistent-sepal yellowcress	G3	N	X			Lichvar 6017 (RM)	1983	
Brassic	<i>Rorippa curvipes</i> var. <i>curvipes</i>	Blunt-leaf yellowcress	G5T?	N	X	X		Lichvar 6013 (RM)	1983	
Brassic	<i>Rorippa nasturtium- aquaticum</i> [ <i>Nasturtium officinale</i> ]	Watercress	G5	E	O	X	X	Lichvar 5880 (BICA)	1983	
Brassic	<i>Rorippa palustris</i> var. <i>fernaldiana</i>	Bog yellowcress	G5T5	N			X	Heidel 2153	2001	

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Brassic	<i>Rorippa palustris</i> var. <i>hispidula</i>	Bog yellowcress	G5T5	N	X			Fertig 18414 (RM)	1998	
Brassic	<i>Rorippa sinuata</i>	Spreading yellowcress	G5	N	X	X		Lichvar 6050 (RM)	1983	
Brassic	<i>Schoenocrambe linifolia</i> [ <i>Sisymbrium linifolium</i> ]	Salmon River plains- mustard	G5	N	X		X	Lichvar 5606 (BICA)	1983	
Brassic	<i>Sisymbrium altissimum</i>	Tall hedge-mustard [Tumblemustard]	G?	E	X	X	X	Lichvar 5994 (RM)	1982	
Brassic	<i>Sisymbrium loeselii</i>	False London rocket [Loesel's tumblemustard]	G?	E		X		Heidel 1971 (RM)	2001	
Brassic	<i>Stanleya pinnata</i>	Golden prince's- plume	G4G5	N	O	X		Wolf 86 (BICA)	1982	
Brassic	<i>Stanleya tomentosa</i> var. <i>tomentosa</i>	Woolly prince's-plume	G4T3	N	X	X	X	Lichvar 6196 (RM)	1983	
Brassic	<i>Streptanthella longirostris</i>	Long-beak fiddle- mustard	G5	N	X			Lichvar 6010 (BICA)	1983	
Brassic	<i>Thlaspi arvense</i>	Field pennycress	G?	E		X		Jones, Ditolla, and Myers s.n. RM	1984	
Cact	<i>Opuntia polyacantha</i> var. <i>polyacantha</i>	Hair-spine prickly- pear [Plains prickly-pear]	G5T5	N	X		X	Jones, Ditolla, and Myers s.n. (RM)	1983	
Cact	<i>Pediocactus simpsonii</i>	Snowball cactus	G4	N			X	Collins 647 (BICA)	1983	
Campanul	<i>Campanula rotundifolia</i>	Bluebell-of-Scotland [Harebell]	G5	N	O	X	X	Lichvar 6074 (BICA)	1983	
Cannab	<i>Humulus lupulus</i> var. <i>neomexicanus</i>	Common hop	G5 T4T5	N			X	Heidel 2090 (RM)	2001	Previously reported, but no voucher specimens located for corroboration..
Cappar	<i>Cleome lutea</i>	Yellow spider-flower	G5	N	X	X		Lichvar 6043 (RM)	1976	
Cappar	<i>Cleome serrulata</i>	Rocky Mountain beeplant	G5	N			X	Morstad s.n. (BICA)	2001	Earlier report by Lichvar et al. (1985) was based on a misidentified specimen
Cappar	<i>Polanisia dodecandra</i> var. <i>trachysperma</i>	Red-whisker clammyweed	G5T?	N	X	O		Lichvar 6028 (RM)	1983	
Caprifoli	<i>Lonicera tatarica</i>	Twinsisters [Tatarian honeysuckle]	G?	E			X	Heidel 2108 (RM)	1999	

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Caprifoli	<i>Sambucus nigra</i> ssp. <i>caerulea</i> [ <i>S. cerulea</i> ]	Black elder	G5?	N		O	X	Lichvar 6136 (RM)	1983	
Caprifoli	<i>Symphoricarpos albus</i> var. <i>albus</i>	Common snowberry	G5T4	N		X	X	Collins 764 (RM)	1983	
Caprifoli	<i>Symphoricarpos occidentalis</i>	Western snowberry	G5	N		X	O	Lichvar 6415 (RM)	1983	
Caprifoli	<i>Symphoricarpos oreophilus</i> var. <i>utahensis</i>	Mountain snowberry	G5T5?	N		X		Collins 728 (BICA)	1983	
Caryophyll	<i>Arenaria congesta</i> var. <i>congesta</i> [ <i>Eremogone congesta</i> var. c.]	Ball-head sandwort	G5T5?	N		X		Lichvar 5927 (RM)	1983	
Caryophyll	<i>Arenaria hookeri</i> var. <i>hookeri</i> [ <i>Eremogone hookeri</i> var. h.]	Hooker's sandwort	G5T5?	N	X	X		Lichvar 5612 (RM)	1983	
Caryophyll	<i>Arenaria serpyllifolia</i>	Thyme-leaf sandwort	G?	E		O	X	Heidel 1861 (MONTU)	1999	
Caryophyll	<i>Cerastium arvense</i>	Field mouse-ear chickweed	G5	N		X		Lichvar 5555 (RM)	1983	
Caryophyll	<i>Cerastium nutans</i>	Nodding mouse-ear chickweed	G5	N			X	Lichvar 6172 (RM)	1983	
Caryophyll	<i>Minuartia nuttallii</i> [ <i>Arenaria nuttallii</i> ]	Brittle stitchwort	G5	N		X		Collins 650 (RM)	1983	
Caryophyll	<i>Paronychia sessiliflora</i>	Low nailwort	G5	N	X	X	O	Lichvar 5614 (RM)	1983	
Caryophyll	<i>Silene antirrhina</i>	Sleepy catchfly	G5	N		O	X	Heidel 2036 (RM)	2001	
Caryophyll	<i>Silene menziesii</i> var. <i>viscosa</i>	White catchfly	G5T?	N		X		Lichvar 5870 (RM)	1983	
Caryophyll	<i>Spergularia salina</i> [ <i>S. marina</i> ]	Saltmarsh sandspurry	G?	E	X			Fertig 14834 (RM)	1994	
Caryophyll	<i>Stellaria media</i>	Common chickweed	G?	E		X	X	Lichvar 5697 (RM)	1983	
Chenopodi	<i>Atriplex argentea</i>	Silverscale	G5	N	X	X	O	Jones, Ditolla, and Myers s.n. (BICA)	1984	
Chenopodi	<i>Atriplex canescens</i> var. <i>canescens</i>	Four-wing saltbush	G5T5?	N	X	X		Collins 916 (RM)	1983	
Chenopodi	<i>Atriplex confertifolia</i>	Shadscale	G5	N	O	X		Knight K-46 (RM)	1983	
Chenopodi	<i>Atriplex gardneri</i> var. <i>gardneri</i>	Gardner's saltbush	G5T5	N	X			Lichvar 5604 (RM)	1983	
Chenopodi	<i>Atriplex micrantha</i> [ <i>A. heterosperma</i> ]	Two-scale saltbush	G?	E	X			Nelson 5080 (RM)	1979	



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Chenopodi	<i>Atriplex powellii</i>	Powell's orache	G4G5	N	X			Jones, Ditolla, and Myers s.n. (RM)	1984	
Chenopodi	<i>Atriplex rosea</i>	Tumbling orache	G?	E	O	X		Collins 918 (RM)	1983	
Chenopodi	<i>Bassia scoparia</i> [ <i>B. sieversiana</i> , <i>Kochia</i> <i>scoparia</i> ]	Mexican fire-weed [Summer-cypress]	G?	E	X	O		Knight K-56 (RM)	1983	
Chenopodi	<i>Chenopodium</i> <i>atrovirens</i>	Pinyon goosefoot	G5	N	X	X		Jones, Ditolla, and Myers s.n. (BICA)	1984	
Chenopodi	<i>Chenopodium</i> <i>berlandieri</i> var. <i>zschackei</i>	Pit-seed goosefoot	G5T?	N	X		X	Nelson 7023 (RM)	1980	
Chenopodi	<i>Chenopodium fremontii</i>	Fremont's goosefoot	G5	N	X	X		Jones, Ditolla, and Myers s.n. (RM)	1984	
Chenopodi	<i>Chenopodium</i> <i>leptophyllum</i>	Narrow-leaf goosefoot	G5	N	O		X	Lichvar 6889 (RM)	1983	
Chenopodi	<i>Chenopodium</i> <i>pratensis</i>	Desert goosefoot	G5	N	X	X		Fertig 19432 (RM)	1984	
Chenopodi	<i>Chenopodium rubrum</i> var. <i>rubrum</i>	Red goosefoot	G5	N	X	X		Heidel 1986 (BICA)	2001	
Chenopodi	<i>Chenopodium salinum</i> [ <i>C. glaucum</i> var. <i>salinum</i> ]	Rocky Mountain goosefoot	G5	N	X			Nelson 5068 (RM)	1979	
Chenopodi	<i>Corispermum</i> sp.	Bugseed sp.	G??	N			X	Lichvar 6355 (RM)	1983	Originally determined as <i>C.</i> <i>hyssopifolium</i> originally; the immature specimen was annotated by Mosyakin in taxonomic revision of genus to either <i>C. americanum</i> or <i>C. villosum</i>
Chenopodi	<i>Cyclopoma</i> <i>atriplicifolium</i>	Winged-pigweed	G5	N	X		O	Heidel 2079 (RM)	2001	
Chenopodi	<i>Grayia spinosa</i>	Spiny hop-sage	G5	N	X	X	X	Jones, Ditolla, and Myers s.n. (BICA)	1984	
Chenopodi	<i>Halogeton glomeratus</i>	Saltlover	G?	E	X	X		Wolf 79 (BICA)	1982	
Chenopodi	<i>Krascheninnikovia</i> <i>lanata</i> [ <i>Ceratooides lanata</i> ]	Winterfat	G5	N	X	X		Lichvar 6056 (RM)	1983	

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Chenopodi	<i>Monolepis nuttalliana</i>	Nuttall's poverty-weed	G5	N	X			Collins 721 (RM)	1983	
Chenopodi	<i>Salicornia rubra</i>	Red saltwort	G4	N	X			Heidel 2055 (RM)	2001	
Chenopodi	<i>Salsola tragus</i> [ <i>S. australis</i> , <i>S. kali</i> ]	Prickly Russian-thistle	G?	E	X	O		Wolf 151 (BICA)	1982	
Chenopodi	<i>Suaeda moquinii</i> [ <i>S. nigra</i> , <i>S. fruticosa</i> , <i>S. torreyana</i> ]	Shrubby seepweed	G5	N	X	X		Lichvar 6033 (RM)	1983	
Chenopodi	<i>Suckleya suckleyana</i>	Poison suckleya	G5	N	X			Fertig 14833 (RM)	1994	
Chenopodi [Sarcobat]	<i>Sarcobatus vermiculatus</i>	Greasewood	G5	N	X	X		Clausen 66-238 (RM), Snelling 18 (RM)	1924	
Commelin	<i>Tradescantia occidentalis</i>	Prairie spiderwort	G5	N			X	Lichvar 6180 (BICA)	1983	
Convolvul	<i>Convolvulus arvensis</i>	Field bindweed	G?	E	O		X	Heidel 2037 (RM)	2001	Noxious weed in MT and WY. Earlier voucher specimens from BICA were collected at Lovell visitors center.
Convolvul	<i>Evolvulus nuttallianus</i>	Shaggy dwarf morning-glory	G5	N	X		X	Heidel 2032 (RM)	2001	
Convolvul	<i>Ipomoea leptophylla</i>	Bush morning-glory	G3G5	N			X	Collins 893 (BICA)	1983	
Corn	<i>Cornus sericea</i> [ <i>C. stolonifera</i> ]	Redosier [Red-osier dogwood]	G5	N	O	X	O	Lichvar 5973 (RM)	1983	
Crassul	<i>Sedum lanceolatum</i>	Lance-leaf stonecrop	G5	N		X	X	Jones, Ditolla, and Myers s.n. (BICA)	1984	
Cucurbit	<i>Bryonia alba</i>	White bryony	G?	E			X	Heidel 2045	2001	
Cupress	<i>Juniperus communis</i> var. <i>depressa</i>	Common juniper	G5T5	N		X	O	Collins 565 (BICA)	1983	
Cupress	<i>Juniperus horizontalis</i>	Creeping juniper	G5	N		X		Fertig 19455 (RM)	1984	
Cupress	<i>Juniperus osteosperma</i>	Utah juniper	G5	N	X	X		Collins 559 (RM)	1981	
Cupress	<i>Juniperus scopulorum</i>	Rocky Mountain juniper	G5	N		X	O	Wolf 143 (BICA)	1982	
Cyper	<i>Carex aquatilis</i>	Leafy tussock sedge [Water sedge]	G5	N	O	O	X	Collins 555 (RM)	1983	
Cyper	<i>Carex aurea</i>	Golden-fruit sedge	G5	N	O	X	X	Heidel 1708 (MONTU)	1998	
Cyper	<i>Carex brevior</i>	Short-beak sedge	G5?	N			X	Heidel 2143 (RM)	2001	
Cyper	<i>Carex duriuscula</i> [ <i>C. stenophylla</i> ]	Spike-rush sedge [Narrow-leaved sedge]	G5	N		X		Heidel 1852 (MONTU)	1999	

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Cyper	<i>Carex elynoides</i>	Black-root sedge	G5	N		X		Heidel 2065 (RM)	2001	Previously reported, but no voucher specimens located for corroboration.
Cyper	<i>Carex filifolia</i>	Thread-leaf sedge	G5	N	X	X	O	Lichvar 5566 (RM)	1983	
Cyper	<i>Carex geyeri</i>	Geyer's sedge [Elk sedge]	G5	N		X		Heidel 2041 (RM)	2001	
Cyper	<i>Carex gravida</i> var. <i>gravida</i>	Heavy sedge	G5T5?	N			X	Heidel 2101 (RM)	1999	
Cyper	<i>Carex hoodii</i>	Hood's sedge	G4G5	N		X	X	Collins 777 (RM)	1983	
Cyper	<i>Carex hystericina</i>	Porcupine sedge	G5	N	O	X	X	Heidel 1716 (MONTU)	1998	
Cyper	<i>Carex inops</i> ssp. <i>heliophila</i> [ <i>C. pennsylvanica</i> var. <i>digyna</i> , <i>C. heliophila</i> ]	Long-stolon sedge [Pennsylvania sedge]	G5T5	N		X	X	Collins 574 (RM)	1983	
Cyper	<i>Carex interior</i>	Inland sedge	G5	N	O	X	X	Lichvar 6106 (BICA)	1983	
Cyper	<i>Carex microptera</i> var. <i>microptera</i>	Small-wing sedge	G5?	N		X	X	Lichvar 6150 (RM)	1983	
Cyper	<i>Carex nebrascensis</i>	Nebraska sedge	G5	N	O	X	O	Heidel 2005 (RM)	2001	Earlier reports based on a misidentified specimen
Cyper	<i>Carex parryana</i> var. <i>parryana</i>	Parry's sedge	G4T4	N		X	X	Heidel 1819 (MONTU)	1983	
Cyper	<i>Carex pellita</i> [ <i>C. lanuginosa</i> ]	Woolly sedge	G5	N	X	X	O	Nelson 5456 (RM)	1980	
Cyper	<i>Carex petasata</i>	Liddon sedge	G5	N		X		Heidel 2028 (RM)	2001	
Cyper	<i>Carex praeegracilis</i>	Clustered field sedge	G5	N	O	O	X	Lichvar 6107 (RM)	1983	
Cyper	<i>Carex rossii</i>	Ross' sedge	G5	N		X		Heidel 2023b (RM)	2001	
Cyper	<i>Carex scirpoidea</i> var. <i>scirpiformis</i>	Canadian single-spike sedge	G5 T4T5	N			X	Heidel 2109 (RM)	2001	
Cyper	<i>Carex sprengelii</i>	Long-beak sedge	G5?	N			X	Lichvar 5692 (RM)	1983	Lichvar 5692 originally misidentified as <i>C. hystericina</i>
Cyper	<i>Carex stipata</i>	Stalk-grain sedge	G5	N			X	Heidel 1858 (MONTU)	1998	
Cyper	<i>Carex vaillicola</i>	Valley sedge	G5	N		X		Jones, Ditolla, and Myers s.n. (BICA)	1984	
Cyper	<i>Carex viridula</i>	Little green sedge	G5?	N			X	Collins 804 (RM)	1983	

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Cyper	<i>Carex vulpinoidea</i>	Common fox sedge	G5	N			X	Lichvar 6119 (RM)	1983	
Cyper	<i>Eleocharis elliptica</i> [ <i>E. tenuis</i> var. <i>borealis</i> ]	Elliptic spike-rush	G5	N		X		Heidel 2006 (RM)	2001	Specimen immature
Cyper	<i>Eleocharis palustris</i>	Common spike-rush	G5	N	X	O	O	Nelson 5457 (RM)	1980	
Cyper	<i>Eleocharis quinqueflora</i> [ <i>E. pauciflora</i> ]	Few-flower spike-rush	G5	N		X		Heidel 1717 (MONTU)	1998	
Cyper	<i>Schoenoplectus acutus</i> var. <i>occidentalis</i> [ <i>Scirpus acutus</i> ]	Hard-stem club-rush	G5	N	X			Nelson 7032 (RM)	1980	
Cyper	<i>Schoenoplectus maritimus</i> [ <i>Scirpus maritimus</i> , <i>Bolboschoenus maritimus</i> var. <i>paludosus</i> ]	Saltmarsh club-rush	G5	N	X	X		Heidel 1979 (RM)	2001	
Cyper	<i>Schoenoplectus pungens</i> var. <i>polyphyllus</i> [ <i>Scirpus pungens</i> var. <i>polyphyllus</i> ]	Three-square [Three-square bulrush]	G5	N	X	O	X	Nelson 7033 (RM)	1980	
Cyper	<i>Schoenoplectus tabernaemontani</i> [ <i>Scirpus validus</i> ]	Soft-stem club-rush	G5	N	O		X	Collins 902 (RM)	1983	
Cyper	<i>Scirpus pallidus</i>	Pale bulrush	G5	N		O	X	Lichvar 6421 (RM)	1983	
Dryopterid [Asplen]	<i>Cystopteris fragilis</i>	Brittle bladder fern	G5	N		X	O	Lichvar 5959 (RM)	1983	
Dryopterid [Asplen]	<i>Woodсия oregana</i> var. <i>oregana</i>	Oregon cliff fern	G5T4?	N		X	X	Fertig 19447 (RM)	1983	Earlier specimens misidentified as <i>W.</i> <i>scopolina</i>
Elaeagn	<i>Elaeagnus angustifolia</i>	Russian-olive	G?	E	X	X	O	Collins 718 (RM)	1981	
Elaeagn	<i>Shepherdia argentea</i>	Silver buffalo-berry	G5	N		X	X	Heidel 1991 (BICA)	1983	
Elaeagn	<i>Shepherdia canadensis</i>	Russet buffalo-berry	G5	N		X	O	Lichvar 6388 (RM)	1983	
Equiset	<i>Equisetum arvense</i>	Field horsetail	G5	N	O	X	X	Lichvar 5867 (RM)	1983	
Equiset	<i>Equisetum hyemale</i>	Tall scouring-rush	G5T5	N			X	Lichvar 6353 (RM)	1983	
Equiset	<i>Equisetum laevigatum</i>	Smooth scouring-rush	G5	N		X		Lichvar 5865 (RM)	1982	
Equiset	<i>Equisetum variegatum</i>	Variegated scouring-rush	G5	N			X	Heidel 2102 (RM)	2001	
Euphorbi	<i>Chamaesyce glyptosperma</i> [ <i>Euphorbia glyptosperma</i> ]	Rib-seed sandmat	G5	N	X	X		Collins 859 (RM)	1983	

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Euphorbi	<i>Chamaesyce missurica</i> var. <i>petaloidea</i> [ <i>Euphorbia missurica</i> var. <i>petaloidea</i> ]	Prairie sandmat	G5	N	X	O	X	Jones, Ditolla, and Myers s.n. (BICA)	1984	
Euphorbi	<i>Chamaesyce serpyllifolia</i> [ <i>Euphorbia serpyllifolia</i> ]	Thyme-leaf sandmat	G5	N		X	X	Heidel 2014 (RM)	2001	
Euphorbi	<i>Euphorbia brachycera</i> var. <i>robusta</i> [ <i>E. robusta</i> ]	Horned spurge	G5	N	X	X	X	Fertig 19427 (RM)	1983	
Euphorbi	<i>Euphorbia esula</i> var. <i>uralensis</i>	Wolf's-milk [Leafy spurge]	G5T?	E		O	O		1983	Noxious weed in MT and WY. Reliably reported for BCNRA by Lichvar et al. (1985) and Knight et al. (1987), but exact locations not known.
Euphorbi	<i>Euphorbia spathulata</i>	Warty spurge	G5	N			X	Heidel 2047 (RM)	2001	
Fab	<i>Astragalus aretioides</i> [ <i>A. serioleucus</i> var. <i>aretioides</i> ]	Cushion milkvetch	G4	N		X		Heidel 2135 (RM)	1998	First observed in BCNRA by Heidel in 1998; voucher collected in 2001. Booth specimen at MONT was probably collected outside BCNRA.
Fab	<i>Astragalus bisulcatus</i> var. <i>bisulcatus</i>	Two-groove milkvetch	G5T5	N	X	X	O	Messerschmidt 103-(BICA)	1981	
Fab	<i>Astragalus canadensis</i> var. <i>canadensis</i>	Canadian milkvetch	G5T4?	N			X	Heidel 2042 (RM)	2001	Previously reported, but no voucher specimens located for corroboration.
Fab	<i>Astragalus ceramicus</i> var. <i>filifolius</i>	Painted milkvetch	G4T4	N			X	Lichvar 6184 (RM)	1983	
Fab	<i>Astragalus chamaeleuce</i>	Cicada milkvetch	G5T?	N	X			Lichvar 5600 (RM)	1983	
Fab	<i>Astragalus cibaribus</i>	Browse milkvetch	G4	N			X	Heidel 1930 (BICA)	1999	
Fab	<i>Astragalus cicer</i>	Chickpea milkvetch	G?	E		X		Heidel 1936 (BICA)	1999	

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Fab	<i>Astragalus crassicaerpus</i> var. <i>paysonii</i>	Ground-plum	G5T5	N		X	X	Lichvar 5658 (RM)	1983	
Fab	<i>Astragalus drummondii</i>	Drummond's milkvetch	G5	N		X		Lichvar 5984 (RM)	1983	
Fab	<i>Astragalus geyeri</i>	Geyer's milkvetch	G4?	N	X	X		Fertig 19421 (RM)	1984	
Fab	<i>Astragalus giviflorus</i> var. <i>giviflorus</i>	Plains milkvetch	G5T?	N		X	O	Lichvar 5574 (RM)	1983	
Fab	<i>Astragalus gracilis</i>	Slender milkvetch	G5	N	X			Jones , Ditolla, and Myers s.n. (BICA)	1984	
Fab	<i>Astragalus hyalinus</i>	Summer milkvetch	G4	N		X		Collins 910 (RM)	1976	Cited in Dorn (1978)
Fab	<i>Astragalus laxmannii</i> var. <i>robustior</i> [A. <i>adsurgens</i> var. <i>robustior</i> ]	Laxmann's milkvetch [Standing milkvetch]	G5T5	N	X	X		Lichvar 5922 (RM)	1983	
Fab	<i>Astragalus lotiflorus</i>	Lotus milkvetch	G5	N	X	X		Fertig 19433 (RM)	1983	
Fab	<i>Astragalus miser</i> var. <i>decumbens</i>	Timber milkvetch	G5T4?	N		X	O	Lichvar 5979 (RM)	1983	
Fab	<i>Astragalus missouriensis</i> var. <i>missouriensis</i>	Missouri milkvetch	G5T?	N		X	O	Collins 547 (RM)	1976	
Fab	<i>Astragalus oreganus</i>	Oregon milkvetch	G4?	N	X	X		Lichvar 5595 (RM)	1983	
Fab	<i>Astragalus purshii</i> var. <i>purshii</i>	Pursh's milkvetch	G5T5	N		X		Lichvar 5568 (BICA)	1983	
Fab	<i>Astragalus shortianus</i>	Short's milkvetch	G4	N	X			Lichvar 6006 (RM)	1983	Lichvar 6006 originally identified as <i>A. oreganus</i> ; annotated by Aaron Listen 1993
Fab	<i>Astragalus spatulatus</i>	Tufted milkvetch [Spoonleaf milkvetch]	G5	N	X	X	O	Lichvar 5579 (RM)	1983	
Fab	<i>Caragana arborescens</i>	Siberian peashrub	G?	E		X		Wolf 110 (BICA)	1982	Planted as an ornamental
Fab	<i>Dalea candida</i> var. <i>oligophylla</i> [Petalostemon <i>occidentale</i> ]	White prairie-clover	G5T?	N	X	X	X	Wolf 136 (BICA)	1982	
Fab	<i>Dalea purpurea</i> [Petalostemon <i>purpureum</i> ]	Violet prairie-clover	G5	N			X	Lichvar 6923 (RM)	1983	
Fab	<i>Glycyrrhiza lepidota</i> var. <i>glutinosa</i>	American licorice	G5	N	X	X	X	Nelson 5075 (RM)	1979	

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Fab	<i>Hedysarum boreale</i> var. <i>boreale</i>	Boreal sweet-vetch	G5T?	N		X	X	Lichvar 5985 (RM)	1983	
Fab	<i>Lupinus argenteus</i> var. <i>argenteus</i>	Silver-stem lupine	G5T5	N		X	O	Heidel 2026	1983	
Fab	<i>Lupinus pusillus</i> var. <i>intermontanus</i>	Rusty lupine	G5?T?	N	X	X		Jones, Ditolla, and Myers s.n. (RM)	1984	
Fab	<i>Lupinus wyethii</i> var. <i>wyethii</i> [ <i>L. polyphyllus</i> var. <i>humicola</i> ]	Wyeth's lupine	G5T4	N			X	Collins 766 (RM)	1983	
Fab	<i>Medicago lupulina</i>	Black medick	G?	E	O	X	O	Collins 881 (BICA)	1983	
Fab	<i>Medicago sativa</i>	Alfalfa	G?T?	E	X	X	O	Collins 717 (BICA)	1982	
Fab	<i>Melilotus albus</i> [included in <i>M.</i> <i>officinalis</i> by Kartesz]	White sweet-clover	G?	E	O		X	Collins 835 (BICA)	1983	
Fab	<i>Melilotus officinalis</i>	Yellow sweet-clover	G?	E	X	X	O	Lichvar 5991 (RM)	1982	
Fab	<i>Oxytropis besseyi</i> var. <i>fallax</i>	Bessey's locoweed	G5T3	N	X	X		Despain 16 (RM)	1964	
Fab	<i>Oxytropis besseyi</i> var. <i>ventosa</i>	Bessey's locoweed	G5T3?	N		X		Heidel 1718 (RM)	1998	
Fab	<i>Oxytropis campestris</i> var. <i>spicata</i> [ <i>Oxytropis campestris</i> var. <i>gracilis</i> ]	Northern yellow locoweed	G5T5	N	X	X		Heidel 2024 (RM)	1983	BICA specimen may be <i>O. sericea</i> var. <i>spicata</i>
Fab	<i>Oxytropis lagopus</i> var. <i>atropurpurea</i>	Hare-foot locoweed	G4G5 T4T5	N		X		Lichvar 5661 (RM)	1983	
Fab	<i>Oxytropis sericea</i> var. <i>speciosa</i> [ <i>Oxytropis sericea</i> var. <i>spicata</i> ]	Rocky Mountain locoweed	G5T?	N		X		Heidel 1998 (BICA)	2001	Earlier reports based on a misidentified specimen
Fab	<i>Pediomelum</i> <i>argophyllum</i>	Silver-leaf Indian- breadroot	G5	N			O		1998	Observed at T6S R30E S18 by Heidel
Fab	<i>Pediomelum</i> <i>esculentum</i> [ <i>Psoralea</i> <i>esculentum</i> ]	Large Indian- breadroot	G5	N		X		Collins 741 (RM)	1983	
Fab	<i>Psoraleidium</i> <i>lanceolatum</i> [ <i>Psoralea lanceolata</i> ]	Wild lemonweed [Lemon scurfpea]	G5	N	X		X	Lichvar 6185 (RM)	1983	
Fab	<i>Psoraleidium tenuiflorum</i> [ <i>Psoralea tenuiflora</i> ]	Slender-flower lemonweed [Slender-flower scurfpea]	G5	N		X		Jones, Ditolla, Myers s.n. (BICA)	1984	

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Fab	<i>Sphaerophysa salsula</i>	Red bladder-vetch	G?	E	X	X	X	Nelson 5458 (RM)	1980	
Fab	<i>Thermopsis rhombifolia</i> var. <i>rhombifolia</i>	Prairie golden-banner [Round-leaved golden-pea]	G5T?	N	O	X		Lichvar 5666 (BICA)	1983	
Fab	<i>Trifolium fragiferum</i>	Strawberry-head clover	G?	E		X	X	Heidel 2112 (RM)	2001	
Fab	<i>Trifolium hybridum</i>	Alsike clover	G?	E		X	X	Collins 757 (RM)	1983	
Fab	<i>Vicia americana</i> var. <i>minor</i>	American purple vetch	G5T5	N		X		Lichvar 5918 (RM)	1983	
Fumari	<i>Corydalis aurea</i> var. <i>aurea</i>	Scrambledeggs [Goldensmoke]	G5T5	N		X		Lichvar 6073 (RM)	1983	
Gentian	<i>Gentiana affinis</i> var. <i>affinis</i>	Pleated gentian	G5T5	N		X		Jones, Ditolla, and Myers s.n. (BICA)	1984	
Gerani	<i>Erodium cicutarium</i>	Red-stem stork's-bill	G?	E			X	Lichvar 5717 (RM)	1983	
Gerani	<i>Geranium bicknellii</i>	Northern crane's-bill	G5	N			X	Heidel 2099 (RM)	2001	Previously reported, but no voucher specimens located for corroboration.
Gerani	<i>Geranium viscosissimum</i> var. <i>viscosissimum</i>	Sticky purple crane's- bill	G5T5?	N		O	X	Lichvar 5700 (RM)	1983	
Grossulari	<i>Ribes americanum</i>	Wild black currant	G5	N		X	O	Collins 591(RM)	1983	
Grossulari	<i>Ribes aureum</i> var. <i>aureum</i>	Golden currant	G5T?	N	O	X	O	Lichvar 5649 (RM)	1983	
Grossulari	<i>Ribes cereum</i> var. <i>pedicellare</i>	White squaw currant	G5T5	N	X	X		Lichvar 5632 (RM)	1983	
Grossulari	<i>Ribes oxycanthoides</i> var. <i>setosum</i>	Canadian gooseberry	G5 T4T5	N		X		Collins 662 (RM)	1983	
Hydrocharit	<i>Egeria densa</i> [ <i>Elodea densa</i> ]	Brazilian water-weed	G5	E		X		Heidel 1937 (MONTU)	1999	Originally determined as <i>Hippuris vulgaris</i> (Heidel and Fertig 2000)
Hydrophyll	<i>Ellisia nyctelea</i>	Aunt Lucy [Waterpod]	G5	N			X	Lichvar 6181 (RM)	1983	
Hydrophyll	<i>Nama densum</i> var. <i>parviflorum</i>	Leafy fiddleleaf	G5T5	N	X			Jones, Ditolla, and Myer s.n. (BICA)	1984	
Hydrophyll	<i>Phacelia glandulosa</i>	Glandular scorpion- weed [Glandular phacelia]	G4	N	X			Heidel 2053 (RM)	2001	Previously reported, but no voucher specimens located for corroboration.



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Hydrophyll	<i>Phacelia hastata</i> var. <i>hastata</i>	Silver-leaf scorpion- weed	G5T5	N		X		Collins 783 (RM)	1983	
Hydrophyll	<i>Phacelia ivesiana</i>	Ives' scorpion-weed	G5	N	X	X	X	Lichvar 5613 (RM)	1976	
Hydrophyll	<i>Phacelia linearis</i>	Thread-leaf scorpion- weed	G5	N	O	X	X	Lichvar 5690 (RM)	1983	
Irid	<i>Iris missouriensis</i>	Rocky Mountain iris	G5	N		X	X	Lichvar 5935 (RM)	1983	
Irid	<i>Sisyrinchium idahoense</i> var. <i>occidentale</i>	Idaho blue-eyed grass	G5T?	N			X	Heidel 1817 (MONTU)	1998	
Irid	<i>Sisyrinchium montanum</i>	Strict blue-eyed grass	G5	N			X	Lichvar 6068 (RM)	1983	
Jugland	<i>Juglans cinerea</i>	White walnut	G5	E	X			Lichvar 6067 (RM)	1983	Planted at an old homestead
Junc	<i>Juncus articulatus</i>	Joint-leaf rush	G5	N			X	Heidel 2115 (RM)	2001	
Junc	<i>Juncus balticus</i> var. <i>montanus</i>	Baltic rush	G5T5	N	O	X		Lichvar 5879 (BICA)	1983	
Junc	<i>Juncus bufonius</i>	Toad rush	G5	N	X	X		Nelson 5070 (RM)	1979	
Junc	<i>Juncus dudleyi</i> [ <i>J. tenuis</i> var. <i>dudleyi</i> ]	Dudley's rush	G5	N			X	Lichvar 6371 (RM)	1983	
Junc	<i>Juncus ensifolius</i> var. <i>montanus</i>	Dagger-leaf rush	G5T5	N	X		X	Nelson 5072 (RM)	1979	
Junc	<i>Juncus longistylis</i>	Long-style rush	G5	N		X	X	Lichvar 6127 (RM)	1983	
Junc	<i>Juncus nodosus</i>	Tuberous rush	G5	N			X	Heidel 2087b (RM)	2001	
Junc	<i>Juncus torreyi</i>	Torrey's rush	G5	N	X	O	X	Nelson 5073 (RM)	1979	
Juncagin	<i>Triglochin maritima</i> var. <i>elata</i>	Seaside arrow-grass	G5	N	O	X	X	Heidel 1859 (BICA)	1998	
Juncagin	<i>Triglochin palustris</i>	Marsh arrow-grass	G5	N		X		Heidel 1723 (MONTU)	1998	
Lami	<i>Hedeoma drummondii</i>	Drummond's false pennyroyal	G5	N	X	X	X	Jones, Ditolla, and Myers s.n. (BICA)	1983	
Lami	<i>Hedeoma hispida</i>	Rough false pennyroyal	G5	N			O		1998	Observed on slope north of Ok-a-beh Marina (T6S R31E S18 SW 1/4) by Heidel
Lami	<i>Lycopus asper</i>	Rough water- horehound	G5	N	X	X		Nelson 5062 (RM)	1979	
Lami	<i>Mentha arvensis</i>	American wild mint	G5	N	X	O	X	Nelson 5063 (RM)	1979	
Lami	<i>Monarda fistulosa</i> var. <i>mentifolia</i>	Oswego-tea	G5T5	N		O	X	Collins 801 (RM)	1983	

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Lami	<i>Nepeta cataria</i>	Catnip	G?	E		O	X	Heidel 2093 (RM)	2001	Previously reported, but no voucher specimens located for corroboration.
Lami	<i>Salvia reflexa</i>	Lance-leaf sage	G?	N	O				2001	Observed by Suzanne Morstad at highway turn to Horseshoe Bend; too late in season to collect voucher
Lami	<i>Scutellaria galericulata</i>	Hooded skullcap	G5	N		X		Collins 811 (RM)	1983	
Lami	<i>Teucrium canadense</i> var. <i>occidentale</i>	American germander	G5T4	N	X			Nelson 7019 (RM)	1980	
Lemn	<i>Lemna turionifera</i> [ <i>L. minor</i> ]	Turion duckweed	G5	N	X		X	Heidel 2125 (RM)	2001	
Lili	<i>Fritillaria atropurpurea</i>	Spotted missionbells [Checker lily]	G5	N			X	Lichvar 5673 (RM)	1983	
Lili	<i>Fritillaria pudica</i>	Yellow missionbells [Yellowbells]	G5	N			O		2001	Observed in fruit by Heidel
Lili	<i>Lilium philadelphicum</i> var. <i>andinum</i>	Wood lily	G5 T4T5	N			X	Heidel 2148 (BICA)	2001	Previously reported, but no voucher specimens located for corroboration.
Lili [Allij]	<i>Allium cernuum</i>	Nodding onion	G5	N		X	O	Jones, Ditolla, and Myers s.n. (BICA)	1984	
Lili [Allij]	<i>Allium geyeri</i> var. <i>geyeri</i>	Geyer's onion	G4G5 T4	N			X	Collins 785 (RM)	1983	Collins 785 may be <i>A. textile</i>
Lili [Allij]	<i>Allium textile</i>	White wild onion [Textile onion]	G5?	N	X	X	X	Jones s.n. (RM)	1982	
Lili [Asparag]	<i>Asparagus officinalis</i>	Asparagus	G5?	E	X	X		Fertig 18407 (RM)	1982	
Lili [Calochort]	<i>Calochortus gunnisonii</i>	Gunnison's mariposa-lily	G5	N		X		Heidel 2067 (RM)	2001	
Lili [Calochort]	<i>Calochortus nuttallii</i>	Sego-lily	G5	N		X	X	Lichvar 6137 (RM)	1981	
Lili [Calochort]	<i>Prosartes trachycarpa</i> [ <i>Disporum trachycarpum</i> ]	Rough-fruit fairybells	G5	N		X		Collins 564 (RM)	1983	

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Lili [Convallari]	<i>Maianthemum racemosum</i> var. <i>amplexicaule</i> [ <i>Smilacina racemosa</i> ]	Feathery false Solomon's-seal [False spikenard]	G5T?	N		X	X	Lichvar 5940 (RM)	1983	
Lili [Convallari]	<i>Maianthemum stellatum</i> [ <i>Smilacina stellata</i> ]	Starry false Solomon's-seal [Spikenard]	G5	N		X	O	Wolf 113 (BICA)	1982	
Lili [Melanthi]	<i>Zigadenus elegans</i>	Mountain deathcamas	G5	N		X	X	Fertig 19454 (RM)	2001	Lichvar 6165 was collected outside of the BCNRA boundary
Lili [Melanthi]	<i>Zigadenus venenosus</i> var. <i>gramineus</i>	Meadow deathcamas	G5T5	N	O		X	Collins 562 (RM)	1983	
Lin	<i>Linum lewisii</i>	Prairie flax [Blue flax]	G4G5	N	X	X	O	T. Peters, s.n. (BICA)	1981	
Lin	<i>Linum rigidum</i>	Large-flower yellow flax	G4G5	N		X		Jones, Ditolla, and Myers s.n. (BICA)	1984	
Loas	<i>Mentzelia albicaulis</i>	White-stem blazingstar	G5	N	X	X		Collins 715 (RM)	1976	
Loas	<i>Mentzelia decapetala</i>	Gumbo-lily [Evening-star]	G5	N	X		O	Collins 851 (RM)	1983	
Loas	<i>Mentzelia montana</i>	Variegated-bract blazingstar	G4	N	X			Jones, Ditolla, and Myers s.n. (BICA)	1984	
Loas	<i>Mentzelia pumila</i>	Golden blazingstar [Wyoming stickleaf]	G4	N	X	X		Welp 7969 (BICA)	1998	
Malv	<i>Malva parviflora</i>	Small-whorl mallow	G?	E			X	Heidel 2158 (RM)	2001	Previously reported, but no voucher specimens located for corroboration.
Malv	<i>Sphaeralcea coccinea</i>	Scarlet globe-mallow	G5?	N	X		O	Wolf 92 (BICA)	1982	
Mor	<i>Morus alba</i>	White mulberry	G?	E	X	X		Heidel 1990 (RM)	2001	Planted as an ornamental
Nyctagin	<i>Abronia elliptica</i> [ <i>A. fragrans</i> var. <i>elliptica</i> ]	Fragrant white sand- verbena	G5	N	X		O	Lichvar 6025 (RM)	1983	
Nyctagin	<i>Mirabilis linearis</i>	Narrow-leaf four- o'clock	G5	N	X	X	X	Lichvar 6063 (RM)	1983	
Nyctagin	<i>Tripterocalyx micranthus</i> [ <i>Abronia micrantha</i> ]	Small-flower sandpuffs	G5	N	X	X	O	Jones, Ditolla, and Myers s.n. (BICA)	1984	
Ole	<i>Fraxinus pennsylvanica</i>	Green ash	G5	N	X			Heidel 2010 (RM)	2001	Planted as an ornamental

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Ole	<i>Ligustrum vulgare</i>	European privet	G?	E		X		Messerschmidt 104 (BICA)	1981	Planted as an ornamental
Onagr	<i>Calylophus serrulatus</i>	Yellow sundrops	G5	N			X	Lichvar 6367 (RM)	1983	
Onagr	<i>Camissonia minor</i>	Green River suncup	G4	N	X	X		Jones, Ditolla, and Myers s.n. (BICA)	1984	
Onagr	<i>Camissonia scapoidea</i>	Paiute suncup	G5T?	N	X			Lichvar 6061 (RM)	1983	
Onagr	<i>Chamerion angustifolium</i> [ <i>Epilobium angustifolium</i> ]	Narrowleaf fireweed	G5	N			X	Collins 820 (RM)	1983	variety not determined
Onagr	<i>Circaea alpina</i> var. <i>alpina</i>	Small enchanter's- nightshade	G5T5	N			X	Lichvar 6899 (RM)	1983	
Onagr	<i>Epilobium brachycarpum</i> [ <i>E. paniculatum</i> ]	Tall annual willowherb	G5	N			X	Heidel 2150 (RM)	2001	Previously reported, but no voucher specimens located for corroboration.
Onagr	<i>Epilobium ciliatum</i> var. <i>ciliatum</i>	Fringed willowherb	G5T5	N	O		X	Lichvar 6920 (RM)	1983	
Onagr	<i>Epilobium ciliatum</i> var. <i>glandulosum</i>	Fringed willowherb	G5T5	N			X	Lichvar 6374 (RM)	1983	
Onagr	<i>Gaura coccinea</i>	Scarlet beeblossom [ <i>Scarlet gaura</i> ]	G5	N	X	X	O	Collins 644 (RM)	1983	
Onagr	<i>Gaura mollis</i> [ <i>G. parviflora</i> ]	Velvetweed [Small-flower gaura]	G4G5	N			X	Collins 831 (RM)	1983	
Onagr	<i>Oenothera albicaulis</i>	White-stem evening- primrose	G5	N		X		Dorn 2635 (MONT?)	1976	Reported by Dorn (1978)
Onagr	<i>Oenothera caespitosa</i> var. <i>caespitosa</i> [ <i>O. caespitosa</i> var. <i>caespitosa</i> ]	Tufted evening- primrose	G5T5	N	X	X		Messerschmidt 51 (BICA)	1981	
Onagr	<i>Oenothera pallida</i> var. <i>trichocalyx</i>	White-pole evening- primrose	G5T?	N	X	O	X	Lichvar 6014 (RM)	1983	
Onagr	<i>Oenothera villosa</i> var. <i>strigosa</i> [ <i>O. depressa</i> ]	Hairy evening- primrose	G5T?	N			X	Lichvar 6396 (RM)	1983	
Orchid	<i>Corallorhiza maculata</i>	Summer coralroot [Spotted coralroot]	G5 T3T5	N		X		Collins 656 (RM)	1983	variety not determined
Orchid	<i>Corallorhiza striata</i> var. <i>virelandii</i>	Hooded coralroot [Striped coralroot]	G5T?	N			X	Collins 781 (RM)	1983	
Orchid	<i>Goodyera oblongifolia</i>	Green-leaf rattlesnake-plantain	G5?	N		X		Lichvar 5965 (RM)	1983	

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Orchid	<i>Piperia unalascensis</i> [ <i>Habenaria unalascensis</i> ]	Alaska rein-orchid	G5	N		X		Lichvar 6395 (RM)	1983	
Orchid	<i>Platanthera dilatata</i> [ <i>Habenaria dilatata</i> ]	Scentbottle [White bog orchid]	G5	N		X	O	Lichvar 5875 (RM)	1983	variety not determined
Orchid	<i>Platanthera huronensis</i>	Lake Huron green orchid	G5	N		X		Jones, Ditolla, and Myers s.n. (BICA)	1983	Formerly included in <i>Platanthera</i> [Habenaria] hyperborea
Orobanch	<i>Orobanche fasciculata</i>	Clustered broom-rape	G4	N	X	X		Jones, Ditolla, and Myers s.n. (BICA)	1984	
Orobanch	<i>Orobanche ludoviciana</i> var. <i>ludoviciana</i>	Louisiana broom-rape	G5	N	O				1998	Observed below new picnic area at Horseshoe Bend (T57N R95W S1) by Heidel
Orobanch	<i>Orobanche uniflora</i> var. <i>occidentalis</i>	Naked broom-rape	G5	N			X	Collins 584 (RM)	1983	
Pin	<i>Abies lasiocarpa</i>	Subalpine fir	G5	N		O			1984	Reported in plots by Knight et al. (1987)
Pin	<i>Picea engelmannii</i>	Engelmann spruce	G5	N		X		Lichvar 5955 (NY)	1983	
Pin	<i>Pinus flexilis</i>	Limber pine	G5	N			X	Lichvar 5645 (RM)	1983	
Pin	<i>Pinus ponderosa</i>	Ponderosa pine	G5	N		O	X	Heidel 2039 (RM)	2001	Previously reported, but no voucher specimens located for corroboration.
Pin	<i>Pseudotsuga menziesii</i> var. <i>glauca</i>	Douglas-fir	G5T5	N		X	O	Collins 569 (RM)	1983	
Plantagin	<i>Plantago major</i>	Great plantain	G5	E	O	O	X	Heidel 2113 (RM)	2001	Previously reported, but no voucher specimens located for corroboration.
Plantagin	<i>Plantago patagonica</i> var. <i>patagonica</i>	Woolly plantain	G5T5	N	X	O	X	Lichvar 6058 (RM)	1983	
Po	<i>Achnatherum hymenoides</i> [ <i>Oryzopsis hymenoides</i> ]	Indian rice grass	G5	N	X	X	O	Peters 99 (BICA)	1981	

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Po	<i>Achnatherum lettermanii</i> [ <i>Stipa lettermanii</i> ]	Letterman's rice grass	G5	N		X		Collins 732 (RM)	1983	Duplicate specimen at BICA is misidentified
Po	<i>Achnatherum nelsonii</i> var. <i>dorei</i> [ <i>Stipa nelsonii</i> var. <i>dorei</i> , <i>S. columbiana</i> , <i>S. williamsii</i> ]	Nelson's rice grass	G5T5?	N		X	O	Lichvar 5976 (RM)	1983	
Po	<i>Achnatherum nelsonii</i> var. <i>nelsonii</i> [ <i>Stipa nelsonii</i> var. <i>nelsonii</i> ]	Nelson's rice grass	G5T5	N			X	Heidel 2007 (RM)	2001	
Po	<i>Aegilops cylindrica</i>	Jointed goat grass	G?	E			X	Heidel 1849 (MONTU)	1999	
Po	<i>Agropyron cristatum</i> var. <i>cristatum</i>	Crested wheat grass	G5T5	E	X	X		Wolf 124 (BICA)	1981	
Po	<i>Agropyron desertorum</i> [ <i>A. cristatum</i> var. <i>desertorum</i> ]	Clustered wheat grass	G5T?	E		X		Lichvar 5882 (RM)	1983	
Po	<i>Agrostis exarata</i>	Spiked bent	G5	N			X	Lichvar 6378 (RM)	1983	
Po	<i>Agrostis scabra</i>	Rough bent	G5	N	O	X	O	Knight K-72 (RM)	1983	
Po	<i>Agrostis stolonifera</i> [ <i>A. alba</i> ]	Spreading bent	G5	E	O		X	Lichvar 6896 (RM)	1983	
Po	<i>Alopecurus arundinaceus</i>	Creeping foxtail	G?	E	X	X	X	Heidel 1984 (RM)	1999	Originally determined as <i>A. pratensis</i>
Po	<i>Andropogon gerardii</i>	Big bluestem	G5	N			X	Lichvar 6930 (RM)	1983	
Po	<i>Aristida purpurea</i> var. <i>fendleriana</i> [ <i>A. fendleriana</i> ]	Purple three-awn	G5T5	N	X	X		Collins 543 (RM)	1976	
Po	<i>Aristida purpurea</i> var. <i>longiseta</i> [ <i>A. longiseta</i> ]	Purple three-awn	G5T5?	N		X	O	Collins 542 (RM)	1983	
Po	<i>Beckmannia syzigachne</i>	American slough grass	G5	N	X			Heidel 2012 (RM)	2001	
Po	<i>Bouteloua curtipendula</i>	Side-oats grama	G5	N			X	Collins 888 (RM)	1983	
Po	<i>Bouteloua gracilis</i>	Blue grama	G5	N	X	X	X	Wolf 21 (BICA)	1981	
Po	<i>Bromus carinatus</i>	California brome	G5	N			X	Lichvar 6169 (RM)	1983	
Po	<i>Bromus ciliatus</i>	Fringed brome	G5	N		X		Lichvar 6909 (RM)	1983	
Po	<i>Bromus commutatus</i>	Meadow brome	G?	E		O	X	Lichvar 6408 (RM)	1983	
Po	<i>Bromus inermis</i> var. <i>inermis</i>	Smooth brome	G5T?	E	O	X	O	Messerschmidt 19 (BICA)	1981	

Family (aceae)	Species Name [synonyms]	Common Name	Global rank	Native/ exotic	WY - Big Horn Co	MT- Carbon Co	MT- Big Horn Co	Sample Voucher	Year first collected	Comments
Po	<i>Bromus japonicus</i>	Japanese brome	G?	E			O		2001	Previously reported, but no voucher specimens located for corroboration; observed in hills above Ft. Smith.
Po	<i>Bromus tectorum</i>	Cheat grass	G?	E	X	X	X	Lichvar 5625 (RM)	1983	
Po	<i>Calamagrostis stricta</i> ssp. <i>inexpansa</i> [ <i>C. inexpansa</i> ]	Slim-stem reed grass	G5T5	N		X		Heidel 2002 (RM)	2001	
Po	<i>Calamovilfa longifolia</i>	Prairie sand-reed	G5	N	O	O	X	Collins 795 (RM)	1983	
Po	<i>Catabrosa aquatica</i>	Water whorl grass	G5	N			X	Heidel 1857(MONTU)	1999	
Po	<i>Cinna latifolia</i>	Slender wood-reed	G5	N			X	Heidel 1921 (MONTU)	1999	
Po	<i>Dactylis glomerata</i>	Orchard grass	G?	E	O		X	Collins 588 (RM)	1983	
Po	<i>Danthonia californica</i>	California wild oat grass	G5	N			X	Heidel 1860 (MONTU)	1999	
Po	<i>Danthonia spicata</i>	Poverty wild oat grass	G5	N			X	Heidel 2097 (RM)	2001	
Po	<i>Danthonia unispicata</i>	Few-flower wild oat grass	G5	N			X	Heidel 2046 (RM)	2001	Previously reported, but no voucher specimens located for corroboration.
Po	<i>Deschampsia cespitosa</i>	Tufted hair grass	G5	N		X	O	Collins 736 (RM)	1983	
Po	<i>Dichanthelium acuminatum</i> var. <i>fasciculatum</i> [ <i>D. acuminatum</i> var. <i>lanuginosum</i> ]	Tapered rosette grass	G5T5	N		X	X	Heidel 1720 (MONTU)	1998	
Po	<i>Distichlis spicata</i> [ <i>D. stricta</i> ]	Coastal salt grass	G5	N	X	O	O	Nelson 5455 (RM)	1980	
Po	<i>Echinochloa muricata</i> var. <i>microstachya</i>	Rough barnyard grass	G5T5	N	X		O	Nelson 5069 (RM)	1979	
Po	<i>Elymus canadensis</i> var. <i>canadensis</i>	Nodding wild rye [Canada wild rye]	G5T5	N	O	O	X	Lichvar 6363 (RM)	1983	
Po	<i>Elymus elymoides</i> var. <i>elymoides</i> [ <i>Sitanion hystrix</i> ]	Western bottle-brush grass [Bottlebrush squirreltail]	G5T5	N	X	X	O	Collins 684 (RM)	1983	
Po	<i>Elymus glaucus</i>	Blue wild rye	G5	N		X	O	Collins 883 (RM)	1983	

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Po	<i>Elymus repens</i> [ <i>Agropyron repens</i> ]	Creeping wild rye [Quackgrass]	G5	N		X	X	Heidel 1994 (RM)	2001	Noxious weed in Wyoming. Previously reported, but no voucher specimens located for corroboration.
Po	<i>Elymus trachycaulus</i> var. <i>andinus</i>	Slender wild rye	G5T5	N		X		Heidel 2061 (RM)	2001	This taxon is included in <i>E. trachycaulus</i> var. <i>trachycaulus</i> by Kartesz and Meacham (1999).
Po	<i>Elymus trachycaulus</i> var. <i>trachycaulus</i> [ <i>Agropyron trachycaulum</i> ]	Slender wild rye	G5T5	N		X		Lichvar 5989 (RM)	1983	
Po	<i>Elymus villosus</i>	Hairy wild rye	G5	N		X		Heidel 2140 (RM)	2001	
Po	<i>Elymus virginicus</i>	Virginia wild rye	G5	N			X	Lichvar 6386 (RM)	1983	
Po	<i>Eragrostis cilianensis</i>	Stink grass	G?	E	X		O	Heidel 2128 (RM)	2001	
Po	<i>Festuca arundinacea</i>	Tall fescue	G5	E	X	X	X	Heidel 1993 (RM)	1999	Planted and escaped at BICA
Po	<i>Festuca idahoensis</i>	Bluebunch fescue [Idaho fescue]	G5	N		X	X	Lichvar 5986 (RM)	1983	
Po	<i>Festuca ovina</i>	Sheep fescue	G?	E		X		Heidel 2111 (RM)	2001	Planted and escaped at BCNRA
Po	<i>Glyceria striata</i>	Fowl manna grass	G5	N		X	X	Collins 808 (RM)	1983	
Po	<i>Hesperostipa comata</i> var. <i>comata</i> [ <i>Stipa comata</i> var. <i>comata</i> ]	Needle-and-thread	G5T5	N	X	X	X	Wolf 76 (BICA)	1982	
Po	<i>Hordeum jubatum</i>	Fox-tail barley	G5	N	X	X		Messerschmidt 19 (BICA)	1981	
Po	<i>Hordeum x caespitosum</i>	Hybrid (between Fox-tail and Meadow barley)	G5	N			X	Heidel 2094 (RM)	2001	
Po	<i>Koeleria macrantha</i>	Prairie Koeler's grass [Prairie junegrass]	G5	N	O	X	O	Lichvar 5896 (RM)	1983	
Po	<i>Leersia oryzoides</i>	Rice cut grass	G5	N			X	Heidel 2151 (RM)	2001	
Po	<i>Leptochloa fusca</i> var. <i>fascicularis</i> [ <i>L. fascicularis</i> ]	Bearded sprangletop	G5	N	X	O	O	Heidel 2123 (RM)	2001	



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Po	<i>Leucopoa kingii</i>	False fescue [King spike-fescue]	G5	N	O	O	X	Collins 579 (RM)	1983	
Po	<i>Leymus cinereus</i> [ <i>Elymus cinereus</i> ]	Great Basin lyme grass [Great Basin wildrye]	G5	N	X	X	X	Lichvar 6358 (RM)	1981	
Po	<i>Melica subulata</i>	Alaska melic grass	G5	N			X	Collins 773 (RM)	1983	
Po	<i>Monroa squarrosa</i>	False buffalo grass	G5	N	X	O		Heidel 2077 (RM)	2001	
Po	<i>Muhlenbergia asperifolia</i>	Alkali muhly	G5	N	O	X	X	Heidel 2117 (RM)	1999	
Po	<i>Muhlenbergia cuspidata</i>	Stony-hills muhly	G4	N			X	Heidel 1925 (MONTU)	1999	
Po	<i>Muhlenbergia filiformis</i>	Pullup muhly	G5	N		X		Heidel 1732 (MONTU)	1998	
Po	<i>Muhlenbergia glomerata</i>	Spiked muhly [Marsh muhly]	G5	N			X	Lichvar 6917 (BICA)	1983	Originally identified as <i>M. racemosa</i>
Po	<i>Muhlenbergia mexicana</i>	Wirestem muhly	G5	N			X	Heidel 2104 (RM)	2001	
Po	<i>Muhlenbergia racemosa</i>	Green muhly	G5	N		X		Heidel 2118 (RM)	2001	Original reports based on a misidentified specimen
Po	<i>Muhlenbergia richardsonis</i>	Matted muhly	G5	N		X	X	Heidel 1727 (MONTU)	1998	
Po	<i>Nassella viridula</i> [ <i>Stipa viridula</i> ]	Green tussock grass [Green needlegrass]	G5	N		X	X	Collins 676 (RM)	1983	A native species, but also cultivated at BCNRA
Po	<i>Panicum capillare</i>	Common panic grass	G5	N			X	Heidel 2110 (RM)	2001	
Po	<i>Panicum miliaceum</i>	Millet	G?	E	O				2001	Observed by Heidel at first pullout on west side of highway in BCNRA. Plants probably not established.
Po	<i>Pascopyrum smithii</i> [ <i>Elymus smithii</i> , <i>Agropyron smithii</i> ]	Western wheat grass	G5	N		X	O	Wolf 131 (BICA)	1981	
Po	<i>Phalaris arundinacea</i>	Reed canary grass	G5	N	X	O	X	Collins 706 (RM)	1983	Duplicate specimens at BICA were misidentified
Po	<i>Phleum pratense</i>	Common timothy	G?	E		X	O	Collins 810 (RM)	1983	

Family (_aceae)	Species Name [Synonyms]	Common Name	Global rank	Native/ exotic	WY - Big Horn Co	MT- Carbon Co	MT- Big Horn Co	Sample Voucher	Year first collected	Comments
Po	<i>Phragmites australis</i>	Common reed	G5	N	X		X	Nelson 5083 (RM)	1979	
Po	<i>Piptatherum micranthum</i> [ <i>Oryzopsis micrantha</i> ]	Little-seed mountain rice grass	G5	N		X	X	Collins 731 (RM)	1983	
Po	<i>Poa annua</i>	Annual blue grass	G5	E		X		Heidel 1850 (MONTU)	1999	
Po	<i>Poa arida</i>	Prairie blue grass	G5	N			X	Lichvar 6914 (RM)	1983	
Po	<i>Poa bulbosa</i>	Bulbous blue grass	G?	E		X	O	Lichvar 5576 (RM)	1983	
Po	<i>Poa compressa</i>	Flat-stem blue grass	G?	E		X	X	Collins 884 (RM)	1983	
Po	<i>Poa cusickii</i> var. <i>pallida</i> [ <i>P. cusickii</i> var. <i>cusickii</i> ]	Cusick's blue grass	G5T?	N		X	X	Lichvar 5575 (RM)	1983	
Po	<i>Poa fendleriana</i>	Mutton grass	G5	N		X	X	Collins 678 (RM)	1983	
Po	<i>Poa juncifolia</i> var. <i>amplea</i>	Curly blue grass [Big bluegrass]	G5	N		X		Heidel 2016	2001	Included in <i>Poa secunda</i> by Kartesz and Meacham 1999)
Po	<i>Poa nemoralis</i> ssp. <i>interior</i> [ <i>Poa interior</i> ]	Forest blue grass [Interior bluegrass]	G5T?	N		X	X	Lichvar 6173 (RM)	1983	
Po	<i>Poa palustris</i>	Fowl blue grass	G5	N			X	Lichvar 5712 (RM)	1983	
Po	<i>Poa pratensis</i>	Kentucky blue grass	G?	E	O	X	X	Messerschmidt 2 (BICA)	1981	
Po	<i>Poa secunda</i> var. <i>elongata</i> [ <i>Poa scabrella</i> ]	Curly blue grass [Canby bluegrass]	G5	N	O	X	O	Jones, Ditolla, and Myers s.n. (BICA)	1984	Included in <i>Poa secunda</i> by Kartesz and Meacham 1999)
Po	<i>Poa secunda</i> var. <i>secunda</i> [ <i>Poa sandbergii</i> ]	Curly blue grass [Sandberg bluegrass]	G5	N		O		Jones, Ditolla, and Myers s.n. (BICA)	1984	Included in <i>Poa secunda</i> by Kartesz and Meacham 1999)
Po	<i>Polygonon monspeliensis</i>	Annual rabbit's-foot grass	G?	E	X			Nelson 5071 (RM)	1979	
Po	<i>Pseudoroegneria spicata</i> [ <i>Elymus spicatus</i> , <i>Agropyron spicatum</i> ]	Bluebunch wheatgrass	G5	N	X	X	X	Peters 101 BICA	1981	
Po	<i>Puccinellia nuttalliana</i>	Nuttall's alkali grass	G5	N	X	O		Heidel 1982 (RM)	2001	
Po	<i>Schedonnardus paniculatus</i>	Tumble grass	G5	N		X		Heidel 2062 (RM)	1998	
Po	<i>Schizachyrium scoparium</i> [ <i>Andropogon scoparius</i> ]	Little false bluestem	G5	N		X		Lichvar 6894 (RM)	1983	

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Po	<i>Setaria viridis</i>	Green bristle grass	G?	E	X	O	O	Heidel 2080 (RM)	2001	Previously reported, but no voucher specimens located for corroboration.
Po	<i>Spartina gracilis</i>	Alkali cord grass	G5	N		X		Heidel 1726 (MONTU)	1998	
Po	<i>Spartina pectinata</i>	Freshwater cord grass	G5	N			X	Heidel 2157 (RM)	2001	Previously reported, but no voucher specimens located for corroboration.
Po	<i>Sphenopholis intermedia</i> [ <i>S. obtusata</i> var. <i>major</i> ]	Slender wedgescale	G5	N			X	Lichvar 6378 (RM)	1983	
Po	<i>Sphenopholis obtusata</i> var. <i>obtusata</i>	Slender wedgescale	G5	N			X	Heidel 2156 (RM)	2001	
Po	<i>Sporobolus airoides</i>	Alkali-sacaton	G5	N	X	X	X	Nelson 5454 (RM)	1980	
Po	<i>Sporobolus cryptandrus</i>	Sand dropseed	G5	N	X			Collins 699 (RM)	1983	
Po	<i>Thinopyrum ponticum</i> [ <i>Elymus elongatus</i> , <i>Agropyron elongatum</i> ]	Eurasian quackgrass	G?	E	X		X	Heidel 2056 (RM)	2001	Previously reported, but no voucher specimens located for corroboration.
Po	<i>Vulpia octoflora</i> [ <i>Festuca octoflora</i> ]	Eight-flower six-weeks grass [Six-weeks fescue]	G5	N		X	X	Collins 579 (RM)	1983	
Polemoni	<i>Collomia linearis</i>	Narrow-leaf mountain-trumpet [Narrowleaf collomia]	G5	N			X	Heidel 2049 (RM)	2001	
Polemoni	<i>Gilia leptomeria</i> [ <i>Aliciella leptomeria</i> ]	Sand gilly-flower [Great Basin gilia]	G5	N	X	X		Dorn 2631 (MONT)	1976	
Polemoni	<i>Ipomopsis pumila</i>	Low skyrocket [Dwarf gilia]	G4	N	X	X	O	Jones, Dittola, and Myers s.n. (BICA)	1984	
Polemoni	<i>Ipomopsis spicata</i> var. <i>orchidacea</i>	Spiked skyrocket [Spicate gilia]	G4?T?	N		O	X	Heidel 2029 (RM)	2001	
Polemoni	<i>Ipomopsis spicata</i> var. <i>spicata</i>	Spiked skyrocket [Spicate gilia]	G4? T4?	N	X	X		Lichvar 6040 (RM)	1976	
Polemoni	<i>Leptodactylon caespitosum</i> [ <i>L. inanthus caespitosum</i> ]	Matted prickly-phlox	G3G4	N	X	X		Lichvar 6001 (RM)	1983	

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Polemoni	<i>Leptodactylon pungens</i> [ <i>Linanthus pungens</i> ]	Granite prickly-phlox	G5	N	X		X	Jones, Ditolla, and Myers s.n. (BICA)	1983	
Polemoni	<i>Linanthus septentrionalis</i> [ <i>Leptosiphon septentrionalis</i> ]	Northern desert- trumpet [Northern linanthus]	G5	N		X		Heidel 2020 (BICA)	2001	Earlier reports based on a misidentified specimen
Polemoni	<i>Phlox hoodii</i> var. <i>hoodii</i>	Carpet phlox [Hood's phlox]	G5T5	N	X	X	X	Lichvar 5571 (RM)	1983	
Polemoni	<i>Phlox hoodii</i> var. <i>muscooides</i> [ <i>P. muscooides</i> , <i>P. bryoides</i> ]	Carpet phlox [Moss phlox]	G5T4	N	X	X		Lichvar 5590 (RM)	1983	
Polygon	<i>Eriogonum annuum</i>	Annual wild buckwheat	G5	N			X	Lichvar 6359 (RM)	1983	
Polygon	<i>Eriogonum cernuum</i>	Nodding wild buckwheat	G5	N	X	X	O	Jones, Ditolla, and Myers s.n. (BICA)	1984	
Polygon	<i>Eriogonum flavum</i> var. <i>flavum</i>	Alpine golden wild buckwheat	G5 T4T5	N	X	X	X	Jones, Ditolla, and Myers s.n. (BICA)	1983	
Polygon	<i>Eriogonum lagopus</i> [ <i>E. brevicaulis</i> var. <i>canum</i> ]	Parasol wild buckwheat [Rabbit buckwheat]	G3	N	X	X		Dorn 2772 (RM)	1976	
Polygon	<i>Eriogonum ovalifolium</i> var. <i>ochroleucum</i>	Cushion wild buckwheat	G5T?	N			X	Heidel 1851 (MONTU)	1999	
Polygon	<i>Eriogonum ovalifolium</i> var. <i>purpureum</i>	Cushion wild buckwheat	G5T5	N		X	X	Fertig 19445 (RM)	1983	
Polygon	<i>Eriogonum pauciflorum</i> var. <i>pauciflorum</i>	Few-flower wild buckwheat	G5T4	N	X	X		Lichvar 6004 (RM)	1983	
Polygon	<i>Eriogonum umbellatum</i> var. <i>majus</i>	Sulphur-flower wild buckwheat	G5T5	N		X		Jones, Ditolla, and Myers s.n. (BICA)	1984	
Polygon	<i>Polygonum amphibium</i> var. <i>emersum</i>	Water smartweed	G5T5	N	X		X	Nelson 7024 (RM)	1980	BICA specimen is vegetative
Polygon	<i>Polygonum aviculare</i>	Yard knotweed	G?	E	X			Collins 689 (RM)	1983	
Polygon	<i>Polygonum leptanthifolium</i>	Dock-leaf smartweed	G5	E	X		O	Nelson 5058 (RM)	1979	
Polygon	<i>Rumex crispus</i>	Curly dock	G?	E	X	X	X	Wolf s.n. (BICA)	1982	
Polygon	<i>Rumex maritimus</i> var. <i>fuiginus</i>	Golden dock	G5	N	X			Nelson 5057 (RM)	1979	
Polygon	<i>Rumex salicifolius</i> var. <i>mexicanus</i> [ <i>R. salicifolius</i> var. <i>triangulivalvis</i> ]	Willow dock	G5T5	N	X		X	Heidel 1989 (RM)	2001	
Polygon	<i>Rumex venosus</i>	Veiny dock	G5?	N	O	O	X	Lichvar 6356 (RM)	1983	

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Portulac	<i>Claytonia lanceolata</i> var. <i>lanceolata</i>	Lance-leaf springbeauty	G5T5	N			X	Lichvar 5695 (RM)	1983	
Portulac	<i>Claytonia perfoliata</i> var. <i>intermontana</i> [ <i>Montia perfoliata</i> ]	Miner's lettuce	G5T?	N			X	Lichvar 5690 (RM)	1983	
Portulac	<i>Lewisia rediviva</i>	Oregon bitter-root	G5	N		X		Lichvar 5928 (RM)	1983	
Portulac	<i>Portulaca oleracea</i>	Little-hogweed [Common purslane]	G?	E		X		Heidel 2134 (BICA)	2001	Earlier reports were not vouchered for confirmation. Species is native to North America but introduced in Montana.
Potamogeton	<i>Potamogeton foliosus</i>	Leafy pondweed	G5	N	X			Heidel 2126 (RM)	2001	
Potamogeton	<i>Stuckenia filiformis</i> var. <i>alpina</i> [ <i>Potamogeton filiformis</i> var. <i>alpinus</i> ]	Slender-leaf false pondweed	G5T5	N	X			Collins 792 (RM)	1983	
Potamogeton	<i>Stuckenia pectinata</i> [ <i>Potamogeton</i> <i>pectinatus</i> ]	Sago false pondweed	G5	N	X			Heidel 1981 (RM)	2001	
Primul	<i>Dodecatheon</i> <i>conjugens</i>	Bonneville shooting- star	G5	N		X	O	Heidel 1825 (BICA)	1999	
Primul	<i>Dodecatheon</i> <i>pulchellum</i>	Dark-throat shooting- star	G5	N		X		Lichvar 5567 (RM)	1983	
Primul [Myrsin]	<i>Lysimachia ciliata</i>	Fringed yellow- loosestrife	G5	N			X	Lichvar 6405 (RM)	1983	
Pterid [Adiant]	<i>Aspidotis densa</i>	Indian's-dream	G5	N		X		Heidel 1714 (MONTU)	1998	
Pterid [Adiant]	<i>Cheilanthes feei</i>	Slender lip fern	G5	N	X	X		Lichvar 5616 (RM)	1983	
Pterid [Adiant]	<i>Pellaea glabella</i> ssp. <i>occidentalis</i> [ <i>P. occidentalis</i> ]	Smooth cliffbrake	G5T4	N		X		Lichvar 5945 (RM)	1983	
Ranuncul	<i>Actaea rubra</i>	Red baneberry	G5	N		X	O	Collins 663 (RM)	1983	
Ranuncul	<i>Anemone cylindrica</i>	Long-head thimbleweed	G5	N			X	Heidel 2043 (RM)	1983	
Ranuncul	<i>Anemone multifida</i>	Red windflower	G5	N		X	X	Lichvar 5939 (RM)	1983	
Ranuncul	<i>Ceratocephala</i> <i>festiculata</i> [ <i>Ranunculus</i> <i>festiculatus</i> ]	Curve-seed butterwort [Hornseed buttercup]	G?	E		X	X	Lichvar 5716 (RM)	1983	

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Ranuncul	<i>Clematis columbiana</i> var. <i>tenuiloba</i>	Columbian virgin's- bower	G5? T4?	N		X		Heidel 2136 (RM)	2001	Earlier record (Lichvar 6457) collected outside of BCNRA
Ranuncul	<i>Clematis ligusticifolia</i>	Decidious traveler's- joy [Western virgin's-bower]	G5	N	X	X	X	Nelson 5074 (RM)	1979	
Ranuncul	<i>Delphinium bicolor</i> var. <i>bicolor</i>	Flathead larkspur	G4G5 T?	N		X		Lichvar 5556 (RM)	1983	
Ranuncul	<i>Pulsatilla patens</i> ssp. <i>multifida</i> [ <i>Anemone patens</i> var. <i>multifida</i> ]	American pasqueflower	G5T?	N		O	O	Collins 581 (RM)	2001	Observed adjacent to Ok-a-beh boat ramp AND IN Carbon County by Heidel in 2001.
Ranuncul	<i>Ranunculus cymbalaria</i>	Alkali buttercup	G5	N	X	X	X	Nelson 5061 (RM)	1979	If varieties are recognized, BCNRA material is var. <i>cymbalaria</i> .
Ranuncul	<i>Ranunculus gmelinii</i>	Lesser yellow water buttercup	G5	N		X		Heidel 1715 (MONTU)	1998	Earlier reports were from outside BCNRA.
Ranuncul	<i>Ranunculus pennsylvanicus</i>	Pennsylvania buttercup	G5	N			X	Lichvar 6162a (RM)	1983	
Ranuncul	<i>Ranunculus sceleratus</i> var. <i>multifidus</i>	Cursed buttercup	G5T5	N	X	X		Nelson 5060 (RM)	1979	
Ranuncul	<i>Ranunculus uncinatus</i> var. <i>uncinatus</i>	Woodland buttercup	G5T?	N		O	X	Lichvar 6101 (RM)	1983	
Ranuncul	<i>Thalictrum dasycarpum</i>	Purple meadow-rue	G5	N			X	Collins 873 (RM)	1983	
Ranuncul	<i>Thalictrum fendleri</i>	Fendler's meadow- rue	G5	N			X	Collins 779 (RM)	1983	
Ros	<i>Agrimonia gryposepala</i>	Tall hairy grooveburr	G5	N			X	Lichvar 6395 (RM)	1983	
Ros	<i>Agrimonia striata</i>	Woodland grooveburr	G5	N			X	Heidel 1924 (MONTU)	1998	
Ros	<i>Amelanchier alnifolia</i> var. <i>alnifolia</i>	Saskatoon service- berry	G5T5	N	O	O	X	Lichvar 5667 (RM)	1983	
Ros	<i>Cercocarpus ledifolius</i> var. <i>ledifolius</i>	Curl-leaf mountain- mahogany	G5T5	N	X	X	X	Collins 541 (RM)	1983	
Ros	<i>Crataegus chrysoarpa</i> [ <i>C. columbiana</i> var. <i>chrysoarpa</i> ]	Fire-berry hawthorn	G5T5	N			X	Heidel 2142 (RM)	2001	

Family (__aceae)	Species Name [synonyms]	Common Name	Global rank	Native/ exotic	WY - Big Horn Co	MT- Carbon Co	MT- Big Horn Co	Sample Voucher	Year first collected	Comments
Ros	<i>Dasiphora fruticosa</i> var. <i>floribunda</i> [ <i>Potentilla fruticosa</i> , <i>Pentaphylloides</i> <i>floribunda</i> ]	Golden-hardhack [Shrubby cinquefoil]	G5	N			X	Heidel 2086 (RM)	2001	Earlier records were collected from the plantings at the Lovell visitor center.
Ros	<i>Fragaria vesca</i>	Woodland strawberry	G5	N			X	Lichvar 6191 (RM)	1983	
Ros	<i>Fragaria virginiana</i>	Virginia strawberry	G5	N		X		Collins 667 (RM)	1983	
Ros	<i>Geum aleppicum</i>	Yellow avens	G5	N			X	Lichvar 6168 (RM)	1983	
Ros	<i>Geum macrophyllum</i> var. <i>perincisum</i>	Large-leaf avens	G5T?	N		X	X	Lichvar 5944 (RM)	1983	
Ros	<i>Geum triflorum</i> var. <i>triflorum</i>	Old-man's-whiskers	G5T5?	N		X	X	Collins 573 (RM)	1983	
Ros	<i>Kelseya uniflora</i>	One-flower kelseya	G5	N	X	X		Dorn 3466 (RM)	1976	
Ros	<i>Petrophyton</i> <i>caespitosum</i>	Rocky Mountain rockmat	G4G5	N	X	X		Collins 865 (RM)	1983	
Ros	<i>Physocarpus</i> <i>monogynus</i>	Mountain ninebark	G4G5	N	O	X	X	Collins 659 (RM)	1983	
Ros	<i>Potentilla arguta</i>	Tall cinquefoil	G5	N			X	Heidel 2145 (RM)	2001	
Ros	<i>Potentilla gracilis</i> var. <i>fastigiata</i> [ <i>P. gracilis</i> var. <i>nuttallii</i> , <i>P. gracilis</i> var. <i>glabrata</i> ]	Graceful cinquefoil	G5T5	N			X	Collins 748 (RM)	1983	
Ros	<i>Potentilla norvegica</i>	Nonwegian cinquefoil	G5	E	X	X		Fertig 19435 a (RM)	1983	
Ros	<i>Potentilla ovina</i> var. <i>ovina</i>	Sheep cinquefoil	G5? T5?	N		X		Lichvar 5657 (RM)	1983	
Ros	<i>Potentilla paradoxa</i>	Bushy cinquefoil	G5	N	X	X		Nelson 5066 (RM)	1979	
Ros	<i>Potentilla pensylvanica</i>	Pennsylvania cinquefoil	G5	N		X		Lichvar 5874 (RM)	1983	
Ros	<i>Potentilla rivalis</i>	Brook cinquefoil	G5	N	X			Fertig 19435 b (RM)	1998	
Ros	<i>Prunus americana</i>	American plum	G5	N		O	X	Collins 746 (RM)	1983	
Ros	<i>Prunus virginiana</i> var. <i>melanocarpa</i>	Choke cherry	G5	N	O	X	X	Lichvar 5686 (RM)	1983	
Ros	<i>Rosa acicularis</i> var. <i>sayi</i> [ <i>Rosa sayi</i> ]	Prickly rose	G5T5	N		X	X	Lichvar 5915 (RM)	1983	
Ros	<i>Rosa arkansana</i>	Prairie rose	G5	N			X	Heidel 2038 (RM)	2001	
Ros	<i>Rosa woodsii</i>	Woods' rose	G5	N		X	O	Wolf 109 (BICA)	1982	
Ros	<i>Rubus idaeus</i> var. <i>strigosus</i> [ <i>R. idaeus</i> var. <i>aculeatissimus</i> ]	Common red raspberry	G5T5	N		X	X	Lichvar 6097 (RM)	1983	

Family (aceae)	Species Name [synonyms]	Common Name	Global rank	Native/ exotic	WY - Big Horn Co	MT- Carbon Co	MT- Big Horn Co	Sample Voucher	Year first collected	Comments
Ros	<i>Rubus parviflorus</i>	Western thimble- berry	G5	N			X	Heidel 2147 (RM)	2001	
Ros	<i>Spiraea betulifolia</i> var. <i>lucida</i>	Shiny-leaf meadowsweet	G4G5 T?	N		X		Collins 763 (RM)	1983	
Rubi	<i>Galium aparine</i> var. <i>echinospermon</i>	Sticky-willy	G5	N		X		Fertig 19446 (RM)	2001	
Rubi	<i>Galium boreale</i>	Northern bedstraw	G5	N		O		Lichvar 6147 (RM)	1983	
Rubi	<i>Galium triflorum</i>	Fragrant bedstraw	G5	N		X		Lichvar 6098 (RM)	1983	
Salic	<i>Populus alba</i>	White poplar	G5	E	X	X		Lichvar 6046 (RM)	1983	
Salic	<i>Populus angustifolia</i>	Narrowleaf cottonwood	G5	N		X		Lichvar 5876 (RM)	1983	
Salic	<i>Populus balsamifera</i> ssp. <i>trichocarpa</i> [ <i>Populus balsamifera</i> var. <i>californica</i> ]	Balsam poplar	G5T5	N		X		Fertig 19444 (RM)	2001	
Salic	<i>Populus deltoides</i> ssp. <i>monilifera</i> [ <i>Populus deltoides</i> var. <i>deltoides</i> var. <i>occidentalis</i> ]	Eastern cottonwood	G5 T4T5	N	X	X		Nelson 7025 (RM)	1980	
Salic	<i>Populus tremuloides</i>	Quaking aspen	G5	N			X	Lichvar 5961 (RM)	1983	
Salic	<i>Populus x acuminata</i>	Lanceleaf cottonwood	HYB	N	X	X		Lichvar 5995 (RM)	1982	
Salic	<i>Salix amygdaloides</i>	Peach-leaf willow	G5	N	X	X		Nelson 7026 (RM)	1980	
Salic	<i>Salix bebbiana</i>	Gray willow	G5	N			X	Heidel 1709 (MONTU)	1983	
Salic	<i>Salix drummondiana</i>	Drummond's willow	G4G5	N		X		Lichvar 5702 (RM)	1983	
Salic	<i>Salix exigua</i> var. <i>exigua</i>	Narrowleaf willow	G5T5	N	X	X		Nelson 7027 (RM)	1980	
Salic	<i>Salix fragilis</i>	Crack willow	G?	E	X			Collins 709 (RM)	1983	
Salic	<i>Salix lutea</i> [ <i>S. eriocephala</i> var <i>watsonii</i> ]	Yellow willow	G4G5	N	X			Heidel 2152 (RM)	2001	Earlier reports had been based on misidentified specimens
Santal	<i>Comandra umbellata</i> var. <i>pallida</i>	Bastard toadflax	G5T5	N	X	X		Lichvar 5561 (RM)	1983	
Saxifrag	<i>Conimitella williamsii</i>	Williams' miterwort	G3?	N		X		Collins 661 (RM)	1983	Duplicate of Collins 661 at BICA was misidentified as <i>Mitella</i> <i>stauropetala</i>
Saxifrag	<i>Heuchera parvifolia</i>	Littleleaf alumroot	G5	N		X		Lichvar 5883 (RM)	1983	



Family (_aceae)	Species Name [synonyms]	Common Name	Global rank	Native/ exotic	WY - Big Horn Co	MT- Carbon Co	MT- Big Horn Co	Sample Voucher	Year first collected	Comments
Saxifrag	<i>Lithophragma parviflorum</i>	Prairie woodlandstar	G5	N		X		Lichvar 5560 (RM)	1983	
Saxifrag	<i>Mitella stauropetalata</i>	Side-flower Bishop's- cap	G5	N		X	O	Collins 661 (BICA)	1983	Duplicate of Collins 661 at RM was identified as <i>Conimitella williamsii</i>
Saxifrag	<i>Sullivantia hapemanii</i> var. <i>hapemanii</i>	Hapeman's coolwort	G3T3	N		X	X	Lichvar 5871 (RM)	1976	
Saxifrag	<i>Telesonix heucheriformis</i> [ <i>Boykinia heucheriformis</i> ]	False saxifrage	G4	N		X		Lichvar 5930 (RM)	1983	
Saxifrag [Parnassij]	<i>Parnassia palustris</i> var. <i>montanensis</i>	Marsh Grass-of- Parnassus	G5T?	N			X	Heidel 2087 (RM)	1983	
Scrophulari	<i>Besseya wyomingensis</i>	Wyoming coraldrops	G5	N		X	O	Lichvar 5660 (RM)	1983	
Scrophulari	<i>Castilleja angustifolia</i> var. <i>angustifolia</i>	Northwestern Indian- paintbrush	G5T?	N		X		Lichvar 5557 (RM)	1982	
Scrophulari	<i>Castilleja linariifolia</i>	Wyoming Indian- paintbrush	G5	N		X	O		1983	Observed by Heidel in Big Horn Co., MT in 2001.
Scrophulari	<i>Castilleja minor</i> ssp. <i>minor</i> [ <i>C. exilis</i> ]	Alkali Indian- paintbrush	G5	N	X			Heidel 2130 (RM)	2001	
Scrophulari	<i>Castilleja sessiliflora</i>	Great Plains Indian- paintbrush	G5	N		X	O	Jones, Ditolla, and Myers s.n. (BICA)	1984	
Scrophulari	<i>Collinsia parviflora</i>	Small-flower blue- eyed mary	G5	N		X	X	Collins 583 (RM)	1983	
Scrophulari	<i>Mimulus guttatus</i>	Seep monkey-flower	G5	N			X	Lichvar 6170 (RM)	1983	
Scrophulari	<i>Orthocarpus luteus</i>	Golden-tongue owl- clover	G5	N		X		Jones, Ditolla, and Myers s.n. (BICA)	1984	
Scrophulari	<i>Penstemon aridus</i>	Stiff-leaf beardtongue	G5?	N		X		Lichvar 5951 (RM)	1983	
Scrophulari	<i>Penstemon eriantherus</i> var. <i>eriantherus</i>	Fuzzy-tongue beardtongue	G4T4	N	X	X		Dorn 2554 (MONT?)	1976	Reported by Dorn (1978)
Scrophulari	<i>Penstemon laricifolius</i> var. <i>laricifolius</i>	Larch-leaf beardtongue	G4 T3T4	N	O	X		Lichvar 6197 (RM)	1983	
Scrophulari	<i>Penstemon nitidus</i> var. <i>nitidus</i>	Waxy-leaf beardtongue	G5T?	N	X		X	Messerschmidt s.n. (BICA)	1981	
Scrophulari	<i>Penstemon radicosus</i>	Mat-root beardtongue	G5	N		X	X	Lichvar 5987 (RM)	1983	
Scrophulari	<i>Verbascum thapsus</i>	Great mullein	G?	E			X	Heidel 2107 (RM)	1983	
Scrophulari	<i>Veronica americana</i>	American brooklime	G5	N		O	X	Collins 745 (RM)	1983	
Scrophulari	<i>Veronica anagallis- aquatica</i>	Blue water speedwell	G5	E	X			Nelson 5059 (RM)	1979	

Family (aceae)	Species Name [synonyms]	Common Name	Global rank	Native/ exotic	WY - Big Horn Co	MT- Carbon Co	MT- Big Horn Co	Sample Voucher	Year first collected	Comments
Scrophulari	<i>Veronica peregrina</i> var. <i>xalapensis</i>	Neckweed	G5T5	N		X	O	Lichvar 6157 (RM)	1983	
Selaginell	<i>Selaginella densa</i>	Dense spike-moss	G5	N		O	X	Lichvar 5656 (RM)	1983	
Smilac [Lili]	<i>Smilax lasioneura</i> [ <i>S. herbacea</i> var. <i>lasioneuron</i> ]	Blue Ridge carrion- flower	G5	N		O	X	Lichvar 6146 (RM)	1983	
Solan	<i>Lycium barbarum</i>	Matrimony-vine	G?	E	X			Heidel 2009 (RM)	2001	
Solan	<i>Physalis heterophylla</i>	Clammy ground- cherry	G5	N		X		Collins 830 (RM)	1983	
Solan	<i>Physalis longifolia</i>	Long-leaf ground- cherry	G5	N	X	X		Heidel 2075 (RM)	2001	
Solan	<i>Solanum dulcamara</i>	Climbing nightshade	G?	E	O	X		Lichvar 6130 (RM)	1983	
Solan	<i>Solanum triflorum</i>	Cut-leaved nightshade	G5	N	X			Heidel 2083 (RM)	2001	
Tamaric	<i>Tamarix chinensis</i>	Five-stamen tamarisk [Salt-cedar]	G?	E	X	X	O	M. L. Roberts 4631 (RM)	1976	Noxious weed in WY.
Typh	<i>Typha angustifolia</i>	Narrow-leaf cat-tail	G5	N	X			Dorn 7086 (RM)	1996	Some early reports were from Lovell visitors center
Typh	<i>Typha latifolia</i>	Broad-leaf cat-tail	G5	N	X		O	Nelson 7035 (RM)	1980	
Ulm	<i>Ulmus pumila</i>	Siberian elm	G?	E	X	X	O	Knight K-12 (RM)	1983	Planted as an ornamental
Ulm [Celtid]	<i>Celtis occidentalis</i>	Common hackberry	G5	N	X		X	Lichvar 6066 (RM)	1983	Planted as an ornamental
Urtic	<i>Parietaria pensylvanica</i>	Pennsylvania pellitory	G5	N	O	X	X	Collins 634 (RM)	1983	
Urtic	<i>Urtica dioica</i> ssp. <i>gracilis</i> [ <i>U. d.</i> var. <i>procera</i> ]	Stinging nettle	G5T5	N	O	X	X	Heidel 2091 (BICA)	1983	
Valerian	<i>Valeriana dioica</i> var. <i>sylvatica</i>	Marsh valerian	G5 T4T5	N		O	X	Collins 670 (RM)	1983	
Verben	<i>Verbena bracteata</i>	Carpet vervain	G4G5	N	X	O	O	Lichvar 6026 (RM)	1982	
Verben	<i>Verbena hastata</i>	Simpler's-joy	G5	N	O		X	Wolf 122 (BICA)	1982	
Viol	<i>Viola adunca</i>	Hook-spur violet	G5	N			X	Lichvar 5901 (RM)	1983	
Viol	<i>Viola canadensis</i>	Canadian white violet	G5	N		X	X	Collins 762 (RM)	1983	
Viol	<i>Viola nuttallii</i>	Yellow prairie violet	G5	N		X		Lichvar 6186 (RM)	1983	
Viol	<i>Viola palustris</i>	Alpine marsh violet	G5	N		X		Heidel 1826 (BICA)	1999	
Viol	<i>Viola vallicola</i>	Valley violet	G4Q	N			X	Lichvar 5558 (RM)	1983	
Visc	<i>Arceuthobium cyanocarpum</i>	Limber pine dwarf- mistletoe	G4	N		X		Heidel 2068 (RM)	2001	
Vit	<i>Vitis riparia</i>	River-bank grape	G5	N			X	Collins 742 (RM)	1983	
Zannichelli	<i>Zannichellia palustris</i>	Horned pondweed	G5	N	X		X	Heidel 2078 (RM)	2001	
Zygophyll	<i>Tribulus terrestris</i>	Puncturevine	G?	E		X		Heidel 2073 (RM)	2001	

## Appendix B.

### Rejected Taxa

The following vascular plant species have been reported from Bighorn Canyon National Recreation Area based on collections at the RM and BICA herbaria and reports from Lichvar et al. (1985), Knight et al. (1987), Akashi (1988), and Heidel and Fertig (2000), but are now known to be either misidentified or collected outside the NRA. The list does not include species that are known by a different synonym (synonyms are listed in Appendix A).

Family ( <u>aceae</u> )	Species Name	Common Name	Comments
Api	<i>Ligusticum filicinum</i>	Fern-leaf wild lovage	Cited in Lichvar et al. (1985), but specimen misidentified.
Api	<i>Ligusticum porteri</i>	Porter's wild lovage	Historical collection by Booth cited in Lichvar et al. (1985), but specimen misidentified.
Api	<i>Lomatium cous</i>	Cous-root desert-parsley	Cited in Lichvar et al. (1985), but specimen from outside BCNRA.
Ast	<i>Antennaria media</i> [ <i>A. alpina</i> var. <i>media</i> ]	Rocky Mountain pussytoes [Alpine pussytoes]	Cited in Lichvar et al. (1985), but specimen from outside BCNRA.
Ast	<i>Antennaria parvifolia</i>	Little-leaf pussytoes	Cited in Lichvar et al. (1985), but specimen misidentified ( <i>A. rosea</i> )
Ast	<i>Arnica rydbergii</i>	Subalpine leopardbane	Cited in Lichvar et al. (1985), but specimen misidentified ( <i>A. fulgens</i> ).
Ast	<i>Artemisia annua</i>	Annual wormwood	Report in Heidel and Fertig (2000) based on a misidentified specimen.
Ast	<i>Chrysothamnus viscidiflorus</i> var. <i>latifolius</i>	Green rabbitbrush	Cited in Lichvar et al. (1985), but this variety does not occur in Montana or Wyoming. This name may have been misapplied to specimens of <i>C. linifolius</i> .
Ast	<i>Erigeron compositus</i> var. <i>discoideus</i>	Dwarf mountain fleabane [Cutleaf fleabane]	Cited in Lichvar et al. (1985), but all labeled specimens are <i>E. allocotus</i> . An additional unlabeled Lichvar collection cannot be reliably placed within BCNRA.
Ast	<i>Erigeron linearis</i>	Desert yellow fleabane	Reported from a plot by Knight et al. (1987), but voucher is misidentified.
Ast	<i>Erigeron speciosus</i>	Aspen fleabane	Cited in Lichvar et al. (1985), but specimen misidentified.
Ast	<i>Helianthella quinquenervis</i>	Nodding dwarf-sunflower	Cited in Lichvar et al. (1985), but specimen from outside BCNRA.
Ast	<i>Hieracium cynoglossoides</i>	Hound-tongue hawkweed	Cited in Lichvar et al. (1985), but specimen misidentified.
Ast	<i>Malacothrix torreyi</i>	Torrey's desert-dandelion	Cited in Lichvar et al. (1985), but specimen misidentified.
Ast	<i>Packera plattensis</i> [ <i>Senecio plattensis</i> ]	Prairie groundsel	Cited in Lichvar et al. (1985), but specimen misidentified.
Ast	<i>Packera subnuda</i> [ <i>Senecio cymbalarioides</i> , included in <i>Packera streptanthifolia</i> by Kartesz and Meacham 1999)	Rocky Mountain groundsel	Report in Heidel and Fertig (2000) based on misidentified specimen.
Ast	<i>Solidago simplex</i> var. <i>nana</i> [ <i>S. spathulata</i> var. <i>nana</i> ]	Mt. Albert goldenrod	Cited in Lichvar et al. (1985), but specimen from outside BCNRA.
Ast	<i>Symphyotrichum falcatum</i> [ <i>Aster falcatus</i> , variety not indicated]	Rough white prairie American aster	Cited in Lichvar et al. (1985), but specimen probably misidentified ( <i>Aster ericoides</i> )
Ast	<i>Symphyotrichum foliaceum</i> var. <i>parryi</i> [ <i>Aster foliaceus</i> var. <i>parryi</i> ]	Alpine leafy-head American aster	Cited in Lichvar et al. (1985), but no voucher specimen has been
Ast	<i>Tetradymia spinosa</i>	Short-spine horsebrush	Report in Heidel and Fertig (2000) based on an observation by Heidel just outside BCNRA boundaries in 1999.
Aster	<i>Cirsium eatonii</i> [ <i>C. tweedyi</i> ]	Eaton's thistle	Earlier reports were based on specimens collected outside of BCNRA.

Family ( <u>aceae</u> )	Species Name	Common Name	Comments
Boragin	<i>Cryptantha caespitosa</i>	Tufted cat's-eye	Report from Knight et al. (1987) is based on misidentified specimens of <i>C. cana</i> .
Boragin	<i>Mertensia viridis</i> [included in <i>M. oblongifolia</i> by Kartesz and Meacham 1999]	Green bluebells	Cited in Lichvar et al. (1985), but specimen probably from outside BCNRA (single voucher is unlabeled and precise location cannot be determined).
Boragin	<i>Onosmodium molle</i> var. <i>molle</i>	Soft-hair marbleseed	Reported by Lichvar et al. (1985), but probably represents var. <i>occidentale</i> . Var. <i>molle</i> is endemic to the southeastern United States.
Brassic	<i>Arabis hirsuta</i>	Hairy rockcress	Cited in Lichvar et al. (1985), but specimen from outside BCNRA.
Brassic	<i>Arabis williamsii</i> var. <i>saximontana</i> [ <i>A. pendulocarpa</i> var. <i>saximontana</i> , <i>A.</i> <i>microphylla</i> var. <i>s.</i> , <i>Boechea williamsii</i> var. <i>s.</i> ]	Wind River rockcress	Cited in Lichvar et al. (1985), but specimen misidentified ( <i>A. holboellii</i> var. <i>pendulocarpa</i> )
Brassic	<i>Draba crassifolia</i>	Snowbed whitlow-grass	Cited in Lichvar et al. (1985), but specimen misidentified ( <i>D. praealta</i> and <i>D. albertina</i> ).
Brassic	<i>Smelowskia calycina</i> var. <i>americana</i>	Fern-leaf false candytuft	Reported by Lichvar et al. (1985), but no voucher found for corroboration; locality probably outside of BCNRA.
Caprifoli	<i>Lonicera utahensis</i>	Rocky Mountain honeysuckle	Cited in Lichvar et al. (1985), but specimen misidentified.
Caprifoli [Adox]	<i>Sambucus racemosa</i> var. <i>melanocarpa</i>	Red elder	Cited in Lichvar et al. (1985), but specimen misidentified ( <i>Rhus glabra</i> )
Caryophyll	<i>Minuartia obtusiloba</i> [ <i>Arenaria obtusiloba</i> ]	Alpine stitchwort	Cited in Lichvar et al. (1985), but specimen from outside BCNRA.
Chenopodi	<i>Chenopodium album</i>	Lamb's-quarters	Specimen from BCNRA (Wolf 146) is immature and probably represents <i>C. berlandieri</i> .
Chenopodi	<i>Kochia americana</i> [ <i>Bassia americana</i> ]	Greenmolly	Cited in Lichvar et al. (1985), but specimen misidentified.
Commelin	<i>Tradescantia bracteata</i>	Long-bract spiderwort	Cited in Lichvar et al. (1985), but probably misidentified ( <i>T. occidentalis</i> ).
Cyp	<i>Carex canescens</i>	Hoary sedge	Reported by Heidel and Fertig (2000) based on a misidentification.
Cyp	<i>Carex raynoldsii</i>	Raynold's sedge	Cited in Lichvar et al. (1985), but specimen from outside BCNRA.
Cyp	<i>Carex scopulorum</i>	Holm's Rocky Mountain sedge	Mistakenly reported in Heidel and Fertig (2000).
Dryopterid [Aspleni]	<i>Polystichum lonchitis</i>	Northern holly-fern	Cited in Lichvar et al. (1985), but specimen from outside BCNRA.
Fab	<i>Astragalus bourgovii</i>	Bourgov's milkvetch	Report in Heidel and Fertig (2000) based on misidentified specimen.
Fab	<i>Cytisus scoparius</i>	Scotch broom	Report from Heidel and Fertig (2000) is based on a misidentified specimen at BICA.
Fab	<i>Hedysarum sulphurescens</i>	Yellow sweet-vetch	Cited in Lichvar et al. (1985), but specimen from outside BCNRA.
Fab	<i>Lupinus sericeus</i>	Pursh's silky lupine	Cited in Lichvar et al. (1985), but specimen misidentified.
Fab	<i>Oxytropis besseyi</i> var. <i>besseyi</i>	Bessey's locoweed	Cited in Lichvar et al. (1985), but specimen misidentified ( <i>O. lagopus</i> ).
Fab	<i>Oxytropis deflexa</i> (variety not indicated)	Pendant-pod locoweed	Cited in Lichvar et al. (1985), but specimen misidentified.
Hippurid	<i>Hippuris vulgaris</i>	Common mare's-tail	Report from Heidel and Fertig (2000) based on a misidentified specimen.
Irid	<i>Sisyrinchium angustifolium</i>	Narrow-leaf blue-eyed grass	Cited in Lichvar et al. (1985), but specimen misidentified ( <i>S. montanum</i> ).
Junc	<i>Juncus parryi</i>	Parry's rush	Cited in Lichvar et al. (1985), but specimen from outside BCNRA.
Junc	<i>Juncus tenuis</i> var. <i>tenuis</i>	Poverty rush	Report from Lichvar et al. (1985) is based on material of <i>J. dudleyi</i> .
Lili [Alli]	<i>Allium brevistylum</i>	Short-stem onion	Cited in Lichvar et al. (1985), but specimen from outside BCNRA.

Family (_aceae)	Species Name	Common Name	Comments
Onagr	<i>Gayophytum ramossimum</i>	Pinyon groundsmoke	Report from Heidel and Fertig (2000) based on a misidentified specimen.
Pa	<i>Alopecurus pratensis</i>	Field meadow-foxtail	Report from Heidel and Fertig (2000) based on a misidentified specimen.
Po	<i>Calamagrostis purpurascens</i>	Purple reed grass	Cited in Lichvar et al. (1985), but specimen from outside BCNRA.
Po	<i>Echinochloa crus-galli</i>	Large barnyard grass	Cited in Lichvar et al. (1985), but specimen probably misidentified ( <i>E. muricata</i> ).
Po	<i>Elymus scribneri</i> [ <i>Agopyron scribneri</i> ]	Scribner's wildrye	Report from Heidel and Fertig (2000) based on a misidentified specimen.
Po	<i>Poa alpina</i>	Alpine bluegrass	Cited in Lichvar et al. (1985), but specimen from outside BCNRA.
Po	<i>Poa glaucifolia</i> [included in <i>Poa arida</i> by Kartesz and Meacham, 1999]	Prairie bluegrass	Cited in Lichvar et al. (1985), but specimen misidentified.
Po	<i>Trisetum spicatum</i>	Narrow false oat [Spike trisetum]	Cited in Lichvar et al. (1985), but specimens either misidentified or from outside BCNRA.
Polemoni	<i>Phlox multiflora</i>	Rocky Mountain phlox	Cited in Lichvar et al. (1985), but specimens from outside BCNRA.
Polemoni	<i>Polemonium viscosum</i>	Sticky Jacob's-ladder	Cited in Lichvar et al. (1985), but specimens from outside BCNRA.
Polygon	<i>Eriogonum mancum</i>	Imperfect wild buckwheat [Mancos wild buckwheat]	Report from Heidel and Fertig (2000) based on a misidentified specimen.
Polygon	<i>Eriogonum ovalifolium</i> var. <i>ovalifolium</i>	Cushion wild buk wheat	Cited in Lichvar et al. (1985), but specimen misidentified.
Polygon	<i>Polygonum achoreum</i>	Leathery knotweed	Cited in Lichvar et al. (1985), but specimen misidentified.
Polygon	<i>Polygonum bistortoides</i>	American bistort	Cited in Lichvar et al. (1985), but specimens from outside BCNRA.
Ranuncul	<i>Ranunculus macounii</i>	Macoun's buttercup	Cited in Lichvar et al. (1985), but specimens from outside BCNRA.
Ranuncul	<i>Thalictrum occidentale</i>	Western meadow-rue	Cited in Lichvar et al. (1985), but specimen misidentified.
Ros	<i>Ivesia gordonii</i>	Alpine mousetail	Cited in Lichvar et al. (1985), but specimens from outside BCNRA.
Ros	<i>Physocarpus malvaceus</i>	Mallow-leaf ninebark	Cited in Lichvar et al. (1985), but specimen misidentified.
Ros	<i>Potentilla biennis</i>	Biennial cinquefoil	Cited in Lichvar et al. (1985), but specimens from outside BCNRA.
Ros	<i>Potentilla diversifolia</i> var. <i>diversifolia</i>	Mountain meadow cinquefoil	Cited in Lichvar et al. (1985), but specimens from outside BCNRA.
Ros	<i>Potentilla fissa</i>	Big-flower cinquefoil	Cited in Lichvar et al. (1985), but specimen misidentified ( <i>P. paradoxa</i> )
Salic	<i>Salix boothii</i>	Booth's willow	Cited in Lichvar et al. (1985), but specimen misidentified ( <i>S. bebbiana</i> )
Salic	<i>Salix monticola</i>	Park willow	Cited in Lichvar et al. (1985), but specimen misidentified ( <i>S. bebbiana</i> )
Saxifrag	<i>Saxifraga rhomboidea</i>	Diamond-leaf saxifrage	Cited in Lichvar et al. (1985), but specimens from outside BCNRA.
Scrophulari	<i>Castilleja angustifolia</i> var. <i>dubia</i> [ <i>C. chromosa</i> . <i>C. applegatei</i> var. <i>martinii</i> in Kartesz and Meacham, 1999]	Wavy-leaf Indian- paintbrush	Cited in Lichvar et al. (1985), but specimen misidentified.
Scrophulari	<i>Castilleja miniata</i>	Great red Indian-paintbrush	Cited in Lichvar et al. (1985), but specimens from outside BCNRA.
Scrophulari	<i>Castilleja pulchella</i>	Showy Indian-paintbrush	Cited in Lichvar et al. (1985), but specimens from outside BCNRA.
Scrophulari	<i>Pedicularis cystopteridifolia</i>	Fern-leaf lousewort	Cited in Lichvar et al. (1985), but specimens from outside BCNRA.
Scrophulari	<i>Penstemon caryi</i>	Cary's beardtongue	Cited in Lichvar et al. (1985), but specimens from outside BCNRA.
Scrophulari	<i>Penstemon humilis</i>	Low beardtongue	Cited in Lichvar et al. (1985), but specimen misidentified.

Family (_aceae)	Species Name	Common Name	Comments
Scrophulari	<i>Penstemon procerus</i> <i>[P. confertus var. procerus]</i>	Pincushion beardtongue	Cited in Lichvar et al. (1985), but specimens from outside BCNRA.
Valerian	<i>Valeriana edulis</i>	Tobacco-root	Cited in Lichvar et al. (1985), but specimens from outside BCNRA.

## Appendix C.

### Unconfirmed Taxa

The following vascular plant species have been reported from Bighorn Canyon National Recreation Area based on reports from Lichvar et al. (1985), Knight et al. (1987), Akashi (1988), and Heidel and Fertig (2000), but these reports cannot be confirmed due to a lack of authenticated voucher material at the RM or BICA herbaria. None of these species could be relocated during field surveys of BCNRA in 2001.

Family (__aceae)	Species Name	Common Name	Comments
Api	<i>Lomatium simplex</i> var. <i>simplex</i> [ <i>L. triternatum</i> ssp. <i>platycarpum</i> ]	Great Basin desert-parsley	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey
Aster	<i>Antennaria racemosa</i>	Hooker's pussytoes	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey
Aster	<i>Oreostemma alpigena</i> var. <i>haydenii</i> [ <i>Aster alpigenus</i> ]	Tundra mountaincrown [Hayden's alpine aster]	Reported by Heidel in Heidel and Fertig (2000), but population could not be relocated in 2001 survey for verification.
Aster	<i>Picradeniopsis oppositifolia</i>	Opposite-leaf false-bahia	Cited in Lichvar et al. (1985) and reported from Barry's Landing in Lichvar's 1983 field notes. No voucher has been found and this population was not relocated in 2001 survey.
Aster	<i>Senecio serra</i> var. <i>serra</i>	Tall ragwort	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey
Aster	<i>Symphotrichum ascendens</i> [ <i>Aster ascendens</i> , <i>A. chilensis</i> var. <i>ascendens</i> ]	Western American aster	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey
Aster	<i>Symphotrichum foliaceum</i> var. <i>parryi</i> [ <i>Aster foliaceus</i> var. <i>parryi</i> ]	Alpine leafy-head American aster	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey.
Aster	<i>Tetraneuris acaulis</i> var. <i>caespitosa</i> [ <i>Hymenoxys acaulis</i> var. <i>caespitosa</i> ]	Stemless four-nerve daisy	Lichvar (5907) is an unlabeled specimen of this taxon that may be within BCNRA (exact location cannot be determined and Lichvar's original field book has been lost).
Brassic	<i>Arabis lignifera</i> [ <i>Boechera lignifera</i> ]	Owens Valley rockcress	Reported by Dorn (1978), but specimen and presence within BCNRA cannot be verified. Other reports are based on misidentifications.
Brassic	<i>Cardaria chalepensis</i>	Lens-pod hoary-cress	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey. Considered a noxious weed in Montana.
Brassic	<i>Draba nemorosa</i>	Woodland whitlow-grass	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey.
Brassic	<i>Sisymbrium loeselii</i>	False London rocket	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey.
Campanul	<i>Triodanis leptocarpa</i>	Slim-pod Venus'-looking-glass	Reported by Lichvar et al. (1985) from the north end of BCNRA, but no voucher has been located for corroboration.

Family (_aceae)	Species Name	Common Name	Comments
Campanul	<i>Triodanis perfoliata</i>	Clasping-leaf Venus'-looking-glass	Reported by Lichvar et al. (1985) from the north end of BCNRA, but no voucher has been located for corroboration.
Caryophyll	<i>Silene latifolia</i> ssp. <i>alba</i> [ <i>Lychnis alba</i> ]	Bladder-campion	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey.
Cyp	<i>Carex utriculata</i> [ <i>C. rostrata</i> ]	Northwest Territories sedge [Beaked sedge]	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey.
Euphorbi	<i>Euphorbia cyparissias</i>	Cypress spurge	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey.
Fab	<i>Amorpha canescens</i>	Leadplant	Mentioned as characteristic of BCNRA Great Plains flora in Lichvar et al. (1985) but not cited in checklist and not located in 2001 survey.
Fab	<i>Astragalus kentrophyta</i> (variety not indicated)	Spiny milkvetch	Reports by Akashi (1988) cannot be confirmed with voucher specimens.
Fab	<i>Trifolium pratense</i>	Red clover	Cited in Lichvar et al. (1985) and Akashi (1988) but no voucher specimens found for corroboration and not recorded in 2001 survey.
Gentian	<i>Frasera speciosa</i> [ <i>Swertia radiata</i> ]	Monument-plant [Green gentian]	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey.
Junc	<i>Juncus compressus</i>	Round-fruit rush	Reported by Knight et al. (1987), but no voucher specimen found for confirmation and not recorded in 2001 survey.
Junc	<i>Juncus regelii</i>	Regel's rush	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey.
Lami	<i>Stachys palustris</i>	Woundwort [Swamp hedge-nettle]	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey.
Lentibulari	<i>Utricularia macrorhiza</i> [ <i>U. vulgaris</i> , <i>U. major</i> ]	Greater bladderwort	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey.
Lili [Antheric]	<i>Leucocrinum montanum</i>	Star-lily	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey. Lichvar's 1983 field notes indicate an observation along one BCNRA's access roads, but exact location is unclear.
Onagr	<i>Camissonia andina</i>	Blackfoot River suncup	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey.
Orchid	<i>Calypso bulbosa</i>	Fairy-slipper orchid	Mentioned as characteristic of BHCNRA Rocky Mt flora in Lichvar et al. (1985), but not cited in checklist and not recorded in 2001 surveys.
Po	<i>Elymus lanceolatus</i> var. <i>riparius</i> [ <i>Agropyron riparium</i> ; included in var. <i>lanceolatus</i> by Kartesz and Meacham, 1999; ]	Streamside wild rye	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey.



Family (_aceae)	Species Name	Common Name	Comments
Po	<i>Hordeum pusillum</i>	Little barley	Reported by Heidel in Heidel and Fertig (2000) based on an unvouchered observation in 1999. Population could not be relocated for confirmation in 2001.
Po	<i>x Elyhordeum macounii</i> [ <i>Elymus x macounii</i> ]		Possibly observed in BCNRA by Heidel, but confirmation needed.
Polemoni	<i>Gilia pinnatifida</i> [ <i>Aliciella pinnatifida</i> ]	Sticky gily-flower	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey.
Polemoni	<i>Gilia tweedyi</i>	Tweedy's gily-flower	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey.
Polemoni	<i>Polemonium occidentale</i>	Western Jacob's-ladder	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey.
Polemoni	<i>Polemonium pulcherrimum</i>	Beautiful Jacob's-ladder	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey.
Polygon	<i>Eriogonum caespitosum</i>	Matted wild buckwheat	Reported in Knight et al. (1987), but no voucher specimen available for confirmation.
Pyrol [Eric]	<i>Orthilia secunda</i> [ <i>Pyrola secunda</i> ]	Sidebells	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey.
Pyrol [Eric]	<i>Pyrola asarifolia</i>	Pink wintergreen	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey.
Ranuncul	<i>Delphinium geyeri</i>	Geyer's larkspur	Reported in Heidel and Fertig (2000) based on a Booth specimen at MONTU that remains to be verified. Exact location of collection needs to be determined.
Ranuncul	<i>Myosurus apetalus</i> [ <i>M. aristatus</i> ]	Bristly mousetail	Unlabeled specimen from Lichvar may be from vicinity of BCNRA.
Ros	<i>Argentina anserina</i> [ <i>Potentilla anserina</i> ]	Common silverweed	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey.
Ros	<i>Crataegus douglasii</i>	Black hawthorn	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey.
Rubi	<i>Galium trifidum</i>	Three-petal bedstraw	Cited by Lichvar et al. (1985), but no voucher specimens found for corroboration. Heidel made a tentative observation at T8S R29E S27 in 2001.
Scrophulari	<i>Mimulus suksdorfii</i>	Miniature monkeyflower	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey.
Scrophulari	<i>Penstemon glaber</i> var. <i>glaber</i>	Western smooth beardtongue	Cited in Lichvar et al. (1985), but no voucher specimens found for corroboration and not recorded in 2001 survey.

## Appendix D.

### Potential Vascular Plant Flora of Bighorn Canyon National Recreation Area

The following list contains species that are known from the vicinity of Bighorn Canyon National Recreation Area in Montana and Wyoming, but which have not yet been documented in the NRA. Species are considered of “High” probability of occurrence in the study area if they are globally common and occur in habitat types that are well-represented within the NRA. Species of “Medium” probability are less abundant or occur in habitats that are uncommon within the area. “Low” probability taxa are rare species or occur in habitats that are rare or found just outside the park’s boundaries. See Appendix A for other codes and definitions.

Family (_aceae)	Species Name	Common Name	Native/ exotic	Probability	Comments
Amaranth	<i>Amaranthus powellii</i>	Green amaranth	N	High	Found in adjacent areas of Big Horn County, WY
Api	<i>Lomatium cous</i>	Cous-root desert-parsley	N	Low	Most likely at higher elevations in Carbon County.
Api	<i>Lomatium simplex</i> var. <i>simplex</i> [ <i>L. triternatum</i> ssp. <i>platycarpum</i> ]	Great Basin desert-parsley	N	Low	Potential habitat in foothills of Pryor Mountains in Carbon County.
Aster	<i>Antennaria dimorpha</i>	Cushion pussytoes	N	Medium	Potential habitat in foothills of Pryor Mountains and in north unit.
Aster	<i>Antennaria media</i> [ <i>A. alpina</i> var. <i>media</i> ]	Rocky Mountain pussytoes [Alpine pussytoes]	N	Low	Known from vicinity of BCNRA. Potential habitat most likely at high elevation sites in Carbon County.
Aster	<i>Antennaria parvifolia</i>	Little-leaf pussytoes	N	High	Potential habitat in foothills of Pryor Mountains and in north unit.
Aster	<i>Antennaria racemosa</i>	Hooker's pussytoes	N	Medium	Potential habitat in coniferous forests in Carbon County.
Aster	<i>Arnica mollis</i>	Cordilleran leopardbane	N	Low	Potential habitat in coniferous forests in Carbon County.
Aster	<i>Crepis occidentalis</i> var. <i>costata</i>	Large-flower hawk's-beard	N	Low	Most likely at moderate elevations in Big Horn County WY & Big Horn County, MT.
Aster	<i>Erigeron compositus</i> var. <i>discoideus</i>	Dwarf mountain fleabane [Cutleaf fleabane]	N	Medium	Known from vicinity of BCNRA. Potential habitat most likely at medium to high elevation sites.
Aster	<i>Erigeron divergens</i>	Spreading fleabane	N	Medium	Most likely at moderate elevations in Big Horn County WY & Big Horn County, MT.
Aster	<i>Erigeron engelmannii</i>	Engelmann's fleabane	N	Medium	Most likely at moderate elevations in Big Horn County WY & Big Horn County, MT.
Aster	<i>Erigeron peregrinus</i> var. <i>callianthemus</i>	Subalpine fleabane	N	Low	Most likely at higher elevations in Carbon County.
Aster	<i>Erigeron speciosus</i>	Aspen fleabane	N	High	Previous reports were misidentified, but potential habitat is present at higher elevations in Carbon County.
Aster	<i>Eurybia integrifolia</i> [ <i>Aster integrifolius</i> ]	Thick-stem wood-aster	N	Low	Most likely at higher elevations in Carbon County.
Aster	<i>Eurybia merita</i> [ <i>Aster sibiricus</i> var. <i>meritus</i> , <i>A. meritus</i> ]	Behring wood-aster	N	Low	Most likely at higher elevations in Carbon County.
Aster	<i>Helianthella quinquenervis</i>	Nodding dwarf-sunflower	N	Medium	Previous reports were misidentified, but potential habitat is present at higher elevations in Carbon County.

Family (_aceae)	Species Name	Common Name	Native/ exotic	Probability	Comments
Aster	<i>Madia glomerata</i>	Mountain tarplant	N	High	Weedy native could occur along roads and trails over much of the higher elevations of BCNRA.
Aster	<i>Malacothrix torreyi</i>	Torrey's desert-dandelion	N	Medium	Found in adjacent areas of Big Horn County, WY
Aster	<i>Oreostemma alpigena</i> var. <i>haydenii</i> [ <i>Aster alpigenus</i> ]	Tundra mountaincrown [Hayden's alpine aster]	N	Medium	Observed in vicinity of BCNRA in Montana by Heidel in 1999, but population could not be relocated in 2001.
Aster	<i>Picradeniopsis oppositifolia</i>	Opposite-leaf false-bahia	N	High	Reported from Barry's Landing by Lichvar, but population could not be confirmed. Boat ramp development may have eliminated suitable habitat.
Aster	<i>Senecio serra</i> var. <i>serra</i>	Tall ragwort	N	High	Most likely at higher elevations in Carbon County.
Aster	<i>Senecio triangularis</i>	Arrow-leaf ragwort	N	Medium	Most likely at higher elevations in Carbon County.
Aster	<i>Solidago simplex</i> var. <i>nana</i> [ <i>S. spathulata</i> var. <i>nana</i> ]	Mt. Albert goldenrod	N	Low	Most likely at higher elevations in Carbon County.
Aster	<i>Stenotus acaulis</i> [ <i>Haplopappus acaulis</i> ]	Stemless mock goldenweed	N	High	Most likely at moderate elevations in Big Horn County WY & Big Horn County, MT.
Aster	<i>Symphyotrichum ascendens</i> [ <i>Aster ascendens</i> , <i>A. chilensis</i> var. <i>ascendens</i> ]	Western American aster	N	High	Potential habitat throughout lower elevation areas of BCNRA.
Aster	<i>Symphyotrichum ericoides</i> var. <i>stricticaule</i> [ <i>Aster ericoides</i> var. <i>stricticaulis</i> ]	White heath American-aster	N	Medium	Potential habitat in northern unit (Big Horn County, MT).
Aster	<i>Symphyotrichum foliaceum</i> var. <i>parryi</i> [ <i>Aster foliaceus</i> var. <i>parryi</i> ]	Alpine leafy-head American aster	N	Medium	Most likely at higher elevations in Carbon County.
Aster	<i>Symphyotrichum spathulatum</i> [ <i>Aster occidentalis</i> ]	Mountain American aster	N	Low	Most likely at higher elevations in Carbon County.
Aster	<i>Tetradymia spinosa</i>	Short-spine horsebrush	N	High	Observed just outside BNCRA boundaries by Heidel in 1999.
Aster	<i>Tetraneuris acaulis</i> var. <i>caespitosa</i> [ <i>Hymenoxys acaulis</i> var. <i>caespitosa</i> ]	Stemless four-nerve daisy	N	High	An unlabeled collection by Lichvar is probably from the general vicinity of BCNRA.
Boragin	<i>Cryptantha caespitosa</i>	Tufted cat's-eye	N	Medium	Reported from Big Horn County in Dorn (2001), but these may represent misidentified <i>C. cana</i> .
Boragin	<i>Lappula cenchrusoides</i>	Great Plains sheepburr	N	Medium	Most likely at moderate elevations in Big Horn County WY & Big Horn County, MT.
Boragin	<i>Mertensia viridis</i> [included in <i>M. oblongifolia</i> by Kartesz and Meacham 1999]	Green bluebells	N	Medium	Known from vicinity of BCNRA. Potential habitat most likely at medium to high elevation sites.
Boragin	<i>Plagiobothrys scouleri</i> var. <i>hispidulus</i>	Meadow popcorn-flower	N	High	Potential habitat along Yellowtail Reservoir in Bighorn County, WY and Big Horn County, MT.
Brassic	<i>Arabis drummondii</i> [ <i>Boechera angustifolia</i> ]	Canadian rockcress	N	High	Most likely at higher elevations in Carbon County.

Family (_aceae)	Species Name	Common Name	Native/ exotic	Probability	Comments
Brassic	<i>Arabis hirsuta</i>	Hairy rockcress	N	Medium	Most likely at higher elevations in Carbon County.
Brassic	<i>Arabis lignifera</i> [ <i>Boechera lignifera</i> ]	Owens Valley rockcress	N	Low	Reported by Dorn (1978) from vicinity of BCNRA, but specimen cannot be relocated and may be misidentified. Potential habitat at lower elevations in Bighorn County, WY and Carbon County.
Brassic	<i>Cardaria chalepensis</i>	Lens-pod hoary-cress	E	Medium	Potential habitat along roads and trails at lower elevations.
Brassic	<i>Lepidium densiflorum</i> var. <i>densiflorum</i>	Miner's pepperwort	N	Medium	Most likely at moderate elevations in Big Horn County WY & Big Horn County, MT.
Callitrich	<i>Callitriche palustris</i>	Vernal water-starwort	N	Medium	Potential habitat along margins of Yellowtail Reservoir.
Campanul	<i>Triodanis leptocarpa</i>	Slim-pod Venus'-looking-glass	N	High	Reported by Lichvar et al. (1985) from northern end of BCNRA.
Campanul	<i>Triodanis perfoliata</i>	Clasping-leaf Venus'-looking-glass	N	High	Reported by Lichvar et al. (1985) from northern end of BCNRA.
Caryophyll	<i>Arenaria congesta</i> var. <i>lithophila</i> [ <i>Eremogone congesta</i> var. <i>lithophila</i> ]	Ball-head sandwort	N	High	Observed in 2001 on east flanks of Pryor Mountain, just outside the NRA.
Caryophyll	<i>Moehringia lateriflora</i> [ <i>Arenaria lateriflora</i> ]	Blunt-leaf groove-sandwort	N	High	Potential habitat in Big Horn County, MT on slopes above dam.
Caryophyll	<i>Silene drummondii</i>	Drummond's catchfly	N	Medium	Most likely at higher elevations in Carbon County.
Caryophyll	<i>Silene latifolia</i> ssp. <i>alba</i> [ <i>Lychnis alba</i> ]	Bladder-campion	E	Medium	No voucher - high prob.
Caryophyll	<i>Spergularia rubra</i>	Ruby sand-spurry	E	High	Potential habitat along margins of Yellowtail Reservoir.
Chenopodi	<i>Chenopodium foliosum</i> [ <i>C. capitatum</i> var. <i>parvicapitatum</i> , <i>C. overi</i> ]	Leafy goosefoot	N	High	Most likely at higher elevations in Carbon County.
Chenopodi	<i>Chenopodium simplex</i>	Giant-seed goosefoot	N	Low	Most likely at moderate elevations in Big Horn County WY & Big Horn County, MT.
Chenopodi	<i>Endolepis suckleyi</i> [ <i>Atriplex suckleyi</i> ]	Suckley's saltbush	N	High	Potential habitat in shale barren habitats in Big Horn County, WY.
Chenopodi	<i>Suaeda calceoliformis</i>	Paiute weed	N	Medium	Potential habitat in shale-clay wetland habitats in Big Horn County, WY.
Cyper	<i>Carex phaeocephala</i>	Mountain hare sedge	N	Medium	Most likely at higher elevations in Carbon County.
Cyper	<i>Carex raynoldsii</i>	Raynold's sedge	N	Low	Most likely at higher elevations in Carbon County.
Cyper	<i>Carex utriculata</i> [ <i>C. rostrata</i> ]	Northwest Territories sedge [Beaked sedge]	N	High	Potential habitat along Yellowtail Reservoir in Bighorn County, WY and Big Horn County, MT.
Dryopterid [Aspleni]	<i>Polystichum lonchitis</i>	Mountain holly fern	N	Low	Known from vicinity of BCNRA. Potential habitat most likely at high elevation sites in Carbon County.
Dryopterid [Aspleni]	<i>Woodsia scopulina</i>	Rocky Mountain cliff fern	N	Medium	Potential habitat in northern unit (Big Horn County, MT).
Eric	<i>Vaccinium scoparium</i>	Grouseberry [Grouse whortleberry]	N	Low	Most likely at higher elevations in Carbon County.

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Fab	<i>Astragalus alpinus</i>	Alpine milkvetch	N	Medium	Most likely at higher elevations in Carbon County.
Fab	<i>Astragalus eucosmus</i>	Elegant milkvetch	N	Low	Most likely at higher elevations in Carbon County.
Fab	<i>Astragalus kentrophyta</i> var. <i>tegetarius</i>	Spiny milkvetch	N	Medium	Potential habitat in foothills of Pryor Mountains and in north unit.
Fab	<i>Astragalus tenellus</i>	Loose-flower milkvetch	N	High	Potential habitat in northern unit (Big Horn County, MT).
Fab	<i>Astragalus vexilliflexus</i>	Bent-flower milkvetch	N	Medium	Potential habitat in northern unit (Big Horn County, MT).
Fab	<i>Hedysarum occidentale</i>	Western sweet-vetch	N	Low	Potential habitat in northern unit (Big Horn County, MT).
Fab	<i>Hedysarum sulphurescens</i>	Yellow sweet-vetch	N	Low	Known from vicinity of BCNRA. Potential habitat most likely at medium to high elevation sites.
Fab	<i>Lupinus sericeus</i>	Pursh's silky lupine	N	Medium	Most likely at moderate elevations in Big Horn County WY & Big Horn County, MT.
Fab	<i>Oxytropis sericea</i> var. <i>sericea</i>	Rocky Mountain locoweed	N	Medium	Most likely at moderate elevations in Big Horn County WY & Big Horn County, MT.
Fab	<i>Trifolium pratense</i>	Red clover	E	High	Most likely at low elevation disturbed sites in Big Horn County, WY and Big Horn County, MT.
Fab	<i>Trifolium repens</i>	White clover	E	High	Most likely at low elevation disturbed sites in Big Horn County, WY and Big Horn County, MT.
Gentian	<i>Frasera speciosa</i> [ <i>Swertia radiata</i> ]	Monument-plant [Green gentian]	N	Medium	Most likely at medium to high elevations in Montana counties.
Gentian	<i>Gentianella amarella</i> var. <i>amarella</i>	Autumn dwarf-gentian	N	Medium	Potential habitat in northern unit (Big Horn County, MT).
Gerani	<i>Geranium richardsonii</i>	White crane's-bill	N	High	Potential habitat in northern unit (Big Horn County, MT).
Halorag	<i>Myriophyllum sibiricum</i>	Siberian water-milfoil	N	High	Potential habitat along Yellowtail Reservoir in Bighorn County, WY and Big Horn County, MT.
Hydrophyll	<i>Nemophila breviflora</i>	Great Basin baby-blue-eyes	N	Medium	Most likely at higher elevations in Carbon County.
Isoet	<i>Isoetes bolanderi</i>	Bolander's quillwort	N	Low	Potential habitat in northern unit (Big Horn County, MT).
Junc	<i>Juncus compressus</i>	Round-fruit rush	E	High	Potential habitat along Yellowtail Reservoir in Bighorn County, WY and Big Horn County, MT.
Junc	<i>Juncus confusus</i>	Colorado rush	E	Medium	Known from vicinity of BCNRA. Potential habitat most likely at medium elevation sites.
Junc	<i>Juncus parryi</i>	Parry's rush	N	Low	Known from vicinity of BCNRA. Potential habitat most likely at high elevation sites in Carbon County.
Junc	<i>Luzula parviflora</i>	Small-flower wood-rush	N	Medium	Most likely at higher elevations of Montana counties.
Lami	<i>Prunella vulgaris</i>	Common self-heal	N	Medium	Most likely at higher elevations of Montana counties.
Lami	<i>Stachys palustris</i>	Woundwort [Swamp hedge-nettle]	N	High	Most likely at higher elevations of Montana counties.

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Lentibulari	<i>Utricularia macrorhiza</i> [ <i>U. vulgaris</i> , <i>U. major</i> ]	Greater bladderwort	N	Medium	Potential habitat along Yellowtail Reservoir in Bighorn County, WY and Big Horn County, MT.
Lili [Antheric]	<i>Leucocrinum montanum</i>	Star-lily	N	Medium	Potential habitat occurs at medium to high elevation areas, mostly in Montana counties.
Lili [Alli]	<i>Allium brevistylum</i>	Short-stem onion	N	Medium	Most likely at higher elevations of Montana counties.
Lili [Calochort]	<i>Streptopus amplexicaulis</i>	Clasping twisted-stalk	N	Medium	Most likely at higher elevations in Carbon County.
Loas	<i>Mentzelia dispersa</i>	Nevada blazing-star	N	High	Potential habitat in northern unit (Big Horn County, MT).
Onagr	<i>Camissonia andina</i>	Blackfoot River suncup	N	High	Most likely at moderate elevations in Big Horn County WY & Big Horn County, MT.
Onagr	<i>Gayophytum diffusum</i> ssp. <i>parviflorum</i> [ <i>G. diffusum</i> var. <i>strictipes</i> ]	Spreading groundsmoke	N	High	Most likely at moderate elevations in Big Horn County WY & Big Horn County, MT.
Po	<i>Alopecurus aequalis</i>	Short-awn meadow-foxtail	N	High	Potential habitat along Yellowtail Reservoir in Bighorn County, WY and Big Horn County, MT.
Po	<i>Calamagrostis canadensis</i>	Bluejoint [Bluejoint reedgrass]	N	Medium	Potential habitat along Yellowtail Reservoir in Bighorn County, WY and Big Horn County, MT.
Po	<i>Calamagrostis purpurascens</i>	Purple reed grass	N	Medium	Known from vicinity of BCNRA. Potential habitat most likely at high elevation sites in Carbon County.
Po	<i>Danthonia intermedia</i>	Timber wild oatgrass	N	Medium	Most likely at higher elevations in Carbon County.
Po	<i>Echinochloa crus-galli</i>	Large barnyard grass	E	Low	Most likely at low elevation disturbed sites in Big Horn County, WY and Big Horn County, MT.
Po	<i>Elymus lanceolatus</i> var. <i>lanceolatus</i>	Streamside wild rye	N	High	Potential habitat throughout BCNRA.
Po	<i>Eremopyrum triticeum</i> [ <i>Agropyron triticeum</i> ]	Annual false wheatgrass	E	Medium	Most likely at moderate elevations in Big Horn County WY & Big Horn County, MT.
Po	<i>Hordeum pusillum</i>	Little barley	N	Medium	Most likely at moderate elevations in Big Horn County WY & Big Horn County, MT.
Po	<i>Phleum alpinum</i>	Mountain timothy	N	Low	Most likely at higher elevations in Carbon County.
Po	<i>Poa alpina</i>	Alpine bluegrass	N	Low	Known from vicinity of BCNRA. Potential habitat most likely at high elevation sites in Carbon County.
Po	<i>Poa wheeleri</i> [ <i>P. nervosa</i> var. <i>wheeleri</i> ]	Wheeler's bluegrass	N	Medium	Most likely at higher elevations in Carbon County.
Po	<i>Trisetum spicatum</i>	Narrow false oat [Spike trisetum]	N	Low	Known from vicinity of BCNRA. Potential habitat most likely at high elevation sites in Carbon County.
Po	<i>x Elyhordeum macounii</i> [ <i>Elymus x macounii</i> ]		N	High	Possibly observed in BCNRA by Heidel, but confirmation needed.
Polemoni	<i>Gilia pinnatifida</i> [ <i>Aliciella pinnatifida</i> ]	Sticky gily-flower	N	High	Most likely at moderate elevations in Big Horn County WY & Big Horn County, MT.

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Polemoni	<i>Gilia tweedyi</i>	Tweedy's gily-flower	N	High	Most likely at moderate elevations in Big Horn County WY & Big Horn County, MT.
Polemoni	<i>Ipomopsis congesta</i> var. <i>congesta</i>	Ballhead skyrocket	N	Medium	Most likely at moderate elevations in Big Horn County WY & Big Horn County, MT.
Polemoni	<i>Phlox gracilis</i> ssp. <i>humilis</i> [ <i>Microsteris</i> <i>gracilis</i> var. <i>humilior</i> ]	Slender phlox	N	Medium	Most likely at moderate elevations in Montana counties.
Polemoni	<i>Phlox multiflora</i>	Rocky Mountain phlox	N	Medium	Most likely at higher elevations of Montana counties.
Polemoni	<i>Polemonium occidentale</i>	Western Jacob's-ladder	N	Low	Most likely at moderate elevations in Big Horn County, MT.
Polemoni	<i>Polemonium pulcherrimum</i>	Beautiful Jacob's-ladder	N	Low	Most likely at moderate elevations in Big Horn County, MT.
Polemoni	<i>Polemonium viscosum</i>	Sticky Jacob's-ladder	N	Low	Known from vicinity of BCNRA. Potential habitat most likely at high elevation sites in Carbon County.
Polygon	<i>Eriogonum caespitosum</i>	Matted wild buckwheat	N	Low	Most likely at moderate elevations in Big Horn County, MT.
Polygon	<i>Polygonum achoreum</i>	Leathery knotweed	N	High	Most likely at low elevation disturbed sites in Big Horn County, WY and Big Horn County, MT.
Polygon	<i>Polygonum douglasii</i> var. <i>douglasii</i>	Douglas' knotweed	N	High	Potential habitat in northern unit (Big Horn County, MT).
Polygon	<i>Polygonum polygaloides</i> var. <i>confertiflorum</i> [ <i>P. kelloggii</i> var. <i>confertiflorum</i> ]	White-margin knotweed	N	Medium	Potential habitat in northern unit (Big Horn County, MT).
Polygon	<i>Rumex stenophyllus</i>	Narrow-leaf dock	E	Medium	Most likely at low elevation disturbed sites in Big Horn County, WY and Big Horn County, MT.
Portulac	<i>Lewisia pygmaea</i>	Alpine bitterroot	N	Low	Most likely at higher elevations of Montana counties.
Primul	<i>Androsace septentrionalis</i> var. <i>subulifera</i>	Pygmy-flower rock-jasmine	N	High	Most likely at higher elevations of Montana counties.
Primul [Myrsin]	<i>Glaux maritima</i>	Sea-milkwort	N	High	Potential habitat in saline wetlands along Yellowtail Reservoir.
Pyrol [Eric]	<i>Orthilia secunda</i> [ <i>Pyrola secunda</i> ]	Sidebells	N	Medium	Most likely at higher elevations in Carbon County.
Pyrol [Eric]	<i>Pyrola asarifolia</i>	Pink wintergreen	N	Low	Most likely at higher elevations in Carbon County.
Ranuncul	<i>Clematis hirsutissima</i>	Sugarbowl	N	Medium	Most likely at higher elevations of Montana counties.
Ranuncul	<i>Delphinium geyeri</i>	Geyer's larkspur	N	Medium	Known from vicinity of BCNRA in Montana from an historical collection by Booth. Potential habitat also occurs in Big Horn County, WY.
Ranuncul	<i>Myosurus apetalus</i> [ <i>M. aristatus</i> ]	Bristly mousetail	N	Medium	Potential habitat along Yellowtail Reservoir in Bighorn County, WY and Big Horn County, MT.
Ranuncul	<i>Ranunculus flammula</i> var. <i>filiformis</i>	Greater creeping spearwort	N	Medium	Potential habitat along Yellowtail Reservoir in Bighorn County, WY and Big Horn County, MT.

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Ranuncul	<i>Ranunculus glaberrimus</i> var. <i>ellipticus</i>	Sagebrush buttercup	N	Medium	Most likely at higher elevations of Montana counties.
Ranuncul	<i>Ranunculus macounii</i>	Macoun's buttercup	N	Medium	Most likely at higher elevations of Montana counties.
Rhamn	<i>Ceanothus velutinus</i>	Tobacco-brush [Buckbrush]	N	Low	Most likely at higher elevations of Montana counties.
Ros	<i>Argentina anserina</i> [ <i>Potentilla anserina</i> ]	Common silverweed	N	High	Potential habitat along Yellowtail Reservoir in Bighorn County, WY and Big Horn County, MT.
Ros	<i>Crateagus douglasii</i>	Black hawthorn	N	High	Potential habitat in northern unit (Big Horn County, MT).
Ros	<i>Ivesia gordonii</i>	Alpine mousetail	N	Medium	Most likely at higher elevations in Carbon County.
Ros	<i>Potentilla biennis</i>	Biennial cinquefoil	N	High	Potential habitat along Yellowtail Reservoir in Bighorn County, WY and Big Horn County, MT.
Ros	<i>Potentilla concinna</i> var. <i>concinna</i>	Red cinquefoil	N	Medium	Most likely at higher elevations of Montana counties.
Ros	<i>Potentilla diversifolia</i> var. <i>diversifolia</i>	Mountain meadow cinquefoil	N	Low	Known from vicinity of BCNRA. Potential habitat most likely at high elevation sites in Carbon County.
Ros	<i>Potentilla glandulosa</i> var. <i>pseudorupestris</i>	Sticky cinquefoil	N	Medium	Most likely at higher elevations of Montana counties.
Ros	<i>Potentilla pulcherrima</i> [ <i>P. gracilis</i> var. <i>pulcherrima</i> ]	Soft cinquefoil	N	Medium	Most likely at higher elevations of Montana counties.
Rubi	<i>Galium bifolium</i>	Twin-leaf bedstraw	N	High	Potential habitat in semi-disturbed areas throughout BCNRA
Rubi	<i>Galium trifidum</i>	Three-petal bedstraw	N	High	Potential habitat along Yellowtail Reservoir in Bighorn County, WY and Big Horn County, MT.
Ruppi	<i>Ruppia cirrhosa</i> [ <i>R. maritima</i> ]	Spiral ditch-grass	N	Low	Potential habitat along Yellowtail Reservoir in Bighorn County, WY and Big Horn County, MT.
Saxifrag	<i>Saxifraga rhomboidea</i>	Diamond-leaf saxifrage	N	Low	Known from vicinity of BCNRA. Potential habitat most likely at high elevation sites in Carbon County.
Scrophulari	<i>Castilleja cusickii</i>	Cusick's Indian-paintbrush	N	Low	Most likely at higher elevations of Montana counties.
Scrophulari	<i>Castilleja miniata</i>	Great red Indian-paintbrush	N	Low	Known from vicinity of BCNRA. Potential habitat most likely at high elevation sites in Carbon County.
Scrophulari	<i>Penstemon caryi</i>	Cary's beardtongue	N	Medium	Voucher from outside BCNRA
Scrophulari	<i>Penstemon eriantherus</i> var. <i>cleburnei</i>	Fuxxy-tongue beardtongue	N	Low	Potential habitat in low elevation areas of Big Horn County, WY.
Scrophulari	<i>Penstemon glaber</i> var. <i>glaber</i>	Western smooth beardtongue	N	Medium	Most likely at higher elevations of Montana counties.
Scrophulari	<i>Penstemon procerus</i> [ <i>P. confertus</i> var. <i>procerus</i> ]	Pincushion beardtongue	N	Medium	Known from vicinity of BCNRA. Potential habitat most likely at high elevation sites in Carbon County.
Scrophulari	<i>Veronica serpyllifolia</i> var. <i>humifusa</i>	Thyme-leaf speedwell	N	Medium	Most likely at higher elevations of Montana counties.
Solan	<i>Hyoscyamus niger</i>	Black henbane	E	Medium	Potential habitat in semi-disturbed areas throughout BCNRA



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Valerian	<i>Valeriana edulis</i>	Tobacco-root	N	Low	Known from vicinity of BCNRA. Potential habitat most likely at high elevation sites in Carbon County.
Viol	<i>Viola praemorsa</i> ssp. <i>liguifolia</i> [ <i>V. praemorsa</i> var. <i>altior</i> ]	Upland yellow violet	N	Medium	Most likely at higher elevations of Montana counties.