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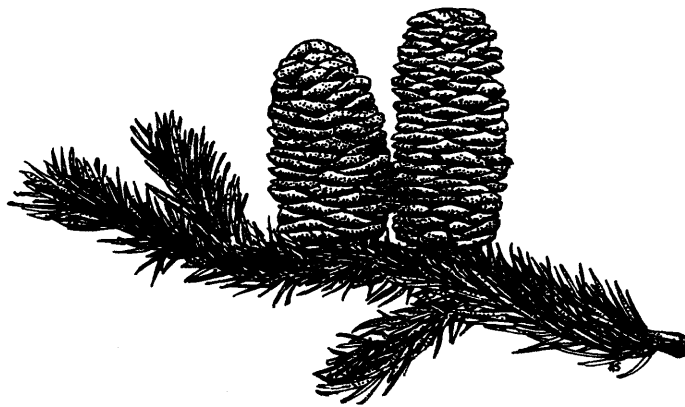
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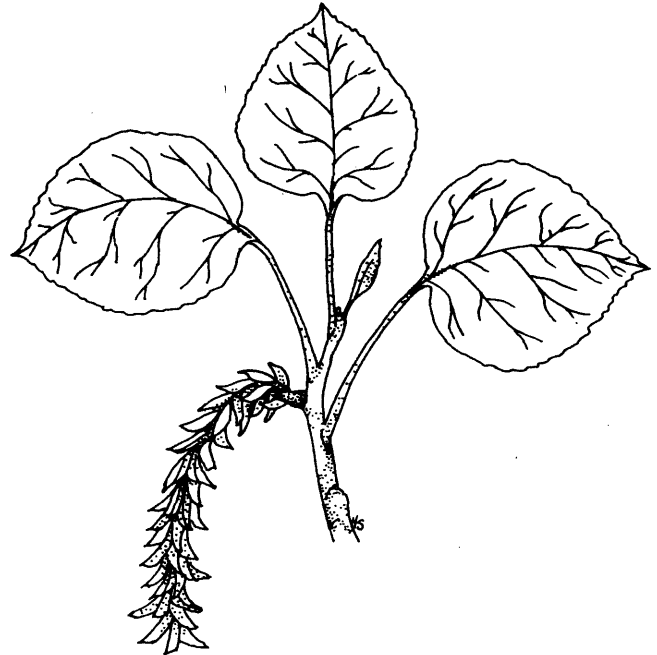


# Flora of the Fraser Experimental Forest, Colorado

Steve J. Popovich, Wayne D. Shepperd, Donald W. Reichert,  
and Michael A. Cone



*Abies lasiocarpa* (Subalpine Fir)



*Populus tremuloides* (Quaking Aspen)



*Picea engelmannii* (Engelmann Spruce)



*Pinus contorta* var. *latifolia* (Lodgepole Pine)

### **Abstract**

This report lists 441 vascular plant taxa in 228 genera and 63 families encountered on the 9,300-ha Fraser Experimental Forest in central Colorado. Synonyms appearing in previous publications and other works pertaining to the Fraser Experimental Forest, as well as appropriate Colorado floras and less-technical field guides, are included. Plant communities and habitats are discussed, and a list of 54 lichens is also presented. A glossary of related terms is included.

**Cover Illustration: The four most common tree species occurring on Fraser Experimental Forest.**

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## Contents

	<b>Page</b>
Introduction .....	1
The Vegetation .....	2
General Description .....	2
Plant Communities, Associations, and Habitats .....	2
Land Use Impacts .....	5
Forest Floristics .....	5
Colorado Floras Pertinent to the Forest .....	6
Using the Checklists .....	7
Vascular Plant Checklist .....	8
Lichen Checklist .....	36
Names Excluded from the Checklists .....	37
References .....	40
Additional Useful References .....	41
Glossary .....	42
Index of Common Names .....	44
Index of Scientific Names of Vascular Plants .....	47

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## INTRODUCTION

This report documents vascular plants occurring on the Fraser Experimental Forest (referred to as the Forest). Both scientists and laypersons alike will find the checklist useful in cross-referencing plants and plant communities found on the Forest to other places of interest. The checklist also adds to the databank of species' geographic distributions and habitats. Older names that appear in previous publications and unpublished works relating to the Forest can be referenced to newer names. Readers can use Harrington's 1954 *Manual of the Plants of Colorado*, Weber's 1987 *Colorado Flora: Western Slope*, or most other less-technical field books and quickly reference them to the checklist. A short list of lichens is also included.

The Fraser Experimental Forest was established in 1937 in the central Rocky Mountains of Colorado (fig. 1). This 9,300-ha (36-mi<sup>2</sup>) outdoor research laboratory is maintained by the USDA Forest Service, Rocky Mountain Forest and Range Experiment Station. The Forest is located 81 air km (50 air mi) west of Denver, Colorado, and 26 air km (16 air mi) south of Rocky Mountain National Park. Latitude and longitude at headquarters are 39° 53' N. and 105° 53' W., respectively. The Forest boundaries roughly correspond to the delineation of the subalpine portion of the St. Louis Creek watershed (fig. 2). The location is well suited for studying vegetation, water, wildlife, and their integration in high-elevation subalpine coniferous forests. Research programs focus on forest regeneration; increasing growth and yield of trees; increasing water supplies; maintaining water quality; improving wildlife habitat; and study-

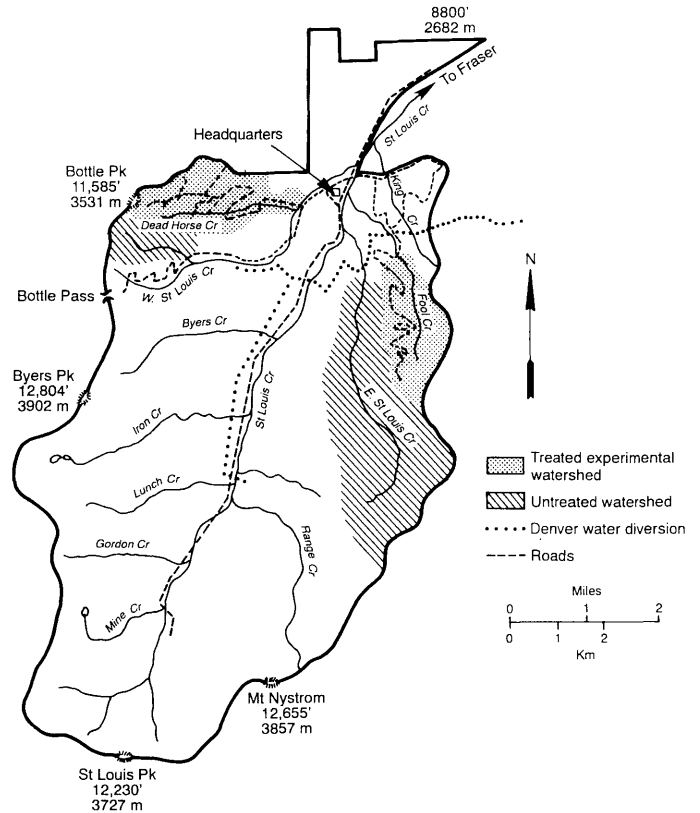


Figure 2. — Fraser Experimental Forest.

ing the effects of timber harvest on these resources. The Fraser Experimental Forest is also a Biosphere Reserve (MAB-8) in the United Nations Educational and Cultural Scientific Organization's Man and the Biosphere Program, which recognizes that cooperative interdisciplinary research is needed at all levels if pressing global environmental problems are to be solved.

Elevation of the Fraser Experimental Forest ranges from 2,684 m (8,800 ft) at the main entrance to 3,905 m (12,804 ft) at the summit of Byers Peak. Headquarters is at 2,745 m (9,000 ft). About three-fourths of the Forest lies above 3,050 m (10,000 ft), and about one-third is above upper tree line.

Climate is temperate with long, cold winters and short, cool summers. Average yearly temperature at Forest headquarters is about 1° C (33° F), and frost can occur any month of the year. Mean monthly temperature for January is -10° C (14° F), and for July it is 13° C (55° F). The observed annual range is about -40° to 32° C (-40° to 90° F). Annual precipitation at headquarters varies from 43 to 71 cm (17 to 28 in), while over the entire Forest precipitation averages 74 cm (29 in). Nearly two-thirds of

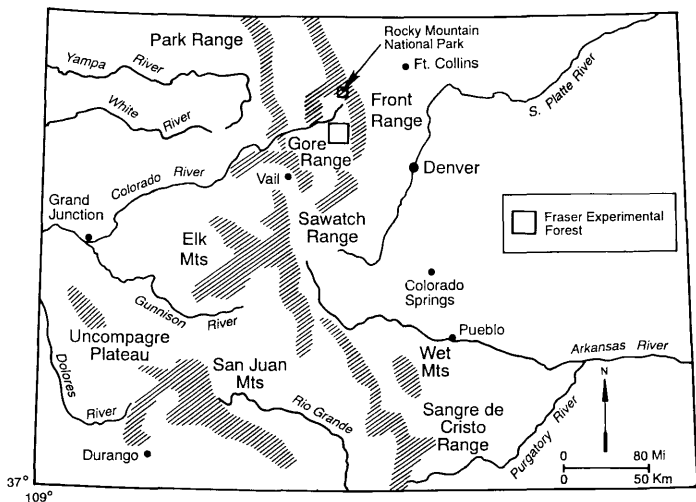


Figure 1. — Location of Fraser Experimental Forest. Map Adapted from original by Diane Lorenz in Hogan (1992).

the total precipitation falls as snow from October through May. As spring advances, snow disappears progressively from lower to higher elevations, and from south slopes first.

The varied topography of the Forest is typical of the southern Rocky Mountains. The western portion of the Forest is characterized by rugged mountains and narrow, steep-sided valleys filled with alluvium and glacial outwash. Southern and eastern portions are remnants of an old peneplain, dissected by glaciers and characterized by long, gentle, relatively uniform slopes. The northern portion is a nearly level, broad valley dissected by St. Louis Creek and surrounded by rolling hills.

Soil parent material is generally derived from gneiss and schist. These soils are typically shallow and gravelly or sandy. Occasionally, small outcroppings of granitic rock occur. At high elevations, especially in the western portion, sandy soils containing large amounts of stone have developed from sandstone parent material. Alluvial soils occur along main streams, with parent material being a mixture of glacial till, glacial outwash, and recent valley fill.

## THE VEGETATION

### General Description

Native vegetation at Fraser Experimental Forest is typical of the subalpine and alpine regions of the Colorado Rocky Mountains. Engelmann spruce (*Picea engelmannii*) and subalpine fir (*Abies lasiocarpa*) are the predominant trees at higher elevations, on north slopes, and along streams; lodgepole pine (*Pinus contorta* var. *latifolia*) is the predominant tree at lower elevations and on drier upper slopes. In undisturbed stands, coniferous trees range from 200 to over 600 years old. Second-growth lodgepole pine stands that originated after fires about 75 years ago are common on the north end of the Forest. Scattered patches of aspen (*Populus tremuloides*) occur in areas opened by logging or fire. Occasionally a large, old (450 to 500 years) Douglas-fir (*Pseudotsuga menziesii*) can be found. Forest floors are generally covered with a layer of duff, litter, and often a dense, shrubby mat of whortleberries (*Vaccinium* spp., predominantly *V. scoparium*). Herbaceous vegetation is generally sparse, except in wet areas, in meadows, and in openings resulting from disturbance. Rocks, often lichen-covered, intermix with alpine fellfields, meadows, fens, and willow carrs above tree line. Wet areas originating from seeps or springs are scattered throughout the Forest.

### Plant Communities, Associations, and Habitats

Three general vegetation zones characterize the Forest: lodgepole pine forests, Engelmann spruce-subalpine fir forests, and alpine tundra (fig. 3). Their distribution is segregated along gradients of elevation and topography

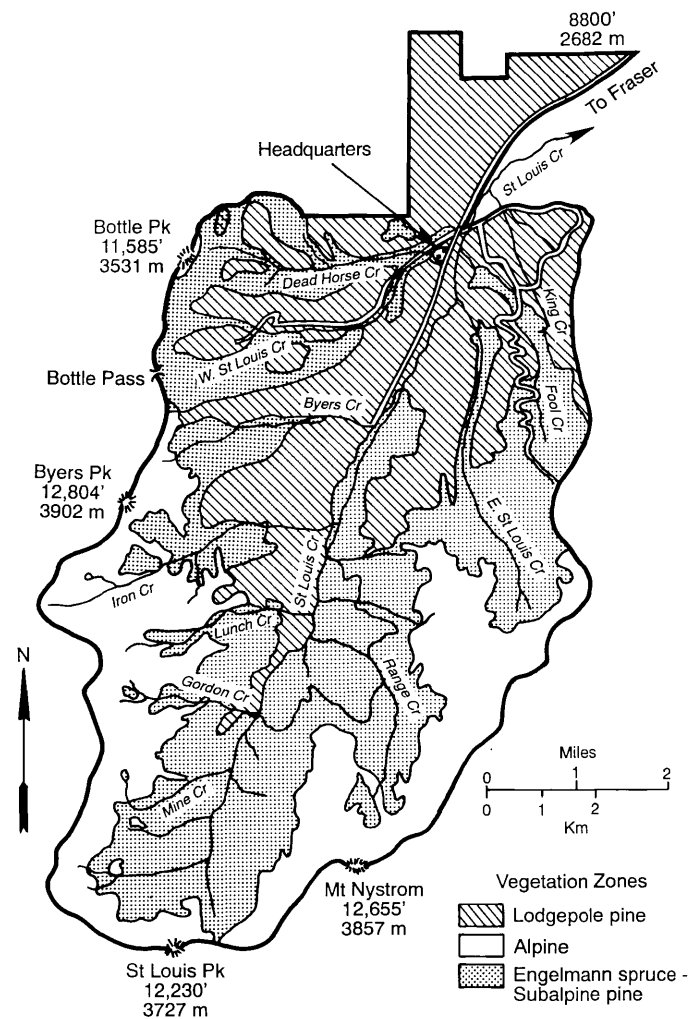


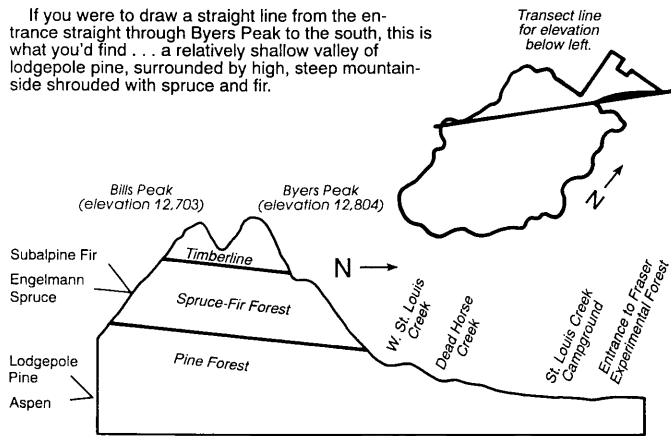
Figure 3. — Vegetation zones of Fraser Experimental Forest.

(fig. 4), which directly affect important plant growth determinants such as temperature and effective precipitation. As elevation increases, lodgepole pine forests that occupy the lower portions of the Forest give way to spruce-fir forests, which in turn yield to the alpine tundra. Generally, a species can grow at higher elevations on south-facing slopes than on north-facing slopes.

A fourth vegetation zone, the sagebrush-steppe, is present mainly in Middle Park nearby the Forest, but small outliers of this zone occur within the Forest boundary.

The basic taxonomic unit of vegetation classification used by the Forest Service to determine resource production capabilities is the plant association. In theory, a plant association represents the terminal stage of an ecological succession; in other words, it is the climax community resulting when the vegetation is allowed to persist and develop naturally in its environment through time. A plant association is described by its dominant climax plant species and by some characteristics of the sites it occupies. Plant association identification on the Forest is not clearly

If you were to draw a straight line from the entrance straight through Byers Peak to the south, this is what you'd find . . . a relatively shallow valley of lodgepole pine, surrounded by high, steep mountain-side shrouded with spruce and fir.



Note that the same tree species grow at higher elevations when the slope faces south than on slopes that face north. The added sunlight and heat create this "slope" effect.

Figure 4. — Illustration showing the influence of elevation and topography upon vegetation zones.

resolved, and the vegetation has not been classified or mapped into habitat types.<sup>2</sup> The following sections present the major plant communities that occur on the Forest. The current status of our knowledge of plant associations is also discussed.

## Lodgepole Pine Forests

At low elevations, forests of nearly pure lodgepole pine occur on warm, dry sites. Occasional aspen groves are sometimes encountered. Engelmann spruce and subalpine fir are absent or infrequent, and regeneration of these species is usually minor when compared to regeneration of pine. Understory vegetation can be remarkably depauperate. The sparse, herbaceous understory is composed of various grasses, sedges (*Carex* spp.), and forbs (herbs other than grasses, grass-like, and ferns). Common grasses and sedges include bluegrass (*Poa* spp.), brome (*Bromopsis* spp.), elk sedge (*Carex geyeri*), Ross' sedge (*C. rossii*), and silvertop sedge (*C. foenea*). Some prevalent forbs are American twinflower (*Linnaea borealis* subsp. *americana*), arnica (*Arnica* spp.), fireweed (*Chamerion danielsii*), spreading golden-banner (*Thermopsis divaricarpa*), strawberry (*Fragaria* spp.), and wintergreen (*Orthilia secunda* and *Pyrola* spp.). The most prevalent shrub is whortleberry. Other common shrubs are bearberry (*Arctostaphylos adenotricha*), common juniper (*Juniperus communis* subsp. *alpina*), mountain-lover (*Paxistima myrsinites*), rose (*Rosa* spp.), russet buffaloberry (*Shepherdia canadensis*) and willow (*Salix* spp.).

The abundance and diversity of understory species can increase dramatically on wet sites and in disturbed areas, such as where overstory trees have been removed. Over-

<sup>2</sup>For more information on the regional application of plant associations and habitat types, see the introductions in Hess and Alexander (1986) and Johnston (1987).

story removal usually results in an immediate decline in average woody plant production and a concomitant increase in proportion of herbaceous plants. Tree species may again dominate the site over time.

Lodgepole pine forests are usually considered seral. In the absence of repeated, widespread fires they are commonly replaced by forests of Englemann spruce and subalpine fir at the elevation and environment found on the Forest. Recent investigators have concluded, however, that regional lodgepole pine can be a climax or long-lived subclimax species in certain topo-edaphic situations, such as on cold, excessively drained sites. On dry, poor sites, lodgepole pine may be a subclimax species that occupies an area for hundreds of years simply because there is no seed source of climax species available for reinvasion. All of these scenarios may be occurring on the Forest.

The most prevalent lodgepole pine plant associations appear to be *Pinus contorta*/*Shepherdia canadensis* and *Pinus contorta*/*Vaccinium scoparium*. Others may be present. Possible occurrences of *Pinus contorta*/*Vaccinium cespitosum*<sup>3</sup> and *Pinus contorta*/*Carex geyeri* (Crouch 1986, 1987) associations have not been verified. Descriptions for the above plant associations are found in Hess and Alexander (1986) and Johnston (1987).

## Spruce-fir Forests

This forest zone occurs on mesic sites at low elevations and is widely distributed throughout much of the remainder of the forested landscape within the Fraser Experimental Forest. Engelmann spruce and subalpine fir are the characteristic overstory trees. Lodgepole pine and aspen are found as seral trees, with regeneration infrequent or absent by midsuccession. Spruce and subalpine fir regeneration is often abundant in forest gaps, especially at higher elevations or on cold, northerly slopes. Nearly ubiquitous whortleberries exhibit high canopy coverage in many areas. Other plants frequently encountered include arnica, spreading golden-banner, silvertop and Ross' sedge, spike trisetum (*Trisetum spicatum*), and wintergreen. Such spruce-fir forests, typically regarded as the "subalpine zone," occupy the coldest and highest coniferous forest zone on the Arapaho and Roosevelt National Forests. Near upper tree line, subalpine fir may be absent or minor compared to Engelmann spruce. Trees of this transition area from subalpine forest to alpine grassland, or krummholtz, are often twisted and stunted. Plants of alpine affinity intermix with the subalpine flora near tree line.

The most extensive plant association in spruce-fir forests is *Abies lasiocarpa*-*Picea engelmannii*/*Vaccinium scoparium*. The *Abies lasiocarpa*-*Picea engelmannii*/*Calamagrostis canadensis* association can be found on hydric soils along cold drainageways and benches adjacent to streams. The soils remain wet to moist for most of the

<sup>3</sup>Barry Johnston, personal communication, 8 January 1993. USDA Forest Service, Gunnison, Colorado.

growing season, resulting in a dense undergrowth. The *Abies lasiocarpa*-*Picea englemannii*/*Senecio triangularis* association occurs on seeps, riparian areas, and draining soils by snowbanks. It is frequently found in a narrow strip along seasonally wet areas. This and the previous association are rich in plant species. A plant association describing the communities at upper tree line has been named *Picea engelmannii*/*Trifolium dasyphyllum*. Lodgepole pine communities with an understory of *Vaccinium cespitosum*, observed at low elevations on glacial alluvium soils, may be a seral stage of the *Abies lasiocarpa*-*Picea englemannii*/*Vaccinium cespitosum* plant association.<sup>4</sup> The *Abies lasiocarpa*/*Carex geyeri* association reported in Crouch (1987) has not been confirmed. Descriptions of these plant associations are given by Hess and Alexander (1986) and Johnston (1987). The name of the *Abies lasiocarpa*-*Picea englemannii* series is often shortened to *Abies lasiocarpa* to be consistent with usage elsewhere.

### Alpine Zone

The alpine zone consists of rock fields intermixed with a vegetation complex containing grasses, grass-like plants, dwarf willows, and many showy forbs. Several habitats promoting different plant communities occur here. Fellfields exhibiting low, matted, or cushioned plants are generally found on exposed or dry sites. Turf or lawn-like meadows with abundant wildflowers occupy less harsh areas. Moist or wet meadows are common in depressed areas or where drainage is restricted, such as in basins or below cirques. Grasses and sedges tend to dominate meadow communities. Fens and willow carrs exist where water appears for most of the year or where the soil is continuously wet. Some common plants in the alpine zone include alpine avens (*Acomastylis rossii* subsp. *turbinata*), alpine sagebrush (*Artemisia scopulorum*), Bellard's kobresia (*Kobresia myosuroides*), bluegrass, clover (*Trifolium* spp.), pussytoes (*Antennaria* spp.), sedge, spike trisetum, stoncrop (Crassulaceae spp.), tufted hairgrass (*Deschampsia cespitosa*), and willow.

Plant associations of local alpine communities have not been determined.

### Aspen

Individual aspen trees and small groves or stands are found scattered among the conifer forests. Understory vegetation is typically richer and more luxuriant than in neighboring conifer stands. Common herbaceous understory plants in the larger aspen stands include American vetch (*Vicia americana*), aspen peavine (*Lathyrus leucanthus*), bluegrass, blue wildrye (*Elymus glaucus*), brome, Colorado columbine (*Aquilegia coerulea*), cow-pars-

nip (*Heracleum sphondylium*), elk sedge, Parry's goldenweed (*Oreochrysum parryi*), reedgrass (*Calamagrostis* spp.), Richardson's geranium (*Geranium richardsonii*), and strawberry. As with lodgepole and spruce-fir forests, the increase in understory species abundance and diversity following disturbance or tree removal can be dramatic.

Most aspen groves on the Forest exist as inclusions in large conifer stands and can be considered as components of the seral stages of the conifer plant communities. However, there is a large, apparently stable aspen community in the northern part of the Forest. It resembles the *Populus tremuloides*/*Heracleum sphondylium* plant association described in Hoffman and Alexander (1980) and Johnston (1987). Two other aspen associations that may occur on the Forest are *Populus tremuloides*/*Thalictrum fendleri* and *Populus tremuloides*/*Carex geyeri*. They are described in Hess and Alexander (1986) and Johnston (1987).

### Riparian Areas, Seeps, Fens, and Carrs

A great diversity of plant species can be found along the streams and in seeps, fens, and carrs that dot the Forest. Along with wet aspen groves, plant growth is most luxurious in these areas. Twenty-eight vascular plant species have been observed within a 0.1-m<sup>2</sup> (1-ft<sup>2</sup>) area on a stream bank in a spruce-fir clearcut on the Fool Creek drainage. Heights of 1.8 m (6 ft) have been noted for various grass species in a wet area of a spruce-fir clearcut in the Deadhorse Creek drainage. Grasses, sedges, rushes (*Juncus* spp.), thinleaf alder (*Alnus incana* subsp. *tenuifolia*), bog birch (*Betula glandulosa*), willows and numerous forb species abound. American globe-flower (*Trollius albiflorus*), heartleaf brookcress (*Cardamine cordifolia*), and white marsh-marigold (*Psychrophila leptosepala*) are common forbs along streams at higher elevations.

Plant associations of local riparian communities have not been determined.

### Sagebrush-steppe

Communities dominated by shrubs and grasses occur on glacial outwash and quaternary alluviums at low elevations (below 2440 m or 8400 ft) just outside Fraser Experimental Forest. These communities adjoin forested areas at lower tree line. It is possible that nonforested communities were more extensive and occurred within the present-day boundaries of the Forest during the warmest intervals of the Holocene Epoch. Today only a few, small mountain big sagebrush (*Seriphidium vaseyana*) communities occur within Fraser Experimental Forest. One such area, several acres in size, is located on both sides of the main entrance road, just north of the junction of Fool Creek Road. Other smaller sites are located nearby. Prevalent shrubs in this larger area are golden aster (*Heterotheca* spp.), mountain big sagebrush, Parry's rabbitbrush (*Chrysothamnus parryi*), and shrubby cinquefoil (*Pentaphylloides floribunda*).

<sup>4</sup>W.H. Moir, personal communication, 11 January 1993. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.

Common grasses are bluegrass, Idaho fescue (*Festuca idahoensis*), and mountain muhly (*Muhlenbergia montana*). Showy herbaceous plants include flowery phlox (*Phlox multiflora*), Gunnison's sego-lily (*Calochortus gunnisonii*), harebell (*Campanula* spp.), monument plant (*Frasera speciosa*), Parry's gentian (*Pneumonanthe parryi*), slender crazyweed (*Oxytropis campestris* var. *gracilis*), and subalpine buckwheat (*Eriogonum subalpinum*).

This plant association has not been ascertained, but it appears similar to associations described by Tiedeman *et al.* (1987) that occur nearby in Middle Park.

### Specialized Communities

Some specialized physiographic features and habitats existing on the Forest include alpine fellfields, rock outcrops, grass-forb mountain meadows, areas of late snow retention, drying pond edges, seeps, fens, and carrs. These areas offer a diversity of specific microhabitats in which uncommon plants or communities can occur.

Certain forested areas appear to be barely disturbed, with lodgepole pine stands older than 300 years and spruce-fir forests containing Engelmann spruce over 600 years old.<sup>5</sup> Indeed, at present, these spruce appear to be the oldest trees of their species known to exist.<sup>6</sup> One of the rarest plants recorded on the Forest—purple lady's slipper (*Cypripedium fasciculatum*)—appears restricted to undisturbed, old-aged spruce-fir forests, illustrating the potential of such areas to provide specialized habitats.

### Land Use Impacts

Fire, timber harvest, water diversion, grazing, and recreation, have occurred on many portions of the Forest and have impacted the vegetation to varying degrees. Evidence of fire in the form of ground charcoal is frequently found. In historic times, 3 fires are known to have occurred: in the early 1800's on the upper one-third of the Fool Creek drainage and adjacent tree line areas; in 1907 on the far northern part of the Forest; and around 1915 between the Forest headquarters and the town of Fraser.

Portions of the Forest below 2,800 m (9,180 ft) were cut in the early 1900's and partial cutting continued in certain northern areas into the 1950's. Several areas in the Forest have been logged in more recent times for experimental purposes. Selected aspen, lodgepole, and spruce-fir sites have been logged with intensities ranging from light thinning to complete removal of the overstory. The most extensive cutting occurred in spruce-fir forests on the Fool Creek drainage in the mid 1950's (fig. 5) and on the Deadhorse Creek drainage in the 1970's and 1980's.

<sup>5</sup>Data on file at Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.

<sup>6</sup>Peter Brown, personal communication, 6 January 1993. Laboratory of Tree Ring Research, University of Arizona, Tucson.



Figure 5. — Aerial view of upper Fool Creek, showing spruce-fir forests, overstory removal treatments, access roads, and alpine tundra.

Water is diverted from St. Louis Creek and its tributaries within the Forest to the Front Range and the City of Denver via a system of buried pipelines. The diversions markedly reduce water flow in some streams and may have affected the dependent downstream vegetation.

Cattle historically grazed the most accessible forestland while sheep grazed the alpine zone. Around 20 head of cattle currently may graze forested areas from July through September. Sheep may occasionally utilize alpine summer range along the southern boundary of the Forest.

Recreational use is increasing on the Forest, which exerts pressure on the vegetation. Trampling and off-road vehicle use are especially evident in the alpine zone.

### FOREST FLORISTICS

The vascular plant checklist in this report documents all such taxa known by the Forest Service to occur on the Fraser Experimental Forest. A total of 441 taxa in 228 genera and 63 families have been recorded. They are distinguished at the infraspecific level. Forty-five species are adventive. Three are endemic to Colorado and sometimes portions of adjacent states. The sunflower family (Asteraceae) is represented the most, with 81 taxa, followed

by the grass family (Poaceae) with 72, the sedge family (Cyperaceae) with 26, the rose family (Rosaceae) with 19, and the mustard family (Brassicaceae) with 17. Taxa representing these five families account for nearly one-half of all documented plants. Twenty-four families are represented by only one taxon and ten families by two. The number of families represented by one or two taxa is almost halved if the plants are placed in their traditional families.

The Forest flora is not, generally speaking, markedly different from those in similar habitats of surrounding areas, including the Indian Peaks of the Front Range (Komarkova 1979); the Park Range and Mount Zirkel Wilderness Area (Kastning 1990); the Eagles Nest Wilderness Area of the southern Gore Range (Hogan 1992); and Rocky Mountain National Park (Weber 1992).

Purple-leaf groundsel (*Ligularia soldanella*), Rocky Mountain nailwort (*Paronchya pulvinata*), and wood-rush (*Luzula subcapitata*) are endemic. The first two species are restricted to rocky areas of the alpine and upper subalpine, while the wood-rush occurs in wet areas at high elevations.

Three plants listed as species of special concern by the Colorado Natural Areas Program (1991) have been documented: arctic draba (*Draba fladnizensis*), mountain bladder fern (*Cystopteris montana*), and purple lady's slipper. These plants occur only sporadically across their ranges. The circumpolar arctic draba is rare in Colorado and adjacent states but more common farther north. Found in rocky areas on high peaks, it also occurs in Rocky Mountain National Park and San Juan County in the southwest portion of the state. The circumboreal bladder fern is a southern disjunct in Colorado, normally found as far south as lower British Columbia, northwest Montana, the north shores of Lake Superior, and Quebec. It inhabits wet, rich spruce-fir forests. Other state occurrences are in Rocky Mountain National Park and the San Juan and Uncompahgre National Forests of southwestern Colorado. Purple lady's slipper is found very sparingly in forests throughout the Western United States. The populations at Rocky Mountain National Park, Fraser Experimental Forest, and the Medicine Bow Mountains of southern Wyoming apparently constitute the most eastern distributions known.

Widely disjunct species and those at the edge of their range are often important from both an environmental and evolutionary perspective. The Forest currently serves as a refuge for these species because the amount of direct, human-caused habitat disturbance is low. Protection is not secured, however, because there are no directives to the Rocky Mountain Forest and Range Experiment Station to manage sensitive plants or habitats. Also, potential adverse impacts from research studies are not reviewed prior to project implementation. No federally listed threatened, endangered, or candidate plants are known to occur.

Species have been intermittently collected or reported since 1937, when K.E. Brown made the first known Forest Service collections. A moderately intensive survey of vascular plants was conducted below tree line by the senior

author of this report during the summers of 1985, 1986, and 1987. A portion of the survey sampled many sites in aspen, lodgepole pine, and spruce-fir plant communities which have undergone overstory removal of varying intensities between the 1950's and the 1970's. A range of species responding to disturbance in such communities is well represented. About 50 new taxa were also recorded, mostly from undisturbed areas, in the summers of 1991 and 1992.

Perhaps 85 percent of the vascular plants occurring on the Forest are documented. Unrecorded taxa are likely to be found in specialized habitats or above tree line. Alpine landscapes, most of the Forest's periphery, and extreme northern and southern areas have not been well explored. Some early spring and late summer plants have undoubtedly escaped detection.

Voucher specimens have been collected for the majority of species listed and are housed in a small working herbarium at the Rocky Mountain Forest and Range Experiment Station in Fort Collins, Colorado. Some specimens are also deposited at the University of Colorado Herbarium (COLO) in Boulder; the Rocky Mountain Herbarium (RM), University of Wyoming, in Laramie; and at the Colorado State University Herbarium (CS) in Fort Collins. Specimens have been verified by one of the following individuals: Robert D. Dorn, Charles Feddema, Harold D. Harrington, Ronald L. Hartman, Frederick J. Hermann, B.E. Nelson, William A. Weber, or Dieter H. Wilken. Taxa for which no voucher specimens exist have been reliably identified in the field.

Much research has been conducted on the Forest (Alexander *et al.* 1985). Numerous publications and graduate papers include partial species lists or contain discussions regarding vegetative attributes relative to specific study objectives. Understory response of nontree species to timber harvest is described in the wildlife habitat studies by Porter (1959a), Wallmo *et al.* (1972), Regelin and Wallmo (1978), and Crouch (1985, 1986, 1987). Studies by Paulsen (1960), Whipple (1973, 1975), and Whipple and Dix (1979) directly address the Forest plant communities and vegetation ecology.

The Forest continues to offer opportunities to study forest succession, plant community ecology, and specialized habitats. Old-aged stands, for example, could prove useful in modeling or validating old-growth definitions, ecosystem functions, or gap-dynamics. Research has been initiated on such subjects as dendrochronology, biological diversity, and fire ecology. Some cool, moist, old spruce-fir groves are exceptionally rich in understory species; it is not inconceivable that they harbor undocumented rare species or remnant communities.

## COLORADO FLORAS PERTINENT TO THE FOREST

Taxonomy and nomenclature are not static; rather, they are subject to change as new information becomes avail-

able. The resulting discrepancies in plant names between old and new references can be confusing and frustrating. Ultimate adoption of a revised name or taxonomic status is at the discretion of the individual. A final, stabilized set of names will not likely exist, and should not, as long as plants continue to be studied.

Harrington's *Manual of the Plants of Colorado (1954)* was the first complete flora of the state of Colorado. Harrington wrote the book while he was a botany professor at Colorado State University, and it is still the only complete state treatment with keys and descriptions. This work was a remarkable feat, especially considering the limited funding and facilities at that time.

Our knowledge of Colorado plants has increased greatly since then, however, and recent floras such as William A. Weber's 1987 *Colorado Flora: Western Slope* present revisions and reflect new information. Familiarity with at least one of the above works, which are the most complete technical manuals for this locale, is a must for the individual who is serious about identifying plants on the Forest. For the many others who simply enjoy "botanizing" on a beautiful summer's day, a wide variety of wildflower field books and less exhaustive works is available.

## USING THE CHECKLISTS

Names in the checklists follow the nomenclature, synonymy, and taxonomy presented in Weber and Wittmann's 1992 *Catalog of the Colorado Flora: A Biodiversity Baseline*. Although some of the catalog's taxonomic standings differ from tradition, it presents the most comprehensive and updated information available on Colorado flora.

The vascular plant checklist is organized by primary and alternate names. Primary names are the names preferred by Weber and Wittmann (1992) and are listed first. Alternate names are other names used by different references or authors which correspond to the same taxon; they are listed after the primary names. Primary names and taxonomic arrangements are not necessarily those pre-

ferred by the authors of this report or the USDA Forest Service.

Alternate plant names have been included from both *Colorado Flora: Western Slope* (Weber 1987) and *Manual of the Plants of Colorado* (Harrington 1954). The vascular checklist also includes alternate names appearing in all known previous publications, graduate papers, unpublished species lists, and documentation pertaining to the Forest as well as other selected names sometimes used in Colorado. Additional alternate names usually exist, some of which can be found in Weber and Wittmann (1992) and Harrington (1954). Indexes in the back of this report enable the reader to cross-reference alternate names with primary names.

Alternate names are not always true synonyms. For example, Harrington (1954) sometimes applied the name of a European plant to a New World plant, believing the plants to represent the same taxon based upon available data. Later, the New World plant was deemed a separate species and given a different name. In such a case, the names represent two distinctly separate plant entities and are not truly synonymous. Alternate names should be treated with the understanding that they are based on value judgements and current information, and as such, are subject to change.

This report's checklists are maintained at the Rocky Mountain Forest and Range Experiment Station on a computer database conducive to periodic updating. Information is welcomed regarding rare plants or plants that are not named in the report. To pass along information or to obtain published information about the Fraser Experimental Forest, send a request to Director, Rocky Mountain Forest and Range Experiment Station, 240 West Prospect, Fort Collins, Colorado, 80526. Access to the Station's working herbarium and computer database is available to interested persons at the Station's headquarters in Fort Collins. An electronic copy of the computer database is also available by mail.

If you visit the Forest, please respect ongoing research study areas and help minimize damage to fragile ecosystems. Become informed of visitor use regulations, curtail vehicle or mountain bike use to established roads, and refrain from unscrupulous plant collecting.

## VASCULAR PLANT CHECKLIST

### Arrangement of Names

Names are arranged alphabetically by family, genus, and species and are grouped by ferns and fern allies, gymnosperms, and angiosperms. Family names are followed by a three-letter abbreviation. Plant primary names are in bold; alternate names are in italics and are indented below the primary names. Names follow nomenclature, synonymy, and taxonomy presented in Weber and Wittmann (1992). A few alternate names are not found in Weber and Wittmann (1992); their nomenclature is from Harrington (1954), Weber (1987), or Dorn (1988). A not-equal-to sign ( $\neq$ ) preceding an alternate name signifies that it is not considered truly synonymous with the primary name. Common names are in the right-hand column and follow vernacular used in Colorado. Common names vary greatly among individuals and among regions.

### Source of Information

The following indicators are used to identify the source of given information:

- HDH54 Names appearing in Harrington (1954), not including his synonymy listings.  
WAW87 Names appearing in Weber (1987).  
Names with no reference appear in various publications, graduate papers, and other documentation that pertains to the Forest; synonymy listings in Harrington (1954); or Dorn (1988).  
(COLO) Taxa verified by specimens deposited only at the University of Colorado Herbarium, Boulder.  
(field obs.) Taxa observed in the field, but not collected.  
Specimens for all other taxa are housed at the Rocky Mountain Station's herbarium, in Fort Collins, with some duplicate specimens also located in university herbaria in Boulder (COLO), Fort Collins (CS) and Laramie (RM).

### Habitat

Habitats in which species are known to occur on the Forest appear after the primary names. Plants can usually be found outside listed habitats. Each habitat is abbreviated, e.g. 7a, meaning wet areas at low elevations. Adventive and endemic species are also noted. A key to habitats follows below:

- 1 - Lodgepole pine forests  
2 - Spruce-fir forests  
3 - Alpine, alpine-subalpine interface  
4 - Aspen groves  
5 - Sagebrush-steppe communities  
6 - Mountain meadows/natural forest openings  
7 - Riparian areas, seeps, willow carrs, other moist sites  
8 - Disturbed/compacted soil, roadsides, ditches, seedings  
9 - Rocky areas, screes, dry slopes, bare soil  
a - Low elevation  
b - Mid-high elevations below tree line  
c - Above tree line

### Family Abbreviations

Abbreviations for family names are listed below. The number of taxa documented in each family is in parentheses.

ADX	Adoxaceae (1)	CPR	Caprifoliaceae (3)	IRI	Iridaceae (1)	POR	Portulacaceae (1)
ALL	Alliaceae (2)	CRS	Crassulaceae (3)	JUN	Juncaceae (9)	PRM	Primulaceae (2)
API	Apiaceae (9)	CRY	Caryophyllaceae (5)	LAM	Lamiaceae (1)	PTG	Plantaginaceae (1)
ASN	Alsiniaceae (10)	CUP	Cupressaceae (1)	LIL	Liliaceae (1)	PYR	Pyrolaceae (6)
AST	Asteraceae (81)	CVL	Convallariaceae (1)	LIN	Linaceae (1)	RAN	Ranunculaceae (8)
ATY	Athyriaceae (1)	CYP	Cyperaceae (26)	LYC	Lycopodiaceae (1)	ROS	Rosaceae (19)
BER	Berberidaceae (1)	ELE	Elaeagnaceae (1)	MLN	Melanthiaceae (2)	RUB	Rubiaceae (4)
BET	Betulaceae (2)	EQU	Equisetaceae (2)	MLV	Malvaceae (1)	SAL	Salicaceae (13)
BOR	Boraginaceae (4)	ERI	Ericaceae (6)	MNT	Monotropaceae (1)	SAX	Saxifragaceae (8)
BRA	Brassicaceae (17)	FAB	Fabaceae (16)	ONA	Onagraceae (11)	SCR	Scrophulariaceae (16)
CAM	Campanulaceae (2)	FUM	Fumariaceae (1)	ORC	Orchidaceae (10)	SEL	Selaginellaceae (1)
CCT	Calochortaceae (1)	GEN	Gentianaceae (7)	PAR	Parnassiaceae (2)	UVU	Uvulariaceae (1)
CEL	Celastraceae (1)	GER	Geraniaceae (1)	PIN	Pinaceae (4)	VAL	Valerianaceae (2)
CHN	Chenopodiaceae (2)	GRS	Grossulariaceae (4)	PLG	Polygonaceae (7)	VIO	Violaceae (6)
COP	Coptaceae (1)	HEL	Helleboraceae (8)	PLM	Polemoniaceae (5)	VIS	Viscaceae (1)
CPD	Cypripediaceae (1)	HYD	Hydrophyllaceae (2)	POA	Poaceae (72)		

## FERNS and FERN ALLIES

### ATHYRIACEAE--ATHYRIUM or LADY FERN FAMILY (ATY) (traditionally under Polypodiaceae)

*Cystopteris montana* (Lamarck) Bernhardt ex Desvoux:HDH54, WAW87. 2. (COLO) Brittle Fern; Mountain Bladder Fern

### EQUISETACEAE--HORSETAIL FAMILY (EQU)

*Equisetum arvense* L.:HDH54, WAW87. 7ab. Common or Field Horsetail  
*Hippochaete hyemalis* (L.) Bruhin. 7ab. Common or Perennial Scouring-rush  
*Equisetum hyemale* L.:HDH54

*Hippochaete hyemalis* (L.) Bruhin subsp. *affinis* (A. Braun) W.A. Weber:WAW87

### LYCOPODIACEAE--CLUB-MOSS FAMILY (LYC)

*Lycopodium annotinum* L.:HDH54, WAW87. 2. (COLO) Stiff Club-moss

9

### SELAGINELLACEAE--LITTLE CLUB-MOSS FAMILY (SEL)

*Selaginella densa* Rydberg:HDH54, WAW87. 9. (COLO) Little Club-moss; Rock Selaginella

## GYMNOSPERMS

### CUPRESSACEAE--CYPRESS FAMILY (CUP) (traditionally under Pinaceae)

*Juniperus communis* L. subsp. *alpina* (J.E. Smith) Celakovsky:WAW87. 1,2. Common or Dwarf Juniper

*J. communis* L. var. *montana* Aiton:HDH54

*J. communis* L. var. *saxatilis* Pallas:HDH54

### PINACEAE--PINE FAMILY (PIN) (see also CUP)

*Abies lasiocarpa* (Hooker) Nuttall:HDH54, WAW87. 1-3.

*Picea engelmannii* Parry ex Engelmann:HDH54, WAW87. 1-3. (field obs.) Subalpine Fir  
Engelmann Spruce

*Pinus contorta* Douglas ex Loudon var. *latifolia* Engelm.: HDH54. 1, 2. (field obs.)  
*P. contorta* Douglas ex Loudon subsp. *latifolia* (Engelmann) Critchfield: WAW87  
*Pseudotsuga menziesii* (Mirbel) Franco: WAW87. 1, 2. (field obs.)  
*P. taxifolia* (Poiret) Britton: HDH54

Lodgepole Pine  
 Douglas-fir

## ANGIOSPERMS

### ADOXACEAE--ADOXA FAMILY (ADX)

*Adoxa moschatellina* L.: HDH54, WAW87. 7bc. (COLO)

Moschatel; Muskroot

### ALLIACEAE--ONION FAMILY (ALL) (traditionally under Liliaceae)

*Allium* L., species not determined: HDH54, WAW87. 1a, 5. (field obs.)  
*Allium brevistylum* S. Watson: HDH54, WAW87. 4a. (COLO)

Wild Onion  
 Shortstyle Onion

### ALSINACEAE--CHICKWEED FAMILY (ASN) (traditionally under Caryophyllaceae)

*Cerastium fontanum* Baumgartner: WAW87. 8. Adventive.

Big Cerastium or Mouse-ear

*C. vulgatum* L. var. *hirsutum* E. Fries: HDH54

*Cerastium strictum* L. *emend.* Haenke: WAW87. 6.

Common Cerastium; Field Mouse-ear

≠ *C. arvense* L.: HDH54

*Eremogone fendleri* (A. Gray) Ikonnikov: WAW87. 1-3. (field obs.)

Desert or Fendler's Sandwort

*Arenaria fendleri* A. Gray, var. not determined: HDH54

*Lidia obtusiloba* (Rydberg) Löve & Löve: WAW87. 3.

Alpine or Arctic Sandwort

*Arenaria obtusiloba* (Rydberg) Fernald: HDH54

*Moehringia lateriflora* (L.) Fenzl: WAW87. 7ab. (COLO)

Bluntleaf or Grove Sandwort

*Arenaria lateriflora* L.: HDH54

*Paronychia pulvinata* A. Gray: HDH54, WAW87. 3. Endemic. (field obs.)

Alpine or Rocky Mtn. Nailwort

*Sagina saginoides* (L.) Karsten: HDH54, WAW87. 2, 3, 8, b. (COLO)

Arctic Pearlwort

*Spergularia rubra* (L.) J. & K. Presl: HDH54, WAW87. 8b. Adventive.

Red Sand Spurrey

*Stellaria longipes* Goldie: HDH54 (as the species). 7ab.

Long-stalk Starwort or Stitchwort

*S. longipes* Goldie subsp. *stricta* (Rydberg) W.A. Weber: WAW87

*Stellaria umbellata* Turczaninow ex Karlin & Kirilow: HDH54, WAW87. 2, 3, 7.

Chickweed; Umbellate Starwort

APIACEAE/UMBELLIFERAE--PARSLEY FAMILY (API)

- Angelica grayi* (Coulter & Rose) Coulter & Rose:HDH54,WAW87. 2.  
*Carum carvi* L.:HDH54,WAW87. 1a,8. Adventive.  
*Conioselinum scopulorum* (A. Gray) Coulter & Rose:HDH54,WAW87. 1,2,4.  
*Heracleum sphondylium* L. subsp. *montanum* (Schleicher ex Gaudin) Briquet in Schinz & Thellung:WAW87. 4,7,ab.  
*H. lanatum* Michaux:HDH54  
*H. sphondylium* L. var. *lanatum* (Michaux) Dorn  
*Ligusticum porteri* Coulter & Rose:HDH54,WAW87. 4. (field obs.)  
*Oreoxis alpina* (A. Gray) Coulter & Rose subsp. *alpina*:HDH54,WAW87. 3.  
*Cymopterus alpinus* A. Gray  
*Osmorhiza depauperata* Philippi:WAW87. 1,2,4.  
*O. obtusa* (Coulter & Rose) Fernald:HDH54  
*Oxypolis fendleri* (A. Gray) Heller:HDH54,WAW87. 1,2,4,7,ab.  
*Pseudocymopterus montanus* (A. Gray) Coulter & Rose:HDH54,WAW87. 1,2,4,5.  
*Cymopterus lemmonii* (Coulter & Rose) Dorn

Gray's Angelica  
 Caraway  
 Rocky Mtn. Hemlock-parsley  
 Common Cow-parsnip  
 Lovage; Osha; Porter's Ligusticum  
 Alpine Oreoxis or Parsley  
 Bluntseed Sweetroot; Sweet Cicely  
 Fendler's Cowbane  
 Mountain Parsley

ASTERACEAE/COMPOSITAE--ASTER or SUNFLOWER FAMILY (AST)

- Achillea lanulosa* Nuttall:HDH54(as the species),WAW87. 1-8.  
*A. millefolium* L. subsp. *lanulosa* (Nuttall) Piper  
*Agoseris aurantiaca* (Hooker) Greene:HDH54,WAW87. 4a. (COLO)  
*Agoseris glauca* (Pursh) Rafinesque var. *dasycephala* (Torrey & Gray) Jepson:HDH54,WAW87. 6.  
*Agoseris glauca* (Pursh) Rafinesque var. *glauca*. 4a. (COLO) See comment in Weber and Wittmann.  
 Subsumed under other varieties:HDH54,WAW87  
*Anaphalis margaritacea* (L.) Benth & Hooker:HDH54,WAW87. 6,8.  
*Antennaria media* Greene:HDH54,WAW87. 2.  
 ≠ *A. alpina* L. See comment in Weber and Wittmann.  
*A. alpina* (L.) Gaertner var. *media* (Greene) Jepson  
*Antennaria microphylla* Rydberg:HDH54,WAW87. 5,6.  
*Antennaria parvifolia* Nuttall:HDH54,WAW87. 4,6.  
*Antennaria rosea* Greene:HDH54,WAW87. 1-8.  
*Antennaria umbrinella* Rydberg:HDH54,WAW87. 6b.  
*Arnica cordifolia* Hooker:HDH54,WAW87. 1,2.  
*Arnica latifolia* Bongard:HDH54,WAW87. 1,2,7,b.  
*Arnica mollis* Hooker:HDH54,WAW87. 2.  
*Arnica parryi* A. Gray:HDH54,WAW87. 6b.  
*Arnica rydbergii* Greene:HDH54,WAW87. 9bc.

Western Yarrow; Yarrow  
 Orange Agoseris or False Dandelion  
 Pale Mtn. Agoseris or False Dandelion  
 Pale Agoseris or False Dandelion  
 Pearly Everlasting  
 Alpine Pussytoes  
 Littleleaf Pussytoes  
 Nuttall's Pussytoes  
 Rose Pussytoes  
 Mountain or Umber Pussytoes  
 Heartleaf Arnica  
 Broadleaf Arnica  
 Hairy Arnica  
 Parry's or Rayless Arnica  
 Rydberg's Arnica

- Artemisia arctica* Lessing subsp. *saxicola* (Rydberg) Hultén: WAW87. 3.  
 ≠ *A. norvegica* E. Fries. See comment in Weber and Wittmann.
- A. norvegica* E. Fries subsp. *saxitilis* (Besser) Hall & Clements: HDH54. See comment in Weber and Wittmann.  
 Fringed or Pasture Sage, Sagebrush or Sagewort  
 Louisiana Sage, Sagebrush or Sagewort
- Artemisia frigida* Willdenow: HDH54, WAW87. 4a, 5. (field obs.)  
 Alpine or Rocky Mtn. Sage, Sagebrush or Sagewort
- Artemisia ludoviciana* Nuttall subsp. *ludoviciana*: HDH54, WAW87. 4a, 5. (field obs.)  
 Leafybract Aster
- Artemisia scopulorum* A. Gray: HDH54, WAW87. 3.  
 Aster *foliaceus* Lindley ex De Candolle var. *foliaceus*: HDH54, WAW87. 1, 2, 4, 6, 7, ab.
- A. foliaceus* Lindley ex De Candolle var. *frondeus* A. Gray: HDH54
- A. foliaceus* Lindley ex De Candolle var. *parryi* (Eaton) A. Gray
- Aster lanceolatus* Willdenow subsp. *hesperius* (A. Gray) Semple & Chmielewski. 6a.  
*A. hesperius* A. Gray: HDH54 (var. not determined), WAW87
- Aster spathulatus* Lindley ex De Candolle. 6.
- A. occidentalis* (Nuttall) Torrey & Gray: HDH54, WAW87
- Chlorocrepis albiflora* (Hooker) W.A. Weber: WAW87. 1, 2.  
*Hieracium albiflorum* Hooker: HDH54
- Chlorocrepis tristis* (Willdenow ex Sprengel) Löve & Löve subsp. *gracilis* (Hooker) W.A. Weber: WAW87. 1, 2.  
*Hieracium gracile* Hooker: HDH54
- Chrysothamnus parryi* (A. Gray) Greene subsp. *parryi*: HDH54, WAW87. 5.  
 Parry's Rabbitbrush
- Cirsium arvense* (L.) Scopoli: HDH54 (as the species), WAW87. 8. Adventive.  
 Canada Thistle
- Cirsium centaureae* (Rydberg) K. Schumann: HDH54, WAW87. 1, 2, 8.  
 Thistle
- Cirsium coloradense* (Rydberg) Cockerell: WAW87. 6-8.  
 Colorado Thistle
- ≠ *C. drummondii* Torrey & Gray var. *drummondii*: HDH54. See comment in Weber and Wittmann.
- C. tiogonum* (Congdon) Petrak var. *coloradense* (Rydberg) Dorn  
 Thistle
- Cirsium eatonii* (A. Gray) B.L. Robinson: HDH54, WAW87. 2b, 4.  
 Coulter's Daisy or Fleabane
- Erigeron coulteri* T.C. Porter: HDH54, WAW87. 2, 4, 7.  
 Tall Daisy or Fleabane
- Erigeron elatior* (A. Gray) Greene: HDH54, WAW87. 2, 4.  
 Northern Daisy; Bitter Fleabane
- Erigeron elongatus* Ledebour: WAW87. 6, 9b.  
 Forest Daisy or Fleabane
- E. acre* L. var. *asteroides* (Andrzejowski) De Candolle, alternately spelled *E. acris*: HDH54
- Erigeron eximius* Greene: WAW87. 2, 4.  
 Trailing Daisy or Fleabane
- E. superbus* Greene ex Rydberg: HDH54
- Erigeron flagellaris* A. Gray: WAW87. 5. (field obs.)  
 Viscid Daisy or Fleabane
- E. flagellaris* A. Gray var. *typica* Cronquist: HDH54  
 Smooth Daisy or Fleabane
- Erigeron formosissimus* Greene var. *viscidus* (Rydberg) Cronquist: HDH54, WAW87 (no infraspecific treatment). 6.  
 Large-flowered Daisy or Fleabane
- Erigeron glabellus* Nuttall: WAW87. 6.  
 Blackheaded Daisy or Fleabane
- E. glabellus* Nuttall subsp. *pubescens* (Hooker) Cronquist: HDH54.  
 Subsumed under *E. simplex* Greene: HDH54
- Erigeron grandiflorus* Hooker: WAW87. 3.  
 Blackheaded Daisy or Fleabane
- Erigeron melanocephalus* A. Nelson: HDH54, WAW87. 2, 3, 6.

*Erigeron peregrinus* (Banks ex Pursh) Greene subsp. *callianthemus* (Greene) Cronquist: HDH54, WAW87. 6. Peregrine Daisy or Fleabane  
*Erigeron pinnatisectus* (A. Gray) A. Nelson: HDH54, WAW87. 3. Pinnate Daisy or Fleabane  
*Erigeron simplex* Greene: HDH54, WAW87. 3. One-flower or Alpine Daisy; One-stemmed Fleabane  
*Erigeron speciosus* (Lindley) De Candolle var. *speciosus*: HDH54, WAW87. 1,2,4-7. Aspen, Oregon or Showy Daisy or Fleabane  
*Erigeron subtrinervis* Rydberg: HDH54, WAW87. 1,2,4-7. Threenerve Daisy or Fleabane  
*Gnaphalium uliginosum* L.: HDH54. 8a. Low or Marsh Cudweed or Gnaphalium  
*Filaginella uliginosa* (L.) Opiz: WAW87  
*Helianthella quinquenervis* (Hooker) A. Gray: HDH54, WAW87. 4,5. Fivenerve or Nodding Helianthella  
*Heterotheca pumila* (Greene) Sempile. 5. (COLO) Golden Aster  
Subsumed under *Chrysopsis villosa* (Pursh) Nuttall ex De Candolle: HDH54  
Subsumed under *Heterotheca villosa* (Pursh) Shimmers: WAW87  
*Heterotheca villosa* (Pursh) Shimmers var. *villosa*: WAW87. 5. Hairy Golden Aster  
*Chrysopsis villosa* (Pursh) Nuttall ex De Candolle: HDH54 Prickly or Wild Lettuce  
Lactuca L., species not determined: HDH54, WAW87. 1a,5. (field obs.) Ox-eye Daisy  
*Leucanthemum vulgare* Lamarck: WAW87. 5,8a. Adventive.  
*Chrysanthemum leucanthemum* L. var. *pinnatifidum* Lecoq & Lamotte: HDH54 Showy Alpine or Claspng Groundsel  
*Ligularia amplexens* (A. Gray) W.A. Weber: WAW87. 2,6. Bigelow's Groundsel  
*Senecio amplexens* A. Gray var. *amplexens*: HDH54  
*Ligularia bigelovii* (A. Gray) W.A. Weber var. *hallii* (A. Gray) W.A. Weber: WAW87 (no infraspecific treatment). 4. Purple-leaf or Singlehead Groundsel  
≠ *Senecio bigelovii* A. Gray in Torrey var. *bigelovii*: HDH54. See comment in Weber and Wittmann. Cluster Tarweed  
*S. bigelovii* A. Gray in Torrey var. *hallii* A. Gray: HDH54 Scentless Mayweed; Wild-chamomile  
*Ligularia soldanella* (A. Gray) W.A. Weber: WAW87. 9c. Endemic. Parry's Goldenweed  
*Senecio soldanella* A. Gray: HDH54  
*Madia glomerata* Hooker: HDH54, WAW87. 4,8,a. Adventive. Woolly Groundsel  
*Matricaria perforata* Merat: WAW87. 8ab. Adventive.  
*M. inodora* L.: HDH54  
*Oreochrysum parryi* (A. Gray) Rydberg: WAW87. 1,2,4. Different or Variflower Groundsel  
*Haplopappus parryi* A. Gray: HDH54  
*Solidago parryi* Greene  
*Packera cana* (Hooker) Weber & Löve: WAW87. 2,3. Saffron Groundsel  
*Senecio canus* Hooker: HDH54  
*S. canus* Hooker var. *purshianus* Nuttall  
*S. purshianus* Nuttall: HDH54  
*Packera crocata* (Rydberg) Weber & Löve: WAW87. 7ab.  
*Senecio crocatus* Rydberg: HDH54  
*Packera dimorphophylla* (Greene) Weber & Löve subsp. *dimorphophylla*: WAW87. 4,6.  
*Senecio dimorphophyllus* Greene: HDH54

- Packera streptanthifolia** (Greene) Weber & Löve:WAW87. 1. Rocky Mtn. Butterweed; Cleft-leaved or Fewleaf Groundsel  
*Senecio cymbalarioides* Nuttall:HDH54
- Packera wernerifolia** (A. Gray) Weber & Löve:WAW87. 9bc. Alpine or Rock Butterweed or Groundsel  
*Senecio saxosus* Klatt:HDH54
- S. wernerifolius** (A. Gray) A. Gray var. *wernerifolius*:HDH54 Sticky Cudweed; Gnaphalium
- Pseudognaphalium stramineum** (Humboldt, Bonpland & Kunth) W.A. Weber. 8ab. Adventive.  
*Gnaphalium macounii* Greene:HDH54
- G. viscosum** Humbolt, Bonpland & Kunth:WAW87 Beaked or Tapertip Hawksbeard
- Psilochenia acuminata** (Nuttall) W.A. Weber:WAW87. 1. (field obs.) Old-man-of-the-mountain; Alpine Sunflower  
*Crepis acuminata* Nuttall subsp. *acuminata*:HDH54
- Rydbergia grandiflora** (Torrey & Gray) Greene:WAW87. 3. Black Groundsel or Ragwort  
*Hymenoxys grandiflora* (Torrey & Gray) Parker:HDH54 Thickleaf Groundsel or Ragwort
- Senecio atratus** Greene:HDH54, WAW87. 9ab. Desert Groundsel; Dryland Ragwort
- Senecio crassulus** A. Gray:HDH54, WAW87. 1,2,6.
- Senecio eremophilus** Richardson subsp. *kingii* (Rydberg) Douglas & Ruyle-Douglas:WAW87. 8,9,ab. Fremont's Groundsel  
*S. ambrosioides* Rydberg:HDH54
- Senecio fremontii** Torrey & Gray subsp. *blitoides* (Greene) W.A. Weber:WAW87. 2,9,b. Western Groundsel; Lamb's Tongue  
*S. carthamoides* Greene:HDH54 Tall Butterweed or Groundsel; Toothed Ragwort
- Senecio integerrimus** Nuttall:HDH54, WAW87. 7,9,b. (COLO) Arrowleaf Groundsel or Ragwort  
**Senecio serra** Hooker var. *admirabilis* (Greene) A. Nelson:WAW87. 7ab. Wooton's Groundsel  
 ≠ Not distinguished from *S. serra* Hooker var. *serra*:HDH54
- Senecio triangularis** Hooker:HDH54, WAW87. 7ab. Hoary or Silver Sagebrush; Wormwood  
**Senecio wootonii** Greene:HDH54, WAW87. 2. Mountain Big Sagebrush; Wormwood
- Seriphidium canum** (Pursh) W.A. Weber:WAW87. 5. *Artemisia cana* Pursh:HDH54
- Seriphidium vaseyanum** (Rydberg) W.A. Weber:WAW87. 5. *Artemisia tridentata* Nuttall subsp. *tridentata*:HDH54  
 Subsumed under *Artemisia tridentata* Nuttall subsp. *tridentata*:HDH54
- Artemisia tridentata** Nuttall subsp. *vaseyana* (Rydberg) Beetle  
*A. vaseyana* Rydberg
- Solidago missouriensis** Nuttall:HDH54, WAW87. 5. Missouri or Smooth Goldenrod  
**Solidago multiradiata** Aiton var. *scopulorum* A. Gray. 6,9. Mountain or Northern Goldenrod  
*S. ciliosa* Greene:HDH54
- S. multiradiata** Aiton subsp. *scopulorum* (A. Gray) W.A. Weber:WAW87
- Solidago spathulata** De Candolle var. *neomexicana* (A. Gray) Cronquist:WAW87. 1,2. Dune Goldenrod  
*S. decumbens* Greene var. *oreophila* (Rydberg) Fernald:HDH54

**Sonchus uliginosus** Bieberstein: WAW87. 8. Adventive. Marsh or Swamp Sow-thistle  
*S. arvensis* L. subsp. *glabrescens* Guenther  
*S. arvensis* L. var. *glabrescens* (Guenther) Grabowski & Wimmer: HDH54  
**Taraxacum officinale** G.H. Weber ex Wiggers: HDH54, WAW87. 1, 7, 8, a. Adventive. Common Dandelion  
**Tonestus pygmaeus** (Torrey & Gray) A. Nelson: WAW87. 9c. Dwarf Goldenweed  
*Haplopappus pygmaeus* (Torrey & Gray) A. Gray: HDH54  
**Tragopogon dubius** Scopoli subsp. **major** (Jacquin) Vollmann: HDH54, WAW87. 1, 8, a. Adventive. Yellow Goatsbeard; Oyster-plant; Salsify  
**Virgulastrer ascendens** (Lindley ex Hooker) Semple, alternately spelled *V. ascendens*. 8, 9, ab. Longleaf Aster  
*Aster ascendens* Lindley in Hooker, alternately spelled *A. ascendens*: HDH54, WAW87

**BERBERIDACEAE--BARBERRY FAMILY (BER)**

**Mahonia repens** (Lindley) G. Don: WAW87. 1, 2. Hollygrape; Creeping Mahonia; Oregon-grape  
*Berberis repens* Lindley: HDH54

**BETULACEAE--BIRCH FAMILY (BET)**  
 (under Corylaceae in some manuals)

**Alnus incana** (L.) Moench subsp. **tenuifolia** (Nuttall) Breitung: WAW87. 7ab. Mountain or Thinleaf Alder  
*A. tenuifolia* Nuttall: HDH54  
**Betula glandulosa** Michaux: HDH54, WAW87. 7ab. Bog or Scrub Birch

**BORAGINACEAE--BORAGE FAMILY (BOR)**

**Eritrichum aretioides** (Chamisso) De Candolle, alternately spelled *Eritrichium*: WAW87. 9bc. Alpine Forget-me-not  
*E. elongatum* (Rydberg) W.F. Wight var. *argenteum* (W.F. Wight) Johnston: HDH54  
*E. nanum* (Villars) Schrader ex Gaudin var. *elongatum* (Rydberg) Cronquist  
**Hackelia floribunda** (Lehmann) I.M. Johnston: HDH54, WAW87. 1, 5, 6, 8, ab. Many-flowered Stickweed  
**Mertensia ciliata** (James ex Torrey) G. Don: HDH54, WAW87. 7abc. Broadleaf, Ciliate or Mountain Bluebells  
**Mertensia lanceolata** (Pursh) A. De Candolle var. **viridis** A. Nelson: WAW87 (no infraspecific treatment). 2, 3. Green- or Lanceleaf Bluebells  
*M. viridis* (A. Nelson) A. Nelson var. *cana* (Rydberg) L. Williams: HDH54  
*M. viridis* (A. Nelson) A. Nelson var. *viridis*: HDH54

**BRASSICACEAE/CRUCIFERAE--MUSTARD FAMILY (BRA)**

**Arabis hirsuta** (L.) Scopoli var. **pyncocarpa** (Hopkins) Rollins: HDH54, WAW87 (no infraspecific treatment). 6, 8, ab. Common Hairy Arabis or Rock Cress  
**Barbarea vulgaris** R. Brown: WAW87. 8ab. Adventive. Bitter Winter Cress  
 No treatment; escaped detection by author: HDH54

*Boechera drummondii* (A. Gray) Löve & Löve: WAW87. 1,2,6.  
*Arabis drummondii* A. Gray: HDH54  
*Boechera retrofracta* (R. Graham) Löve & Löve: WAW87. 1,2,6.  
*Arabis holboellii* Hornemann var. *pinetorum* (Tidestrom) Rollins: HDH54  
*A. holboellii* Hornemann var. *retrofracta* (R. Graham) Rydberg: HDH54  
*Cardamine cordifolia* A. Gray: HDH54, WAW87. 4,7abc.  
*Descurainia incana* (Bernhardi ex Fischer & Meyer) Dorn. 1,4,a.  
*D. richardsonii* (Sweet) O.E. Schulz, no infraspecific treatment: WAW87. See comment in Weber and Wittmann.  
*D. richardsonii* (Sweet) O.E. Schulz subsp. *incisa* (Engelmann) Detling: HDH54  
*Descurainia pinnata* (Walter) Britton subsp. *nelsonii* (Rydberg) Detling: HDH54  
*D. pinnata* (Walter) Britton subsp. *nelsonii* (Rydberg) Detling: HDH54  
*Draba albertina* Greene: WAW87. 1,2,7,ab.  
*D. stenoloba* Ledebour var. *nana* (O.E. Schulz) C.L. Hitchcock: HDH54  
*Draba crassifolia* R. Graham: HDH54, WAW87. 9abc.  
*Draba fladnizensis* Wulfen: HDH54, WAW87. 9c.  
*Draba nemorosa* L.: HDH54, WAW87. 8ab. Adventive.  
*Draba streptocarpa* A. Gray: HDH54 (as the species), WAW87. 1,2,6.  
*Lepidium ramosissimum* A. Nelson: HDH54, WAW87. 8.  
*Lesquerella montana* (A. Gray) S. Watson: HDH54. 2.  
No treatment; escaped detection by author: WAW87. See comment in Weber under *L. rectipes* Wooten & Standley.  
*Nocca montana* (L.) F.K. Meyer: WAW87. 2.  
≠ *Thlaspi alpestre* L.: HDH54. See comment in Weber and Wittmann.  
*T. montanum* L.  
*Smelowskia calycina* (Stephan ex Willdenow) C.A. Meyer: HDH54, WAW87. 9c.  
*Turritis glabra* L.: WAW87. 8. Adventive.  
*Arabis glabra* (L.) Bernhardi: HDH54

**CALOCHORTACEAE--MARIPOSA FAMILY (CCT)**  
(traditionally under Liliaceae)

*Calochortus gunnisonii* S. Watson: HDH54, WAW87. 5.

**CAMPANULACEAE--BELLFLOWER FAMILY (CAM)**

*Campanula parryi* A. Gray: HDH54, WAW87. 5.  
*Campanula rotundifolia* L.: HDH54, WAW87. 4,5.

Drummond's False-arabis or Rock Cress  
Rose False-arabis or Rock Cress  
Heartleaf Bitter Cress; Brook-cress  
Richardson's Flixweed or Tansymustard  
Pinnate Flixweed or Tansymustard  
Hairy Draba or Whitlow-wort  
Hairy Draba or Whitlow-wort  
Arctic Draba or Whitlow-wort  
Wood's Draba or Whitlow-wort  
Draba or Whitlow-wort  
Branched Peppergrass  
Low Bladderpod  
Wild Candytuft; Mtn. Pennygrass  
Alpine or Siberian Smelowskia  
Tower Mustard  
Gunnison's Mariposa or Segolily  
Parry's Bellflower or Harebell  
Common or Mountain Bellflower or Harebell

CAPRIFOLIACEAE--HONEYSUCKLE FAMILY (CPR)

- Distegia involucrata* (Banks ex Sprengel) Cockerell:WAW87. 7ab. Bearberry or Bush Honeysuckle; Black Twinberry  
*Lonicera involucrata* Banks ex Sprengel:HDH54  
*Linnaea borealis* L. subsp. *americana* (Forbes) Hultén ex Clausen:WAW87(no infraspecific treatment). 1,2,4. American Twinflower  
*L. borealis* L. var. *americana* (Forbes) Rehder:HDH54  
*Sambucus microbotryis* Rydberg. 7ab. Bunch- or Red-berried Elder; Mountain Red Elderberry  
*S. melanocarpa* A. Gray  
 ≠*S. pubens* Michaux:HDH54. See comment in Weber and Wittmann.  
*S. racemosa* L. subsp. *pubens* (Michaux) House var. *microbotryis* (Rydberg) Kearney & Peebles:WAW87  
 ≠*S. racemosa* L. subsp. *racemosa*. See comment in Weber and Wittmann under above subspecies.

CARYOPHYLLACEAE--PINK FAMILY (CRY)

(see also ASN)

- Anotites menziesii* (Hooker) Greene:WAW87. 1,4. Menzie's Campion or Catchfly  
*Silene menziesii* Hooker:HDH54  
*Gastrolychnis drummondii* (Hooker) Löve & Löve:WAW87. 1,2,4. Alpine or Drummond's Campion or Catchfly  
*Lychnis drummondii* (Hooker) S. Watson:HDH54  
*Melandrium drummondii* (Hooker) Porsild  
*Silene drummondii* Hooker  
*Melandrium dioicum* (L.) Cosson & Germain:WAW87. 6. Adventive. Evening or White Campion or Catchfly  
*Lychnis alba* P. Miller:HDH54  
*Silene latifolia* Poiret subsp. *alba* (P. Miller) Greuter & Burdet  
*Silene acaulis* (L.) L. subsp. *subcaulescens* (F.N. Williams) Hitchcock & Maguire:HDH54. 3. Moss Campion or Catchfly; Moss Pink  
 Subspecies misspelled as *acaulescens*:WAW87  
*Silene vulgaris* (Moench) Garcke:WAW87. 8a. Adventive. (field obs.) Campion; Catchfly  
*S. cucubalus* Wibel:HDH54

CELASTRACEAE--STAFF TREE FAMILY (CEL)

- Paxistima myrsinites* (Pursh) Rafinesque, alternately spelled *Pachystima*:HDH54,WAW87. 1,2. Boxleaf; Mountain-lover; Myrtle Pachystima

CHENOPODIACEAE--GOOSEFOOT FAMILY (CHN)

- Chenopodium capitatum* (L.) Ascherson:HDH54,WAW87. 8a. Adventive. Blite Goosefoot; Strawberry-blite  
*Chenopodium foliosum* (Moench) Ascherson:WAW87. 8a. Adventive. Red Goosefoot  
*C. overi* Aellen:HDH54

**CONVALLARIACEAE--MAYFLOWER FAMILY (CVL)**  
(traditionally under Liliaceae)

**Maianthemum stellatum** (L.) Link:WAW87. 4,6,7ab.  
*Smilacina stellata* (L.) Desfontaines:HDH54

False Solomon's Seal; Star Solomon-plume

**COPTACEAE--MEADOWRUE FAMILY (COP)**  
(traditionally under Ranunculaceae)

**Thalictrum sparsiflorum** Turczaninov ex Fischer & Ave-Lallemand:WAW87. 4. (COLO)  
*T. sparsiflorum* Turczaninov ex Fischer & Ave-Lallemand var. *saximontanum* Boiven:HDH54

Few-flowered Meadowrue

**CRASSULACEAE--STONECROP FAMILY (CRS)**

**Amerosedum lanceolatum** (Torrey) Löve & Löve:WAW87. 3,4,9.

*Sedum lanceolatum* Torrey

≠ *S. stenopetalum* (Pursh) Löve & Löve:HDH54. See comment in Weber and Wittmann.

**Clementsia rhodantha** (A. Gray) Rose:WAW87. 7bc.

*Sedum rhodanthum* A. Gray:HDH54

**Rhodiola integrifolia** Rafinesque:WAW87. 7bc.

*Sedum integrifolium* (Rafinesque) A. Nelson:HDH54

Lanceleaf, Wormleaf, or Yellow Stonecrop

Queen's or Rose Crown; Stonecrop

King's Crown; Rose Root; Rosy Stonecrop

**CYPERACEAE--SEDGE FAMILY (CYP)**

**Carex albo-nigra** Mackenzie in Rydberg, alternately spelled *C. albonigra*:HDH54,WAW87. 3.

**Carex aquatilis** Wahlenberg subsp. *aquatilis*:HDH54,WAW87. 7.

**Carex arapahoensis** Clokey:HDH54,WAW87. 9bc.

**Carex bebbii** (L. H. Bailey) Fernald:HDH54,WAW87. 7ab.

**Carex brevipes** F. Boott:WAW87. 1,2. See comment in Weber and Wittmann.

Subsumed under *C. rossii* F. Boott in Hooker:HDH54

**Carex capitata** L. subsp. *arctogena* (H. Smith) Böcher:WAW87. 7bc. (COLO)

≠ As the species:HDH54

*C. arctogena* H. Smith

**Carex chalciolepis** Holm:HDH54,WAW87. 1-3.

*C. heteroneura* W. Boott var. *chalciolepis* (Holm) F.J. Hermann

**Carex crandallii** Gandoger:WAW87. 3.

≠ *C. pyrenaica* Wahlenberg:HDH54. See comment in Weber and Wittmann.

**Carex disperma** Dewey:HDH54,WAW87. 7ab.

Blackhead Sedge

Water Sedge

Arapaho Sedge

Bebb's Sedge

Sedge

Capitate Sedge

Sedge

Pyrenaen Sedge

Softleaved Sedge

*Carex ebenea* Rydberg: HDH54, WAW87. 6. Ebony Sedge  
*Carex festivella* Mackenzie: HDH54, WAW87. 6. Ovalhead Sedge  
*Carex foenea* Willdenow: WAW87. 1,2,9ab. Silvertop Sedge  
*C. siccata* Dewey: HDH54  
*Carex geyeri* F. Boott: HDH54, WAW87. 1,2,4. Elk or Geyer's Sedge  
*Carex haydeniana* Olney: HDH54, WAW87. 3. Cloud or Hayden's Sedge  
*Carex hoodii* F. Boott in Hooker: HDH54, WAW87. 6. (COLO) Hood's Sedge  
*Carex microptera* Mackenzie: WAW87. 4,6,7a. Smallwing Sedge  
Subsumed under *C. festivella* Mackenzie: HDH54  
*Carex norvegica* Retzius subsp. *stevenii* (Holm) D. Murray: WAW87. 4,6,7. Scandanavian Sedge  
*C. media* R. Brown var. *stevenii* (Holm) Fernald: HDH54. See comment in Harrington.  
*Carex nova* A. Nelson: HDH54, WAW87. 7. New Sedge  
*Carex pachystachya* Chamisso ex Steudel: HDH54, WAW87. 1,2,6. Chamisso's or Thick-headed Sedge  
*Carex phaeocephala* Piper: HDH54, WAW87. 3. Dunhead Sedge  
*Carex rossii* F. Boott in Hooker: HDH54, WAW87. 1,2,4. Ross' Sedge  
*Carex rupestris* Allioni subsp. *drummondiana* (Dewey) Holub: WAW87. 9. Curly Sedge  
*C. drummondiana* Dewey: HDH54  
*Carex scopulorum* Holm: HDH54, WAW87. 7b. (COLO) Cliff or Rocky Mtn. Sedge  
*Carex utriculata* F. Boott: WAW87. 7ab. Beaked Sedge  
≠ *C. rostrata* J. Stokes: HDH54. See comment in Weber and Wittmann.  
*Carex vesicaria* L.: HDH54, WAW87. 7ab. Adventive. Blister or Inflated Sedge  
*Kobresia myosuroides* (Villars) Fiori & Paoli: WAW87. 3. Bellard's Kobresia  
*K. bellardii* (Allioni) Degland var. *bellardii*: HDH54

**CYPRIPEDIAACEAE--LADY'S SLIPPER FAMILY (CPD)**  
(traditionally under Orchidaceae)

*Cypripedium fasciculatum* Kellogg ex S. Watson: HDH54, WAW87. 2. Brownie or Purple Lady's Slipper

**ELAEAGNACEAE--OLEASTER FAMILY (ELE)**

*Shepherdia canadensis* (L.) Nuttall: HDH54, WAW87. 1. Canada or Russet Buffaloberry

**ERICACEAE--HEATH FAMILY (ERI)**  
(see also MNT, PYR)

*Arctostaphylos adenotricha* (Fernald & Macbride) Löve et al.: WAW87. 1,2,6,ab. Bearberry; Kinnikinnick  
*A. uva-ursi* (L.) Sprengel var. *adenotricha* Fernald & Macbride: HDH54

*Gaultheria humifusa* (R. Graham) Rydberg:HDH54, WAW87. 2.  
*Kalmia microphylla* (Hooker) Heller:WAW87. 7b.

*K. polifolia* Wangerin var. *microphylla* (Hooker) Rehder:HDH54

*Vaccinium cespitosum* Michaux, alternately spelled *V. caespitosum*:HDH54, WAW87. 2.

*Vaccinium myrtillosum* L. subsp. *oreophilum* (Rydberg) Löve et al.:WAW87. 1-3.

≠ As the species:HDH54. See comment in Weber and Wittmann.

*Vaccinium scoparium* Leiberger ex Coville:HDH54, WAW87. 1-3.

Alpine, Creeping, or Western Wintergreen  
Alpine, Bog, Rocky Mtn., or Swamp Kalmia or Laurel

Dwarf Bil-, Blue-, Huckle-, or Whortleberry  
Rocky Mtn. Bil-, Blue-, Huckle-, or Whortleberry

Broom or Grouse Bil-, Blue-, Huckle-, or Whortleberry

#### FABACEAE/LEGUMINOSAE--LEGUME or PEA FAMILY (FAB)

*Astragalus alpinus* L.:HDH54, WAW87. 1,6.

*Astragalus miser* Douglas in Hooker var. *oblongifolius* (Rydberg) Cronquist:WAW87. 1,2,6.

*A. decumbens* (Nuttall ex Torrey & Gray) A. Gray var. *oblongifolius* (Rydberg) Cronquist:HDH54

*Lathyrus leucanthus* Rydberg:HDH54, WAW87. 4.

*Lupinus argenteus* Pursh:HDH54. 1,5,6.

*L. argenteus* Pursh subsp. *rubricaulis* (Greene) Hess & Dunn:WAW87

*L. caudatus* Kellogg:WAW87. 1,5,6.

*L. caudatus* Kellogg subsp. *argophyllus* (A. Gray) Phillips

*L. greenii* A. Nelson:HDH54

*Melilotus albus* Medicus, alternately spelled *M. alba*:HDH54, WAW87. 8a. Adventive. (field obs.)

*Melilotus officinale* (L.) Pallas, alternately spelled *M. officinalis*:HDH54, WAW87. 8a. Adventive. (field obs.)

*Oxytropis campestris* (L.) De Candolle var. *gracilis* (A. Nelson) Barneby. 5.

≠ *O. campestris* (L.) De Candolle var. *glabrata* Hooker:HDH54. See comment in Weber and Wittmann.

*O. gracilis* (A. Nelson) Schumann:WAW87

*Thermopsis divaricarpa* A. Nelson:HDH54, WAW87. 7ab.

*Trifolium dasyphyllum* Torrey & Gray:HDH54, WAW87. 2,3.

*Trifolium hybridum* L.:HDH54, WAW87. 1,4,6,8,a. Adventive.

*Trifolium nanum* Torrey:HDH54, WAW87. 3.

*Trifolium parryi* A. Gray:HDH54, WAW87. 6b,7c.

*Trifolium repens* L.:HDH54, WAW87. 1,8,a. Adventive.

*Trifolium rusbyi* Greene subsp. *reflexum* (A. Nelson) Heller & Zohary. 4a. (COLO)

≠ *T. longipes* Nuttall ex Torrey & Gray subsp. *longipes*:HDH54, WAW87. See comment in Weber and Wittmann.

*T. longipes* Nuttall ex Torrey & Gray var. *reflexum* A. Nelson

*Vicia americana* Mühlenberg ex Willdenow var. *americana*:HDH54, WAW87. 4.

Alpine Milkvetch  
Decumbent or Weedy Milkvetch

Aspen Peavine  
Silvery Lupine

Spurred or Tailcup Lupine

White Sweet-clover  
Yellow Sweet-clover

Field or Slender Crazyweed; Stemless-locoweed

Spreading Golden Banner; Golden Pea; Thermopsis  
Alpine or Whiproot Clover

Alsike Clover  
Dwarf Clover

Parry's Clover  
White Dutch Clover

Rusby's Clover

American Vetch

FUMARIACEAE--FUMITORY FAMILY (FUM)

*Corydalis aurea* Willdenow subsp. *aurea*:WAW87. 8b. Golden Corydalis; Golden Smoke  
*C. aurea* Willdenow var. *aurea*:HDH54

GENTIANACEAE--GENTIAN FAMILY (GEN)

*Frasera speciosa* Douglas ex Grisebach:WAW87. 5. (field obs.) Giant Frasera; Green Gentian; Monument Plant  
*Swertia radiata* (Kellogg) Kuntze:HDH54  
*Gentianella acuta* (Michaux) Hiitonen:WAW87. 7ab. Annual, Little, or Northern Gentian  
*Gentiana acuta* Michaux var. *nana* Engelm  
*G. amarilla* L. subsp. *acuta* (Michaux) Murray  
 ≠ *G. amarilla* L. subsp. *amarilla*. See comment in Weber and Wittmann under *Gentianella amarilla*.  
*G. plebia* Chamisso ex Bunge:HDH54  
*Gentianella amarilla* (L.) Börner subsp. *acuta* (Michaux) J.M. Gillett  
 ≠ *G. amarilla* (L.) Börner subsp. *amarilla*. See comment in Weber and Wittmann.  
*Gentianella strictiflora* (Rydberg) W.A. Weber. 7ab. Gentian  
*Gentiana acuta* Michaux var. *strictiflora* Rydberg  
 ≠ *G. amarilla* L. subsp. *amarilla*. See comment in Weber and Wittmann under *Gentianella amarilla*.  
*G. amarilla* L. var. *stricta* (Grisebach in Hooker) S. Watson  
*G. strictiflora* (Rydberg) A. Nelson:HDH54  
 Subsumed under *Gentianella acuta* (Michaux) Hiitonen:WAW87  
 ≠ *Gentianella amarilla* (L.) Börner subsp. *amarilla*. See comment in Weber and Wittmann.  
*Gentianodes algida* (Pallas) Löve & Löve:WAW87. 3. (field obs.) Alpine, Arctic or Whitish Gentian  
*Gentiana romanzovii* Ledebour:HDH54 Bearded or Fringed Gentian  
*Gentianopsis barbellata* (Engelmann) Iltis:WAW87. 7b. Bottle or Parry's Gentian  
*Gentiana barbellata* Engelmann:HDH54  
*Gentianella barbellata* (Engelmann) J.M. Gillett  
*Pneumonanthe parryi* (Engelmann) Greene:WAW87. 2,4,5. Star Gentian; Bog Swertia  
*Gentiana parryi* Engelmann:HDH54  
*Swertia perennis* L.:HDH54,WAW87. 7ab. *S. palustris* A. Nelson

GERANIACEAE--GERANIUM FAMILY (GER)

*Geranium richardsonii* Fischer & Trautvetter:HDH54,WAW87. 1,2,4,6. Richardson's or Whiteflower Geranium

**GROSSULARIACEAE--CURRANT or GOOSEBERRY FAMILY (GRS)**

(traditionally under Saxifragaceae)

**Ribes coloradense** Coville:HDH54, WAW87. 1,2.

**Ribes inerme** Rydberg:HDH54, WAW87. 1.

**Ribes lacustre** (Persoon) Poiret:HDH54, WAW87. 7ab.

**Ribes montigenum** McClatchie:HDH54, WAW87. 2b. (COLO)

Colorado Currant or Gooseberry

White-stem Currant or Gooseberry

Prickly or Swamp Black Currant or Gooseberry

Mountain Currant or Gooseberry

**HELLEBORACEAE--HELLEBORE FAMILY (HEL)**

(traditionally under Ranunculaceae)

**Aconitum columbianum** Nuttall ex Torrey & Gray var. **columbianum**:HDH54, WAW87. 4,7.

*A. columbianum* Nuttall ex Torrey & Gray var. *columbianum* forma *ochroleucum* (A. Nelson) St. John:WAW87

*A. lutescens* A. Nelson:HDH54

**Actaea rubra** (Aiton) Willdenow subsp. **arguta** (Nuttall in Torrey & Gray) Hultén:WAW87. 4.

*A. arguta* Nuttall ex Torrey & Gray:HDH54

**Aquilegia coerulea** James ex Torrey, alternately spelled *A. caerulea*:HDH54(as the species), WAW87. 2,3,4.

**Delphinium barbeyi** (Huth) Huth:HDH54, WAW87. 7b.

**Delphinium nuttalianum** Pritzl ex Walpers:WAW87. 6.

*D. nelsonii* Greene:HDH54

**Delphinium occidentale** (S. Watson) S. Watson subsp. **occidentale**:HDH54, WAW87. 5.

**Psychrophila leptosepala** (De Candolle) W.A. Weber:WAW87. 7.

*Caltha leptosepala* De Candolle:HDH54

**Trollius albiflorus** (A. Gray) Rydberg:WAW87. 7ab.

*T. laxus* Salisbury var. *albiflorus* A. Gray:HDH54

Monkshood

Red Baneberry

Colorado Columbine

Barbey's Delphinium or Larkspur

Nuttall's or Pine Delphinium or Larkspur

Western Delphinium or Larkspur

Elkslip or White Marsh-marigold

American Globe-flower

**HYDROPHYLLACEAE--WATERLEAF FAMILY (HYD)**

**Hydrophyllum fendleri** (A. Gray) Heller:HDH54, WAW87. 1,2,7ab.

**Phacelia sericea** (R. Graham) A. Gray subsp. **sericea**:HDH54, WAW87. 1,2,9ab.

Fendler's Waterleaf

Purple Fringe; Silky Phacelia

**IRIDACEAE--IRIS FAMILY (IRD)**

**Sisyrinchium montanum** Greene:HDH54, WAW87. 7b.

Montana Blue-eyed-grass

**JUNCACEAE--RUSH FAMILY (JUN)**

- Juncus confusus* Coville:HDH54, WAW87. 7.  
*Juncus drummondii* E. Meyer in Ledeb:HDH54, WAW87. 7.  
*Juncus hallii* Englemann:HDH54, WAW87. 6a. (COLO)  
*Juncus mertensianus* Bongard:HDH54, WAW87. 7.  
*Juncus saximontanus* A. Nelson:HDH54, WAW87. 7.  
*Luzula comosa* E. Meyer:WAW87. 4a, 7ab.  
    ≠ *L. multiflora* (Retzius) Lejeune:HDH54. See comment in Weber and Wittmann.  
*Luzula parviflora* (Ehrhart) Desvauz:HDH54, WAW87. 7.  
*Luzula spicata* (L.) De Candolle:HDH54, WAW87. 7bc.  
*Luzula subcapitata* (Rydberg) Harrington:HDH54, WAW87. 7bc. Endemic. (COLO)

- Colorado Rush  
Drummond's Rush  
Hall's Rush  
Blackheaded or Merten's Rush  
Rocky Mtn. Rush  
Field Wood-rush  
Millet or Small-flowered Wood-rush  
Spike Wood-rush  
Wood-rush

**LAMIACEAE/LABIATAE--MINT FAMILY (LAM)**

- Dracocephalum parviflorum* Nuttall:WAW87. 4.  
*Moldavica parviflora* (Nuttall) Britton:HDH54

- American Dragon Head

**LILIACEAE--LILY FAMILY (LIL)**  
(see also ALL, CCT, CVL, MLN, UVU)

- Lloydia serotina* (L.) Salisbury ex Reichenbach:HDH54, WAW87. 3.

- Common Alp-lily

**LINACEAE--FLAX FAMILY (LIN)**

- Adenolinum lewisii* (Pursh) Löve & Löve:WAW87. 5.  
*Linum lewisii* Pursh:HDH54

- Lewis' or Wild Blue Flax

**MALVACEAE--MALLOW FAMILY (MLV)**

- Sidalcea candida* A. Gray:HDH54, WAW87. 4, 7, ab.

- White Checker-mallow

**MELANTHIA CEAE--FALSE HELEBORE FAMILY (MLN)**  
(traditionally under Liliaceae)

- Anticlea elegans* (Pursh) Rydberg:WAW87. 4, 7, ab.  
*Zigadenus elegans* Pursh, alternately spelled *Zygadenus*:HDH54

- Mountain Death Camas

*Veratrum tenuipetalum* Heller:WAW87. 7a. (field obs.)

≠ *V. californicum* E.M. Durand:HDH54. See comment in Weber and Wittmann.

≠ *V. speciosum* Rydberg. See comment in Weber and Wittmann under above name.

Corn Husk Lily; False Hellebore

## MONOTROPA CEAE--PINESAP FAMILY (MNT)

(traditionally under Ericaceae)

*Pterospora andromedea* Nuttall:HDH54,WAW87. 1,2.

Woodland Pinedrops

## ONAGRACEAE--EVENING-PRIMROSE FAMILY (ONA)

*Chamerion danielsii* D. Löve:WAW87. 1-3,7,8. See comment in Weber and Wittmann.

Blooming-Sally; Fireweed

*Chamaenerion angustifolium* (L.) Scopoli subsp. *circumvagnum* (Mosquin) Moldenke

*C. angustifolium* (L.) Scopoli var. *platyphyllum* Daniels

*Epilobium angustifolium* auct., non (L.) Scopoli var. *angustifolium*

*E. angustifolium* (L.) Scopoli var. *canescens* Wood

*E. angustifolium* (L.) Scopoli subsp. *circumvagnum* Mosquin

*E. angustifolium* (L.) Scopoli var. *platyphyllum* (Daniels) Fernald:HDH54

*Chamerion subdentatum* (Rydberg) Löve & Löve:WAW87. 7b. See comment in Weber and Wittmann.

*Epilobium latifolium* auct., non L.:HDH54

*Epilobium anagalidifolium* Lamarek:WAW87. 7b.

≠ *E. alpinum* L.:HDH54. See comment in Weber and Wittmann.

*Epilobium brachycarpum* K. Presl:WAW87. 6,8,ab.

*E. paniculatum* Nuttall ex Torrey & Gray:HDH54

*Epilobium ciliatum* Rafinesque subsp. *glandulosum* (Lehmann) Hoch & Raven:WAW87. 6,8,ab.

≠ *E. adenocaulon* Haussknecht var. *adenocaulon*:HDH54

*E. adenocaulon* Haussknecht var. *occidentale* Trelease:HDH54

≠ *E. ciliatum* Rafinesque subsp. *ciliatum*

*Epilobium clavatum* Trelease:HDH54,WAW87. 6,8,ab.

*Epilobium halleanum* Haussknecht:HDH54,WAW87. 4,6,8,ab.

*Epilobium hornemannii* Reichenbach:HDH54,WAW87. 6-8,ab.

*Epilobium lactiflorum* Haussknecht:HDH54,WAW87. 6,8,ab.

*Epilobium saximontanum* Haussknecht:HDH54,WAW87. 7ab.

*Gayophytum diffusum* Torrey & Gray subsp. *parviflorum* Lewis & Szweykowski:WAW87. 8ab.

*G. lasiospermum* Greene:HDH54

Spreading Gayophytum or Ground Smoke

**ORCHIDACEAE--ORCHID FAMILY (ORC)**

(see also CPD)

- Calypto bulbosa (L.) Oakes:HDH54,WAW87. 1.  
 Corallorhiza maculata Rafinesque:HDH54,WAW87. 1,2.  
 Corallorhiza trifida (L.) Chatelain:HDH54,WAW87. 2.  
 Goodyera oblongifolia Rafinesque:HDH54,WAW87. 2. (field obs.)  
 Linnororchis dilatata (Pursh) Rydberg subsp. albiflora (Chamisso) Löve & Simon:WAW87. 7ab.  
*Habenaria dilatata* (Pursh) Hooker var. *albiflora* (Chamisso) Correll:HDH54. See comment in Harrington.  
 Linnororchis hyperborea (L.) Rydberg. 7ab. See comment in Weber and Wittmann.  
*Habenaria hyperborea* (L.) R. Brown:HDH54  
 ≠ *Linnororchis saccata* (Greene) Löve & Simon:WAW87  
 Linnororchis stricta (Lindley) Rydberg. 7ab. (field obs.)  
*Habenaria saccata* Greene:HDH54  
*Linnororchis saccata* (Greene) Löve & Simon:WAW87  
 Listera cordata (L.) R. Brown subsp. nephrophylla (Rydberg) Löve & Löve:WAW87. 7ab.  
 ≠ As the species:HDH54  
 Lysiella obtusata (Banks ex Pursh) Britton & Rydberg:WAW87. 7ab.  
*Habenaria obtusata* (Banks ex Pursh) Richardson:HDH54  
 Spiranthes romanzoffiana Chamisso:HDH54,WAW87. 7ab.

Calypto; Fairy Slipper  
 Spotted Coralroot  
 Early Coralroot  
 Western Rattlesnake-plantain  
 White Bog-orchid or Habenaria

Bog-orchid; Habenaria

Northern Green Bog-orchid or Habenaria

Heartleaf Listera; Twayblade

Small Northern or One-leaf Bog-orchid or Habenaria

Continental Lady's Tresses; Pearl Twist

**PARNASSIACEAE--GRASS-OF-PARNASSUS FAMILY (PAR)**

(traditionally under Saxifragaceae)

- Parnassia fimbriata König:HDH54,WAW87. 7b.  
 Parnassia parviflora De Candolle:HDH54,WAW87. 7b. (COLO)

Fringed Grass-of-Parnassus; Rocky Mtn. Parnassia  
 Small-flowered Grass-of-Parnassus or Parnassia

**PLANTAGINACEAE--PLANTAIN FAMILY (PTG)**

- Plantago major L.:HDH54,WAW87. 8a. Adventive. (field obs.)

Common Plantain or Rippleseed

**POACEAE/GRAMINEAE--GRASS FAMILY (POA)**

- Agrostis exarata Trinius:HDH54,WAW87. 7,8,ab. Adventive. (field obs.)  
 Agrostis gigantea Roth:WAW87. 2. Adventive.  
*A. alba* L.:HDH54  
 Agrostis idahoensis Nash:HDH54,WAW87. 2,7a. (COLO)  
 Agrostis scabra Willdenow:HDH54(as the species),WAW87. 1,4,5.

Spike Bentgrass  
 Redtop

Idaho Bentgrass  
 Rough Bentgrass; Ticklegrass

- Agrostis thurberiana A.S. Hitchcock:HDH54,WAW87. 2b.  
 Alopecurus aequalis Sobolewski:HDH54,WAW87. 7a.  
 Alopecurus pratensis L.:WAW87. 8a. Adventive.  
     No treatment; escaped detection by author:HDH54  
 Anisantha tectorum (L.) Nevski:WAW87. 8a. Adventive.  
     *Bromus tectorum* L., intermediate between vars. *glabratus* Spenner and *tectorum*:HDH54  
 Bromelica bulbosa (Geyer ex Porter & Coulter) W.A. Weber:WAW87. 4a. (COLO)  
     *Melica bulbosa* Geyer ex Porter & Coulter:HDH54  
 Bromopsis canadensis (Michaux) Holub subsp. canadensis:WAW87. 1,4.  
     *Bromus ciliatus* L. var. *ciliatus*:HDH54  
 Bromopsis inermis (Leysser) Holub:WAW87. 5,7,8,ab. Adventive.  
     *Bromus inermis* Leysser:HDH54  
 Bromopsis lanatipes (Shear) Holub:WAW87. 8ab.  
     *Bromus anomalus* Ruprecht ex Fournier var. *lanatipes* (Shear) A.S. Hitchcock:HDH54  
 Calamagrostis canadensis (Michaux) P. Beauvois:HDH54,WAW87. 1,2,4,7ab.  
     *C. scribneri* Beal  
 Calamagrostis purpurascens R. Brown in Richardson:HDH54,WAW87. 1,2,4.  
 Calamagrostis stricta (Timm) Koeler:WAW87. 7ab.  
     *C. inexpansa* A. Gray:HDH54  
 Ceratochloa carinata (Hooker & Arnott) Tutin:WAW87. 4a. Adventive.  
     *Bromus carinatus* Hooker & Arnott  
     *B. marginatus* Nees in Steudel:HDH54  
 Cinna latifolia (Treviranus) Grisebach in Ledebour:HDH54,WAW87. 7b.  
 Criteston brachyantherum (Nevski) Barkworth & Dewey. 1,2,4,8,ab. Adventive.  
     *C. jubatum* (L.) Nevski subsp. *breviaristatum* (Bowden) Löve:WAW87  
     *Hordeum brachyantherum* Nevski:HDH54  
 Criteston jubatum (L.) Nevski:WAW87. 1,2,5,7,8,ab.  
     *Hordeum jubatum* L. var. *caespitosum* (Scribner) A.S. Hitchcock:HDH54  
     *H. jubatum* L. var. *jubatum*:HDH54  
 Dactylis glomerata L.:HDH54,WAW87. 8ab. Adventive.  
 Danthonia intermedia Vasey:HDH54,WAW87. 4-6.  
 Deschampsia cespitosa (L.) P. Beauvois subsp. *cespitosa*:WAW87. 1-4,6,7abc.  
     *D. cespitosa* (L.) P. Beauvois subsp. *genuina* (Reichenbach) Lawrence:HDH54  
 Elymus canadensis L.:HDH54,WAW87. 2. (COLO)  
 Elymus elymoides (Rafinesque) Swezey:WAW87. 1,2,5.  
     *Sitanion hystrix* (Nuttall) J.G. Smith:HDH54  
     *S. hystrix* (Nuttall) J.G. Smith var. *brevifolium* (J.G. Smith) C.L. Hitchcock  
 Elymus glaucus Buckley:HDH54,WAW87. 1,2,4,7ab.

Thurber's Bentgrass  
 Short-awn Foxtail  
 Meadow Foxtail

Cheatgrass Brome; Cheatgrass; Chess

Melicgrass; Oniongrass

Fringed Brome or Bromegrass

Smooth Brome or Bromegrass

Brome; Bromegrass

Bluejoint Pine- or Reedgrass

Purple Pine- or Reedgrass  
 Northern Pine- or Reedgrass

Rescuegrass

Drooping Wood-reed  
 Little Barley

Foxtail Barley

Orchard Grass  
 Timber Danthonia or Oatgrass  
 Salt-and-pepper Grass; Tufted Hairgrass

Canada Wildrye  
 Bottlebrush Squirreltail

Blue Wild Rye

- Elymus scribneri (Vasey) Jones:WAW87. 3.  
*Agropyron scribneri* Vasey:HDH54
- Elymus trachycaulus (Link) Gould ex Shinners subsp. andinus (Scribner & Smith) Löve & Löve:WAW87. 3.  
*Agropyron subsecundum* (Link) A.S. Hitchcock var. *andinum* (Scribner & Smith) A.S. Hitchcock:HDH54
- Elymus trachycaulus (Link) Gould ex Shinners subsp. trachycaulus:WAW87. 1-8.  
*Agropyron trachycaulum* (Link) Malte:HDH54
- Festuca brachyphylla Schultes subsp. coloradensis Fredriksen:WAW87. 2,3.  
*F. ovina* L. var. *brachyphylla* (Schultes) Piper:HDH54
- Festuca idahoensis Elmer:HDH54,WAW87. 5.  
*F. ovina* L. var. *brevifolia* (R. Brown) S. Watson
- Festuca multiniflora Rydberg:WAW87. 2,3. Possibly endemic. (COLO)  
 ≠*F. ovina* L. var. *ovina*:HDH54. See comment in Weber and Wittmann.
- Festuca pratensis Hudson:WAW87. 4. Adventive.  
*F. elatior* L. var. *elatior*:HDH54
- Festuca rubra L.:HDH54(as the species),WAW87. 1.  
 Festuca saximontana Rydberg:WAW87. 1,6,a. (COLO)  
 ≠*F. ovina* L. var. *ovina*:HDH54. See comment in Weber and Wittmann.
- Festuca thurberi Vasey in Rothrock:HDH54,WAW87. 5.  
 Glyceria elata (Nash ex Rydberg) Jones:HDH54,WAW87. 7ab.  
 Glyceria striata (Lamarck) A.S. Hitchcock var. *stricta* (Scribner) Fernald:HDH54,WAW87. 7ab.  
 Helictotrichon mortonianum (Scribner) Henard:HDH54,WAW87. 3.  
 Koeleria macrantha (Ledebour) Schultes:WAW87. 1,4-6.  
*K. cristata* (L.) Persoon:HDH54
- Leucopoa kingii (S. Watson) W.A. Weber:WAW87. 1.  
*Hesperochloa kingii* (S. Watson) Rydberg:HDH54
- Lolium perenne L. subsp. *italicum* (A. Braun) Syme. 8ab. Adventive.  
*L. multiflorum* Lamarck
- ≠*L. perenne* subsp. *perenne*:HDH54,WAW87. Weber and Wittmann maintain that subsp. *perenne* is restricted to Europe.
- Muhlenbergia montana (Nuttall) A.S. Hitchcock:HDH54,WAW87. 5.  
 Muhlenbergia richardsonis (Trinius) Rydberg:HDH54,WAW87. 5.  
 Oryzopsis asperifolia Michaux:HDH54,WAW87. 4a.  
 Oryzopsis pungens (Torrey ex Sprengel) A.S. Hitchcock:HDH54,WAW87. 1,4a.  
 Phleum commutatum Gaudin:WAW87. 7,8,a.  
 ≠*P. alpinum* L.:HDH54
- Phleum pratense L.:HDH54,WAW87. 5,7,8,a. Adventive.  
 Poa agassizensis Boivin & D. Löve:WAW87. 5.  
 Subsumed under *P. pratensis* L.:HDH54
- Poa alpina L.:HDH54,WAW87. 3,9b.
- Scribner's Wheatgrass
- Bearded Wheatgrass
- Slender Wheatgrass
- Alpine Fescue
- Idaho Fescue
- Small Fescue
- Meadow Fescue
- Red Fescue
- Fescue
- Thurber's Fescue
- Tall Mannagrass
- Fowl Mannagrass
- Alpine Oat
- Junegrass; Prairie Junegrass
- Spike-fescue
- Italian or Perennial Ryegrass
- Mountain Muhly
- Mat, Richardson's or Short-leaved Muhly
- Roughleaf Ricegrass
- Short or Short-horn Ricegrass
- Alpine Timothy
- Common Timothy
- Bluegrass
- Alpine Bluegrass

- Poa annua* L.: HDH54, WAW87. 8a. Adventive.  
*Poa arctica* R. Brown: HDH54, WAW87. 8bc. (COLO)  
*Poa compressa* L.: HDH54, WAW87. 4. Considered adventive, but see comment in Weber and Wittmann.  
*Poa cusickii* Vasey subsp. *epilis* (Scribner) W.A. Weber: WAW87. 3. (COLO)  
*P. epilis* Scribner: HDH54  
*Poa fendleriana* (Steudel) Vasey: HDH54, WAW87. 1,2.  
*Poa glauca* M. Vahl subsp. *rupicola* (Nash) W.A. Weber: WAW87. 2,3.  
*P. rupicola* Nash: HDH54  
*Poa glaucifolia* Scribner & Williams: HDH54. 2. (COLO)  
No treatment (by accidental omission): WAW87  
*Poa juncifolia* Scribner: HDH54, WAW87. 6,7,ab.  
*P. ampla* Merrill: HDH54  
*Poa leptocoma* Trinibus: HDH54, WAW87. 7ab.  
*Poa nemoralis* L. subsp. *interior* (Rydberg) W.A. Weber: WAW87. 4,5,9,ab.  
*P. interior* Rydberg: HDH54  
*Poa nervosa* (Hooker) Vasey: HDH54, WAW87. 1,2,6ab.  
*Poa palustris* L.: HDH54, WAW87. 4a,6a,7ab.  
*Poa pratensis* L.: HDH54, WAW87. 1,2,4-8,ab. Adventive.  
*Poa reflexa* Vasey & Scribner: HDH54, WAW87. 6a,7ab.  
*Poa secunda* J. Presl in K. Presl: HDH54, WAW87. 1,2.  
*P. sandbergii* Vasey. See also Weber and Wittmann for expanded synonym listing.  
*Secale cereale* L.: HDH54, WAW87. 8a. Adventive.  
*Stipa lettermanii* Vasey: HDH54, WAW87. 5.  
*Stipa nelsonii* Scribner: WAW87. 6a. (COLO)  
*S. columbiana* Macoun var. *nelsonii* (Scribner) A.S. Hitchcock: HDH54  
*Thinopyrum intermedium* (Host) Barkworth & Dewey subsp. *intermedium*. 8a. Adventive.  
*Agropyron intermedium* (Host) P. Beauvois: HDH54  
*Elytrigia intermedia* (Host) Nevski subsp. *intermedia*: WAW87  
*Thinopyrum ponticum* (Podpera) Barkworth & Dewey. 8a. Adventive.  
*Agropyron elongatum* (Host) P. Beauvois: HDH54  
*Lophopyrum elongatum* (Host) Löve: WAW87  
*Trisetum spicatum* (L.) Richter subsp. *congdonii* (Scribner & Merrill) Hultén: WAW87. 1-3,7.  
≠ As the species: HDH54. See comment in Weber and Wittmann.  
*Trisetum spicatum* (L.) Richter subsp. *molle* (Michaux) Hultén. 1-3,7.  
*T. spicatum* (L.) Richter subsp. *majus* (Vasey) Hultén: WAW87  
≠ As the species: HDH54. See comment in Weber and Wittmann.  
*Trisetum wolfii* Vasey in Rothrock: HDH54, WAW87. 7ab.

Annual Bluegrass  
Arctic or Gray's Bluegrass  
Canada Bluegrass  
Skyline Bluegrass

Mutton Bluegrass; Muttongrass  
Greenland or Timberline Bluegrass

Big or Pale-leaf Bluegrass

Alkali Bluegrass

Bog Bluegrass  
Inland or Woods Bluegrass

Wheeler's Bluegrass  
Fowl or Swamp Bluegrass  
Kentucky Bluegrass  
Nodding Bluegrass  
Nevada or Sandberg's Bluegrass

Rye  
Letterman's Needlegrass  
Columbia or Nelson's Needlegrass

Intermediate Wheatgrass

Tall Wheatgrass

Downy Oatgrass; Spike Trisetum

Rocky Mtn. or Spike Trisetum

Beardless or Wolf's Trisetum

POLEMONIACEAE--PHLOX FAMILY (PLM)

- Collomia linearis* Nuttall:HDH54, WAW87. 2,6. Slender-leaf Collomia  
*Phlox multiflora* A. Nelson:HDH54, WAW87. 5,6,a. Flowery or Many-flowered Phlox  
*Polemonium caeruleum* L. subsp. *amygdalinum* (Wherry) Munz:WAW87. 2,7b. Greek-valerian; Jacob's Ladder; Polemonium; Sky Pilot  
*P. occidentale* Greene:HDH54  
*Polemonium pulcherrimum* Hooker subsp. *delicatum* (Rydberg) Brand:WAW87. 1,2. Showy or Skunkleaf Jacob's Ladder, Polemonium or Sky pilot  
*P. delicatum* Rydberg:HDH54  
*Polemonium viscosum* Nuttall:HDH54, WAW87. 3. Sticky Jacob's Ladder, Polemonium or Sky Pilot

POLYGONACEAE--BUCKWHEAT or KNOTWEED FAMILY (PLG)

- Bistorta bistortoides* (Pursh) Small:WAW87. 6. Alpine or American Bistort  
*Polygonum bistortoides* Pursh var. *bistortoides*:HDH54  
*P. bistortoides* Pursh, intermediate between vars. *bistortoides* and *linearifolium* (S. Watson) Small:HDH54  
*Bistorta vivipara* (L.) S. Gray:WAW87. 3,6b. Small or Viviparous Bistort  
*Polygonum viviparum* L.:HDH54  
*Eriogonum subalpinum* Greene:HDH54, WAW87. 5. Subalpine or Sulphur Buckwheat  
*E. umbellatum* Torrey var. *majus* Hooker  
*Oxyria digyna* (L.) J. Hill:HDH54, WAW87. 3. Alpine Sorrel; Alpine Mountain Sorrel  
*Polygonum arenastrum* Boreau:WAW87. 8ab. Adventive. Devil's Shoestrings; Box Knotweed  
*≠P. aviculare* L. var. *aviculare*:HDH54. See comment in Weber and Wittmann. Douglas' or Sawatch Knotweed  
*Polygonum douglasii* Greene:HDH54, WAW87. 2,6a,8b. Narrow-leaved or Willow Dock; Mountain Sorrel  
*Rumex triangulivalvis* (Danser) Rechinger *f.*:HDH54. 8a. *≠R. mexicanus* Meisner  
 Specific epithet misspelled as *quadrangulivalvis*:WAW87

PORTULACACEAE--PURSLANE FAMILY (POR)

- Oreobroma pygmaea* (A. Gray) T.J. Howell:WAW87. 3. Pygmy or Least Bitterroot or Lewisia  
*Lewisia pygmaea* (A. Gray) B.L. Robinson var. *pygmaea*:HDH54

PRIMULACEAE--PRIMROSE FAMILY (PRM)

- Androsace septentrionalis* L.:WAW87. 1,2,6-8,ab. Northern Androsace or Rock-jasmine  
*A. septentrionalis* L. var. *puberulenta* (Rydberg) Knuth:HDH54  
*Primula parryi* A. Gray:HDH54, WAW87. 7ab. Parry's Primrose

**PYROLACEAE--WINTERGREEN FAMILY (PYR)**

(traditionally under Ericaceae)

- Chimaphila umbellata** (L.) W. Barton subsp. **occidentalis** (Rydberg) Hultén: WAW87. 1,2. Western Pipsissewa; Prince's Pine
- C. umbellata** (L.) W. Barton var. **occidentalis** (Rydberg) Blake: HDH54
- Moneses uniflora** (L.) A. Gray: HDH54, WAW87. 1,2,7ab. One-flowered Wintergreen; Wood-nymph
- Orthilia secunda** (L.) House: WAW87. 1,2. Sidebells Pyrola; One-sided Wintergreen
- Pyrola secunda** L.: HDH54
- Ramischia secunda** (L.) Garcke
- Pyrola chlorantha** Swartz: HDH54, WAW87. 1,2,7ab. Shinleaf; Pyrola; Green or White Wintergreen
- P. virens** Schweigger
- Pyrola minor** L.: HDH54, WAW87. 1,2,7ab. Snowline Pyrola; Lesser Wintergreen
- Pyrola rotundifolia** L. subsp. **asarifolia** (Michaux) Löve: WAW87. 1,2,7ab. Alpine Pyrola; Pink, Round-leaved or Swamp Wintergreen
- P. asarifolia** Michaux var. **asarifolia**: HDH54
- P. asarifolia** Michaux var. **purpurea** (Bunge) Fernald: HDH54
- P. uliginosa** Torrey

**RANUNCULACEAE--BUTTERCUP or CROW'S FOOT FAMILY (RAN)**

(see also COP, HEL)

- Anemone multifida** Poiret var. **globosa** (Nuttall) Torrey & Gray: WAW87. 2. (COLO) Cliff or Pacific Anemone; Hudsonian Windflower
- A. globosa** Nuttall: HDH54
- Batrachium trichophyllum** (Chaix) van den Bosch: WAW87. 7b. (COLO) Hairy Water Crowfoot
- Ranunculus aquatilis** L. var. **capillaceus** (Thuillier) De Candolle: HDH54
- Pulsatilla patens** (L.) P. Miller subsp. **multifida** (Pritzell) Zamels. 1. American or Western Pasque Flower
- Anemone patens** L.
- Pulsatilla ludoviciana** (Nuttall) Heller: HDH54
- P. patens** (L.) P. Miller subsp. **hirsutissima** (Pursh) Zamels: WAW87
- Ranunculus adoneus** A. Gray: HDH54, WAW87. 3. Alpine or Snow Buttercup
- Ranunculus alismifolius** Geyer ex Benth var. **montanus** S. Watson: HDH54, WAW87. 2b. (COLO) Plantain-leaf or Water-plantain Buttercup
- Ranunculus eschscholtzii** Schlechtendal: WAW87. 7b. Subalpine Buttercup
- R. eschscholtzii** Schlechtendal var. **typicus** L. Benson: HDH54
- Ranunculus inamoenus** Greene: WAW87. 2b,4a,7b. Unlovely Buttercup
- R. inamoenus** Greene var. **alpeophilus** (A. Nelson) L. Benson: HDH54
- Ranunculus pedatifidus** J.E. Smith: HDH54, WAW87. 7b. (COLO) Birdfoot or Northern Buttercup

ROSACEAE--ROSE FAMILY (ROS)

- Acomastylis rossii* (R. Brown) Greene subsp. *turbinata* (Rydberg) W.A. Weber:WAW87. 3. Alpine or Golden Avens  
*Geum rossii* (R. Brown) Seringe var. *turbinatum* (Rydberg) C.L. Hitchcock  
*G. turbinatum* Rydberg:HDH54 Saskatoon Serviceberry  
 Old-man's Whiskers; Prairie Smoke
- Amelanchier alnifolia* Nuttall:HDH54,WAW87. 1,4,5. (field obs.)  
*Erythrocoma triflora* (Pursh) Greene:WAW87. 5-7,a.  
*Geum ciliatum* Pursh:HDH54  
*G. triflorum* Pursh
- Fragaria vesca* L. subsp. *bracteata* (Heller) Staudt:WAW87. 1,2,4,7ab. (field obs.)  
*F. americana* (T.C. Porter) Britton:HDH54
- Fragaria virginiana* P. Miller subsp. *glauca* (S. Watson) Staudt:WAW87. 1,2,4. Blue Elf, Virginia or Wild Strawberry  
*F. glauca* (S. Watson) Rydberg  
*F. ovalis* (Lehmann) Rydberg:HDH54
- Geum macrophyllum* Willdenow var. *perincisum* Raup:HDH54. 7ab. Largeleaved or Yellow Avens  
*G. macrophyllum* Willdenow subsp. *perincisum* (Rydberg) Hultén:WAW87
- Geum rivale* L.:HDH54,WAW87. 7ab.  
*Padus virginiana* (L.) P. Miller subsp. *melanocarpa* (A. Nelson) W.A. Weber:WAW87. 7ab. (field obs.)  
*Prunus melanocarpa* (A. Nelson) Rydberg  
*P. virginiana* L. var. *melanocarpa* (A. Nelson) Sargent:HDH54
- Pentaphylloides floribunda* (Pursh) Löve:WAW87. 5. Bushy or Shrubby Cinquefoil  
*Dasiphora fruticosa* (L.) Rydberg  
*Potentilla fruticosa* L.:HDH54
- Potentilla concinna* Richardson var. *concinna*:HDH54,WAW87. 1,2. Early or Elegant Cinquefoil  
*Potentilla diversifolia* Lehmann:HDH54,WAW87. 1-3. Diverse-leaved or Varileaf Cinquefoil  
*Potentilla hippiana* Lehmann:HDH54,WAW87. 1,2,6a. (field obs.) Horse, Silver-leaved or Woolly Cinquefoil  
*Potentilla pulcherrima* Lehmann:HDH54,WAW87. 1,2,6a. Beautiful or Soft Cinquefoil  
*P. gracilis* Douglas var. *pulcherrima* (Lehmann) Fernald  
*Potentilla subjuga* Rydberg:HDH54,WAW87. 3. Subpinnate Cinquefoil  
*Rosa sayi* Schweinitz:WAW87. 1,2,4-7ab. Bourgeau's Prickly Rose  
 ≠ *R. acicularis* Lindley:HDH54
- R. acicularis* Lindley subsp. *sayi* (Schweinitz) W.H. Lewis  
 ≠ *R. nukana* K. Presl:HDH54. See comment in Weber and Wittmann.  
*Rosa woodsii* Lindley:HDH54,WAW87. 1,2,4-7ab.  
 ≠ *R. nukana* K. Presl:HDH54. See comment in Weber and Wittmann.  
*Rubus idaeus* L. subsp. *melanolasius* (Dieck) Focke:WAW87. 1,2,7b. Pearnip, Wild or Wood's Rose  
*R. strigosus* Michaux:HDH54 Red Raspberry

*Sibbaldia procumbens* L.:HDH54, WAW87. 2,3. (field obs.)  
*Sorbus scopulina* Greene:HDH54, WAW87. 7ab. (field obs.)

Creeping Sibbaldia  
Cascade or Greene's Mountain-ash

#### RUBIACEAE--MADDER FAMILY (RUB)

*Galium aparine* L.:HDH54, WAW87. 2,7ab. Adventive. (field obs.)

*Galium septentrionale* Roemer & Schultes:WAW87. 4,6,7ab.

≠ *G. boreale* L.:HDH54. See comment in Weber and Wittmann.

*Galium trifidum* L. subsp. *subbiflorum* (Wiegand) Puff. 7ab.

*G. brandegei* A. Gray:HDH54

*G. trifidum* L. subsp. *brevipes* (Fernald & Weigand) Löve & Löve:WAW87

*Galium triflorum* Michaux:HDH54, WAW87. 2,7.

Catchweed Bedstraw  
Northern Bedstraw

Small Bedstraw or Cleavers

Fragrant Bedstraw; Sweet-scented Cleavers

#### SALICACEAE--WILLOW FAMILY (SAL)

*Populus angustifolia* James:HDH54, WAW87. 7ab.

*Populus tremuloides* Michaux:HDH54, WAW87. 1,2,4.

*Salix arctica* Pallas subsp. *petraea* (Andersson) Löve *et al.*:WAW87(no infraspecific treatment). 3.

*S. anglorum* Chamisso var. *antiplasta* C.K. Schneider:HDH54

*Salix bebbiana* Sargent:HDH54, WAW87. 7ab. (field obs.)

*Salix boothii* Dorn:WAW87. 7ab.

≠ *S. pseudocordata* (Andersson) Rydberg:HDH54. See comment in Weber and Wittmann.

*Salix brachycarpa* Nuttall:HDH54(as the species), WAW87. 7.

*S. bractycarpa* Nuttall var. *anitimima* Raup:HDH54

*Salix drummondiana* Barratt:WAW87. 7ab.

*S. drummondiana* Barratt var. *subcoerulea* Piper

*S. subcoerulea* Piper:HDH54

*Salix geyeriana* Andersson:HDH54(as the species), WAW87. 5-7,ab.

*Salix monticola* Bebb in Coulter:HDH54, WAW87. 7ab.

*Salix planifolia* Pursh:WAW87. 1,2.

*S. planifolia* Pursh var. *monica* (Bebb) C.K. Schneider:HDH54

*Salix reticulata* L. subsp. *nivalis* (Hooker) Löve *et al.*:WAW87. 3. (COLO)

*S. nivalis* Hooker var. *nivalis*:HDH54

*Salix scouleriana* Barratt *ex* Hooker:HDH54, WAW87. 1,2.

*Salix wolfii* Bebb:HDH54(as the species), WAW87. 7.

*S. wolfii* Bebb var. *idahoensis* Ball:HDH54

Narrowleaf Cottonwood or Poplar  
Quaking Aspen  
Arctic Willow

Beaked or Bebb's Willow  
Booth's Willow

Barrenground or Short-fruited Willow

Blue or Drummond's Willow

Geyer's or Silver Willow

Mountain or Serviceberry Willow  
Planeleaf or Tea-leaved Willow

Snow Willow

Scouler's Willow  
Wolf's Willow

SAXIFRAGACEAE--SAXIFRAGE FAMILY (SAX)

(see also GRS, PAR)

- Heuchera L., species not determined: HDH54, WAW87. 3. (field obs.)  
 Ciliaria austromontana (Wiegand) W.A. Weber: WAW87. 2.  
     *Saxifraga austromontana* Weigand  
*S. bronchialis* L. subsp. *austromontana* (Wiegand) Piper, under  $\neq$  *S. bronchialis* L. subsp. *bronchialis*: HDH54  
 Micranthes odontoloma (Piper) Heller: WAW87. 7.  
 $\neq$  *Saxifraga arguta* D. Don: HDH54. See comment in Weber and Wittmann under *Micranthes arguta*.  
*S. odontoloma* Piper  
 Micranthes oregana (T.J. Howell) Small: WAW87. 7.  
     *Saxifraga montanensis* Small: HDH54  
*S. oregana* (T.J. Howell) Small var. *montanensis* (Small) C.L. Hitchcock  
 $\neq$  *S. subapetala* E. Nelson  
 Micranthes rhomboidea (Greene) Small: WAW87. 1-3, 7.  
     *Saxifraga rhomboidea* Greene: HDH54  
 Mitella pentandra Hooker: HDH54, WAW87. 1, 2.  
 Mitella stauropetala Piper var. *stenopetala* (Piper) Rosendahl: WAW87. 1, 2.  
 $\neq$  As the species: HDH54. See comment in Weber and Wittmann.  
*M. stenopetala* Piper: HDH54  
 Saxifraga hyperborea R. Brown subsp. *debilis* (Engelmann ex A. Gray) Löve et al.: WAW87. 2, 3. (COLO)  
*S. debilis* Engelmann ex A. Gray: HDH54

Alumroot; Heuchera  
 Spotted or Yellowdot Saxifrage

Brook Saxifrage

Bog or Oregon Saxifrage

Diamond-leaf or Snowball Saxifrage

Alpine or Five-stamen Miterwort

Side-petaled or Smallflower Miterwort

Pygmy or Weak Saxifrage

SCROPHULARIACEAE--FIGWORT FAMILY (SCR)

- Castilleja occidentalis Torrey: HDH54, WAW87. 3.  
 Castilleja rhexifolia Rydberg: HDH54, WAW87. 2, 4, 7.  
 Castilleja sulphurea Rydberg: WAW87. 2, 4, 7a.  
 $\neq$  *C. septentrionalis* Lindley: HDH54. See comment in Weber and Wittmann.  
 Chionophila jamesii Benth in De Candolle: HDH54, WAW87. 3.  
 Linaria vulgaris P. Miller: HDH54, WAW87. 8a. Adventive.  
 Mimulus guttatus De Candolle: HDH54, WAW87. 7.  
     *M. langsdorffii* Donn ex Greene  
 Orthocarpus luteus Nuttall: HDH54, WAW87. 5.  
 Pedicularis bracteosa Benth in Hooker subsp. *paysoniana* (Pennell) W.A. Weber: WAW87. 2.  
     *P. paysoniana* Pennell: HDH54  
 Pedicularis groenlandica Retzius: HDH54, WAW87. 7.  
 Pedicularis parryi A. Gray subsp. *parryi*: HDH54, WAW87. 2, 3.

Western Yellow Paintbrush or Painted Cup  
 Splitleaf Paintbrush or Painted Cup  
 Sulphur Paintbrush or Painted Cup

James' Snowlover  
 Butter-and-eggs; Toadflax  
 Common or Yellow Monkeyflower

Yellow Owl-clover  
 Bracted Lousewort or Pedicularis

Elephantella; Elephant-head Pedicularis  
 Parry's Lousewort

**Pedicularis racemosa** Douglas ex Hooker subsp. *alba* Pennell:WAW87. 2,7b.  
 ≠ As the species:HDH54

**Penstemon rydbergii** A. Nelson:WAW87. 7ab.

**Penstemon whippleanus** A. Gray:HDH54,WAW87. 2.

**P. glaucus** R. Graham var. *stenosepalus* A. Gray

**Verbascum thapsus** L.:HDH54,WAW87. 8ab. Adventive.

**Veronica americana** Schweinitz ex Bentham:HDH54,WAW87. 7b.

**Veronica nutans** Bongard:WAW87. 4,6,b.  
 ≠ *V. wormskioldii* Roemer & Schultes, alternately spelled *wormskjoldii*:HDH54. See comment in Weber and Wittmann.

Parrot's Beak or Sickletop Lousewort; Sickletop

Rydberg's Beardtongue or Penstemon

Dark or Whipple's Beardtongue or Penstemon

Common, Flannel or Great Mullein  
 American Brooklime or Speedwell  
 American Alpine Speedwell

**UVULARIACEAE--BELLWORT FAMILY (UVU)**  
 (traditionally under Liliaceae)

**Streptopus fassettii** Löve & Löve:WAW87. 7ab.  
 ≠ *S. amplexifolius* (L.) De Candolle var. *americanus* Roemer & Schultes:HDH54  
*S. amplexifolius* (L.) De Candolle var. *chalcatus* Fassett:HDH54

Cucumber Root; Clasp-leaf Twisted-stalk

**VALERIANACEAE--VALERIAN FAMILY (VAL)**

**Valeriana capitata** Pallas ex Link subsp. *acutiloba* (Rydberg) F.G. Meyer:HDH54,WAW87. 7b.  
**Valeriana edulis** Nuttall:HDH54,WAW87. 5.

Downy-fruit or Sharpleaf Valerian  
 Tobacco Root; Edible Valerian

**VIOLACEAE--VIOLET FAMILY (VIO)**

**Viola adunca** J.E. Smith:HDH54(as the species),WAW87. 6,7.  
**Viola labradorica** Schrank:WAW87. 2b,3.  
*V. adunca* J.E. Smith var. *bellidifolia* (Greene) Harrington:HDH54  
*V. bellidifolia* Greene

**Viola macloskeyi** Lloyd subsp. *pallens* (Banks ex De Candolle) M.S. Baker. 7b. (COLO)  
 ≠ *V. epipsitoides* Löve & Löve:WAW87. See comment in Weber and Wittmann.  
*V. macloskeyi* Lloyd var. *pallens* (Banks ex De Candolle) C.L. Hitchcock  
*V. pallens* (Banks ex De Candolle) Brainard  
*V. palustris* L. subsp. *brevipes* M.S. Baker:HDH54  
 ≠ *V. palustris* L. subsp. *palustris*. See comment in Weber and Wittmann.

**Viola renifolia** A. Gray var. *brainerdii* (Greene) Fernald:HDH54,WAW87(no infraspecific treatment). 6,7,b.

Early Blue, Hook or Subalpine Violet  
 Mountain Blue or Labrador Violet

Pallid or Small White Violet

Kidney-leaved Violet

**Viola rydbergii** Greene. 6,7,ab.

- ≠ *V. canadensis* L., no infraspecific treatment: WAW87. See comment in Weber and Wittmann.
- ≠ *V. canadensis* L. var. *rugulosa* (Greene) C.L. Hitchcock
- V. canadensis* L. var. *rydbergii* (Greene) House
- ≠ *V. rugulosa* Greene: HDH54, WAW87. See comment in Weber and Wittmann.

**Viola scopulorum** (A. Gray) Greene. 6,7,ab.

- ≠ *V. canadensis* L., no infraspecific treatment: WAW87. See comment in Weber and Wittmann.
- ≠ *V. canadensis* L. var. *canadensis*: HDH54. See comment in Weber and Wittmann.
- V. canadensis* L. var. *scopulorum* A. Gray: HDH54

Rydberg's Violet

Canada Violet

**VISCACEAE--MISTLETOE FAMILY (VIS)**

(traditionally under Loranthaceae)

**Arceuthobium americanum** Nuttall ex Engelman: HDH54, WAW87. 1,2, parasitic on *Pinus contorta*.

Lodgepole Pine Dwarf-mistletoe

## LICHEN CHECKLIST

Although now recognized as important ecosystem components, organisms such as lichens, mosses, fungi, and algae have been, until recently, largely ignored in research and management of natural resources. Several Forest studies have mentioned lichens in passing, but no serious research or inventories have been conducted.

The list of lichens presented below is intended as a starting point in the documentation of lichens and nonvascular plant occurrences. All specimens except *Usnea cavernosa* were collected by W.A. Weber and Eilif Dahl on 1 August 1953. Specimens are housed at the University of Colorado Herbarium in Boulder. Some mosses, also deposited at the same herbarium, have been collected but are not included in this report.

The list is arranged alphabetically by genus and species. If a taxon has been treated under more than one genus, the different genera are listed in brackets. Nomenclature and synonymy follow Weber and Wittmann (1992).

**Bellemeria alpina** (Sommerfelt) Clauzade & Roux [*Aspicilia*, *Lecanora*]  
**Bryonora castanea** (Hepp) Poelt [*Biatora*, *Lecanora*]  
**Bryoria chalybeiformis** (L.) Brodo & Hawksworth [*Alectoria*]  
**Caloplaca sinapisperma** (Lamarck & De Candolle) Maheu & Gillet [*Blastenia*, *Caloplaca*, *Placodium*]  
**Cetraria ericetorum** Opiz var. **reticulata** (Räsänen) Kärnefelt  
**Cetraria islandica** (L.) Acharius  
**Cladonia bacilliformis** (Nylander) Glück  
**Cladonia botrytes** (Hagen) Willdenow  
**Cladonia cariosa** (Acharius) Sprengel  
**Cladonia cenotea** (Acharius) Schaerer  
**Cladonia cervicornis** (Acharius) Flotow subsp. **verticillata** (Hoffmann) Ahti  
**Cladonia chlorophaea** (Floerke ex Sommerfelt) Sprengel  
**Cladonia coccifera** (L.) Willdenow  
**Cladonia coniocraea** (Floerke) Sprengel  
**Cladonia decorticata** (Floerke) Sprengel  
**Cladonia deformis** (L.) Hoffmann  
**Cladonia ecmocyna** Leighton  
**Cladonia gracilis** (L.) Willdenow  
**Cladonia macrophyllodes** Nylander  
**Cladonia pleurota** (Floerke) Schaerer  
**Cladonia pyxidata** (L.) Hoffmann  
**Collema furfuraceum** (Arnold) DuRietz  
**Dactylina madreporiformis** (Acharius) Tuckerman [*Cetraria*, *Dufourea*]  
**Hypogymnia austerodes** (Nylander) Räsänen [*Parmelia*]  
**Lecidea atrobrunnea** (Rameau ex Lamarck & De Candolle) Schaerer  
**Lecidea berengeriana** (Massalongo) Th. Fries  
**Leptogium saturninum** (Dickson) Nylander  
**Parmeliopsis ambigua** (Wulfen in Jacquin) Nylander [*Foraminella*]  
**Parmeliopsis hyperopta** (Acharius) Arnold [*Foraminella*]  
**Peltigera aphthosa** (L.) Willdenow [*Peltophora*]  
**Peltigera canina** (L.) Willdenow  
**Peltigera erumpens** (Taylor in Hooker) Vainio  
**Peltigera malacea** (Acharius) Funck  
**Peltigera rufescens** (Weiss) Humboldt  
**Peltigera venosa** (L.) Hoffmann [*Peltophora*]  
**Phaeophyscia scaistra** (Acharius) Moberg [*Physcia*]  
**Physcia caesia** (Hoffmann) Fürnrohr  
**Physconia grisea** (Lamarck) Poelt  
**Psoroma hypnorum** (M. Vahl) S. Gray  
**Rhizocarpon disporum** (Naegeli ex Hepp) Müller-Argoviensis  
**Rhizocarpon geographicum** (L.) De Candolle

**Solorina crocea** (L.) Acharius  
**Stereocaulon tomentosum** E. Fries  
**Thamnotia vermicularis** (Swartz) Schaerer [*Cladonia*]  
**Thrombium epigaeum** (Persoon) Wallroth  
**Trapeliopsis granulosa** (Hoffmann) Lumbsch *ex* Hertel [*Lecidea*]  
**Tuckermannopsis pinastri** (Scopoli) Hale in Egan [*Cetraria*]  
**Umbilicaria deusta** (L.) Baumgartner  
**Umbilicaria hyperborea** (Acharius) Hoffmann [*Gyrophora*]  
**Umbilicaria vellea** (L.) Acharius [*Gyrophora*]  
**Usnea cavernosa** Tuckerman  
**Usnea laponica** Vainio  
**Xanthoparmelia cf. coloradensis** (Gyelnik) Hale [*Parmelia*]  
**Xanthoria soreliata** (Vainio) Poelt [*Caloplaca, Gasparrinia*]

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### NAMES EXCLUDED FROM THE CHECKLISTS

Several plant names appear in previous publications, graduate papers, Forest Service vegetation data forms, and herbarium records that have not been included in the checklist. Either they were erroneously reported or their presence was not verified. The names, references in which they appear, and reasons for exclusion from listing follow below. Confusing misspellings in previous works and unconfirmed field observations are also presented. All unpublished references cited are on file with the Rocky Mountain Forest and Range Experiment Station.

- Agropyron saundersii* (Vasey) A.S. Hitchcock.** Appears misspelled as *A. saunderii* in unpublished checklist by Regelin (undated). No voucher specimen or verification. Presence on the Forest is possible. Corresponding name in Weber and Wittmann (1992) is *Elymus saundersii* Vasey.
- Agropyron smithii* Rydberg.** Appears in unpublished range data forms A-2200-15 and R2-2200-13, dated 29 June 1967. No voucher specimen or verification. Presence is possible. Corresponding name in Weber and Wittmann (1992) is *Pascopyrum smithii* (Rydberg) Löve.
- Agropyron spicatum* (Pursh) Scribner & Smith.** Appears in unpublished range data form titled "vegetative development indicating range readiness," dated 30 June 1981. No voucher specimen or verification. Presence on the Forest is unlikely. Corresponding name in Weber and Wittmann (1992) is *Pseudoregneria spicata* (Pursh) Löve subsp. *spicata*.
- Aster bigelovii* A. Gray.** Appears in Porter (1959a). No voucher specimen or verification. The presence of this plant is restricted to southern counties in Colorado. Corresponding name in Weber and Wittmann (1992) is *Machaeranthera bigelovii* (A. Gray) Greene.

- Astragalus convallarius* Greene.** Appears in Crouch (1986). Voucher specimen (Station herbarium acc. no. 564) annotated to *A. miser* Douglas in Hooker var. *oblongifolius* (Rydberg) Cronquist. Presence of *A. convallarius* is unlikely.
- Brassica campestris* L.** Appears in Wallmo *et al.* (1972). Voucher specimen (Station herbarium acc. no. 764) annotated to *Barbarea vulgaris* R. Brown. Presence of *Brassica campestris*, which corresponds in Weber and Wittmann (1992) to *B. rapa* L., is unlikely.
- Carduus nutans* L. subsp. *macrolepis* (Peterman) Kazmi.** This adventive plant was reported but not confirmed by W. Moir, summer 1992, in a forest clearcut.
- Carex arapahoensis* var. *albo-nigra*.** Appears in "list of plants at Fraser Experimental Forest and adjacent areas" (unauthored, undated; edited by Popovich, 1991a). This varietal name is not recognized and the voucher specimen (Station herbarium acc. no. 212C) was annotated to *C. albo-nigra* Mackenzie in Rydberg.
- Carex athrostachya* Olney.** Appears in unpublished checklists by Reichert (undated) and Regelin and Reichert (1969). No voucher specimen or verification. Presence is possible.
- Carex elynoides* Holm.** Appears in unpublished range condition data forms R2-2200-9, dated 30 July 1965. No voucher specimen or verification. Presence is possible.
- Carex heliophila* Mackenzie.** Appears in unpublished checklist by Regelin and Reichert (1969). No voucher specimen or verification. Presence on the Forest is likely. Corresponding name in Weber and Wittmann (1992) is *C. pensylvanica* Lamarck subsp. *heliophila* (Mackenzie) W.A. Weber.
- Carex macloviana* D'Urville.** Voucher specimen (W. Moir 1936, collected at "study plot 38") not examined. Presence is possible.

- Carex nebraskensis* Dewey.** Appears in Wallmo *et al.* (1972), and unpublished checklists by Reichert (undated), Regelin (undated) and Regelin and Reichert (1969). Voucher specimen (Station herbarium acc. no. 770) annotated to *C. brevipes* F. Boott and additional voucher specimen (Station herbarium acc. no. 713) annotated to *C. nova* A. Nelson. Presence of this plant is likely. The spelling in Weber and Wittmann (1992) is *C. nebrascensis*.
- Carex nevadensis*.** Appears in Wallmo *et al.* (1972). No voucher specimen. This is an apparent erroneous combination of genus and specific epithet. The intended taxon is not known.
- Carex petasata* Dewey.** Appears in unpublished checklists by Reichert (undated), Regelin (undated) and Regelin and Reichert (1969). No voucher specimen or verification. Presence is possible.
- Castilleja haydenii* (A. Gray) Cockerell.** Appears in oldest known checklist of plants (unauthored, unpublished; edited by Popovich, 1991b), created in the late 1930's. Voucher specimen (Station herbarium acc. no. 867) annotated to *C. rhexifolia* Rydberg, a common plant on the Forest. Presence of *C. haydenii* in Colorado is restricted to the San Juan Mountains.
- Castilleja integra* A. Gray in Torrey.** Appears in unpublished checklist by Porter (1959b). No voucher specimen or verification. Occurrence of this species in Colorado is limited to more southern counties. A probable misidentification of *C. rhexifolia* Rydberg, a plant which commonly occurs on the Forest. Several specimens originally identified as *C. integra* collected above tree line by K.E. Brown in the late 1930's were also annotated to the latter species.
- Castilleja lancifolia* Rydberg.** Appears in oldest known checklist of plants (unauthored, unpublished; edited by Popovich, 1991b), created in the late 1930's. Voucher specimen (Station herbarium acc. no. 852) annotated to *C. rhexifolia* Rydberg. *Castilleja lancifolia*, now known as *C. miniata* Douglas *ex* Hooker, also likely occurs on the Forest.
- Cirsium osterhoutii* (Rydberg) Petrak.** Appears in Wallmo *et al.* (1972) and in unpublished checklist by Regelin (undated). No voucher specimen or verification. The present status of this taxon is unclear. Corresponding name in Harrington (1954) is *Carduus osterhoutii* Rydberg. This was probably a misidentification of another *Cirsium* species.
- Corallorhiza striata* Lindley.** Appears misspelled as *C. stricta* in oldest known checklist of plants (unauthored, unpublished; edited by Popovich, 1991b), created in the late 1930's. Voucher specimen (Station herbarium acc. no. 1018) annotated to *C. maculata* Rafinesque. Presence of *C. striata* on the Forest is possible.
- Dryas octopetala* L.** Appears in unpublished range condition data form R2-2200-9, dated 30 July 1965. No voucher specimen or verification. Presence on the Forest is possible. Intraspecific assignment in Weber & Wittmann (1992) is *D. octopetala* L. subsp. *hookeriana* (Juzepczuk) Hultén.
- Erygeron compositus* Pursh.** Appears misspelled as *E. compositae* in unpublished checklist by Regelin and Reichert (1969). No voucher specimen or verification. Presence is possible.
- Erythronium grandiflorum* Pursh.** Appears in Whipple (1973). No voucher specimen or verification. Presence likely.
- Festuca arizonica* Vasey.** Appears in unpublished range data form titled "vegetative development indicating range readiness," dated 30 June 1981. No voucher specimen or verification. Presence on the Forest is unlikely.
- Festuca hesperochloa*.** This erroneous combination of genus and specific epithet appears in unpublished range data form titled "vegetative development indicating range readiness," dated 30 June 1981. The intended taxon was *Leucopoa kingii* (S. Watson) W.A. Weber, a plant occurring on the Forest.
- Helenium hoopesii* A. Gray.** Appears in unpublished checklist by Regelin and Reichert (1969). No voucher specimen or verification. Presence is possible. Corresponding name in Weber and Wittmann (1992) is *Dugaldia hoopesii* (A. Gray) Rydberg.
- Heuchera rubescens* Torrey in Stansbury.** The oldest known checklist of plants (unauthored, unpublished; edited by Popovich, 1991b) indicates a specimen was collected on 18 July 1937 "1 mi up Iron Cr. from road. Arap. N.F.," but the voucher specimen cannot be located. This plant is known to occur only in more western portions of Colorado. The specimen may have been *H. parvifolia* Nuttall *ex* Torrey & Gray, a plant which could occur on the Forest.
- Juncus balticus* Willdenow.** Appears in Wallmo *et al.* (1972) and in unpublished checklists by Reichert (undated) and Regelin and Reichert (1969). No voucher specimen or verification. Presence likely. Corresponding name in Weber and Wittmann (1992) is *J. ater* Rydberg.
- Juncus parryi* Engelman.** Appears in unpublished checklists by Reichert (undated), Regelin (undated) and Regelin and Reichert (1969). No voucher specimen or verification. Presence is possible.
- Leontodon taraxacum* L.** Appears in unpublished range data form A-2200-15, dated 29 June 1967. No voucher specimen or verification. The intended taxon is unclear, but was probably *Taraxacum officinale* G.H. Weber *ex* Wiggers, the well known adventive common dandelion. It occurs infrequently on the Forest.
- Penstemon glanca*.** Appears in the oldest known checklist of plants (unauthored, unpublished; edited by Popovich, 1991b). This is a misspelling of *P. glaucus* R. Graham var. *stenosepalus* A. Gray, a common penstemon on the Forest. The plant is now known as *P. whippleanus* A. Gray.

***Penstemon virens* Pennell ex Rydberg.** Appears in Wallmo *et al.* (1972), and in unpublished checklists by Regelin (undated) and Regelin and Reichert (1969). No voucher specimen or verification. This plant may occur on the Forest. A possible misidentification of *P. glaber* Pursh, a plant which more likely could occur on the Forest.

***Poa occidentalis* Vasey.** Appears in unpublished checklist by Regelin (undated). No voucher specimen or verification. Presence of this plant is restricted to southern Colorado. Likely a misidentification of a different *Poa* species.

***Primula angustifolia* Torrey.** Appears in unpublished checklists by Reichert (undated) and Regelin and Reichert (1969). No voucher specimen or verification. The checklists probably correspond to a specimen originally identified as *P. angustifolia* collected by Regelin (Station herbarium acc. no. 804) that was annotated to *P. parryi* A. Gray, a common plant on the Forest. Presence of *P. angustifolia* is likely.

***Ribes leptanthum* A. Gray.** Appears in Wallmo *et al.* (1972), and in unpublished checklists by Regelin (undated) and Regelin and Reichert (1969). Voucher specimen (Station herbarium acc. no. 799) annotated to *R. inerme* Rydberg. Presence of *R. leptanthum* is unlikely.

***Rubus parviflorus* Nuttall.** Appears in Wallmo *et al.* (1972) and in unpublished checklist by Reichert (1969). No voucher specimen or verification. Occurrence on the Forest is possible. Corresponding name in Weber and Wittmann (1992) is *Rubacer parviflorum* (Nuttall) Rydberg.

***Rudbeckia* L., species not determined.** An unconfirmed observation by S. Popovich in the summer of 1986 in the aspen thinning study plots near Fraser Experimental Forest headquarters. Presence is possible.

***Sisymbrium* L., species not determined.** Appears in unpublished checklist by Porter (1959b). No voucher specimen or verification. Presence is possible.

***Streptopus angustifolia.*** Appears in unpublished checklist by Reichert (undated). This apparent erroneous combination of genus and specific epithet is probably a misspelling of *S. amplexifolius* (L.) De Candolle, a common plant on the Forest. Corresponding name in Weber and Wittmann (1992) is *S. fassettii* Löve & Löve.

***Taraxacum dumetorum* Greene.** The label on Station herbarium acc. no. 1708 indicates a voucher specimen was collected on 8 August 1937 "0.2 mi sw/w of Sheepherder Mon." (near the Sheepherder Monument, within the alpine southern border of the Forest). Plant material of the original specimen no longer exists. Presence on the Forest is possible. Harrington (1954) incorrectly lists this as a synonym of *T. ceratophorum* (Ledebour) De Candolle, a name he erroneously applied to *T. ovinum* Greene.

***Xocleria cristata.*** Misspelling of *Koeleria cristata* (L.) Persoon, a common plant on the Forest. Appears in unpublished range data form titled "vegetative development indicating range readiness," dated 30 June 1981.

## REFERENCES

- Alexander, Robert R.; Troendle, Charles A.; Kaufmann, Merrill R.; Shepperd, Wayne D.; Crouch, Glenn L.; Watkins, Ross K. 1985. The Fraser Experimental Forest, Colorado: research program and published research 1937-1985. Gen. Tech. Rep. RM-118. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station. 46 p.
- Colorado Natural Areas Program. 1991. Colorado plant species of special concern. Denver: State of Colorado, Division of Parks and Outdoor Recreation. 16 p.
- Crouch, Glenn L. 1985. Effects of clearcutting a subalpine forest in central Colorado on wildlife habitat. Res. Pap. RM-258. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station. 12 p.
- Crouch, Glenn L. 1986. Effects of thinning pole-sized lodgepole pine on understory vegetation and large herbivore activity in central Colorado. Res. Pap. RM-268. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station. 10 p.
- Crouch, Glenn L. 1987. Big game habitat research in subalpine forests in the central Rocky Mountains. In: Management of subalpine forests: building on 50 years of research: Proceedings of a technical conference; 1987 July 6-9; Silver Creek, Colorado. Gen. Tech. Rep. RM-149. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station: 106-112.
- Dorn, Robert D. 1988. Vascular plants of Wyoming. Cheyenne, WY: Mountain West Publishing. 340 p.
- Harrington, H.D. 1954. Manual of the plants of Colorado. Denver: Sage Books. 666 p.
- Hess, Karl; Alexander, Robert R. 1986. Forest vegetation of the Arapaho and Roosevelt National Forests in central Colorado: a habitat type classification. Gen. Tech. Rep. RM-266. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station. 48 p.
- Hoffman, George R.; Alexander, Robert R. 1980. Forest vegetation of the Routt National Forest in northwestern Colorado: a habitat type classification. Res. Pap. RM-221. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station. 41 p.
- Hogan, Tim. 1992. A floristic survey of the Eagles Nest Wilderness Area in the southern Gore Range of central Colorado. Natural History Inventory of Colorado No. 12. Boulder: University of Colorado Museum. 35 p.
- Johnston, Barry C. 1987. Plant associations of Region Two. 4th ed. R2-ECOL-87-2. Lakewood, CO: U.S. Department of Agriculture, Forest Service. 429 p.
- Kastning, Nancy. 1990. A floristics survey of the Park and Sierra Madre Ranges, Colorado and Wyoming. Laramie, WY: University of Wyoming. 99 p. M.S. thesis.
- Komarkova, Vera. 1979. Alpine vegetation of the Indian Peaks area: Front Range; Colorado Rocky Mountains. Vaduz, Lichenstein: J. Cramer. 2 vol. 591 p.
- Paulsen, Harold A. 1960. Plant cover and forage use of alpine sheep ranges in the central Rocky Mountains. Iowa State Journal of Science. 34(4): 731-748.
- Popovich, Steve J., ed. 1991a. [original author and date unknown, circa 1970]. List of plants at Fraser Experimental Forest and adjacent areas. [unpublished]. On file with: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 7 p.
- Popovich, Steve J., ed. 1991b. [original author and date unknown, circa 1938]. Old list of plants collected on the Experimental Forest and elsewhere. [unpublished]. On file with: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 4 p.
- Porter, Kenneth A. 1959a. Effects of sub-alpine timber cutting on wildlife in Colorado. Fort Collins, CO: Colorado State University. 92 p. M.S. thesis.
- Porter, Kenneth A. 1959b. List of plants at Fraser Experimental Forest. [unpublished]. On file with: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 3 p.
- Regelin, Wayne L. [undated]. Species list of plants on Fool Creek watershed, Fraser Experimental Forest. [unpublished]. On file with: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 5 p.
- Regelin, Wayne L.; Reichert, Donald W. 1969. Plants collected at Fraser, summer 1969. [unpublished]. On file with: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 6 p.
- Regelin, Wayne L.; Wallmo, Olof C. 1978. Duration of deer forage benefits after clearcut logging of subalpine forests in Colorado. Res. Note RM-356. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station. 4 p.
- Reichert, Donald W. [undated]. Plant list at Fraser Experimental Forest. [unpublished]. On file with: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 3 p.
- Tiedeman, James A.; Francis, Richard E.; Terwilliger, Jr., Charles; Carpenter, Len H. 1987. Shrub-steppe habitat types of Middle Park, Colorado. Res. Pap. RM-273. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station. 20 p.

- Wallmo, Olof C.; Regelin, Wayne L.; Reichert, Donald W. 1972. Forage use by mule deer relative to logging in Colorado. *Journal of Wildlife Management*. 36: 1025-1033.
- Weber, William A. 1987. *Colorado flora: Western Slope*. Boulder: Colorado Associated University Press. 530 p.
- Weber, William A. 1992. *Catalogue of the vascular plants of Rocky Mountain National Park*. 4th ed. Boulder: University of Colorado Museum. 78 p.
- Weber, William A.; Wittmann, Ronald C. 1992. *Catalog of the Colorado flora: a biodiversity baseline*. Niwot, CO: University Press of Colorado. 215 p.
- Whipple, Steven A. 1973. *The species composition and age-structure of subalpine forests of the Front Range*. Fort Collins, CO: Colorado State University. 109 p. M.S. thesis.
- Whipple, Steven A. 1975. *The influence of environmental gradients on vegetational structure in the subalpine forests of the southern Rocky Mountains*. Fort Collins, CO: Colorado State University. 122 p. Ph.D. dissertation.
- Whipple, Steven A.; Dix, Ralph L. 1979. *Age structure and successional dynamics of a Colorado subalpine forest*. *American Midland Naturalist*. 102: 142-158.
- State University, Colorado Agricultural Research Foundation. 91 p.
- Hermann, Frederick J. 1970. *Manual of the carices of the Rocky Mountains and Colorado Basin*. *Agricultural Handb.* 374. Washington, DC: U.S. Department of Agriculture, Forest Service. 397 p.
- Hermann, Frederick J. 1975. *Manual of the rushes (*Juncus* spp.) of the Rocky Mountains and Colorado Basin*. Gen. Tech. Rep. RM-18. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station. 107 p.
- Hitchcock, A.S. 1971. *Manual of the grasses of the United States*. 2nd ed. Revised by Agnes Chase. New York: Dover Publications, Inc. 2 vol. 1051 p.
- Long, John C. 1965. *Native orchids of Colorado*. *Denver Museum of Natural History Pictorial No. 16*. Denver, CO: Denver Museum of Natural History. 34 p.
- Matsumara, Yoshiharu; Harrington, H.D. 1955. *The true aquatic vascular plants of Colorado*. *Colorado Agricultural Experiment Station Technical Bulletin 57*. Fort Collins, CO: Colorado State University. 130 p.
- McKean, William T., ed. 1976. *Winter guide to central Rocky Mountain shrubs (with summer key)*. Denver, CO: Colorado Division of Wildlife. 274 p.
- Nelson, Ruth Ashton. 1982. *Plants of Rocky Mountain National Park*. 5th ed. Estes Park, CO: Rocky Mountain Nature Association. 168 p.
- Nelson, Ruth Ashton. 1992. *Handbook of Rocky Mountain plants*. 4th ed. Revised by Roger L. Williams. Niwot, CO: Roberts Rinehart Publs. 400 p.
- U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station. 1987. *Welcome to Fraser Experimental Forest*. Visitor Pamphlet. Fort Collins, CO.
- Willard, Bettie E.; Harris, C.O. 1963. *Alpine wildflowers of Rocky Mountain National Park*. Estes Park, CO: Rocky Mountain Nature Association. 22 p.
- Willard, Bettie E.; Smithson, Michael T. 1989. *Alpine wildflowers of the Rocky Mountains*. Estes Park, CO: Rocky Mountain Nature Association. 40 p.

#### ADDITIONAL USEFUL REFERENCES

- Craighead, J.J.; Craighead, Jr., F.C.; Davis, R.J. 1963. *A field guide to Rocky Mountain wildflowers from northern Arizona and New Mexico to British Columbia*. Boston, MA: Houghton Mifflin Co. 277 p.
- Dannen, Kent; Dannen, Donna. 1981. *Rocky Mountain wildflowers*. Estes Park, CO: Tundra Publications. 63 p.
- Duft, Joseph F.; Moseley, Robert K. 1989. *Alpine wildflowers of the Rocky Mountains*. Missoula, MT: Mountain Press Publishing Company. 200 p.
- Harrington, H.D.; Durrell, L.W. 1950. *Colorado ferns and fern allies: Pteridophyta*. Fort Collins, CO: Colorado

## GLOSSARY

- adventive** Accidentally or purposely introduced into the wild; not native to the habitat or area.
- alluvium** Deposits or sediment transported by water.
- angiosperms** The flowering plants; seed plants in which the seeds are enclosed in a fruit. Together with gymnosperms, they comprise the higher vascular plants.
- auct.** Latin *auctorum*, of authors; used in author citations to indicate a scientific name appearing in manuals; denotes the name is judged to be misapplied or otherwise not appropriate.
- author** The person(s) who first applied a given scientific name to a plant.
- authority** The name or abbreviation of an author(s) cited after a plant's scientific name. For example, *Shepherdia canadensis* (L.) Nuttall was originally described under a different genus by Linnaeus (L.) but renamed under the current genus by Thomas Nuttall, an English-American naturalist.
- °C** Celsius, a scale of temperature; °C = 5/9(°F - 32).
- carr** A fen dominated by scrubby or woody vegetation; e.g., willow carr.
- cf.** Latin *confer*, compared with; used to indicate a specimen tentatively identified by comparison with other known specimens.
- circumboreal** Distributed around the high latitudes of the northern hemisphere (the northern cold temperate regions and coniferous forests).
- circumpolar** Distributed around the polar regions of the northern hemisphere.
- climax plant community** Theoretically, a relatively stable plant community in equilibrium with existing environmental conditions; represents the final or indefinitely prolonged stage of the product (the sere) of succession. (There is debate among contemporary ecologists over the use of climax community and plant association philosophies.)
- cm** Centimeter, a metric unit of length; one centimeter = 0.39 inch.
- disjunct** Refers to populations in a discontinuous range separated from other potentially interbreeding populations by sufficient distance to preclude gene flow between them.
- emend.** Latin *emendatus*, amended; used in author citations when an author has changed the original spelling of a taxon without excluding the type of the name; precedes the name of the author making the change.
- endemic** Native and restricted to a particular geographical area.
- et al.** Latin *et alii*, and others; used in author citations to indicate that a publication or scientific name was written or published jointly by more than two authors; usually follows the senior author.
- ex** Latin *ex*, from, or according to; used in author citations to connect the names of two authors when the second validly published a name proposed, but not validly published, by the first.
- f.** Latin *fide*, according to; used in author citations.
- ft** Foot.
- ft<sup>2</sup>** Square foot.
- family** A taxonomic category comprising one or more genera or tribes of common phylogenetic origin.
- fellfield** A very rocky or boulder-strewn exposed site. It is typically dry and windswept.
- fen** A wet area rich in nutrients and exhibiting high primary productivity, with a winter water table at ground level or above. It is usually dominated by herbaceous plants.
- ferns/fern allies** Common names for the lower vascular plants, which do not produce seeds.
- flora** The plant life of a given area; also, a published work describing the plant life of a given area.
- floristics** The systematic study of floras; the study of species composition of vegetation.
- forma** Latin *forma*, form; a minor variant or form of a species; a lower taxonomic category than variety.
- genera** Plural of genus.
- genus** A taxonomic category comprising one or more phylogenetically related and morphologically similar species; the first word listed in the binomial name of a species or trinomial name of a subspecies or variety.
- glacial till** Materials transported and deposited by glaciers.
- gymnosperms** The conifers; cone-bearing trees or shrubs; seed plants in which the seeds are not enclosed in a fruit.
- ha** Hectare, a metric unit of area; one hectare = 2.47 acres.
- habitat type** A basic mapping unit used by the USDA Forest Service in classifying lands or sites based on potential (climax) natural vegetation. A habitat type represents, collectively, all parts of the landscape that support, or are capable of supporting, the same climax vegetation (plant association).
- herbaceous** Not woody; non-woody plants with stems that die back annually.
- holocene Epoch** The interval of geologic time beginning about 12,000 years ago and continuing to the present. The most recent Epoch of the Quaternary Period; recent geological time.
- hydric** Wet.
- in** Used in author citations to connect the names of two authors when the first supplied a described name in a work actually published by the second.
- in** Inch.
- infraspecific** Below the level of species; e.g., subspecies, variety, form.
- interface** The transition area from one environment to another.
- km** Kilometer, a metric unit of length; one kilometer = 0.62 miles.
- krummholz** Area at upper tree line characterized by environmentally dwarfed trees due to harsh growing conditions.

**lichen** An organism consisting of a fungus living symbiotically with an alga or a photosynthetic bacteria.

**m** Meter, a metric unit of length; one meter = 3.28 feet.

**mesic** Moist; wet-tending.

**mi** Mile.

**mi<sup>2</sup>** Square mile.

**nomenclature** The scientific names applied to organisms.

**non** Latin *non*, not; used in author citations.

**penepain** An area worn down by erosion to a nearly flat plain.

**plant association** A taxonomic unit of vegetation classification used by the USDA Forest Service; is defined by the plants that dominate it at climax and usually by some characteristics of the site it occupies. A plant association is a climax plant community. (There is debate among contemporary ecologists over the use of climax community and plant association philosophies.)

**plant community** The group of plants that co-occur in the same habitat or area.

**quaternary** A geological period, from about 1.6 million years ago to the present.

**rare** Very seldomly occurring.

**remnant community** A formerly more widespread community now existing in isolated areas or habitats.

**seral** Subclimax.

**southern Rocky Mountains** The physiographic area comprising that portion of the Rocky Mountains extending from Casper, Wyoming, south to Sante Fe, New Mexico.

**sp.** Species (singular).

**species** A group of organisms recognized as distinct from others and that is usually reproductively isolated. The basic unit of biological classification; a taxonomic category below genus.

**specific epithet** The second word of the binomial name of a species or trinomial name of a subspecies or variety. The genus (first word) and specific epithet together comprise the species name.

**spp.** Species (plural).

**subalpine** Forested area below tree line, less severe in climate than alpine but still affected by cold tempera-

tures and a short growing season; ecotone forest between montane forest and nonforested alpine vegetation.

**subsp.** Subspecies (singular); also abbreviated ssp.

**subspecies** A subdivision of a species; usually has a distinct geographical range and morphological differences.

**succession (ecological)** The gradual and predictable process of progressive community change and replacement leading toward a stable climax community. The products of succession are termed the seral stages; they collectively form a sere. (There is debate among contemporary ecologists over the philosophies and applications of succession.)

**taxa** Plural of taxon.

**taxon** Any group of organisms considered sufficiently different from other such groups to be treated as a separate unit; any named taxonomic entity. For example, *Agoseris glauca* variety *glauca* and *Agoseris glauca* variety *dasycephala* each represent a different taxon at the varietal level.

**taxonomy** The theory and practice of describing, naming, and classifying organisms; systematics.

**topography** The surface features of a geographical area; the "lay of the land."

**tree line** The boundary marking the upper or lower elevational limits of tree cover. Strictly speaking, the term "timberline" refers to the upper elevational limit of commercially valuable timber, which may be hundreds of meters below the actual tree line.

**var.** Variety.

**variety** A subdivision of species denoting a lower taxonomic category than subspecies.

**vascular plants** Plants exhibiting the presence of specialized conductive tissues (xylem and phloem). All but the most primitive groups are clearly differentiated into root, stem, and leaf.

**vegetation zone** A geographical area that has a characteristic set of plants. More specifically, a geographical area with a uniform climate that supports a particular climatic climax plant association(s).

## INDEX OF COMMON NAMES

Common names are followed by corresponding genera and their family abbreviations.

- Agoseris: *Agoseris* (AST)  
 Alder: *Alnus* (BET)  
 Allumroot: *Heuchera* (SAX)  
 Alpine Oat: *Helictotrichon* (POA)  
 Alpine Parsley: *Oreoxis* (API)  
 Alpine Sunflower: *Rydbergia* (AST)  
 Alp-lily: *Lloydia* (LIL)  
 Androsace: *Androsace* (PRM)  
 Anemone: *Anemone* (RAN)  
 Angelica: *Angelica* (API)  
 Arabis: *Arabis* (BRA)  
 Arnica: *Arnica* (AST)  
 Aspen: *Populus* (SAL)  
 Aster: *Aster*, *Virgulaster* (AST)  
 Avens: *Acomastylis*, *Geum* (ROS)  
 Baneberry: *Actaea* (HEL)  
 Bearberry: *Arctostaphylos* (ERI)  
 Beardtongue: *Penstemon* (SCR)  
 Bedstraw: *Galium* (RUB)  
 Bellflower: *Campanula* (CAM)  
 Bentgrass: *Agrostis* (POA)  
 Bilberry: *Vaccinium* (ERI)  
 Birch: *Betula* (BET)  
 Bistort: *Bistorta* (PLG)  
 Bitter Cress: *Cardamine* (BRA)  
 Bitterroot: *Oreobroma* (POR)  
 Bladder Fern: *Cystopteris* (ATY)  
 Bladderpod: *Lesquerella* (BRA)  
 Blooming-Sally: *Chamerion* (ONA)  
 Bluebells: *Mertensia* (BOR)  
 Blueberry: *Vaccinium* (ERI)  
 Blue-eyed-grass: *Sisyrinchium* (IRI)  
 Bluegrass: *Poa* (POA)  
 Bog-orchid: *Limnorchis*, *Lysiella* (ORC)  
 Boxleaf: *Paxistima* (CEL)  
 Brittle Fern: *Cystopteris* (ATY)  
 Brome: *Anisantha*, *Bromopsis* (POA)  
 Bromegrass: *Bromopsis* (POA)  
 Brook-cress: *Cardamine* (BRA)  
 Brooklime: *Veronica* (SCR)  
 Buckwheat: *Eriogonum* (PLM)  
 Buffaloberry: *Shepherdia* (ELE)  
 Butter-and-eggs: *Linaria* (SCR)  
 Buttercup: *Ranunculus* (RAN)  
 Butterweed: *Packera*, *Senecio* (AST)  
 Calypso: *Calypso* (ORC)  
 Champion: *Anotites*, *Gastrolychnis*,  
     *Melandrium*, *Silene* (CRY)  
 Caraway: *Carum* (API)  
 Catchfly: *Anotites*, *Gastrolychnis*,  
     *Melandrium*, *Silene* (CRY)  
 Cerastium: *Cerastium* (ASN)  
 Cheatgrass: *Anisantha* (POA)  
 Checker-mallow: *Sidalcea* (MLV)  
 Chess: *Anisantha* (POA)  
 Chickweed: *Stellaria* (ASN)  
 Chokecherry: *Padus* (ROS)  
 Cinquefoil: *Pentaphylloides*, *Potentilla* (ROS)  
 Cleavers: *Galium* (RUB)  
 Clover: *Trifolium* (FAB)  
 Club-moss: *Lycopodium*, *Selaginella* (SEL)  
 Collomia: *Collomia* (PLM)  
 Columbine: *Aquilegia* (HEL)  
 Coralroot: *Corallorhiza* (ORC)  
 Corn Husk Lily: *Veratrum* (MLN)  
 Corydalis: *Corydalis* (FUM)  
 Cottonwood: *Populus* (SAL)  
 Cowbane: *Oxypolis* (API)  
 Cow-parsnip: *Heracleum* (API)  
 Crazyweed: *Oxytropis* (FAB)  
 Cucumber Root: *Streptopus* (UVU)  
 Cudweed: *Gnaphalium*, *Pseudognaphalium* (AST)  
 Currant: *Ribes* (GRS)  
 Daisy: *Erigeron*, *Leucanthemum* (AST)  
 Dandelion: *Taraxacum* (AST)  
 Danthonia: *Danthonia* (POA)  
 Death Camas: *Anticlea* (MLN)  
 Delphinium: *Delphinium* (HEL)  
 Devil's Shoestrings: *Polygonum* (PLM)  
 Douglas-fir: *Pseudotsuga* (PIN)  
 Draba: *Draba* (BRA)  
 Dragon Head: *Dracocephalum* (LAM)  
 Dwarf-mistletoe: *Arceuthobium* (VIS)  
 Elder: *Sambucus* (CPR)  
 Elderberry: *Sambucus* (CPR)  
 Elephantella: *Pedicularis* (SCR)  
 Elephant-head: *Pedicularis* (SCR)  
 Fairy Slipper: *Calypso* (ORC)  
 False-arabis: *Boechnera* (BRA)  
 False Dandelion: *Agoseris* (AST)  
 False Hellebore: *Veratrum* (MLN)  
 False Solomon's Seal: *Maianthemum* (CVL)  
 Fescue: *Festuca* (POA)  
 Fir: *Abies* (PIN)  
 Fireweed: *Chamerion* (ONA)  
 Fleabane: *Erigeron* (AST)  
 Flixweed: *Descurainia* (BRA)  
 Forget-me-not: *Eritrichum* (BOR)

Foxtail: *Alopecurus* (POA)  
 Foxtail Barley: *Critesion* (POA)  
 Frasera: *Frasera* (GEN)  
 Gayophytum: *Gayophytum* (ONA)  
 Gentian: *Frasera*, *Gentianella*, *Gentianodes*,  
     *Gentianopsis*, *Swertia* (GEN)  
 Geranium: *Geranium* (GER)  
 Gilia: *Collomia* (PLM)  
 Globe-flower: *Trollius* (HEL)  
 Gnaphalium: *Gnaphalium*, *Pseudognaphalium* (AST)  
 Goatsbeard: *Tragopogon* (AST)  
 Golden Aster: *Heterotheca* (AST)  
 Golden Banner: *Thermopsis* (FAB)  
 Golden Smoke: *Corydalis* (FUM)  
 Goldenrod: *Solidago* (AST)  
 Goldenweed: *Oreochrysum*, *Tonestus* (AST)  
 Gooseberry: *Ribes* (GRS)  
 Goosefoot: *Chenopodium* (CHN)  
 Grass-of-Parnassus: *Parnassia* (PAR)  
 Greek-valerian: *Polemonium* (PLM)  
 Ground Smoke: *Gayophytum* (ONA)  
 Groundsel: *Ligularia*, *Packera*, *Senecio* (AST)  
 Habenaria: *Limnorchis*, *Lysiella* (ORC)  
 Harebell: *Campanula* (CAM)  
 Hawksbeard: *Psilochenia* (AST)  
 Hawkweed: *Chlorocrepis* (AST)  
 Helianthella: *Helianthella* (AST)  
 Hemlock-parsley: *Conioselinum* (API)  
 Heuchera: *Heuchera* (SAX)  
 Hollygrape: *Mahonia* (BER)  
 Honeysuckle: *Distegia* (CPR)  
 Horsetail: *Equisetum* (EQU)  
 Huckleberry: *Vaccinium* (ERI)  
 Jacob's Ladder: *Polemonium* (PLM)  
 Junegrass: *Koeleria* (POA)  
 Juniper: *Juniperus* (CUP)  
 Kalmia: *Kalmia* (ERI)  
 King's Crown: *Rhodiola* (CRS)  
 Kinnikinnick: *Arctostaphylos* (ERI)  
 Knotweed: *Polygonum* (PLM)  
 Kobresia: *Kobresia* (CYP)  
 Lady's Slipper: *Cypripedium* (CPD)  
 Lady's Tresses: *Spiranthes* (ORC)  
 Lamb's Tongue: *Senecio* (AST)  
 Larkspur: *Delphinium* (HEL)  
 Laurel: *Kalmia* (ERI)  
 Lewisia: *Lewisia* (POR)  
 Ligusticum: *Ligusticum* (API)  
 Listera: *Listera* (ORC)  
 Little Barley: *Critesion* (POA)  
 Lousewort: *Pedicularis* (SCR)  
 Lovage: *Ligusticum* (API)  
 Lupine: *Lupinus* (FAB)  
 Mahonia: *Mahonia* (BER)  
 Mannagrass: *Glyceria* (POA)  
 Mariposa: *Calochortus* (CCT)  
 Marsh-marigold: *Psychrophila* (HEL)  
 Mayweed: *Matricaria* (AST)  
 Meadowrue: *Thalictrum* (COP)  
 Melicgrass: *Bromelica* (POA)  
 Milkvetch: *Astragalus* (FAB)  
 Miterwort: *Mitella* (SAX)  
 Monkeyflower: *Mimulus* (SCR)  
 Monkshood: *Aconitum* (HEL)  
 Monument Plant: *Frasera* (GEN)  
 Moschatel: *Adoxa* (ADX)  
 Moss Pink: *Silene* (CRY)  
 Mountain-ash: *Sorbus* (ROS)  
 Mountain-lover: *Paxistima* (CEL)  
 Mountain Parsley: *Pseudocymopterus* (API)  
 Mouse-ear: *Cerastium* (ASN)  
 Muhly: *Muhlenbergia* (POA)  
 Mullein: *Verbascum* (SCR)  
 Muskroot: *Adoxa* (ADX)  
 Muttongrass: *Poa* (POA)  
 Nailwort: *Paronychia* (ASN)  
 Needlegrass: *Stipa* (POA)  
 Oat Grass: *Trisetum* (POA)  
 Oatgrass: *Danthonia* (POA)  
 Old-man-of-the-mountain: *Rydbergia* (AST)  
 Old-man's Whiskers: *Erythrocoma* (ROS)  
 Onion: *Allium* (ALL)  
 Oniongrass: *Bromelica* (POA)  
 Orchard Grass: *Dactylis* (POA)  
 Oregon-grape: *Mahonia* (BER)  
 Oreoxis: *Oreoxis* (API)  
 Osha: *Ligusticum* (API)  
 Owl-clover: *Orthocarpus* (SCR)  
 Oyster-plant: *Tragopogon* (AST)  
 Pachystima: *Paxistima* (CEL)  
 Painted-cup: *Castilleja* (SCR)  
 Paintbrush: *Castilleja* (SCR)  
 Parnassia: *Parnassia* (PAR)  
 Pasque Flower: *Pulsatilla* (RAN)  
 Pearl Twist: *Spiranthes* (ORC)  
 Pearlwort: *Sagina* (ASN)  
 Pearly Everlasting: *Anaphalis* (AST)  
 Peavine: *Lathyrus* (FAB)  
 Penstemon: *Penstemon* (SCR)  
 Pennycress: *Noccaea* (BRA)  
 Peppergrass: *Lepidium* (BRA)  
 Phacelia: *Phacelia* (HYD)  
 Phlox: *Phlox* (PLM)  
 Pine: *Pinus* (PIN)  
 Pinedrops: *Pterospora* (MNT)  
 Pinegrass: *Calamagrostis* (POA)

Pipsissewa: *Chimaphila* (PYR)  
 Plantain: *Plantago* (PTG)  
 Poplar: *Populus* (SAL)  
 Prairie Smoke: *Erythrocoma* (ROS)  
 Prickly Lettuce: *Lactuca* (AST)  
 Primrose: *Primula* (PRM)  
 Prince's Pine: *Chimaphila* (PYR)  
 Purple Fringe: *Phacelia* (HYD)  
 Pussytoes: *Antennaria* (AST)  
 Pyrola: *Orthilia*, *Pyrola* (PYR)  
 Queen's Crown: *Clemensia* (CRS)  
 Rabbitbrush: *Chrysothamnus* (AST)  
 Ragwort: *Senecio* (AST)  
 Raspberry: *Rubus* (ROS)  
 Rattlesnake-plantain: *Goodyera* (ORC)  
 Redtop: *Agrostis* (POA)  
 Reedgrass: *Calamagrostis* (POA)  
 Rescuegrass: *Ceratochloa* (POA)  
 Ricegrass: *Oryzopsis* (POA)  
 Rock Cress: *Arabis*, *Boechera* (BRA)  
 Rock-jasmine: *Androsace* (PRM)  
 Rose: *Rosa* (ROS)  
 Rose Crown: *Clemensia* (CRS)  
 Rose Root: *Rhodiola* (CRS)  
 Rush: *Juncus* (JUN)  
 Rye: *Secale* (POA)  
 Ryegrass: *Lolium* (POA)  
 Sage: *Artemisia*, *Seriphidium* (AST)  
 Sagebrush: *Artemisia*, *Seriphidium* (AST)  
 Sagewort: *Artemisia* (AST)  
 Salsify: *Tragopogon* (AST)  
 Salt-and-pepper Grass: *Deschampsia* (POA)  
 Sand Spurrey: *Spergularia* (ASN)  
 Sandwort: *Eremogone*, *Lidia*, *Moehringia* (ASN)  
 Saxifrage: *Ciliaria*, *Micranthes*, *Saxifraga* (SAX)  
 Scouring-rush: *Hippochaete* (EQU)  
 Sedge: *Carex* (CYP)  
 Sego-lily: *Calochortus* (CCT)  
 Selaginella: *Selaginella* (SEL)  
 Serviceberry: *Amelanchier* (ROS)  
 Shinleaf: *Pyrola* (PYR)  
 Sibbaldia: *Sibbaldia* (ROS)  
 Sickletop: *Pedicularis* (SCR)  
 Sky Pilot: *Polemonium* (PLM)  
 Smelowskia: *Smelowskia* (BRA)  
 Snowlover: *Chionophila* (SCR)  
 Solomon-plume: *Maianthemum* (CVL)  
 Sorrel: *Oxyria*, *Rumex* (PLM)  
 Sow-thistle: *Sonchus* (AST)  
 Speedwell: *Veronica* (SCR)  
 Spike-fescue: *Leucopoa* (POA)  
 Spruce: *Picea* (PIN)  
 Squirreltail: *Elymus* (POA)  
 Starwort: *Stellaria* (ASN)  
 Stemless-locoweed: *Oxytropis* (FAB)  
 Stickweed: *Hackelia* (BOR)  
 Stitchwort: *Stellaria* (ASN)  
 Stonecrop: *Amerosedum*, *Clemensia*,  
*Rhodiola* (CRS)  
 Strawberry: *Fragaria* (ROS)  
 Strawberry-blite: *Chenopodium* (CHN)  
 Sweet Cicely: *Osmorhiza* (API)  
 Sweet-clover: *Melilotus* (FAB)  
 Sweetroot: *Osmorhiza* (API)  
 Swertia: *Swertia* (GEN)  
 Tansymustard: *Descurainia* (BRA)  
 Tarweed: *Madia* (AST)  
 Thermopsis: *Thermopsis* (FAB)  
 Thistle: *Cirsium* (AST)  
 Ticklegrass: *Agrostis* (POA)  
 Timothy: *Phleum* (POA)  
 Toadflax: *Linaria* (SCR)  
 Tobacco Root: *Valeriana* (VAL)  
 Tower Mustard: *Turritus* (BRA)  
 Trisetum: *Trisetum* (POA)  
 Tufted Hairgrass: *Deschampsia* (POA)  
 Twayblade: *Listera* (ORC)  
 Twinflower: *Linnaea* (CPR)  
 Twisted-stalk: *Streptopus* (UVU)  
 Valerian: *Valeriana* (VAL)  
 Vetch: *Vicia* (FAB)  
 Violet: *Viola* (VIO)  
 Water Crowfoot: *Batrachium* (RAN)  
 Waterleaf: *Hydrophyllum* (HYD)  
 Wheatgrass: *Elymus*, *Thinopyrum* (POA)  
 Whitlow-wort: *Draba* (BRA)  
 Whortleberry: *Vaccinium* (ERI)  
 Wild Candytuft: *Noccaea* (BRA)  
 Wild-chamomile: *Matricaria* (AST)  
 Wild Flax: *Adenolinum* (LIN)  
 Wild Lettuce: *Lactuca* (AST)  
 Wild Onion: *Allium* (ALL)  
 Wildrye: *Elymus* (POA)  
 Willow: *Salix* (SAL)  
 Willow-herb: *Chamerion*, *Epilobium* (ONA)  
 Willow-weed: *Chamerion*, *Epilobium* (ONA)  
 Windflower: *Anemone* (RAN)  
 Winter Cress: *Barbarea* (BRA)  
 Wintergreen: *Gaultheria* (ERI);  
*Orthilia*, *Pyrola* (PYR)  
 Wood-nymph: *Moneses* (PYR)  
 Wood-reed: *Cinna* (POA)  
 Wood-rush: *Luzula* (JUN)  
 Wormwood: *Seriphidium* (AST)  
 Yarrow: *Achillea* (AST)

## INDEX OF SCIENTIFIC NAMES OF VASCULAR PLANTS

Names are arranged alphabetically by genus and species. Primary names and their family abbreviations are in bold; alternate names are in italics. Alternate names are followed by their corresponding primary names. Alternate names preceded by a not-equal-to sign ( $\neq$ ) are not considered true synonyms of the primary names. Taxa preceded by an asterisk (\*) are not known to occur on the Forest, but appear in checklist comments, the section entitled "names excluded from the checklist," or other text. All vascular plant names presented in this report are listed.

**Abies lasiocarpa** (PIN)

**Achillea lanulosa** (AST)

*Achillea lanulosa* subsp. *lanulosa* See **Achillea lanulosa** (AST)

*Achillea millefolium* subsp. *lanulosa* See **Achillea lanulosa** (AST)

**Acomastylis rossii** subsp. **turbinata** (ROS)

**Aconitum columbianum** var. **columbianum** (HEL)

*Aconitum columbianum* var. *columbianum* forma *ochroleucum* See **Aconitum columbianum** var. **col.** (HEL)

*Aconitum lutescens* See **Aconitum columbianum** var. **columbianum** (HEL)

*Actaea arguta* See **Actaea rubra** subsp. **arguta** (HEL)

**Actaea rubra** subsp. **arguta** (HEL)

**Adenolinum lewisii** (LIN)

**Adoxa moschatellina** (ADX)

**Agoseris aurantiaca** (AST)

**Agoseris glauca** var. **dasycephala** (AST)

**Agoseris glauca** var. **glauca** (AST)

*Agropyron elongatum* See **Thinopyrum ponticum** (POA)

*Agropyron intermedium* See **Thinopyrum intermedium** subsp. **intermedium** (POA)

\**Agropyron saundersii* See "names excluded from the checklist"

*Agropyron scribneri* See **Elymus scribneri** (POA)

\**Agropyron smithii* See "names excluded from the checklist"

\**Agropyron spicatum* See "names excluded from the checklist"

*Agropyron subsecundum* var. *andinum* See **Elymus trachycaulus** subsp. **andinus** (POA)

*Agropyron trachycaulum* See **Elymus trachycaulus** subsp. **trachycaulus** (POA)

*Agrostis alba* See **Agrostis gigantea** (POA)

**Agrostis exarata** (POA)

**Agrostis gigantea** (POA)

**Agrostis idahoensis** (POA)

**Agrostis scabra** (POA)

*Agrostis scabra* var. *scabra* See **Agrostis scabra** (POA)

**Agrostis thurberiana** (POA)

**Allium** sp. (ALL)

**Allium brevistylum** (ALL)

**Alnus incana** subsp. **tenuifolia** (BET)

*Alnus tenuifolia* See **Alnus incana** subsp. **tenuifolia** (BET)

**Alopecurus aequalis** (POA)

**Alopecurus pratensis** (POA)

**Amelanchier alnifolia** (ROS)

**Amerosedum lanceolatum** (CRS)

**Anaphalis margaritacea** (AST)

**Androsace septentrionalis** (PRM)

*Androsace septentrionalis* var. *puberulenta* See **Androsace septentrionalis** (PRM)

*Anemone globosa* See **Anemone multifida** var. **globosa** (RAN)

**Anemone multifida** var. **globosa** (RAN)

*Anemone patens* See **Pulsatilla patens** subsp. **multifida** (RAN)

**Angelica grayi (API)**  
**Anisantha tectorum (POA)**  
**Anotites menziesii (CRY)**  
 ≠ *Antennaria alpina* See **Antennaria media (AST)**  
*Antennaria alpina* var. *media* See **Antennaria media (AST)**  
**Antennaria media (AST)**  
**Antennaria microphylla (AST)**  
**Antennaria parvifolia (AST)**  
**Antennaria rosea (AST)**  
**Antennaria umbrinella (AST)**  
**Anticlea elegans (MLN)**  
*Aquilegia caerulea* See **Aquilegia coerulea (HEL)**  
**Aquilegia coerulea (HEL)**  
*Aquilegia coerulea* var. *coerulea* See **Aquilegia coerulea (HEL)**  
*Arabis drummondii* See **Boechera drummondii (BRA)**  
*Arabis glabra* See **Turritis glabra (BRA)**  
 ≠ *Arabis hirsuta* See **Arabis hirsuta** var. **pyncocarpa (BRA)**  
**Arabis hirsuta** var. **pyncocarpa (BRA)**  
*Arabis holboellii* var. *pinetorum* See **Boechera retrofracta (BRA)**  
*Arabis holboellii* var. *retrofracta* See **Boechera retrofracta (BRA)**  
**Arceuthobium americanum (VIS)**  
**Arctostaphylos adenotricha (ERI)**  
*Arctostaphylos uva-ursi* var. *adenotricha* See **Arctostaphylos adenotricha (ERI)**  
*Arenaria fendleri* See **Eremogone fendleri (ASN)**  
*Arenaria lateriflora* See **Moeringia lateriflora (ASN)**  
*Arenaria obtusiloba* See **Lidia obtusiloba (ASN)**  
**Arnica cordifolia (AST)**  
**Arnica latifolia (AST)**  
**Arnica mollis (AST)**  
**Arnica parryi (AST)**  
**Arnica rydbergii (AST)**  
**Artemisia arctica** subsp. **saxicola (AST)**  
*Artemisia cana* See **Seriphidium canum (AST)**  
*Artemisia cana* var. *viscidula* See **Seriphidium canum (AST)**  
**Artemisia frigida (AST)**  
**Artemisia ludoviciana** subsp. **ludoviciana (AST)**  
 ≠ *Artemisia norvegica* See **Artemisia arctica** subsp. **saxicola (AST)**  
*Artemisia norvegica* subsp. *saxitilis* See **Artemisia arctica** subsp. **saxicola (AST)**  
**Artemisia scopulorum (AST)**  
 \**Artemisia tridentata* subsp. *tridentata* See checklist under **Seriphidium vaseyanum (AST)**  
*Artemisia tridentata* subsp. *vaseyana* See **Seriphidium vaseyanum (AST)**  
*Artemisia vaseyana* See **Seriphidium vaseyanum (AST)**  
*Aster adscendens* See **Virgulaster ascendens (AST)**  
*Aster ascendens* See **Virgulaster ascendens (AST)**  
 \**Aster bigelovii* See "names excluded from the checklist"  
**Aster foliaceus** var. **foliaceus (AST)**  
*Aster foliaceus* var. *frondeus* See **Aster foliaceus** var. **foliaceus (AST)**  
*Aster foliaceus* var. *parryi* See **Aster foliaceus** var. **foliaceus (AST)**  
*Aster hesperius* See **Aster lanceolatus** var. **hesperius (AST)**  
**Aster lanceolatus** subsp. **hesperius (AST)**  
*Aster occidentalis* See **Aster spathulatus (AST)**  
**Aster spathulatus (AST)**  
**Astragalus alpinus (FAB)**

\**Astragalus convallarius* See "names excluded from the checklist"  
*Astragalus decumbens* var. *oblongifolius* See *Astragalus miser* var. *oblongifolius* (FAB)  
*Astragalus miser* var. *oblongifolius* (FAB)  
*Barbarea vulgaris* (BRA)  
*Batrachium trichophyllum* (RAN)  
*Berberis repens* See *Mahonia repens* (BER)  
*Betula glandulosa* (BET)  
*Bistorta bistortoides* (PLG)  
*Bistorta vivipara* (PLG)  
*Boechera drummondii* (BRA)  
*Boechera retrofracta* (BRA)  
 \**Brassica campestris* See "names excluded from the checklist"  
 \**Brassica rapa* See "names excluded from the checklist," under *B. campestris*  
*Bromelica bulbosa* (POA)  
*Bromopsis canadensis* subsp. *canadensis* (POA)  
*Bromopsis inermis* (POA)  
*Bromopsis lanatipes* (POA)  
*Bromus anomalus* var. *lanatipes* See *Bromopsis lanatipes* (POA)  
*Bromus carinatus* See *Ceratochloa carinata* (POA)  
*Bromus ciliatus* var. *ciliatus* See *Bromopsis canadensis* subsp. *canadensis* (POA)  
*Bromus inermis* See *Bromopsis inermis* (POA)  
*Bromus marginatus* See *Ceratochloa carinata* (POA)  
*Bromus tectorum* var. *glabratus* See *Anisantha tectorum* (POA)  
*Bromus tectorum* var. *tectorum* See *Anisantha tectorum* (POA)  
*Calamagrostis canadensis* (POA)  
*Calamagrostis inexpansa* See *Calamagrostis stricta* (POA)  
*Calamagrostis purpurascens* (POA)  
*Calamagrostis scribneri* See *Calamagrostis canadensis* (POA)  
*Calamagrostis stricta* (POA)  
*Calochortus gunnisonii* (CCT)  
*Caltha leptosepala* See *Psychrophila leptosepala* (HEL)  
*Calypso bulbosa* (ORC)  
*Campanula parryi* (CAM)  
*Campanula rotundifolia* (CAM)  
*Cardamine cordifolia* (BRA)  
 \**Carduus nutans* subsp. *macrolepis* See "names excluded from the checklist"  
 \**Carduus osterhoutii* See "names excluded from the checklist," under *Cirsium osterhoutii*  
*Carex albo-nigra* (CYP)  
*Carex albonigra* See *Carex albo-nigra* (CYP)  
*Carex aquatilis* subsp. *aquatilis* (CYP)  
*Carex arapahoensis* (CYP)  
 \**Carex arapahoensis* var. *albo-nigra* (erroneous name) See "names excluded from the checklist"  
*Carex arctogena* See *Carex capitata* subsp. *arctogena* (CYP)  
 \**Carex athrostachya* See "names excluded from the checklist"  
*Carex bebbii* (CYP)  
*Carex brevipes* (CYP)  
 ≠ *Carex capitata* See *Carex capitata* subsp. *arctogena* (CYP)  
*Carex capitata* subsp. *arctogena* (CYP)  
*Carex chalciolepis* (CYP)  
*Carex crandallii* (CYP)  
*Carex disperma* (CYP)  
*Carex drummondiana* See *Carex rupestris* subsp. *drummondiana* (CYP)  
*Carex ebenea* (CYP)

\**Carex elynoides* See "names excluded from the checklist"  
*Carex festivella* (CYP)  
*Carex foenea* (CYP)  
*Carex geyeri* (CYP)  
*Carex haydeniana* (CYP)  
 \**Carex heliophila* See "names excluded from the checklist"  
*Carex heteroneura* var. *chalciolepis* See *Carex chalciolepis* (CYP)  
*Carex hoodii* (CYP)  
 \**Carex macloviana* See "names excluded from the checklist"  
*Carex media* var. *stevanii* See *Carex norvegica* subsp. *stevanii* (CYP)  
*Carex microptera* (CYP)  
 \**Carex nebrascensis* See "names excluded from the checklist"  
 \**Carex nebraskensis* See names excluded from the checklist," under *C. nebrascensis*  
 \**Carex nevadensis* (erroneous name) See "names excluded from the checklist"  
*Carex norvegica* subsp. *stevanii* (CYP)  
*Carex nova* (CYP)  
*Carex pachystachya* (CYP)  
 \**Carex pensylvanica* subsp. *heliophila* See "names excluded from the checklist," under *C. heliophila*  
 \**Carex petasata* See "names excluded from the checklist"  
*Carex phaeocephala* (CYP)  
 ≠ *Carex pyrenaica* See *Carex crandallii* (CYP)  
*Carex rossii* (CYP)  
 ≠ *Carex rostrata* See *Carex utriculata* (CYP)  
*Carex rupestris* subsp. *drummondiana* (CYP)  
*Carex scopulorum* (CYP)  
*Carex siccata* See *Carex foenea* (CYP)  
*Carex utriculata* (CYP)  
*Carex vesicaria* (CYP)  
*Carum carvi* (API)  
 \**Castilleja haydenii* See "names excluded from the checklist"  
 \**Castilleja integra* See "names excluded from the checklist"  
 \**Castilleja lancifolia* See "names excluded from the checklist"  
 \**Castilleja miniata* See "names excluded from the checklist," under *C. lancifolia*  
*Castilleja occidentalis* (SCR)  
*Castilleja rhexifolia* (SCR)  
 ≠ *Castilleja septentrionalis* See *Castilleja sulphurea* (SCR)  
*Castilleja sulphurea* (SCR)  
 ≠ *Cerastium arvense* See *Cerastium strictum* (ASN)  
*Cerastium fontanum* (ASN)  
*Cerastium strictum* (ASN)  
*Cerastium vulgatum* var. *hirsutum* See *Cerastium fontanum* (ASN)  
*Ceratochloa carinata* (POA)  
*Chamaenerion angustifolium* subsp. *circumvagnum* See *Chamerion danielsii* (ONA)  
*Chamaenerion angustifolium* var. *platyphyllum* See *Chamerion danielsii* (ONA)  
*Chamerion danielsii* (ONA)  
*Chamerion subdentatum* (ONA)  
*Chenopodium capitatum* (CHN)  
*Chenopodium foliosum* (CHN)  
*Chenopodium overi* See *Chenopodium foliosum* (CHN)  
*Chimaphila umbellata* subsp. *occidentalis* (PYR)  
*Chimaphila umbellata* var. *occidentalis* See *Chimaphila umbellata* subsp. *occidentalis* (PYR)  
*Chionophila jamesii* (SCR)  
*Chlorocrepis albiflora* (AST)

**Chlorocrepis tristic subsp. gracilis (AST)**  
*Chrysanthemum leucanthemum* var. *pinnatifidum* See **Leucanthemum vulgare (AST)**  
*Chrysopsis villosa* See **Heterotheca villosa var. villosa (AST)**  
**Chrysothamnus parryi subsp. parryi (AST)**  
**Ciliaria austromontana (SAX)**  
**Cinna latifolia (POA)**  
**Cirsium arvense (AST)**  
*Cirsium arvense* var. *arvense* See **Cirsium arvense (AST)**  
**Cirsium centaureae (AST)**  
**Cirsium coloradense (AST)**  
 ≠ *Cirsium drummondii* var. *drummondii* See **Cirsium coloradense (AST)**  
**Cirsium eatonii (AST)**  
 \***Cirsium osterhoutii** See "names excluded from the checklist"  
*Cirsium tiogonum* var. *coloradense* See **Cirsium coloradense (AST)**  
**Clemensia rhodantha (CRS)**  
**Collomia linearis (PLM)**  
**Conioselinum scopulorum (API)**  
**Corallorhiza maculata (ORC)**  
 \***Corallorhiza striata** See "names excluded from the checklist"  
**Corallorhiza trifida (ORC)**  
**Corydalis aurea subsp. aurea (FUM)**  
*Corydalis aurea* var. *aurea* See **Corydalis aurea subsp. aurea (FUM)**  
*Crepis acuminata* subsp. *acuminata* See **Psilochenia acuminata (AST)**  
**Critesion brachyantherum (POA)**  
**Critesion jubatum (POA)**  
*Critesion jubatum* subsp. *breviaristatum* See **Critesion brachyantherum (POA)**  
*Cymopterus alpinus* See **Oreoxis alpina subsp. alpina (API)**  
*Cymopterus lemmonii* See **Pseudocymopterus montanus (API)**  
**Cypripedium fasciculatum (CPD)**  
**Cystopteris montana (ATY)**  
**Dactylis glomerata (POA)**  
**Danthonia intermedia (POA)**  
*Dasiflora fruticosa* See **Pentaphylloides floribunda (ROS)**  
**Delphinium barbeyi (HEL)**  
*Delphinium nelsonii* See **Delphinium nuttallianum (HEL)**  
**Delphinium nuttallianum (HEL)**  
**Delphinium occidentale subsp. occidentale (HEL)**  
**Deschampsia cespitosa subsp. cespitosa (POA)**  
*Deschampsia cespitosa* subsp. *genuina* See **Deschampsia cespitosa subsp. cespitosa (POA)**  
**Descurainia incana (BRA)**  
**Descurainia pinnata (BRA)**  
*Descurainia pinnata* subsp. *nelsonii* See **Descurainia pinnata (BRA)**  
*Descurainia richardsonii* See **Descurainia incana (BRA)**  
*Descurainia richardsonii* subsp. *incisa* See **Descurainia incana (BRA)**  
**Distegia involucrata (CPR)**  
**Draba albertina (BRA)**  
**Draba crassifolia (BRA)**  
**Draba fladnizensis (BRA)**  
**Draba nemorosa (BRA)**  
*Draba stenoloba* var. *nana* See **Draba albertina (BRA)**  
**Draba streptocarpa (BRA)**  
*Draba streptocarpa* var. *streptocarpa* See **Draba streptocarpa (BRA)**  
**Dracocephalum parviflorum (LAM)**

*\*Dryas octopetala* See "names excluded from the checklist"  
*\*Dryas octopetala* subsp. *hookeriana* See "names excluded from the checklist," under *D. octopetala*  
*\*Dugaldia hoopesii* See "names excluded from the checklist," under *Helenium hoopesii*  
*Elymus canadensis* (POA)  
*Elymus elymoides* (POA)  
*Elymus glaucus* (POA)  
*\*Elymus saundersii* See "names excluded from the checklist," under *Agropyron saundersii*  
*Elymus scribneri* (POA)  
*Elymus trachycaulus* subsp. *andinus* (POA)  
*Elymus trachycaulus* subsp. *trachycaulus* (POA)  
*Elytrigia intermedia* subsp. *intermedia* See *Thinopyrum intermedium* subsp. *intermedium* (POA)  
*≠ Epilobium adenocaulon* var. *adenocaulon* See *Epilobium ciliatum* subsp. *glandulosum* (ONA)  
*Epilobium adenocaulon* var. *occidentale* See *Epilobium ciliatum* subsp. *glandulosum* (ONA)  
*≠ Epilobium alpinum* See *Epilobium anagallidifolium* (ONA)  
*Epilobium anagallidifolium* (ONA)  
*Epilobium angustifolium* var. *angustifolium* See *Chamerion danielsii* (ONA)  
*Epilobium angustifolium* var. *canescens* See *Chamerion danielsii* (ONA)  
*Epilobium angustifolium* subsp. *circumvagnum* See *Chamerion danielsii* (ONA)  
*Epilobium angustifolium* var. *platyphyllum* See *Chamerion danielsii* (ONA)  
*Epilobium brachycarpum* (ONA)  
*≠ Epilobium ciliatum* subsp. *ciliatum* See *Epilobium ciliatum* subsp. *glandulosum* (ONA)  
*Epilobium ciliatum* subsp. *glandulosum* (ONA)  
*Epilobium clavatum* (ONA)  
*Epilobium halleanum* (ONA)  
*Epilobium hornemannii* (ONA)  
*Epilobium lactiflorum* (ONA)  
*Epilobium latifolium* See *Chamerion subdentatum* (ONA)  
*Epilobium paniculatum* See *Epilobium brachycarpum* (ONA)  
*Epilobium saximontanum* (ONA)  
*Equisetum arvense* (EQU)  
*Equisetum hyemale* See *Hippochaete hyemalis* (EQU)  
*Eremogone fendleri* (ASN)  
*Erigeron acre* var. *asteroides* See *Erigeron elongatus* (AST)  
*Erigeron acris* var. *asteroides* See *Erigeron elongatus* (AST)  
*\*Erigeron compositus* See "names excluded from the checklist"  
*Erigeron coulteri* (AST)  
*Erigeron elatior* (AST)  
*Erigeron elongatus* (AST)  
*Erigeron eximius* (AST)  
*Erigeron flagellaris* (AST)  
*Erigeron flagellaris* var. *typica* See *Erigeron flagellaris* (AST)  
*≠ Erigeron formosissimus* See *Erigeron formosissimus* var. *viscidus* (AST)  
*Erigeron formosissimus* var. *viscidus* (AST)  
*Erigeron glabellus* (AST)  
*Erigeron glabellus* subsp. *pubescens* See *Erigeron glabellus* (AST)  
*Erigeron grandiflorus* (AST)  
*Erigeron melanocephalus* (AST)  
*Erigeron peregrinus* subsp. *callianthemus* (AST)  
*Erigeron pinnatisectus* (AST)  
*Erigeron simplex* (AST)  
*Erigeron speciosus* var. *speciosus* (AST)  
*Erigeron subtrinervis* (AST)  
*Erigeron superbus* See *Erigeron eximius* (AST)

**Eriogonum subalpinum (PLG)**  
*Eriogonum umbellatum* var. *majus* See **Eriogonum subalpinum (PLG)**  
*Eritrichium aretioides* See **Eritrichium aretioides (BOR)**  
**Eritrichium aretioides (BOR)**  
*Eritrichium elongatum* var. *argenteum* See **Eritrichium aretioides (BOR)**  
*Eritrichium nanum* var. *elongatum* See **Eritrichium aretioides (BOR)**  
**Erythrocoma triflora (ROS)**  
 \***Erythronium grandiflorum** See "names excluded from the checklist"  
 \***Festuca arizonica** See "names excluded from the checklist"  
**Festuca brachyphylla** subsp. *coloradensis* (POA)  
*Festuca elatior* var. *elatior* See **Festuca pratensis (POA)**  
**Festuca idahoensis (POA)**  
 \**Festuca hesperochloa* (erroneous name) See "names excluded from the checklist"  
**Festuca minutiflora (POA)**  
*Festuca ovina* var. *brachyphylla* See **Festuca brachyphylla** subsp. *coloradensis* (POA)  
*Festuca ovina* var. *brevifolia* See **Festuca brachyphylla** subsp. *coloradensis* (POA)  
 ≠ *Festuca ovina* var. *ovina* See **Festuca minutiflora** and **F. saximontana (POA)**  
**Festuca pratensis (POA)**  
**Festuca rubra (POA)**  
*Festuca rubra* var. *rubra* See **Festuca rubra (POA)**  
**Festuca saximontana (POA)**  
**Festuca thurberi (POA)**  
*Filaginella uliginosa* See **Gnaphalium uliginosum (AST)**  
*Fragaria americana* See **Fragaria vesca** subsp. *bracteata* (ROS)  
*Fragaria glauca* See **Fragaria virginiana** subsp. *glauca* (ROS)  
*Fragaria ovalis* See **Fragaria virginiana** subsp. *glauca* (ROS)  
**Fragaria vesca** subsp. *bracteata* (ROS)  
**Fragaria virginiana** subsp. *glauca* (ROS)  
**Frasera speciosa (GEN)**  
**Galium aparine (RUB)**  
 ≠ *Galium boreale* See **Galium septentrionale (RUB)**  
*Galium brandegei* See **Galium trifidum** subsp. *subbiflorum* (RUB)  
**Galium septentrionale (RUB)**  
*Galium trifidum* subsp. *brevipes* See **Galium trifidum** subsp. *subbiflorum* (RUB)  
**Galium trifidum** subsp. *subbiflorum* (RUB)  
**Galium triflorum (RUB)**  
**Gastrolychnis drummondii (CRY)**  
**Gaultheria humifusa (ERI)**  
**Gayophytum diffusum** subsp. *parviflorum* (ONA)  
*Gayophytum lasiospermum* See **Gayophytum diffusum** subsp. *parviflorum* (ONA)  
**Gentiana acuta** var. *nana* See **Gentianella acuta (GEN)**  
**Gentiana acuta** var. *strictiflora* See **Gentianella strictiflora (GEN)**  
**Gentiana amarella** subsp. *acuta* See **Gentianella acuta (GEN)**  
 ≠ *Gentiana amarella* subsp. *amarella* See **Gentianella acuta** and **G. strictiflora (GEN)**  
**Gentiana amarella** var. *stricta* See **Gentianella strictiflora (GEN)**  
**Gentiana barbellata** See **Gentianopsis barbellata (GEN)**  
**Gentiana parryi** See **Pneumonanthe parryi (GEN)**  
**Gentiana plebia** See **Gentianella acuta (GEN)**  
**Gentiana romanzovii** See **Gentianodes algida (GEN)**  
**Gentiana strictiflora** See **Gentianella strictiflora (GEN)**  
**Gentianella acuta (GEN)**  
**Gentianella amarella** subsp. *acuta* See **Gentianella acuta (GEN)**  
 ≠ *Gentianella amarella* subsp. *amarella* See **Gentianella acuta** and **G. strictiflora (GEN)**

*Gentianella barbellata* See *Gentianopsis barbellata* (GEN)  
*Gentianella strictiflora* (GEN)  
*Gentianodes algida* (GEN)  
*Gentianopsis barbellata* (GEN)  
*Geranium richardsonii* (GER)  
*Geum ciliatum* See *Erythrocoma triflora* (ROS)  
*Geum macrophyllum* subsp. *perincisum* See *Geum macrophyllum* var. *perincisum* (ROS)  
*Geum macrophyllum* var. *perincisum* (ROS)  
*Geum rivale* (ROS)  
*Geum rossii* var. *turbinatum* See *Acomastylis rossii* subsp. *turbinata* (ROS)  
*Geum triflorum* See *Erythrocoma triflora* (ROS)  
*Geum turbinatum* See *Acomastylis rossii* subsp. *turbinata* (ROS)  
*Glyceria elata* (POA)  
*Glyceria striata* var. *stricta* (POA)  
*Gnaphalium macounii* See *Pseudognaphalium stramineum* (AST)  
*Gnaphalium uliginosum* (AST)  
*Gnaphalium viscosum* See *Pseudognaphalium stramineum* (AST)  
*Goodyera oblongifolia* (ORC)  
*Habenaria dilatata* var. *albiflora* See *Limnorchis dilatata* subsp. *albiflora* (ORC)  
*Habenaria hyperborea* See *Limnorchis hyperborea* (ORC)  
*Habenaria obtusata* See *Lysiella obtusata* (ORC)  
*Habenaria saccata* See *Limnorchis stricta* (ORC)  
*Hackelia floribunda* (BOR)  
*Haplopappus parryi* See *Oreochrysum parryi* (AST)  
*Haplopappus pygmaeus* See *Tonestus pygmaeus* (AST)  
*\*Helenium hoopesii* See "names excluded from the checklist"  
*Helianthella quinquenervis* (AST)  
*Helictotrichon mortonianum* (POA)  
*Heracleum lanatum* See *Heracleum sphondylium* subsp. *montanum* (API)  
*Heracleum sphondylium* var. *lanatum* See *Heracleum sphondylium* subsp. *montanum* (API)  
*Heracleum sphondylium* subsp. *montanum* (API)  
*Hesperochloa kingii* See *Leucopoa kingii* (POA)  
*Heterotheca pumila* (AST)  
*Heterotheca villosa* var. *villosa* (AST)  
*Heuchera* sp. (SAX)  
*\*Heuchera parvifolia* See "names excluded from the checklist," under *H. rubescens*  
*\*Heuchera rubescens* See "names excluded from the checklist"  
*Hieracium albiflorum* See *Chlorocrepis albiflora* (AST)  
*Hieracium gracile* See *Chlorocrepis tristis* subsp. *gracilis* (AST)  
*Hippochaete hyemalis* (EQU)  
*Hippochaete hyemalis* subsp. *affinis* See *Hippochaete hyemalis* (EQU)  
*Hordeum brachyantherum* See *Critesion brachyantherum* (POA)  
*Hordeum jubatum* var. *caespitosum* See *Critesion jubatum* (POA)  
*Hordeum jubatum* var. *jubatum* See *Critesion jubatum* (POA)  
*Hydrophyllum fendleri* (HYD)  
*Hymenoxys grandiflora* See *Rydbergia grandiflora* (AST)  
*\*Juncus ater* See "names excluded from the checklist," under *J. balticus*  
*\*Juncus balticus* See "names excluded from the checklist"  
*Juncus confusus* (JUN)  
*Juncus drummondii* (JUN)  
*Juncus hallii* (JUN)  
*Juncus mertensianus* (JUN)  
*\*Juncus parryi* See "names excluded from the checklist"

**Juncus saximontanus (JUN)**  
**Juniperus communis L. subsp. alpina (CUP)**  
*Juniperus communis* var. *montana* See **Juniperus communis L. subsp. alpina (CUP)**  
*Juniperus communis* var. *saxatilis* See **Juniperus communis L. subsp. alpina (CUP)**  
**Kalmia microphylla (ERI)**  
*Kalmia polifolia* var. *microphylla* See **Kalmia microphylla (ERI)**  
*Kobresia bellardii* var. *bellardii* See **Kobresia myosuroides (CYP)**  
**Kobresia myosuroides (CYP)**  
*Koeleria cristata* See **Koeleria macrantha (POA)**  
**Koeleria macrantha (POA)**  
**Lactuca sp. (AST)**  
**Lathyrus leucanthus (FAB)**  
*\*Leontodon taraxacum* See "names excluded from the checklist"  
**Lepidium ramosissimum (BRA)**  
**Lesquerella montana (BRA)**  
*\*Lesquerella rectipes* See checklist comment under *L. montana* (BRA)  
**Leucanthemum vulgare (AST)**  
**Leucopoa kingii (POA)**  
*Lewisia pygmaea* var. *pygmaea* See **Oreobroma pygmaea (POR)**  
**Lidia obtusiloba (ASN)**  
**Ligularia amplexans (AST)**  
*≠Ligularia bigelovii* See **Ligularia bigelovii** var. *hallii* (AST)  
**Ligularia bigelovii** var. *hallii* (AST)  
**Ligularia soldanella (AST)**  
**Ligusticum porteri (API)**  
**Limnorchis dilatata** subsp. *albiflora* (ORC)  
**Limnorchis hyperborea (ORC)**  
*≠Limnorchis saccata* See **Limnorchis hyperborea (ORC)**  
*Limnorchis saccata* See **Limnorchis stricta (ORC)**  
**Limnorchis stricta (ORC)**  
**Linaria vulgaris (SCR)**  
*≠Linnaea borealis* See **Linnaea borealis** subsp. *americana* (CPR)  
**Linnaea borealis** subsp. *americana* (CPR)  
*Linnaea borealis* var. *americana* See **Linnaea borealis** subsp. *americana* (CPR)  
*Linum lewisii* See **Adenolinum lewisii (LIN)**  
*≠Listera cordata* See **Listera cordata** subsp. *nephrophylla* (ORC)  
**Listera cordata** subsp. *nephrophylla* (ORC)  
**Lloydia serotina (LIL)**  
*Lolium multiflorum* See **Lolium perenne** subsp. *italicum* (POA)  
**Lolium perenne** subsp. *italicum* (POA)  
*≠Lolium perenne* subsp. *perenne* See **Lolium perenne** subsp. *italicum* (POA)  
*Lonicera involucrata* See **Distegia involucrata (CPR)**  
*Lophopyrum elongatum* See **Thinopyrum ponticum (POA)**  
**Lupinus argenteus (FAB)**  
*Lupinus argenteus* subsp. *rubricaulis* See **Lupinus argenteus (FAB)**  
**Lupinus caudatus (FAB)**  
*Lupinus caudatus* subsp. *argophyllus* See **Lupinus caudatus (FAB)**  
*Lupinus greenei* See **Lupinus caudatus (FAB)**  
**Luzula comosa (JUN)**  
*≠Luzula multiflora* See **Luzula comosa (JUN)**  
**Luzula parviflora (JUN)**  
**Luzula spicata (JUN)**  
**Luzula subcapitata (JUN)**

*Lychnis alba* See *Melandrium dioicum* (CRY)  
*Lychnis drummondii* See *Gastrolychnis drummondii* (CRY)  
*Lycopodium annotinum* (LYC)  
*Lysiella obtusata* (ORC)  
 \**Machaeranthera bigelovii* See "names excluded from the checklist," under *Aster bigelovii*  
*Madia glomerata* (AST)  
*Mahonia repens* (BER)  
*Maianthemum stellatum* (CVL)  
*Matricaria inodora* See *Matricaria perforata* (AST)  
*Matricaria perforata* (AST)  
*Melandrium dioicum* (CRY)  
*Melandrium drummondii* See *Gastrolychnis drummondii* (CRY)  
*Melica bulbosa* See *Bromelica bulbosa* (POA)  
*Melilotus alba* See *Melilotus albus* (FAB)  
*Melilotus albus* (FAB)  
*Melilotus officinale* (FAB)  
*Melilotus officinalis* See *Melilotus officinale* (FAB)  
*Mertensia ciliata* (BOR)  
 ≠ *Mertensia lanceolata* See *Mertensia lanceolata* var. *viridus* (BOR)  
*Mertensia lanceolata* var. *viridis* (BOR)  
*Mertensia viridis* var. *cana* See *Mertensia lanceolata* var. *viridus* (BOR)  
*Mertensia viridis* var. *viridis* See *Mertensia lanceolata* var. *viridus* (BOR)  
 \**Micranthes arguta* See checklist comment under *M. odontoloma* (SAX)  
*Micranthes odontoloma* (SAX)  
*Micranthes oregana* (SAX)  
*Micranthes rhomboidea* (SAX)  
*Mimulus guttatus* (SCR)  
*Mimulus langsdorfii* See *Mimulus guttatus* (SCR)  
*Mitella pentandra* (SAX)  
 ≠ *Mitella stauropetala* See *Mitella stauropetala* var. *stenopetala* (SAX)  
*Mitella stauropetala* var. *stenopetala* (SAX)  
*Mitella stenopetala* See *Mitella stauropetala* var. *stenopetala* (SAX)  
*Moldavica parviflora* See *Dracocephalum parviflorum* (LAM)  
*Moneses uniflora* (PYR)  
*Muhlenbergia montana* (POA)  
*Muhlenbergia richardsonis* (POA)  
*Noccaea montana* (BRA)  
*Oreobroma pygmaea* (POR)  
*Oreochrysum parryi* (AST)  
*Oreoxis alpina* subsp. *alpina* (API)  
*Orthilia secunda* (PYR)  
*Orthocarpus luteus* (SCR)  
*Oryzopsis asperifolia* (POA)  
*Oryzopsis pungens* (POA)  
*Osmorhiza depauperata* (API)  
*Osmorhiza obtusa* See *Osmorhiza depauperata* (API)  
*Oxypolis fendleri* (API)  
*Oxyria digyna* (PLG)  
 ≠ *Oxytropis campestris* var. *glabrata* See *Oxytropis campestris* var. *gracilis* (FAB)  
*Oxytropis campestris* var. *gracilis* (FAB)  
*Oxytropis gracilis* See *Oxytropis campestris* var. *gracilis* (FAB)  
*Pachystima myrsinites* See *Paxistima myrsinites* (CEL)  
*Packera cana* (AST)

**Packera crocata** (AST)  
**Packera dimorphophylla** subsp. **dimorphophylla** (AST)  
**Packera streptanthifolia** (AST)  
**Packera werneriiifolia** (AST)  
**Padus virginiana** subsp. **melanocarpa** (ROS)  
**Parnassia fimbriata** (PAR)  
**Parnassia parviflora** (PAR)  
**Paronchylia pulvinata** (ASN)  
*\*Pascopyrum smithii* See "names excluded from the checklist," under *Agropyron smithii*  
**Paxistima myrsinites** (CEL)  
**Pedicularis bracteosa** subsp. **paysoniana** (SCR)  
**Pedicularis groenlandica** (SCR)  
**Pedicularis parryi** subsp. **parryi** (SCR)  
*Pedicularis paysoniana* See **Pedicularis bracteosa** subsp. **paysoniana** (SCR)  
*≠ Pedicularis racemosa* See **Pedicularis racemosa** subsp. **alba** (SCR)  
**Pedicularis racemosa** subsp. **alba** (SCR)  
*\*Penstemon glaber* See "names excluded from the checklist," under **P. virens**  
*Penstemon glaucus* var. *stenosepalus* See **Penstemon whippleanus** (SCR)  
**Penstemon rydbergii** (SCR)  
*Penstemon rydbergii* subsp. *aggregatus* See **Penstemon rydbergii** (SCR)  
*\*Penstemon virens* See "names excluded from the checklist"  
**Penstemon whippleanus** (SCR)  
**Pentaphylloides floribunda** (ROS)  
**Phacelia sericea** subsp. **sericea** (HYD)  
*≠ Phleum alpinum* See **Phleum commutatum** (POA)  
**Phleum commutatum** (POA)  
**Phleum pratense** (POA)  
**Phlox multiflora** (PLM)  
**Picea engelmannii** (PIN)  
*Pinus contorta* subsp. *latifolia* See **Pinus contorta** var. *latifolia* (PIN)  
**Pinus contorta** var. *latifolia* (PIN)  
*Pinus taxifolia* See **Pseudotsuga menziesii** (PIN)  
**Plantago major** (PTG)  
**Pneumonanthe parryi** (GEN)  
**Poa agassizensis** (POA)  
**Poa alpina** (POA)  
*Poa ampla* See **Poa juncifolia** (POA)  
**Poa annua** (POA)  
**Poa arctica** (POA)  
**Poa compressa** (POA)  
**Poa cusickii** subsp. *epilis* (POA)  
*Poa epilis* See **Poa cusickii** subsp. *epilis* (POA)  
**Poa fendleriana** (POA)  
**Poa glauca** subsp. *rupicola* (POA)  
**Poa glaucifolia** (POA)  
*Poa interior* See **Poa nemoralis** subsp. *interior* (POA)  
**Poa juncifolia** (POA)  
**Poa leptocoma** (POA)  
**Poa nemoralis** subsp. *interior* (POA)  
**Poa nervosa** (POA)  
*\*Poa occidentalis* See "names excluded from the checklist"  
**Poa palustris** (POA)  
**Poa pratensis** (POA)

**Poa reflexa (POA)**  
*Poa rupicola* See *Poa glauca* subsp. *rupicola* (POA)  
*Poa sandbergii* See *Poa secunda* (POA)  
**Poa secunda (POA)**  
**Polemonium caeruleum** subsp. *amygdalinum* (PLM)  
*Polemonium delicatum* See *Polemonium pulcherrimum* subsp. *delicatum* (PLM)  
*Polemonium occidentale* See *Polemonium caeruleum* subsp. *amygdalinum* (PLM)  
**Polemonium pulcherrimum** subsp. *delicatum* (PLM)  
**Polemonium viscosum** (PLM)  
**Polygonum arenastrum** (PLG)  
*≠Polygonum aviculare* var. *aviculare* See *Polygonum arenastrum* (PLG)  
*Polygonum bistortoides* var. *bistortoides* See *Bistorta bistortoides* (PLG)  
*Polygonum bistortoides* var. *linearifolium* See *Bistorta bistortoides* (PLG)  
**Polygonum douglasii** (PLG)  
*Polygonum viviparum* See *Bistorta vivipara* (PLG)  
**Populus angustifolia** (SAL)  
**Populus tremuloides** (SAL)  
**Potentilla concinna** var. *concinna* (ROS)  
**Potentilla diversifolia** (ROS)  
*Potentilla fruticosa* See *Pentaphylloides floribunda* (ROS)  
*Potentilla gracilis* var. *pulcherrima* See *Potentilla pulcherrima* (ROS)  
**Potentilla hippiana** (ROS)  
**Potentilla pulcherrima** (ROS)  
**Potentilla subjuga** (ROS)  
\**Primula angustifolia* See "names excluded from the checklist"  
**Primula parryi** (PRM)  
*Prunus melanocarpa* See *Padus virginiana* subsp. *melanocarpa* (ROS)  
*Prunus virginiana* var. *melanocarpa* See *Padus virginiana* subsp. *melanocarpa* (ROS)  
**Pseudocymopterus montanus** (API)  
**Pseudognaphalium stramineum** (AST)  
\**Pseudoregnaria spicata* subsp. *spicata* See "names excluded from the checklist," under *Agropyron spicatum*  
**Pseudotsuga menziesii** (PIN)  
**Psilochenia acuminata** (AST)  
**Psychrophila leptosepala** (HEL)  
**Pterospora andromedea** (MNT)  
*Pulsatilla ludoviciana* See *Pulsatilla patens* subsp. *multifida* (RAN)  
*Pulsatilla patens* subsp. *hirsutissima* See *Pulsatilla patens* subsp. *multifida* (RAN)  
**Pulsatilla patens** subsp. *multifida* (RAN)  
*Pyrola asarifolia* var. *asarifolia* See *Pyrola rotundifolia* subsp. *asarifolia* (PYR)  
*Pyrola asarifolia* var. *purpurea* See *Pyrola rotundifolia* subsp. *asarifolia* (PYR)  
**Pyrola chlorantha** (PYR)  
**Pyrola minor** (PYR)  
**Pyrola rotundifolia** subsp. *asarifolia* (PYR)  
*Pyrola secunda* See *Orthilia secunda* (PYR)  
*Pyrola uliginosa* See *Pyrola rotundifolia* subsp. *asarifolia* (PYR)  
*Pyrola virens* See *Pyrola chlorantha* (PYR)  
*Ramischia secunda* See *Orthilia secunda* (PYR)  
**Ranunculus adoneus** (RAN)  
**Ranunculus alismifolius** var. *montanus* (RAN)  
*Ranunculus aquatilis* var. *capillaceus* See *Batrachium trichophyllum* (RAN)  
**Ranunculus eschscholtzii** (RAN)  
*Ranunculus eschscholtzii* var. *eschscholtzii* See *Ranunculus eschscholtzii* (RAN)  
*Ranunculus eschscholtzii* var. *typicus* See *Ranunculus eschscholtzii* (RAN)

**Ranunculus inamoenus (RAN)**  
*Ranunculus inamoenus* var. *alpeophilus* See **Ranunculus inamoenus (RAN)**  
**Ranunculus pedatifidus (RAN)**  
**Rhodiola integrifolia (CRS)**  
**Ribes coloradense (GRS)**  
**Ribes inerme (GRS)**  
**Ribes lacustre (GRS)**  
**\*Ribes leptanthum** See "names excluded from the checklist"  
**Ribes montigenum (GRS)**  
 ≠ *Rosa acicularis* See **Rosa sayi (ROS)**  
*Rosa acicularis* subsp. *sayi* See **Rosa sayi (ROS)**  
 ≠ *Rosa nutkana* See **Rosa sayi** and **R. woodsii (ROS)**  
**Rosa sayi (ROS)**  
**Rosa woodsii (ROS)**  
**\*Rubacer parviflorum** See "names excluded from the checklist," under *Rubus parviflorus*  
**Rubus idaeus** subsp. **melanolasius (ROS)**  
**\*Rubus parviflorus** See "names excluded from the checklist"  
*Rubus strigosus* See **Rubus idaeus** subsp. **melanolasius (ROS)**  
**\*Rudbeckia** sp. See "names excluded from the checklist"  
 ≠ *Rumex mexicanus* See **Rumex triangulivalvis (PLG)**  
*Rumex quadrangulivalvis* (misspelling) See **Rumex triangulivalvis (PLG)**  
**Rumex triangulivalvis (PLG)**  
**Rydbergia grandiflora (AST)**  
**Sagina saginoides (ASN)**  
*Salix anglorum* var. *antiplasta* See **Salix arctica** subsp. **petraea (SAL)**  
 ≠ *Salix arctica* See **Salix arctica** subsp. **petraea (SAL)**  
**Salix arctica** subsp. **petraea (SAL)**  
**Salix bebbiana (SAL)**  
**Salix boothii (SAL)**  
**Salix brachycarpa (SAL)**  
*Salix brachycarpa* var. *antimima* See **Salix brachycarpa (SAL)**  
*Salix brachycarpa* var. *brachycarpa* See **Salix brachycarpa (SAL)**  
**Salix drummondiana (SAL)**  
*Salix drummondiana* var. *subcoerulea* See **Salix drummondiana (SAL)**  
**Salix geyeriana (SAL)**  
*Salix geyeriana* var. *geyeriana* See **Salix geyeriana (SAL)**  
**Salix monticola (SAL)**  
*Salix nivalis* var. *nivalis* See **Salix reticulata** subsp. **nivalis (SAL)**  
**Salix planifolia (SAL)**  
*Salix planifolia* var. *monica* See **Salix planifolia (SAL)**  
 ≠ *Salix pseudocordata* See **Salix boothii (SAL)**  
**Salix reticulata** subsp. **nivalis (SAL)**  
**Salix scouleriana (SAL)**  
*Salix subcoerulea* See **Salix drummondiana (SAL)**  
**Salix wolfii (SAL)**  
*Salix wolfii* var. *idahoensis* See **Salix wolfii (SAL)**  
*Salix wolfii* var. *wolfii* See **Salix wolfii (SAL)**  
**Sambucus melanocarpa** See **Sambucus microbotrys (CPR)**  
**Sambucus microbotrys (CPR)**  
 ≠ *Sambucus pubens* See **Sambucus microbotrys (CPR)**  
*Sambucus racemosa* subsp. *pubens* var. *microbotrys* See **Sambucus microbotrys (CPR)**  
 ≠ *Sambucus racemosa* subsp. *racemosa* See **Sambucus microbotrys (CPR)**  
 ≠ *Saxifraga arguta* See **Micranthes odontoloma (SAX)**

*Saxifraga austromontana* See *Ciliaria austromontana* (SAX)  
*Saxifraga bronchialis* subsp. *austromontana* See *Ciliaria austromontana* (SAX)  
 ≠ *Saxifraga bronchialis* subsp. *bronchialis* See *Ciliaria austromontana* (SAX)  
*Saxifraga debilis* See *Saxifraga hyperborea* subsp. *debilis* (SAX)  
*Saxifraga hyperborea* subsp. *debilis* (SAX)  
*Saxifraga montanensis* See *Micranthes oregana* (SAX)  
*Saxifraga odontoloma* See *Micranthes odontoloma* (SAX)  
*Saxifraga oregana* var. *montanensis* See *Micranthes oregana* (SAX)  
*Saxifraga rhomboidea* See *Micranthes rhomboidea* (SAX)  
 ≠ *Saxifraga subapetala* See *Micranthes oregana* (SAX)  
*Secale cereale* (POA)  
*Sedum integrifolium* See *Rhodiola integrifolia* (CRS)  
*Sedum lanceolatum* See *Amerosedum lanceolatum* (CRS)  
*Sedum rhodanthum* See *Clementsia rhodantha* (CRS)  
 ≠ *Sedum stenopetalum* See *Amerosedum lanceolatum* (CRS)  
*Selaginella densa* (SEL)  
*Senecio ambrosioides* See *Senecio eremophilus* subsp. *kingii* (AST)  
*Senecio amplexans* var. *amplexans* See *Ligularia amplexans* (AST)  
*Senecio atratus* (AST)  
*Senecio bigelovii* var. *hallii* See *Ligularia bigelovii* var. *hallii* (AST)  
 ≠ *Senecio bigelovii* var. *bigelovii* See *Ligularia bigelovii* var. *hallii* (AST)  
*Senecio canus* See *Packera cana* (AST)  
*Senecio canus* var. *purshianus* See *Packera cana* (AST)  
*Senecio carthamoides* See *Senecio fremontii* subsp. *blitoides* (AST)  
*Senecio crassulus* (AST)  
*Senecio crocatus* See *Packera crocata* (AST)  
*Senecio cymbalarioides* See *Packera streptanthifolia* (AST)  
*Senecio dimorphophyllus* See *Packera dimorphophylla* subsp. *dimorphophylla* (AST)  
*Senecio eremophilus* subsp. *kingii* (AST)  
*Senecio fremontii* subsp. *blitoides* (AST)  
*Senecio integerrimus* (AST)  
*Senecio purshianus* See *Packera cana* (AST)  
*Senecio saxosus* See *Packera werneriiifolia* (AST)  
*Senecio serra* var. *admirabilis* (AST)  
 ≠ *Senecio serra* var. *serra* See *Senecio serra* var. *admirabilis* (AST)  
*Senecio soldanella* See *Ligularia soldanella* (AST)  
*Senecio triangularis* (AST)  
*Senecio werneriiifolius* var. *werneriiifolius* See *Packera werneriiifolia* (AST)  
*Senecio wootonii* (AST)  
*Seriphidium canum* (AST)  
*Seriphidium vaseyanum* (AST)  
*Shepherdia canadensis* (ELE)  
*Sibbaldia procumbens* (ROS)  
*Sidalcea candida* (MLV)  
*Silene acaulis* subsp. *acaulescens* (misspelling) See *Silene acaulis* subsp. *subacaulescens* (CRY)  
*Silene acaulis* subsp. *subacaulescens* (CRY)  
*Silene cucubalus* See *Silene vulgaris* (CRY)  
*Silene drummondii* See *Gastrolychnis drummondii* (CRY)  
*Silene latifolia* subsp. *alba* See *Melandrium dioicum* (CRY)  
*Silene menziesii* See *Anotites menziesii* (CRY)  
*Silene vulgaris* (CRY)  
 \**Sisymbrium* sp. See "names excluded from the checklist"  
*Sisyrinchium montanum* (IRI)

*Sitanion hystrix* See **Elymus elymoides (POA)**  
*Sitanion hystrix* var. *brevifolium* See **Elymus elymoides (POA)**  
**Smelowskia calycina (BRA)**  
*Smilacina stellata* See **Maianthemum stellatum (CVL)**  
*Solidago ciliosa* See **Solidago multiradiata** var. **scopulorum (AST)**  
*Solidago decumbens* var. *oreophila* See **Solidago spathulata** var. **neomexicana (AST)**  
**Solidago missouriensis (AST)**  
*Solidago multiradiata* subsp. *scopulorum* See **Solidago multiradiata** var. **scopulorum (AST)**  
**Solidago multiradiata** var. **scopulorum (AST)**  
*Solidago parryi* See **Oreochrysum parryi (AST)**  
**Solidago spathulata** var. **neomexicana (AST)**  
*Sonchus arvensis* subsp. *glabrescens* See **Sonchus uliginosus (AST)**  
*Sonchus arvensis* var. *glabrescens* See **Sonchus uliginosus (AST)**  
**Sonchus uliginosus (AST)**  
**Sorbus scopulina (ROS)**  
**Spergularia rubra (ASN)**  
**Spiranthes romanzoffiana (ORC)**  
**Stellaria longipes (ASN)**  
*Stellaria longipes* var. *longipes* See **Stellaria longipes (ASN)**  
*Stellaria longipes* subsp. *stricta* See **Stellaria longipes (ASN)**  
**Stellaria umbellata (ASN)**  
*Stipa columbiana* var. *nelsonii* See **Stipa nelsonii (POA)**  
**Stipa lettermanii (POA)**  
**Stipa nelsonii (POA)**  
 ≠ *Streptopus amplexifolius* var. *americanus* See **Streptopus fassettii (UVU)**  
*Streptopus amplexifolius* var. *chalazatus* See **Streptopus fassettii (UVU)**  
 \**Streptopus angustifolia* (misspelling) See "names excluded from the checklist"  
**Streptopus fassettii (UVU)**  
*Swertia palustris* See **Swertia perennis (GEN)**  
**Swertia perennis (GEN)**  
*Swertia radiata* See **Frasera speciosa (GEN)**  
 \**Taraxacum ceratophorum* See "names excluded from the checklist," under **T. dumetorum**  
 \**Taraxacum dumetorum* See "names excluded from the checklist"  
**Taraxacum officinale (AST)**  
 \**Taraxacum ovinum* See "names excluded from the checklist," under **T. dumetorum**  
 \**Thalictrum fendleri* See text, under aspen plant associations  
**Thalictrum sparsiflorum (COP)**  
*Thalictrum sparsiflorum* var. *saximontanum* See **Thalictrum sparsiflorum (COP)**  
**Thermopsis divaricarpa (FAB)**  
**Thinopyrum intermedium** subsp. **intermedium (POA)**  
**Thinopyrum ponticum (POA)**  
 ≠ *Thlaspi alpestre* See **Noccaea montana (BRA)**  
*Thlaspi montanum* See **Noccaea montana (BRA)**  
**Tonestus pygmaeus (AST)**  
**Tragopogon dubius** subsp. **major (AST)**  
**Trifolium dasyphyllum (FAB)**  
**Trifolium hybridum (FAB)**  
 ≠ *Trifolium longipes* subsp. *longipes* See **Trifolium rusbyi** subsp. **reflexum (FAB)**  
*Trifolium longipes* var. *reflexum* See **Trifolium rusbyi** subsp. **reflexum (FAB)**  
**Trifolium nanum (FAB)**  
**Trifolium parryi (FAB)**  
**Trifolium repens (FAB)**  
**Trifolium rusbyi** subsp. **reflexum (FAB)**

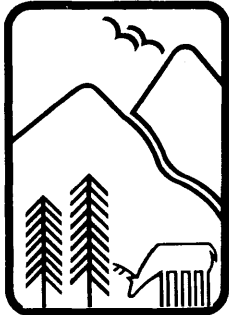
≠ *Trisetum spicatum* See **Trisetum spicatum** subssp. **congdonii** and **majus** (POA)  
**Trisetum spicatum** subsp. **congdonii** (POA)  
*Trisetum spicatum* subsp. *majus* See **Trisetum spicatum** subsp. **molle** (POA)  
**Trisetum spicatum** subsp. **molle** (POA)  
**Trisetum wolfii** (POA)  
**Trollius albiflorus** (HEL)  
*Trollius laxus* var. *albiflorus* See **Trollius albiflorus** (HEL)  
**Turritis glabra** (BRA)  
*Vaccinium caespitosum* See **Vaccinium caespitosum** (ERI)  
**Vaccinium caespitosum** (ERI)  
 ≠ *Vaccinium myrtillus* See **Vaccinium myrtillus** subsp. **oreophilum** (ERI)  
**Vaccinium myrtillus** subsp. **oreophilum** (ERI)  
**Vaccinium scoparium** (ERI)  
**Valeriana capitata** subsp. **acutiloba** (VAL)  
**Valeriana edulis** (VAL)  
 ≠ *Veratrum californicum* See **Veratrum tenuipetalum** (MLN)  
 ≠ *Veratrum speciosum* See **Veratrum tenuipetalum** (MLN)  
**Veratrum tenuipetalum** (MLN)  
**Verbascum thapsus** (SCR)  
**Veronica americana** (SCR)  
**Veronica nutans** (SCR)  
 ≠ *Veronica wormskioldii* See **Veronica nutans** (SCR)  
 ≠ *Veronica wormskioldii* See **Veronica nutans** (SCR)  
**Vicia americana** var. **americana** (FAB)  
**Viola adunca** (VIO)  
*Viola adunca* var. *adunca* See **Viola adunca** (VIO)  
*Viola adunca* var. *bellidifolia* See **Viola labradorica** (VIO)  
*Viola bellidifolia* See **Viola labradorica** (VIO)  
 ≠ *Viola canadensis* See **Viola rydbergii** and **V. scopulorum** (VIO)  
 ≠ *Viola canadensis* var. *canadensis* See **Viola scopulorum** (VIO)  
*Viola canadensis* var. *scopulorum* See **Viola scopulorum** (VIO)  
 ≠ *Viola canadensis* var. *rugulosa* See **Viola rydbergii** (VIO)  
*Viola canadensis* var. *rydbergii* See **Viola rydbergii** (VIO)  
 ≠ *Viola epipsiloides* See **Viola macloskeyi** subsp. **pallens** (VIO)  
**Viola labradorica** (VIO)  
**Viola macloskeyi** subsp. **pallens** (VIO)  
*Viola macloskeyi* var. *pallens* See **Viola macloskeyi** subsp. **pallens** (VIO)  
*Viola pallens* See **Viola macloskeyi** subsp. **pallens** (VIO)  
*Viola palustris* subsp. *brevipes* See **Viola macloskeyi** subsp. **pallens** (VIO)  
 ≠ *Viola palustris* subsp. *palustris* See **Viola macloskeyi** subsp. **pallens** (VIO)  
 ≠ *Viola renifolia* See **Viola renifolia** var. **brainerdii** (VIO)  
**Viola renifolia** var. **brainerdii** (VIO)  
 ≠ *Viola rugulosa* See **Viola rydbergii** (VIO)  
**Viola rydbergii** (VIO)  
**Viola scopulorum** (VIO)  
*Virgulaster adscendens* See **Virgulaster ascendens** (AST)  
**Virgulaster ascendens** (AST)  
 \**Xocleria cristata* (misspelling) See "names excluded from the checklist"  
*Zigadenus elegans* See **Anticlea elegans** (MLN)  
*Zygadenus elegans* See **Anticlea elegans** (MLN)

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This report lists 441 vascular plant taxa in 228 genera and 63 families encountered on the 9,300-ha Fraser Experimental Forest in central Colorado. Synonyms appearing in previous publications and other works pertaining to the Fraser Experimental Forest, as well as appropriate Colorado floras and less-technical field guides, are included. Plant communities and habitats are discussed, and a list of 54 lichens is also presented. A glossary of related terms is included.

**Keywords:** checklist, Colorado, flora, Fraser Experimental Forest, lichens, nomenclature, Rocky Mountains, taxonomy.

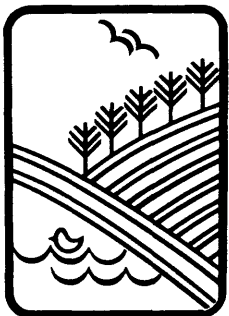
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## Rocky Mountain Forest and Range Experiment Station

The Rocky Mountain Station is one of eight regional experiment stations, plus the Forest Products Laboratory and the Washington Office Staff, that make up the Forest Service research organization.

### RESEARCH FOCUS

Research programs at the Rocky Mountain Station are coordinated with area universities and with other institutions. Many studies are conducted on a cooperative basis to accelerate solutions to problems involving range, water, wildlife and fish habitat, human and community development, timber, recreation, protection, and multiresource evaluation.

### RESEARCH LOCATIONS

Research Work Units of the Rocky Mountain Station are operated in cooperation with universities in the following cities:

Albuquerque, New Mexico  
Flagstaff, Arizona  
Fort Collins, Colorado\*  
Laramie, Wyoming  
Lincoln, Nebraska  
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\*Station Headquarters: 240 W. Prospect Rd., Fort Collins, CO 80526