

## Floristic Survey Metadata

Floristic Inventory of the Northern Gunnison Basin

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**Abstract:** This thesis project is a general floristic survey of the northern Gunnison Basin. It also represents part of an ongoing investigation of the biodiversity of the Rocky Mountains being conducted by the Rocky Mountain Herbarium (RM) (Hartman 1992).

The northern Gunnison Basin (NGB) is located in west-central Colorado in the Southern Rocky Mountains. The study area covers ca. 2,700 square miles of public land (Bureau of Land Management and U.S. Forest Service lands) and ranges in elevation from ca. 5,700 to 14,200 feet above sea level. There is a concomitant range in plant community types from saltbush (*Atriplex confertifolia*) and sagebrush (*Artemisia tridentata*) shrublands to alpine meadows.

Several plant systematists have botanized in the NGB, but most of the investigations involved relatively small parts of the Basin (Hartman and Rottman 1987, Langenheim 1955, Bathke 1968). Joseph Barrell (1969) published the Flora of the Gunnison Basin which lists the vascular plant species that he and others documented by depositing voucher collections in various herbaria. Additionally, he provides a description of each taxon. But with five major wilderness areas now designated that appear as islands in national forest lands, there was much area yet requiring botanical exploration.

This was complicated by difficulty of access and the significant elevational relief. In the inventory work here reported, every taxon in identifiable condition as documented with a voucher specimen at each location. Habitat and distribution data thus are available for each species. These data are now incorporated into the Rocky Mountain Herbarium specimen database. Also, this research provides data regarding distribution of sensitive species and of noxious weeds and other invasive plants.

Documentation of the vascular plants of a constructed wetland along the Gunnison River, near Gunnison, was included to determine the success of native plant development (Gutrich, unpublished). Data from this thesis project are also being used to examine correlations with the present wetland delineation system used in the United States (Gutrich, unpublished).

Lastly, these data were used to update a species list of the Mount Emmons Acid Fen, now designated as a State Natural Area by the Forest Service. It is home to one of only two known populations of *Drosera rotundifolia* (Droseraceae) in Colorado. Floristic inventories also may document range extensions of species (Seagrist and Taylor 1996) or the discovery of taxa new to science (Hartman and Nelson 1998a, Milius 1999).

Funding Sources: University of Wyoming, Colorado Native Plant Society, United States Forest Service, Bureau of Land Management

Study Location: The study area is bordered by U.S. Highway 50 and Colorado Highway 92 on the south and the Continental Divide on the east. The northern border extends along the Gunnison/Chaffee County and Gunnison/Pitkin County borders excluding the White River National Forest north of the Raggeds Wilderness.

The northwestern boundary is the Gunnison/Mesa County and the Delta/Mesa County lines. It is bordered on the west by Colorado Highway 92 from Morrow Point to Hotchkiss, and Colorado Highway 133 from Hotchkiss to Paonia.

Start Date: 9 May 1997

End Date: 26 Aug 1998

Methods: Field work was conducted from 9 May through 18 August 1997 and 14 May through 26 August 1998. Approximately 100 days were spent collecting plants in the field and 100 days pressing specimens at the Rocky Mountain Biological Laboratory (RMBL), Gothic, CO. The subsequent academic years were spent at the RM, University of Wyoming, Laramie, identifying the collections. Weber and Wittman (1996), Harrington (1964), and Dorn (1992) are the floras most often used in making determinations, and the collections were compared with authenticated material.

Taxa of vascular plants were collected, with few exceptions, in flower or fruit at intervals of four to eight miles (one mile in the alpine). All vegetation types were sampled frequently, but due to the size of the area, no location was visited more than once. Due to the presence of large roadless areas, collecting trips of two to three days were routinely made. These were on foot, and I often returned with over 400 collections in my backpack.

Data Location: Zip Disks

File Format: Word 97

Data Format:

Scientific name with authority;

[nomenclatural synonymy according to Weber and Wittman (1992) where necessary];

regions of occurrence;

vegetation types found;

counties of occurrence;

elevational range in feet;

number of collections made in this study.

ELM - Elk Mountains

FRA - Fossil Ridge Area  
GRA - Grand Mesa  
GUU - Gunnison Uplift  
SWA - Sawatch Range  
WEM - West Elk Mountains

DC= Delta County  
GC= Gunnison County  
MC= Montrose County

\* - sensitive species  
! - introduced species  
+ - Colorado state noxious weed  
# - Colorado state endemic  
(Hartman and Nelson 1998b, O'Kane 1988)

Keywords: Gunnison Basin, Rocky Mountains, floristic inventory, plant survey, species list, plant species list, central Colorado, Colorado, Southern Rocky Mountains, Elk Mountains, Sawatch Range, Maroon Bells Snowmass Wilderness, Raggeds Wilderness, Collegiate Peak Wilderness, Fossil Ridge

Publications: Taylor, Kevin 1999 Floristic Inventory of the Northern Gunnison Basin. MS Thesis, University of Wyoming, Laramie, WY 103 Pages.

Voucher Specimens: Rocky Mountain Herbarium at the University of Wyoming, The Rocky Mountain Biological Lab Herbarium and the Forest Service/BLM herbarium in Gunnison, Colorado.