

Level 4 Potential Conservation Area (PCA) Report

Name Rock Creek

Site Code S.USCOHP*25957

IDENTIFIERS

Site ID 2318 Site Class PCA
Site Alias None

Network of Conservation Areas (NCA)

<u>NCA Site ID</u>	<u>NCA Site Code</u>	<u>NCA Site Name</u>
2468	S.USCOHP*27037	Middle Park

LOCATORS

Nation United States Latitude 400411N
State Colorado Longitude 1061308W

Quad Code Quad Name

40106-A2 Parshall

County

Grand (CO)

Watershed Code Watershed Name

14010001 Colorado headwaters

SITE DESCRIPTION

Minimum Elevation	7,500.00	Feet	2,286.00	Meters
Maximum Elevation	7,500.00	Feet	2,286.00	Meters

Site Description

The Rock Creek site is located in Middle Park, between Kremmling and Parshall. In general, Middle Park is located within a series of high mountain parks formed by north/south trending faults traveling the length of Colorado (Chronic 1980). The predominant grayish-brown soils (USDA, NRCS 1994) are derived from Cretaceous Niobrara and Pierre shale of the Troublesome Formation (Tweto 1979). The sparsely vegetated slopes are due to the presence of fine textured, clayey soils that contain mineralogic properties that effectively excludes almost all vegetation (Colorado Native Plant Society 1989). Rock Creek is an ephemeral stream that drains into the Colorado River. The Middle Park endemic Osterhout milkvetch (*Astragalus osterhoutii*) and dog parsley (*Aletes nuttallii*), a regional endemic, are found on the clayey soils (Dawson 1999). These unique plants are able to thrive in the seleniferous soils where few other plants can. Other associated plants, at low (<5%) cover include Patterson's milkvetch (*Astragalus pattersonii*), shortstem buckwheat (*Eriogonum brevicaulis*), spiny phlox (*Phlox hoodii*), Fendler's bluegrass (*Poa fendleriana*), bluebunch wheatgrass (*Pseudoroegneria spicata*), sulphur-flowered buckwheat (*Eriogonum umbellatum*), mat penstemon (*Penstemon caespitosus*), and Indian ricegrass (*Achnatherum hymenoides*). Upland vegetation, where soils have lower concentration of minerals, includes yellow rabbitbrush (*Chrysothamnus viscidiflorus*), broom snakeweed (*Gutierrezia sarothrae*), Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*), greasewood (*Sarcobatus vermiculatus*), and scarlet globemallow (*Sphaeralcea coccinea*).

Key Environmental Factors

Edaphic indicators are clayey, seleniferous soils derived from Niobrara and Pierre shale, soil series Harsha loams (USDA, NRCS 1994).

Climate Description

The climate follows typical weather patterns of high mountain valleys, low precipitation/snowfall (<12-15 inches/year) and late summer "monsoons".

Land Use History

No Data

Cultural Features

No Data

SITE DESIGN

Site Map Y - Yes Mapped Date 12/12/2005
Designer Culver, D.R.

Boundary Justification

The boundaries are drawn to capture the outcrops of the Troublesome Formation which support the known rare plant occurrences and potential habitat.

Level 4 Potential Conservation Area (PCA) Report

Name Rock Creek

Site Code S.USCOHP*25957

Primary Area 719.85 Acres

291.31 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B2: Very High Biodiversity Significance

Biodiversity Significance Comments

The Rock Creek site supports a good (B-ranked) occurrence of a globally critically imperiled (G1/S1) plant that is a Federally Listed Endangered species: Osterhout milkvetch (*Astragalus osterhoutii*). Additionally, an excellent (A-ranked) occurrence of the globally vulnerable (G3/S1) dog parsley (*Aletes nuttallii*), was discovered here. This site is irreplaceable. If destroyed, a significant amount of the occupied habitat for Osterhout milkvetch will be lost.

Other Values Rank V3 - Moderate values

Other Values Comments

The site is located in a State Wildlife Area used for hunting and fishing activities.

LAND MANAGEMENT ISSUES

Land Use Comments

No Data

Natural Hazard Comments

Clayey soils, once wet, are difficult to drive and walk on.

Exotics Comments

No Data

Offsite

No Data

Information Needs

No Data

ASSOCIATED ELEMENTS OF BIODIVERSITY

<u>Element</u>			<u>Global Rank</u>	<u>State Rank</u>	<u>Driving Site Rank</u>
<u>State ID</u>	<u>State Scientific Name</u>	<u>State Common Name</u>			
18877	<i>Aletes nuttallii</i>	dog parsley	G3	S1	No
20454	<i>Astragalus osterhoutii</i>	Kremmling Osterhout milkvetch	G1	S1	Yes

REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
158413	Chronic, H. 1980. Roadside geology of Colorado. Mountain Press Publishing Company, Missoula, Montana. 322 pp.
169492	Colorado Native Plant Society. 1989. Rare Plants of Colorado. Published jointly by Rocky Mountain Nature Association and Colorado Native Plant Society, Estes Park, CO.
193632	Culver, D.R. and Jones, J.R. 2006. Final Report: Survey of Critical Biological Resources in Grand County. Colorado Natural Heritage Program, Fort Collins, CO.
193652	Dawson, C.A. 1999. The autecology of <i>Astragalus osterhoutii</i> Jones. Dissertation. University of Denver, Denver, CO.
192747	Tweto, O. 1979. Geologic Map of Colorado, 1:500,000. United States Geological Survey, Department of Interior, and Geologic Survey of Colorado, Denver, CO.
193653	U.S. Department of Agriculture, Soil Conservation Service. 1994. State Soil Geographic (STATSGO) database for Colorado. Fort Worth, TX.

ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date 12/12/2005

Version Author Culver, D.R.

Disclaimer

Level 4 Potential Conservation Area (PCA) Report

Name Rock Creek

Site Code S.USCOHP*25957

These data are a product and property of Colorado State University, Colorado Natural Heritage Program (CNHP). These data are strictly "on loan" and should be considered "works in progress". Data maintained in the Colorado Natural Heritage Program database are an integral part of ongoing research at CSU and reflect the observations of many scientists, institutions and our current state of knowledge. These data are acquired from various sources, with varying levels of accuracy, and are continually being updated and revised. Many areas have never been surveyed and the absence of data in any particular geographic area does not necessarily mean that species or ecological communities of concern are not present. These data should not be regarded as a substitute for on-site surveys required for environmental assessments. Absence of evidence is NOT evidence of absence. Absence of any data does not mean that other resources of special concern do not occur, but rather CNHP files do not currently contain information to document this presence. CNHP is not responsible for whether other, non-CNHP data providers have secured landowner permission for data collected.

These data are provided for non-commercial purposes only. Under no circumstances are data to be distributed in any fashion to outside parties. To ensure accurate application of data, tabular and narrative components must be evaluated in conjunction with spatial components. Failure to do so constitutes a misuse of the data. The Colorado Natural Heritage Program shall have no liability or responsibility to the data users, or any other person or entity with respect to liability, loss, or damage caused or alleged to be caused directly or indirectly by the data, including but not limited to any interruption of service, loss of business, anticipatory profits or indirect, special, or consequential damages resulting from the use of operation of the data. Data users hereby agree to hold CNHP, Colorado State University, and the State of Colorado harmless from any claim, demand, cause of action, loss, damage or expense from or related to data users use of or reliance on the data, regardless of the cause or nature thereof, and even in the event that such cause is attributable to the negligence or misconduct of CNHP.

These data are provided on an as-is basis, as-available basis without warranties of any kind, expressed or implied, INCLUDING (BUT NOT LIMITED TO) WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT. Although CNHP maintains high standards of data quality control, CNHP, Colorado State University, and the State of Colorado further expressly disclaim any warranty that the data are error-free or current as of the date supplied