

Level 4 Potential Conservation Area (PCA) Report

Name Conn Creek

Site Code S.USCOHP*493

IDENTIFIERS

Site ID 1788 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>
2470	S.USCOHP*27039	Roan

LOCATORS

Nation United States Latitude 393144N
State Colorado Longitude 1081420W

<u>Quad Code</u>	<u>Quad Name</u>
39108-D2	Red Pinnacle
39108-D3	Long Point
39108-E2	Circle Dot Gulch
39108-E3	Mount Blaine

County

Garfield (CO)

<u>Watershed Code</u>	<u>Watershed Name</u>
14010006	Parachute-Roan

SITE DESCRIPTION

Minimum Elevation	6,200.00 Feet	1,890.00 Meters
Maximum Elevation	8,400.00 Feet	2,560.00 Meters

Site Description

Conn Creek cuts through the Green River formation on the Roan Plateau, forming a small box canyon before joining Roan Creek. Two hundred foot shale cliffs form the walls of the box canyon, and a dramatic waterfall at the head of the canyon plunges more than 100 feet over the Roan Cliffs. Conn Creek is a small perennial stream with a very high gradient (500 feet per mile). The adjacent side slopes are very steep and vegetated with Gambel's oak (*Quercus gambelii*), mountain mahogany (*Cercocarpus montanus*), and Utah serviceberry (*Amelanchier utahensis*) on lower slopes while the upper and northeast-facing slopes near the cliff are forested with Douglas-fir. Occasional landslides provide habitat for rare and endemic shale plants. The riparian zone of Conn Creek supports a unique low elevation community dominated by box elder maple and choke cherry. It has a very dense, and fairly undisturbed understory of Oregon grape (*Mahonia repens*), skunkbrush (*Rhus trilobata*), serviceberry (*Amelanchier utahensis*), snowberry (*Symphoricarpos rotundifolius*), and black twinberry (*Lonicera involucrata*). Three rare plants were found on the shale barrens of the steep side slopes: Arapien stickleaf, sun-loving meadowrue and Utah fescue. All three are oil shale endemics, adapted to the Green River shale. A fourth Colorado endemic, hanging garden sullivantia, was found at a waterfall with a plunge pool and seeping cliffs, associated with oil shale columbine (*Aquilegia barnebyi*).

Key Environmental Factors

No Data

Climate Description

No Data

Land Use History

No Data

Cultural Features

No Data

SITE DESIGN

Site Map Y - Yes Mapped Date 01/13/1995
Designer Rondeau, R.J.

Boundary Justification

The site boundaries for Conn Creek include the riparian area and its immediate slopes and cliff from the waterfall to its junction with Cascade Canyon. This boundary includes all element occurrences listed. The more significant elements occur on the shale scree slopes and streamsidings of the box canyon. In order to

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protect these elements, especially the riparian zones, a broader, secondary boundary including the entire watershed should be considered. The watershed approach is especially important if mining activity takes place, since oil shale mining can be highly destructive to the drainages. The boundaries are also mapped to include the Sage Sparrow occurrence and over 30 acres of the surrounding big sagebrush habitat. Sage Sparrows require big sagebrush parks of over 30 acres for nesting (Lambeth 1998).

Primary Area 6,791.29 Acres 2,748.35 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B2: Very High Biodiversity Significance

Biodiversity Significance Comments

An excellent occurrence of a globally vulnerable riparian community, and a good occurrence of a shale endemic plant are found within the Conn Creek Site. The globally imperiled (G2/S2) Roan Cliffs blazing star (*Mentzelia rhizomata*) is historically known from the site and is an endemic perennial found only on steep and barren shale slopes of the Green River Formation. It is restricted to widely separated regions: central Utah and west-central Colorado. Its range is only about 30 square miles in Colorado (NatureServe 2000), where it may be locally common. The 21 documented occurrences in Colorado all are found on Green River shale on the Roan Plateau in Garfield County. The globally vulnerable (G2/S2) sun-loving meadowrue (*Thalictrum heliophilum*) grows on sparsely vegetated, steep shale talus slopes of the Green River Formation. It is restricted to Colorado, in Garfield, Mesa and Rio Blanco counties, with 36 known occurrences and approximately 130,000 individuals. Utah fescue is one of four species of fescue endemic to the Western U.S. (Welsh et al. 1987). Its range is limited to the Green River Formation in Colorado and Utah. Of the 85 occurrences known in Colorado, 37 are in Garfield County, 57 in Rio Blanco County, and one in Mesa County. This site supports a good (B-ranked) occurrence. Hanging garden sullivantia (*Sullivantia hapemanii* var. *purpusii*) is more widespread in its distribution, but only grows on moist cliff faces (hanging gardens). The species is endemic to Colorado, in Garfield, Gunnison, Montrose, Pitkin, and Rio Blanco counties, where there are 45 documented occurrences and approximately 40,000 individuals (NatureServe 2000). The lower elevation riparian areas support one of the best examples of a narrowly distributed (G3/S2) boxelder / chokecherry community (*Acer negundo* / *Prunus virginiana*). Low elevation riparian communities in Colorado are generally in poor condition due to hydrologic changes, heavy grazing, agricultural use, and development. During CNHP's 1994 riparian vegetation study of the Colorado River, this site was found to be exemplary in its low elevation riparian vegetation.

Other Values Rank No Data

Other Values Comments

No Data

LAND MANAGEMENT ISSUES

Land Use Comments

No Data

Natural Hazard Comments

No Data

Exotics Comments

No Data

Offsite

No Data

Information Needs

No Data

ASSOCIATED ELEMENTS OF BIODIVERSITY

Element	State Scientific Name	State Common Name	Global Rank	State Rank	Driving Site Rank
22214	<i>Sullivantia hapemanii</i> var. <i>purpusii</i>	Hanging Garden sullivantia	G3T3	S3	No
18994	<i>Argillochloa dasyclada</i>	Utah fescue	G3	S3	No
24678	<i>Acer negundo</i> / <i>Prunus virginiana</i> Forest	Montane Riparian Deciduous Forest	G3	S2	No
17361	<i>Mentzelia rhizomata</i>	Roan Cliffs blazing star	G2	S2	No
21414	<i>Thalictrum heliophilum</i>	sun-loving meadowrue	G2	S2	Yes

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REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
-	No Data

ADDITIONAL TOPICS

Additional Topics
No Data

VERSION

Version Date	12/16/2000
Version Author	Lyon, M.J.

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