

Level 4 Potential Conservation Area (PCA) Report

Name Garden Park Fossil

Site Code S.USWRO1*147

IDENTIFIERS

Site ID 157 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>
2466	S.USCOHP*27035	Arkansas Valley Barrens

LOCATORS

Nation United States Latitude 383259N
State Colorado Longitude 1051247W

Quad Code Quad Name
38105-E2 Cooper Mountain

County
Fremont (CO)

Watershed Code Watershed Name
11020002 Upper Arkansas

SITE DESCRIPTION

Minimum Elevation	5,490.00 Feet	1,673.35 Meters
Maximum Elevation	6,820.00 Feet	2,078.74 Meters

Site Description

The Garden Park Fossil site is located along Fourmile Creek, which flows south into the Arkansas River. The site is characterized by a mosaic of high quality pinon - juniper woodlands, grasslands, and clay barrens. Two rare plants, *Eriogonum brandegeei* and *Nuttallia chrysantha*, occur in pockets along steep slopes cut by the creeks and within basins of eroded bentonite clay soil. These clay barrens are sparsely vegetated and also support *Oryzopsis hymenoides*, *Frankenia jamesii*, and *Atriplex* species. *Asclepias uncialis* spp. *uncialis* is found in grasslands dominated by *Bouteloua gracilis*, *Aristida purpurea*, and *Erioneuron pilosum*. This site also affords excellent views of the Sangre de Cristo Mountain Range.

Key Environmental Factors

No Data

Climate Description

No Data

Land Use History

No Data

Cultural Features

No Data

SITE DESIGN

Site Map P - Partial Mapped Date 11/20/1995
Designer Spackman, S.C.

Boundary Justification

Primary boundaries protect habitat and ecological processes necessary to support the rare plant occurrences. Secondary boundary provides buffer and connects several occurrences that fall within a 3 x 2 mile area.

Primary Area 6,471.82 Acres 2,619.06 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B2: Very High Biodiversity Significance

Biodiversity Significance Comments

Two globally imperiled plants are found within the Garden Park Fossil site: Brandegee wild buckwheat (*Eriogonum brandegeei*) (G1G2/S1S2) and golden blazing star (*Nuttallia chrysantha*) (G2/S2). This site supports two good (B-ranked) occurrences of *Eriogonum brandegeei* with thousands of individuals and various size classes represented in approximately 280 acres of habitat in excellent condition. *Eriogonum brandegeei* has a global range that spans only 50 miles. An excellent (A-ranked) and a good (B-ranked)

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occurrence of *Nuttallia chrysantha* with hundreds of plants in approximately 160 acres of habitat were also recorded. *Nuttallia chrysantha* has a global range of about 30 square miles. Additionally, one good (B-ranked) occurrence of dwarf milkweed (*Asclepias uncialis* ssp. *uncialis*), a shortgrass prairie endemic (G3G4T2T3/S2), was recorded. The occurrence contained 24 individuals located in a relatively undisturbed site.

Other Values Rank V1 - Outstanding values

Other Values Comments

This is a very significant paleoecological site. Five type specimens of dinosaur species were collected within the proposed site boundaries.

LAND MANAGEMENT ISSUES

Land Use Comments

Historical use includes excavation quarries for dinosaur bones. This is a significant paleontological site. Five type specimens of dinosaur species have been collected. There has been some grazing and homesteading.

Natural Hazard Comments

No Data

Exotics Comments

Drainages and roadsides are weedy in places: e.g. *Bromus tectorum*, *Melilotus officinale*, and *Phleum pratense*. The south side has been burned and is very weedy.

Offsite

Mines in Cripple Creek area may pollute Fourmile Creek.

Information Needs

Likelihood of land use risks, especially recreational use and dinosaur excavation. Need to know BLM's plans of ACEC designation. Need to know if BLM is considering the purchase of the private lands that are part of the site.

ASSOCIATED ELEMENTS OF BIODIVERSITY

<u>Element</u>			<u>Global</u>	<u>State</u>	<u>Driving</u>
<u>State ID</u>	<u>State Scientific Name</u>	<u>State Common Name</u>	<u>Rank</u>	<u>Rank</u>	<u>Site Rank</u>
21173	<i>Eriogonum brandegeei</i>	Brandegee wild buckwheat	G1G2	S1S2	Yes
19348	<i>Nuttallia chrysantha</i>	golden blazing star	G2	S2	No
19348	<i>Nuttallia chrysantha</i>	golden blazing star	G2	S2	Yes
21173	<i>Eriogonum brandegeei</i>	Brandegee wild buckwheat	G1G2	S1S2	Yes
19348	<i>Nuttallia chrysantha</i>	golden blazing star	G2	S2	Yes
23798	<i>Asclepias uncialis</i> ssp. <i>uncialis</i>	dwarf milkweed	G3G4T2T3	S2	No

REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
192561	Kelso, S., N. W. Bower, K. E. Heckman, P. M. Beardsley, D. G. Greve. 2003. Geobotany of the Niobrara Chalk Barrens in Colorado: A Study of Edaphic Endemism. <i>Western North American Naturalist</i> 63(3) 299-313.
193618	Neid, S.L. 2006. Final Report: Survey of Critical Wetlands and Riparian Areas in Fremont County, Colorado. Colorado Natural Heritage Program, Fort Collins, CO.
192544	Spackman, S.C. and S. Floyd. 1996. Final Report. Conserving the Globally Imperiled Brandegee Wild Buckwheat, <i>Eriogonum brandegeei</i> Rydb.

ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date	11/20/1995
Version Author	Spackman, S.C.

Disclaimer

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