

Level 4 Potential Conservation Area (PCA) Report

Name Poitrey Hills

Site Code S.USCOHP*26601

IDENTIFIERS

Site ID 2386 Site Class PCA
 Site Alias Poitrey Arroyo

Network of Conservation Areas (NCA)

NCA Site ID	NCA Site Code	NCA Site Name
-		No Data

LOCATORS

Nation United States Latitude 373706N
 State Colorado Longitude 1040755W

Quad Code Quad Name

37104-F2	Sun Valley Ranch
37104-E2	Bates Lake
37104-E1	Thatcher
37104-F1	Delhi
37104-G1	Snowden Lake
37104-E3	Hidden Valley Ranch
37103-F8	Bloom
37104-D3	Seven Lakes Reservoir

County

Pueblo (CO)
 Otero (CO)
 Las Animas (CO)

Watershed Code Watershed Name

11020010	Purgatoire
11020007	Apishapa
11020005	Upper Arkansas-Lake Meredith

SITE DESCRIPTION

Minimum Elevation	5,000.00 Feet	1,524.00 Meters
Maximum Elevation	5,820.00 Feet	1,773.94 Meters

Site Description

This site is a mix of short and mid grass prairie, open juniper woodlands, and shale hills and breaks. The topography of Poitrey Hills and the surrounding area is striking and includes hills covered in juniper woodlands that are imbedded in lower elevation areas of shortgrass prairie. It includes the headwater portions of numerous intermittent streams that drain to the north and east. Rare plants occur along roads and throughout grasslands and woodlands and are extremely abundant. Some of the common plants found at the site include New Mexico feathergrass (*Hesperostipa neomexicana*), western wheat grass (*Pascopyron smithii*), alkali sacaton (*Sporobolus airoides*), galleta grass (*Pleuraphis jamesii*), little barley (*Hordeum pusillum*), oneseed juniper (*Juniperus monosperma*), pinon pine (*Pinus edulis*), blackfoot daisy (*Melampodium leucanthum*), hairy woollygrass (*Erioneuron pillosum*), broom snakeweed (*Gutierrezia sarothrae*), fourwing saltbush (*Atriplex canescens*), winterfat (*Krascheninnikovia lanata*), and Prince's plume (*Stanleya pinnata*). The geology associated with the shale hills create soils suitable for the larval hostplants of the imperiled Colorado blue butterfly (*Euphilotes rita coloradensis*), which inhabits the site. Beneath the juniper of these hills, the understory includes a great deal of rock and bare ground with sideoats grama (*Bouteloua curtipendula*), and other grasses, and forbs including numerous populations of wild buckwheat.

Key Environmental Factors

Geology, soil depth, drought, grazing, fires, and slope play a critical role in determining the vegetation species composition. Fires kill junipers yet much of the area has relatively low biomass thus preventing large scale fires. Old-growth junipers and pinons are common throughout, denoting that fires are infrequent. Adequate soil depth coupled with low intensity grazing favors New Mexico feathergrass while high intensity grazing favors blue grama. Slopes are generally less vegetated than the mesa tops or the outwash.

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Climate Description

The climate is semiarid and is typical of the high plains of southeastern Colorado where approximately 13 inches of precipitation is received annually. Most precipitation occurs between April and September, with May typically being the wettest month. Annually, climate of the area is characterized by cold winters and hot summers with winter temperatures as low as zero on at least several days and temperatures of over 100 °F occurring on many days in July and August (HPRCC 2008).

Land Use History

Land use has historically been dominated by ranching of sheep and cattle since the mid 1800's (Friedman 1985).

Cultural Features

No Data

SITE DESIGN

Site Map P - Partial

Mapped Date 02/01/2010

Designer Sovell, J.R.

Boundary Justification

The boundary encompasses the rare plants and butterflies and the surrounding potential habitat formed by the shale and limestone derived soils. Although the geology thought to be important to these elements also occurs outside of the site, the boundary, as drawn, covers the minimum extent needed to maintain these known populations. In addition, the long-term persistence of butterfly populations is favored by the protection of an area larger than the area occupied by the occurrence in any one year. Habitat heterogeneity improves long-term persistence in butterflies, a habitat component that is enhanced by a large protected area. Within this site, numerous terrace benches, low ridges, drainages, and shortgrass prairie support a mosaic of habitat patches that have potential for colonization by the rare butterflies.

Primary Area 84,600.25 Acres

34,236.64 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B3: High Biodiversity Significance

Biodiversity Significance Comments

The site supports an excellent (A-ranked) occurrence of the globally imperiled (G3G4T2/S2) rayless goldenweed (*Oenopsis foliosa* var. *monocephala*), a good (B-ranked) occurrence of the globally vulnerable (G3/S3) Arkansas Valley evening primrose (*Oenothera harringtonii*), and a fair (C-ranked) occurrence of the state rare (G4/S2) long-hood milkweed (*Asclepias macrotis*). The site also supports occurrences of the globally rare (G3G4T2T3/S2) Colorado blue (*Euphilotes rita coloradensis*) and a fair (C-ranked) occurrence of the state rare (G4/S3) Simius roadside skipper (*Amblyscirtes simius*).

Other Values Rank No Data

Other Values Comments

No Data

LAND MANAGEMENT ISSUES

Land Use Comments

Continue appropriate grazing regimes or incorporate periodic burning to stimulate regeneration and maintain species composition.

Natural Hazard Comments

No Data

Exotics Comments

No Data

Offsite

No Data

Information Needs

Additional information on the size of the Colorado blue populations would assist with management of the population.

ASSOCIATED ELEMENTS OF BIODIVERSITY

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<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>
19476	<i>Oenothera harringtonii</i>	Arkansas Valley evening primrose	G3	S3	Yes
18074	<i>Euphilotes rita coloradensis</i>	Colorado Blue	G3G4T2T3	S2	No
18074	<i>Euphilotes rita coloradensis</i>	Colorado Blue	G3G4T2T3	S2	No
17735	<i>Amblyscirtes simius</i>	Simius Roadside Skipper	G4	S3	No
18708	<i>Asclepias macrotis</i>	long-hood milkweed	G4	S2	No
40463	<i>Oenopsis foliosa</i> var. <i>monocephala</i>	rayless goldenweed	G3G4T2	S2	Yes

REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
195120	Friedman, Paul D. 1985. Final Report of History and Oral History Studies of the Fort Carson Pinon Canyon Maneuver Area, Las Animas, Colorado. USDI. National Park Service, Interagency Archaeological Services Branch, Rocky Mountain Regional Office, Denver, CO.
195121	HPRCC. 2008. High Plains Regional Climate Center Web Page. Based on data from automated weather stations operated by Colorado for southeastern Colorado area. High Plains Regional Climate Center Web Page: < http://www.hprcc.unl.edu >
198519	Rondeau, R.J., J.R. Sovell, J.E. Stevens, D. Clark and L. Grunau. 2010. Final Report: Southeast Colorado Survey of Critical Biological Resources 2009. Addendum to the 2007 Survey. Colorado Natural Heritage Program, Fort Collins, CO.
195097	Stevens, J., J. Sovell, D. Culver, K. Decker, L. Grunau, A. Lavender, and C. Gaughan. 2008. Final Report: Southeastern Colorado Survey of Critical Biological Resources 2007. Colorado Natural Heritage Program, Fort Collins, 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

Original site design by Culver, D.R. 2006-11-01. Update by Stevens, J.E. 2008-04-02.

VERSION

Version Date	02/01/2010
Version Author	Sovell, J.R.

Disclaimer

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