

Level 4 Potential Conservation Area (PCA) Report

Name Indian Lookout Mountain

Site Code S.USCOHP1*1916

IDENTIFIERS

Site ID 1324 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>
2528	S.USCOHP*27454	Front Range Foothills-Carter Lake to Boulder

LOCATORS

Nation United States Latitude 401324N
State Colorado Longitude 1051832W

Quad Code Quad Name

40105-B3 Lyons

County

Watershed Code Watershed Name

10190005 St. Vrain

SITE DESCRIPTION

Minimum Elevation	5,480.00 Feet	1,670.30 Meters
Maximum Elevation	6,533.00 Feet	1,991.26 Meters

Site Description

This site spans the transition zone between the montane and foothills zones. The vegetation is characteristic of the transition zone. The ponderosa pine (*Pinus ponderosa*) savanna that defines this site flows from an extensive ponderosa pine woodland in the montane zone to the west. The savanna has typical pockets of ponderosa trees with or without shrub understory that form a mosaic with large grassland meadows. The savanna occupies valley and ridge tops with mountain mahogany (*Cercocarpus montanus*) shrublands occurring on the steep hogback slopes that intervene. The ponderosa pine savanna on the west side of the site blankets rolling, granitic hills and has a more open character with widely-spaced variably-sized clusters of trees in a mosaic with grassland openings and scattered granitic rock outcrops. Portions of the grasslands were cultivated, but remnants of native meadows remain. Characteristic species in the grassland openings include needle-and-thread (*Hesperostipa comata*) and western wheatgrass (*Pascopyrum smithii*). Small patches of big bluestem (*Andropogon gerardii*) and little bluestem (*Schizachyrium scoparium*) occur, especially around rock outcrops or slopes with rocky soils. Forktip three-awn (*Aristida basiramea*) has also been documented in this site. The grassland is compromised and obscured in many areas by exotic species, especially Japanese brome (*Bromus japonicus*), cheatgrass (*Bromus tectorum*), and Canada bluegrass (*Poa compressa*). There is a very large prairie dog town in the middle of the largest grassland area. Vegetation in the town is degraded and dominated by bindweed (*Convolvulus arvensis*). Indian Lookout Mountain is the defining feature of the east side of the site. It is a curvilinear portion of hogback landform sculpted by the North and South St. Vrain drainages whose canyons isolated Indian Lookout Mountain from the sections of the same hogback to the north and south. Indian Lookout Mountain is composed of layers of sandstone and has a characteristic flat-topped appearance; it is primarily comprised of Fountain Formation and is capped with Ingelside Formation. The west-facing slopes are characteristically steep. Lyons sandstone and some Quaternary colluvium are exposed on the east-facing slope (Braddock et al. 1988). The geology is an important influence on the major plant communities on Indian Lookout Mountain. Although mountain mahogany is characteristic across the entire hogback, the dominant and characteristic grass species in the understory change with bedrock geology and elevation; New Mexico feathergrass (*Hesperostipa neomexicana*) and Scribner needlegrass (*Achnatherum scribneri*) are characteristic on the steep, red Fountain Formation sandstones. The top of the hill has ponderosa pine and needle-and-thread amidst the mountain mahogany with patches of big bluestem.

Key Environmental Factors

Transition from montane to foothills life zones; sandstone hogback landforms.

Climate Description

No Data

Land Use History

The Hall Ranch was divided up as five homesteads; cultivation of the land occurred at one time and silo

Level 4 Potential Conservation Area (PCA) Report

Name Indian Lookout Mountain

Site Code S.USCOHP1*1916

structures on the property still attest to this fact. Since the 1940's, the ranch has been utilized for the grazing of livestock. The Hall Ranch has several quarry sites, mainly in the eastern part of the site.

Cultural Features

No Data

SITE DESIGN

Site Map P - Partial

Mapped Date 10/17/2008

Designer Neid, S.L.

Boundary Justification

The boundaries are intended to identify the area needed to support the significant elements and the ecological processes needed for their continued persistence. In general the plant associations present at the site historically have been influenced by fire, herbivory, and more recently by logging (Veblin and Lorenz 1991). These associations occur together in a mosaic that is affected by similar ecological processes and similar management issues. The boundaries presented here are intended to encompass an area that will allow these natural ecological processes to function or be mimicked through management practices. Included are some areas that are heavily degraded but thought to have the potential of recovery with proper management and the mosaic of plant communities with similar ecological needs and influences.

Primary Area 3,869.17 Acres

1,565.80 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B2: Very High Biodiversity Significance

Biodiversity Significance Comments

The site contains a good to excellent (AB-ranked) occurrence of the globally imperiled Foothills Ponderosa Pine Scrub Woodlands plant association (*Pinus ponderosa* / *Cercocarpus montanus* / *Andropogon gerardii* Wooded Herbaceous Vegetation, G2/S2?). It also contains several occurrences of globally imperiled and vulnerable (G2 or G3) Foothills Shrubland (*Cercocarpus montanus*) plant associations, and two occurrences of globally imperiled (G2) Xeric Tallgrass Prairie (*Andropogon gerardii*-*Schizachyrium scoparium*). A Black-tailed Prairie Dog colony (*Cynomys ludovicianus*, G4/S3) and a Cross-line Skipper (*Polites origenes*, G5/S3) occurrence have also been documented in this site.

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 ID	State Scientific Name	State Common Name	Global Rank	State Rank	Driving Site Rank
17488	<i>Polites origenes</i>	Cross-line Skipper	G5	S3	No
24531	<i>Cercocarpus montanus</i> / <i>Hesperostipa comata</i>	Mixed Foothill Shrublands	G2	S2	No
24870	<i>Andropogon gerardii</i> - <i>Schizachyrium scoparium</i>	Xeric Tallgrass Prairie	G2?	S2	No
24870	Western Great Plains Herbaceous Vegetation				
24870	<i>Andropogon gerardii</i> - <i>Schizachyrium scoparium</i>	Xeric Tallgrass Prairie	G2?	S2	No
24870	Western Great Plains Herbaceous Vegetation				
40631	<i>Cercocarpus montanus</i> / <i>Achnatherum scribneri</i>	Foothills Shrubland	G3	S3	No
40631	Shrubland				

Level 4 Potential Conservation Area (PCA) Report

Name	Indian Lookout Mountain	Site Code	S.USCOHP1*1916		
40630	<i>Cercocarpus montanus</i> / <i>Hesperostipa neomexicana</i> Shrubland	Foothills Shrubland	G2G3	S2S3	No
24587	<i>Pinus ponderosa</i> / <i>Cercocarpus montanus</i> / <i>Andropogon gerardii</i> Wooded Herbaceous Vegetation	Foothills Ponderosa Pine Scrub Woodlands	G2	S2?	Yes
17796	<i>Cynomys ludovicianus</i>	Black-tailed Prairie Dog	G4	S3	No

REFERENCES

Reference ID	Full Citation
194994	Braddock, W.A., R.G. Houston, R.B. Colton, and J.C. Coles. 1988. Geologic Map of the Lyons Quadrangle, Boulder County, Colorado. Map GQ-1629. U.S. Geologic Survey, Reston, Virginia.
195190	Neid, S., J. Lemly, K. Decker and D. Culver. 2009. Final Report: Survey of Critical Biological Resources in Boulder County 2007-2008. Colorado Natural Heritage Program, Fort Collins, CO.
171491	Peet, R. K. 1981. Forest vegetation of the Colorado Front Range: composition and dynamics. <i>Vegetatio</i> 45:3-75.
167377	Samson, F. and F. Knopf. 1994. Prairie Conservation in North America. <i>Bioscience</i> 44:418-421.
198277	Veblen, T.T. and Lorenz, D.C. 1991. The Colorado Front Range: A Century of Ecological Change. University of Utah Press, Salt Lake City, UT.

ADDITIONAL TOPICS

Additional Topics

Original site design by Pague, C.A. 1995-12-07.

VERSION

Version Date	10/17/2008
Version Author	Neid, S.L.

Disclaimer

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