

Level 4 Potential Conservation Area (PCA) Report

Name Rio Grande Pyramid

Site Code S.USCOHP*5262

IDENTIFIERS

Site ID 994 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>
-		No Data

LOCATORS

Nation United States Latitude 374119N
State Colorado Longitude 1072317W

Quad Code Quad Name

37107-F4 Rio Grande Pyramid
37107-F3 Weminuche Pass

County

Hinsdale (CO)

Watershed Code Watershed Name

14080101 Upper San Juan
13010001 Rio Grande headwaters

SITE DESCRIPTION

Minimum Elevation 12,000.00 Feet 3,658.00 Meters
Maximum Elevation 13,200.00 Feet 4,023.00 Meters

Site Description

The site is a large northeast-northwest facing bowl on the north side of the Rio Grande Pyramid (RGP). A long, high ridge, extending northwest from the summit of the RGP (13,821 feet) provides protection from west winds, and a long high ridge extending east-northeast from the RGP summit shelters the bowl from year-round insolation. Variable topography in the bowl supports a mosaic of plant communities including areas of high floral diversity and extensive areas of *Salix nivalis* and *Salix arctica*. Most north aspects in the bowl contain dense, large patches of *S. nivalis*, which is abundant at this site. In some areas, talus is extensive, forming horizontal bands up to 60 m in width, and separating the two colonies in this bowl by at least 0.25 mile. Two colony sites for Uncompahgre fritillary were identified on 10 July 1996 and are named, for the purpose of this description, the Central and East colony sites. Site description for the East site (12,600-12,800 feet): protected slope in the lee of the east face of the RGP and protected to the south by the east ridge of the RGP. This colony is approximately 60m x 20m, with the long axis perpendicular to contour lines. *S. nivalis* is dispersed more or less regularly throughout the site among graminoids, *Geum rosii*, *Castilleja* spp., sageworts and *Senecio* spp. Grasses dominate. Stream and adjacent snowfield form the southeast margin of the colony, but do not contribute much moisture to the colony. In some years, snow may persist above this site late into the summer providing late-season moisture, but on 10 July 1996 snow was not observed above this colony. Central colony site (12,400-12,600 feet): high terrace bench (flat area high in bowl, approximately 50 m in diameter) of dry soil. This area is dominated by graminoids. The RGP summit is directly south of the colony. The top of the colony site ends in a steep talus field. Slope below the site drops from the bench at about 35 degrees steepness and is dominated by *Salix nivalis*. This patch of *S. nivalis* is approximately 50 m wide and 20 m deep. The central colony site is defined on the east and west by stream drainages that were dry on 10 July 1996. Shrubby *Salix* spp. grow on the north edge of the bench (10% cover).

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 10/01/1996

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Designer Wasinger, D.T.

Boundary Justification

The boundary is intended to adequately protect areas currently occupied by *Boloria improba acrocneema* as well as immediately adjacent areas of suitable habitat which have potential for colonization. The long-term persistence of *B. improba acrocneema* populations will be favored by the protection of an area larger than that which is occupied by the colonies in any one year. Observations of *B. improba acrocneema* on habitat patches outside of known colony areas at the intensively studied Uncompahgre and Redcloud sites (Brussard and Britten 1989, Gall 1984) suggest that dispersal, and resulting in colonization, may be a process important to the population's viability. Habitat heterogeneity may also be related to long-term persistence in butterflies (Ehrlich and Murphy 1987), a habitat component enhanced by a large protected area. Within this site, numerous terrace benches, low ridges, and drainages support a mosaic of habitat patches which have potential for *B. improba acrocneema* colonization.

Primary Area 674.26 Acres 272.87 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B2: Very High Biodiversity Significance

Biodiversity Significance Comments

This site is primarily designated for the globally critically imperiled (G5T1/S1) Uncompahgre fritillary butterfly (*Boloria improba acrocneema*), a species endemic to alpine refugia of the San Juan Mountains, Colorado. This species is known from seven locations containing 14 colonies. Its undisturbed condition combined with the large extent of potential habitat within the bowl make this site potentially one of the highest-ranked occurrences of the Uncompahgre fritillary (B-ranked). However, additional population information is necessary, as few numbers of this species have been observed at this location. Additionally, the white-veined arctic butterfly (*Oeneis taygete*), a state rare species (G5/S3), is known from this location in good (B-ranked) condition and is also believed to be associated with alpine refugia. The presence of these rare glacial relict species indicates that this is an important site, likely a refuge for arctic species that were once common along glacial margins during the Wisconsin glaciation.

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

<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>
18698	<i>Boloria improba acrocneema</i>	Uncompahgre Fritillary	G5T1	S1	Yes
20626	<i>Oeneis bore</i>	White-veined Arctic	G5	S3	No
18698	<i>Boloria improba acrocneema</i>	Uncompahgre Fritillary	G5T1	S1	No
18698	<i>Boloria improba acrocneema</i>	Uncompahgre Fritillary	G5T1	S1	No

REFERENCES

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Reference ID

Full Citation

168096

Brussard, P. F. and H. Britten. 1989. The Status of the Uncompahgre Fritillary BOLORIA ACROCNEMA. Final Report. Department of Biology, Montana State University, Bozeman, Montana.

158500

Gall, L.F. 1984. Population structure and recommendations for conservation of the narrowly endemic alpine butterfly BOLORIA ACROCNEMA (Lepidoptera:Nymphalidae). Biological Conservation 2:(1984) 111-138.

ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date 10/01/1996

Version Author Wasinger, D.T.

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