

Euphilotes ellisii anasazi (Aztec Blue)



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Taxonomy

- **Class:** INSECTA
- **Order:** LEPIDOPTERA
- **Family:** LYCAENIDAE
- **Genus:** Euphilotes
- **Scientific Name:** *Euphilotes ellisii anasazi* (J. Scott, 1998)
- **Common Name:** Aztec Blue
- **Synonyms:** *Euphilotes battoides* ssp. *anasazi* J. Scott, 1998
- **Taxonomic Name Source:** Scott, J.A. 1998. New western North American butterflies. *Papilio*, New Series 11:1-12.

Agency Status

- **NMDGF:**
- **Federal Status:**
- **BLM Sensitive:**
- **USFS:**
- **IUCN Red List:** [Not Evaluated](#)
- **Nature Serve Global:** [T1](#)
- **NHNM State:** S1
- **NM Endemic:** YES

Description

Compared to Central Blues, Ellis' males are a paler blue above with a narrower black border. Females may be lighter brown above with a wider orange band. It may be more important to be able to distinguish it from 'Colorado' Rita Blue, with which it is sympatric and synchronic in northwest New Mexico. In that comparison, *Euphilotes ellisii* has moderately checkered wing fringes; males have a compact pink/orange aurora at the back of the dorsal hindwing with limited development of black dots; and females have a more compact orange band with more prominent black dots at the rear of the dorsal hindwing. Differentiating Ellis' from 'Colorado' Rita Blue based on ventral views only is challenging. In that attempt, look for moderate wing fringe checkering and a light gray ground color on Ellis', compared to slight or limited fringe checkering and white ground color on 'Colorado' Rita. Success is not guaranteed. **Comments.** We have the nominate subspecies, which occupies the Four Corners. Dr. James A. Scott described subspecies *E. e. anasazi* in 1998 based on specimens collected east of Aztec (SJ), but that subspecies was recently shifted over to *Euphilotes battoides*, the Square-spotted Blue, and is no longer considered a form of Ellis' Blue. *Euphilotes ellisii* and *E. rita coloradensis*, are most reliably differentiated by their host plants, which may sound straightforward, but those host wild buckwheats are sympatric (in NM) and bloom at the same time. BOA spells the

Latin species epithet for this species as *ellisii*, not *ellisi*.

Description courtesy of Steven J. Cary, [Butterflies of New Mexico](#), 2024

Habitat and Ecology

Little is known about the life history of this organism however, the species resides in Pinyon and Juniper woodlands in northwestern New Mexico (Scott 1998, Cary and Toliver 2024). This taxon also seems to have just a single host plant, Buckwheat Brush (*Eriogonum corymbosum* var. *velutinum*) (Scott 1998, Cary and Toliver 2024). This subspecies is also univoltine with one flight in late summer records currently stretch from August 6th to September 7th (Cary and Toliver 2024). Ultimately more research is needed on the life history of this taxa.

Geographic Range:

Little is known about this Colorado Plateau subspecies, though it is thought to be endemic to arid northwestern New Mexico (Cary and Toliver 2024). The subspecies appears to be rare and it occurs in a hard to reach area, therefore, there are very few records. Only six collection records could be verified (Cary and Toliver 2024). The subspecies is usually seen between 1,676 to 2,195 m (5,500 and 7,200 ft) (Cary and Toliver 2024), and the sole known host plant exists between 1,200 and 2,300 meters (Flora of North America 2024).

Conservation Considerations:

This subspecies has seen little conservation attention however a 1998 conservation assessment of the species by NatureServe found this species to be globally critically imperiled with extinction (NatureServe 2024). The parent species *Euphilotes ellisi* was also assessed as vulnerable globally to extinction in a 2020 assessment (NatureServe 2024). The parent species for this taxa also has a Nature Conservancy Global Rank of G2-G3 describing the species as endangered throughout its range and remarking that all known subspecies are of conservation concern (Lotts and Naberhaus 2021). At the end of this assessment they recommend that all known habitat and host plants be monitored and maintained and that the monitoring of and removal of Cheatgrass is crucial for the long term viability of this species (Lotts and Naberhaus 2021). We echo that population monitoring is needed for this species as well as additional research on the threats affecting this taxa and how it is being affected by them. Additionally, monitoring of habitat trends to make sure this species' host plant remains healthy and that the species is not at risk of extinction from catastrophic wildfire will be crucial to ensure the survival of this taxa. Removal of Cheatgrass may be necessary in some areas to protect this taxa and its host plant.

Threats:

Little research has been done on the threats to this specific taxa or the specific subspecies of its host plant it utilizes. However, there are several known factors that make this taxa at a much higher risk for extinction. First the taxa is range restricted only being known from a small area of northwestern New Mexico where it utilizes one habitat and one single subspecies of its host plant (Scott 1998, Cary and Toliver 2024). Using a single host plant also puts the species at much increased risk as any threats that lead to declines in the host plant will result in direct declines in this species population (Kotiaho *et al.* 2005, Palash *et al.* 2022, Forister *et al.* 2023). While the threats to this specific subspecies *Eriogonum corymbosum* var. *Velutinum* have not been studied; there has been some research on the other *Eriogonum corymbosum* subspecies and the threats are likely similar. Las Vegas Buckwheat (*Eriogonum corymbosum* var. *Nilesii*) is the best studied and this subspecies has seen large population declines leading to it being petitioned to be listed as a federally endangered species in 2008 (USFWS 2010, Tilley 2012) In 2010 this petitioned was found to be warranted

due to threats from development, wildfire, off highway vehicles, mining, and invasive plant species which had caused huge declines in this taxon population (USFWS 2010, Tilley 2012). They remark further that Las Vegas Buckwheat is not fire adapted and very slow growing which makes it quite susceptible to wildfire (USFWS 2010, Tilley 2012).

The parent species, *Euphydryas anicia*, is threatened by Cheatgrass (*Bromus tectorum*) invasion, and is considered globally imperiled (NatureServe 2024) and all known subspecies are of conservation concern (Lotts and Naberhaus 2021). Furthermore this subspecies is univoltine which puts it at a higher risk of extinction and phenological mismatch and makes it less adaptable (Patterson *et al.* 2019, Forister *et al.* 2023, USFS 2023). However, more research is needed on the threats to this taxon and how they are already likely affecting its population especially as no information is currently available on how climate change might be affecting this taxon.

Population:

The population size and trend are not known for this subspecies. Determination of population size and monitoring of population trends is necessary to ensure the population is stable, especially as so few observations have ever been made and most of the sister taxa are highly threatened (NatureServe 2024).

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More Information

