

SPECIES: Scientific [common]	<i>Boloria alaskensis halli</i> [Napaea Fritillary]
Forest:	Bridger-Teton National Forest
Forest Reviewer:	Randall Griebel, James Wilder
Date of Review:	1/10/2020; updated 4/21/2025
Forest concurrence (or recommendation if new) for inclusion of species on list of potential SCC: (Enter Yes or No)	NO

FOREST REVIEW RESULTS:

- The Forest concurs or recommends the species for inclusion on the list of potential SCC:
Yes ___ No X
- Rationale for not concurring is based on (check all that apply):
Species is not native to the plan area _____
Species is not known to occur in the plan area _____
Species persistence in the plan area is not of substantial concern X

FOREST REVIEW INFORMATION:

- Is the Species Native to the Plan Area? Yes X No ___

If no, provide explanation and stop assessment.
- Is the Species Known to Occur within the Planning Area? Yes X No ___

If no, stop assessment.

Table 1. All Known Occurrences, Years, and Frequency within the Planning Area

Year Observed	Number of Individuals	Location of Observations (USFS District, Town, River, Road Intersection, HUC etc.)	Source of Information
8/1/1972	2	Palmer Lake; vicinity of; Bridger Wildness, Sublette County	GBIF (2019)
8/2/19	2	Palmer Lake; vicinity of; Bridger Wildness, Sublette County	GBIF (2019)
1992	2 pinned male and 10 pinned female specimens	Valaiate Lake, NE face of Battleship Mountain, 10,100 ft. Pinedale Ranger District	WYNDD (2019) Butterflies and Moths (2019)
Between 1850-01-01 and 2013-01-01	Unknown	Exact location unknown: Green River Pass, Bridger Wilderness area, Sublette County, Wyoming Pinedale Ranger District	WYNDD (2019)

1986	4 (preserved specimens)	Exact location unknown: Sublette Co., Bridger Wilderness, Palmer Lake Trail, 2-VIII-86 [MGCL]	Butterflies of America (2019)
2010	2 (preserved specimens)	Exact location unknown: Bears Ears Trail, 11,000', Fremont Co., WY, USA 1-VIII-2010	Butterflies of America (2019)
1997	4 (preserved specimens)	Exact location unknown: Sublette Co., NW Wind River Mtns., 11,300', 2-VIII-1997	Butterflies of America (2019)
1985	2 (preserved specimens)	Exact location unknown: Bears Ears Trail, Adams Pass, Fremont Co., WY, USA 1-VIII-85	Butterflies of America (2019)
1997	2 (preserved specimens)	Exact location unknown: Sublette Co., NW Wind River Mtns., 11,500', 2-VIII-1997	Butterflies of America (2019)

a. Are all Species Occurrences Only Accidental or Transient?

Yes ___ No X

If yes, document source for determination and stop assessment.

b. For species with known occurrences on the Forest since 1990, based on the number of observations and/or year of last observation, can the species be presumed to be established or becoming established in the plan area?

Yes ___ No ___ Unknown X

If no, provide explanation and stop assessment

c. For species with known occurrences on the Forest predating 1990, does the weight of evidence suggest the species still occurs in the plan area?

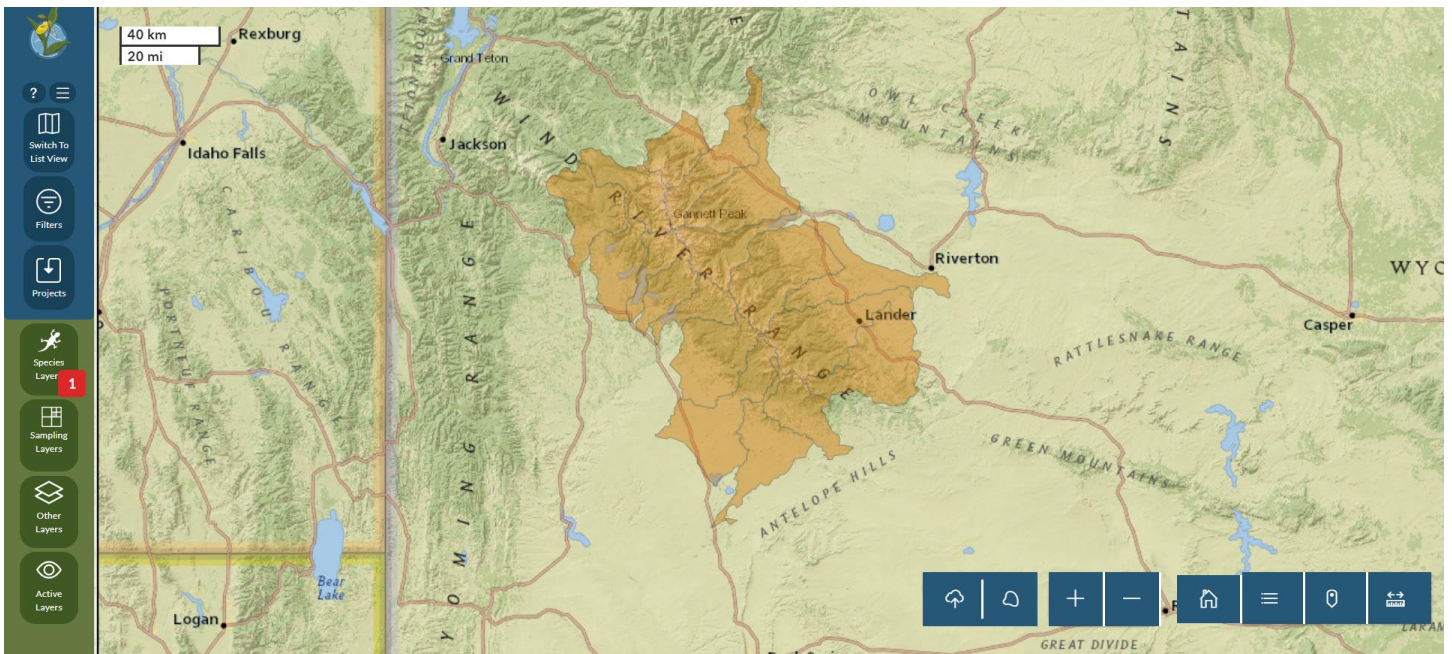
Yes ___ No ___

Provide explanation for determination

N/A – Occurrences have been documented since 1990.

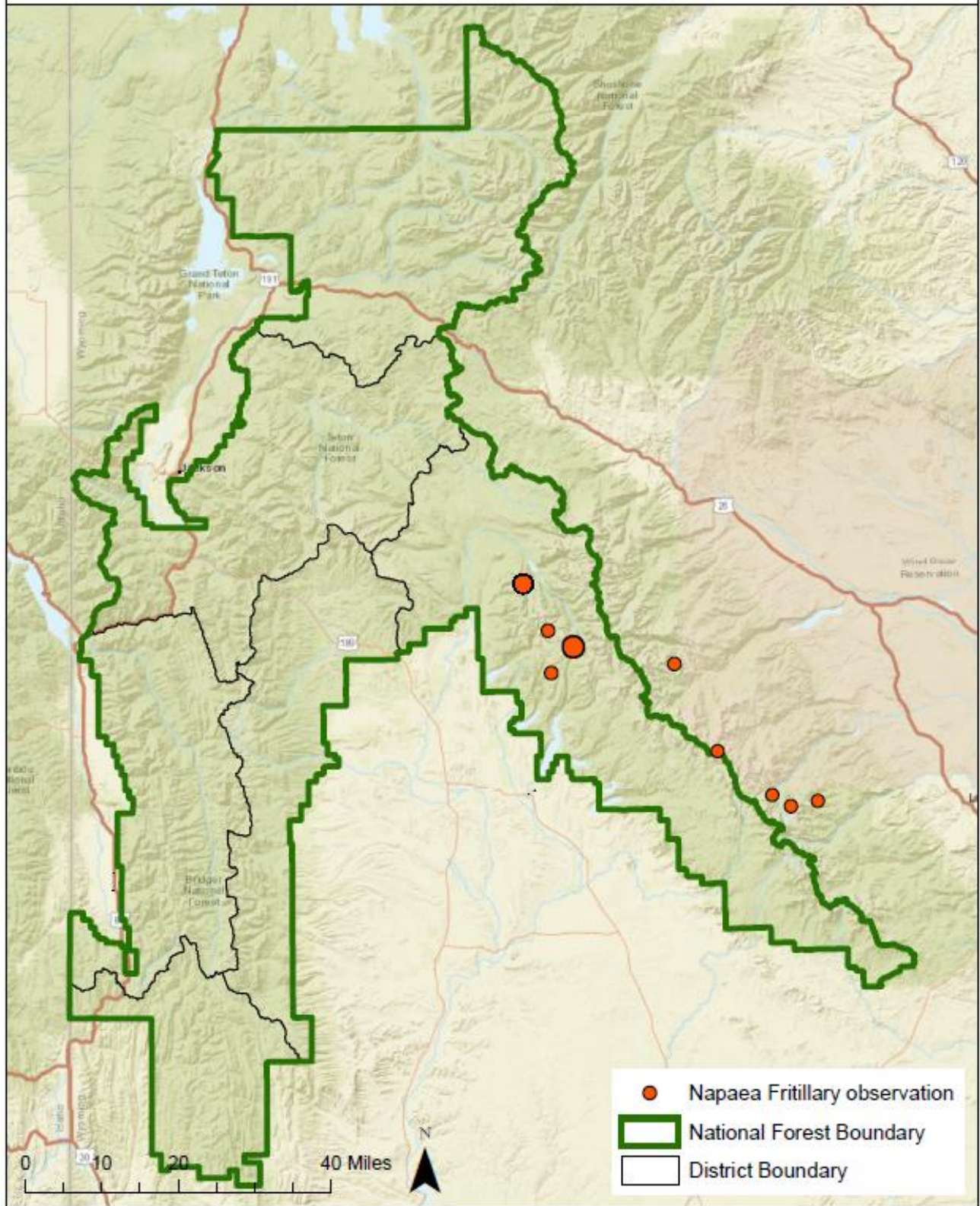
If determination is no, stop assessment

d. **Map 1.** Range of *Boloria alaskensis halli* [Napaea Fritillary] in Wyoming (WYNND 2025).



Map 2. Occurrences of *Boloria alaskensis halli* [Napaea Fritillary] on or near the Bridger-Teton National Forest.

Napaea Fritillary (*Boloria alaskensis halli*)



WYNDD 2019, GBIF 2019
Butterflies of America 2019

3. Is There Substantial Concern for the Species' Capability to persist Over the Long-term in the Plan Area Based on Best Available Scientific Information?

Table 2. Status summary based on existing conservation assessments

Entity	Status/Rank (include definition)
NatureServe Global Status	G5 T2T3—Globally Secure; Imperiled–Vulnerable (Intraspecific Taxon) Rounded Global Status, T2—Imperiled <i>At high risk of extinction or elimination due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.</i>
NatureServe State Status	SNR—Status not ranked
WYNDD	Species of Concern <i>Species vulnerable to extirpation at the global or state level due to:</i> <i>a. their rarity (e.g., restricted distribution, small population size, low population density)</i> <i>b. inherent vulnerability (e.g., specialized habitat requirements, restrictive life history)</i> <i>c. threats (e.g., significant loss of habitat, sensitivity to disturbances)</i> (Wyoming Natural Diversity Database - Species of Concern)
USDA Forest Service	No Special Status
UDI FWS	No Special Status
WY BLM	No Special Status
Xerces Red List Status	No Special Status

Table 3. Status summary based on best available scientific information.

Criteria	Rationale
Distribution on the Bridger-Teton National Forest	<i>Boloria alaskensis halli</i> is known only from isolated populations in Wyoming. Other subspecies of <i>B. alaskensis</i> occur in Alaska and several Canadian provinces. <i>Boloria alaskensis halli</i> has been observed at two locations within the Pinedale Ranger District of the BTNF, and has recently been observed near Palmer lake in the Bridger Wilderness area (Table 1). As this subspecies range is restricted to an area between 200-300 square miles centered about the type locality (WYNDD 2019), it is likely

Criteria	Rationale
	sparse and isolated on the Forest. Adult specimens have been collected during the last week of July and first week of August (NatureServe 2025).
Abundance on the Bridger-Teton National Forest	No abundance surveys for <i>B. a. halli</i> have been conducted on the BTNF. Since only a few occurrences have been documented on the BTNF overall (Table 1), and only two of these were recent (post-1990), the subspecies is likely rare on the Forest.
Population Trend on the Bridger-Teton National Forest	No population trend surveys for <i>B. a. halli</i> have been conducted on the BTNF. There is insufficient information to assess this criterion.
Habitat Trend on the Bridger-Teton National Forest	<p><i>Boloria alaskensis</i> inhabits alpine tundra with moist meadows and gentle slopes along valley bottoms in the Wind River Mountain Range (Butterflies and Moths 2019, NatureServe 2025). Host plants include <i>Polygonum bistortoides</i>, <i>Erigeron ursinus</i>, and <i>Senecio</i> sp. (NatureServe 2025). Grazing and development may influence habitat, but given the remote location of occurrences and habitat type, there is little risk of these activities occurring (USFS 2009). On the BTNF, the quantity of the landscape affected by wildfire is still below the historic range of variation, so habitat is also unaffected by altered fire regimes (USFS 2019).</p> <p>Because habitat occurs in remote areas that are minimally influenced by human activities, potential habitat trends are likely stable on the Forest. However, alpine communities on the BTNF may be affected by climate change effects, leading to declining conditions in the future. Warming effects may change the distribution and establishment of alpine species such as <i>B. a. halli</i>. Alpine communities are possibly the ecosystems in the region that are most at risk from the effects of climate change because of their shrinking habitat. According to Intermountain Adaptation Partnership (IAP) assessments, alpine communities have a high sensitivity to climate change, a low adaptive capacity, and very high vulnerability to climate change (Halofsky, et al. 2018). Warming temperatures are likely to cause decreasing snowpack, which will affect the composition and distribution of alpine ecosystems. It is also likely to cause major changes in alpine plant communities (Halofsky, et al. 2018), which may affect pollination opportunities for species such as <i>B. a. halli</i>.</p>
Threats to the Species and its Habitat on the Bridger-Teton National Forest	Conservation of <i>B. alaskensis</i> is not usually of concern, but the subspecies <i>B. a. halli</i> in the Wind River Mountains of Wyoming should be periodically monitored (Butterflies and Moths 2019). This subspecies may be vulnerable to natural disturbances due to its limited and isolated distribution. Additionally, since habitat is generally at high elevations, climate change may pose a threat. Changes in temperature and precipitation regimes could alter vegetation communities and the abundance of host and nectar plants used by the subspecies (see above).

Criteria	Rationale
	Grazing and road building may be potential threats to the subspecies and its habitat, however, these activities are unlikely to occur within the subspecies' remote habitat type (USFS 2009).
Date: August 29, 2019 Reviewer: L. Chipman	

Summary and Recommendations

The small number of observations or collections seem to be relegated to the Bridger Wilderness on the Forest and there is insufficient information to determine abundance, distribution, or population trends in the plan area. Preferred habitat is relatively unaffected by forest management activities such as timber harvest or prescribed fire treatments; thus, habitat trends are likely stable on the Forest. Although alpine habitats are currently stable on the forest, they may decrease in the future due to climate change effects. Until better information becomes available on abundance, distribution, population trend, habitat trend, threats, or other life history characteristics, there is not a substantial concern for the species capability to persistence on the Forest over the long-term at this time, and it is recommended that the *Napaea fritillaria* is not a Species of Conservation Concern for the Bridger-Teton National Forest.

Summary and Recommendation Provided by: R. Griebel (January 10, 2020).

References

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