Physaria brassicoides (Double Bladderpod)
Conservation Status Rank Summary

Date Published: August 19, 2026

For details on assessment and ranking methodology, see: *Conservation Status Assessment Definitions, Process, Rank Factors, and Calculation of State Ranks for Montana Species*

Rarity and Trends

Rank Factor	Date Assessed	Value Factor Rating	Score	Data Source	Comments
Rarity					
Range Extent	2026-02-23	135088.6 km² F = 20,000-200,000 km²	3.930	MTNHP Range Maps	The 2026 MTNHP range map may somewhat over-estimate the species' actual range which is based on documented observations. However, both estimates fall within the same categorical option for assessing Range Extent.
Area of Occupancy	2026-02-23	* D = 6-25 4-km² grid cells	2.060	MTNHP Database	Of the approximate 96,004 2km x 2km grid cells that cover Montana, known occurrences of the species occupy 18 grid cells.
Number of Occurrences	2026-02-19	18 B = 6 - 20	1.380	MTNHP Databases	The observations group into 18 occurrences.
Population Size	2026-02-23	* DE = 1000 - 10,000 individuals	[2.360, 3.140]	MTNHP Databases	Most observations have fewer than 100 plants. The largest population had an estimated 200 plants. However, a number of occurrences lack quantitative estimates of population size. Statewide populations appear to number less than 10,000 plants
# of Occurrences in Good Condition	2026-02-23	* U = Unknown	-	MTNHP Databases	**Factor not used in ranking.** Most occurrences are small and it is unclear if more than a few have good viability.
% of Area Occupied in Good Condition			-		**Factor not used in ranking.**
Environmental Specificity	2025-03-01	Narrow B = Narrow; specialist or community with key requirements common	-	Expert Opinion	**Factor not used in ranking.** Assessed by Scott Mincemoyer
Rarity is calculated by averaging weighted factor scores: **((3.93 × 1) + (2.06 × 2) + (1.38 × 1) + ([2.36, 3.14] × 2)) / 6 = [2.36, 2.62]**					
Trends					
Short-term Trend	2026-02-23	* G = Relatively Stable (=10% change)	0.000	Expert Opinion	Data to determine short-term trends are lacking. However, it appears likely that the species has been relatively stable in the recent past or experienced only minor declines.
Long-term Trend	2026-02-23	* U = Unknown	-	Expert Opinion	**Factor not used in ranking.** Long-term trends are unknown. However, most of the species' habitat is intact, so the species may have been relatively stable over the long-term.

Trends score is calculated by summing weighted short and long-term trend scores:
((0.00 × 2)) = 0.00

*Values may be absent if not precisely estimated; factors may still be assessed for rank if a Factor Rating can be assigned.

Threats

Rank Factor	Date Assessed	Value / Factor Rating	Score	Data Source	Comments
Threats					
Overall Threat Impact		Low / D = Low	5.500		No significant or widespread threats have been documented. Non-native plant species have been reported at or adjacent to 2 occurrences.
Intrinsic Vulnerability	2025-03-01	Not intrinsically vulnerable / C = Not intrinsically vulnerable	-	Expert Opinion	**Factor not used in ranking.** Assessed by Scott Mincemoyer
Threat score is calculated from Overall Threat Impact when available or Intrinsic Vulnerability if not: **(5.50) = 5.50**					

Individual Threats Data

Threat Category	Date Assessed	Impact Score	Scope	Severity	Immediacy	Comments
No individual threats data used in this rank						

Conservation Status Rank Calculation

Raw score

Rarity: ([2.36, 2.62] × 70%) + Threats: (5.50 × 30%) + Trends: (0.00) = [3.30, 3.48]

Calculated Rank: S3

Accepted Rank	S3
Author(s)	Scott Mincemoyer
Rank Approved By	Andrea Pipp
State Rank Reason	*Physaria brassicoides* is a rare forb in eastern Montana. Plants grow on sparsely-vegetated slopes, primarily in southeast Montana. Surveys at various occurrences from 1999 to 2026 demonstrate that most populations are small, generally less than 100 plants. No significant threats have been identified, though invasive plant species have been reported at or adjacent to two occurrences. Continued revisits to known occurrences, at specified intervals, to collect data on population parameters, habitat conditions, and potential threats are necessary to maintain an accurate and timely state conservation status rank. Monitoring at a subset of populations is greatly needed to track population trends. Additional surveys on lands modelled as predicted suitable habitat are also need to better assess the state's distribution.

Supplementary Information

Montana Natural Heritage Program. 2021. Conservation Status Assessment Definitions, Process, Rank Factors, and Calculation of State Ranks for Montana Species. 18 p.
https://mtnhp.mt.gov/docs/Montana_State_Rank_Criteria_20211201.pdf

Montana Field Guide Species Account:
https://fieldguide.mt.gov/speciesDetail.aspx?elcode=PDBRA22040

Predicted Suitable Habitat Model:
https://mtnhp.mt.gov/resources/models/?elcode=PDBRA22040

Information Needs

Information needs are assessed by considering the availability of factors used to assess species status as well as the quality of these assessments. Current information availability and quality to inform Conservation Status Rank for this species are highlighted.

Rank Factor	Assessment Category	Value	Criteria
General Status	Status Quality	Adequate	Calculated rank has low uncertainty and is represented by a single rank (e.g. S3); accepted rank may be adjusted to a range rank (e.g. S2S3)
		Poor	Rank assessed as SU or calculated rank has notable uncertainty and corresponds to a range rank with 2 or more values (e.g. S2?, S1S3, or S4S5)
Rarity	Range Quality	Adequate	Range polygon adequately represents area of probable occupancy and does not include substantial unoccupied areas; range may be adequately defined and still include areas of unsuitable habitat (e.g. mountain ranges for plains species)
		Marginal	Range polygon defined, but may include or exclude notable areas where the species may or may not occur on the landscape
		Poor	Range polygon not defined
	Habitat Quality	Adequate	Species-habitat relationship is well-defined (e.g. relevant literature or robust habitat model available)
		Marginal	Understanding of species-habitat relationship is adequate among some but not all habitats (e.g. literature covers similar habitats outside of Montana or habitat model performance is only somewhat adequate)
		Poor	Species-habitat relationship is not well understood
Threats	Threat Quality	Adequate	Threat Impact is a single value (including "Unthreatened")
		Marginal	Threat Impact assessed at more than one value (e.g. "High - Medium")
		Poor	Threat Impact is Unknown but Intrinsic Vulnerability is assessed
		Unknown	Threat Impact is Unknown and Intrinsic Vulnerability is not assessed
Trends	Recency	Current	Short-term Trend assessment date less than 10 years old
		Out of Date but Adequate	Short-term Trend assessment date is more than 10 years old or Unknown, but species is Unthreatened
		Out of Date	Short-term Trend assessment date more than 10 years old
		Not Available	Short-term Trend data are not available
	Trend Quality	Sufficient	Short-term Trend assessed at a single value or multiple values with a minimum trend greater than -10% (stable or increasing)
		Unknown but Sufficient	Short-term Trend is Unknown, but species is Unthreatened
		Poor	Short-term Trend is less than -10% (in decline) with two or more values selected
		Unknown	Short-term Trend is Unknown

Summary of Information Availability

Summary of Information Needs

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Additional Threat Details

The table below contains the complete threats assessment for this species. While the Conservation Status Rank Calculation is based on cumulative, broadly categorized (Level 1) threats data, threats are assessed and tracked for more specifically categorized (Level 2) threats when available.

Threat Category	Date Assessed	Assessed By	Data Source	Scope	Severity	Imme-diacy	Comments
Invasive & Other Problematic Species, Genes & Diseases - 8.1 - Invasive Non-Native/Alien Species/Diseases	2026-02-23	S. Mincemoyer	MTNHP Database, Expert Opinion	Small	Unknown	Moderat e-Low	Non-native species have been reported at or adjacent to 2 occurrences. One reported leafy spurge adjacent to the site and another had some yellow sweetclover present.