

Rubber Boa (*Charina bottae*)

Conservation Status Rank Summary

Date Published: April 15, 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	2025-01-30	201799.9 km ² G = 200,000- 2,500,000 km ²	4.710	MTNHP Range Maps	None
Area of Occupancy	2025-01-30	4090 4km ² cells H = 2,501-12,500 4- km ² grid cells	4.810	MTNHP Modeling	None
Number of Occurrences	2025-01-30	[8, 12] B = 6 - 20	1.380	MTNHP Data	Approximately 8-12 discreet areas with species presence.
Population Size			-		Factor not used in ranking.
# of Occurrences in Good Condition			-		Factor not used in ranking.
% of Area Occupied in Good Condition			-		Factor not used in ranking.
Environmental Specificity	2018-05-03	Narrow B = Narrow; specialist or community with key requirements common	-	MTNHP Species Rank Data Table	Factor not used in ranking. Associated with mesic forests and rock outcrops Methodology: NS (2003) Original Score: B
Rarity is calculated by averaging weighted factor scores: $((4.71 \times 1) + (4.81 \times 2) + (1.38 \times 1)) / 4 = 3.93$					
Trends					
Short-term Trend	2018-05-03	* U = Unknown	-	MTNHP Species Rank Data Table	Factor not used in ranking. No data on trends available Methodology: NS (2003) Original Score: U
Long-term Trend	2025-01-30	* G = Relatively Stable (=10% change)	0.000	Expert Opinion	Habitat has likely been stable since European arrival.
Trends score is calculated by summing weighted short and long-term trend scores: $(0.00 \times 1) = 0.00$					

*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		Medium C = Medium	3.670		None
Intrinsic Vulnerability	2018-05-03	Not intrinsically vulnerable C = Not intrinsically vulnerable	-	MTNHP Species Rank Data Table	Factor not used in ranking. Not Vulnerable. Species is long lived, births 2-8 young per year and has good connectivity within its habitat Methodology: NS (2003) Original Score: C
Threat score is calculated from Overall Threat Impact when available or Intrinsic Vulnerability if not: (3.67) = 3.67					

Individual Threats Data

Threat Category	Date Assessed	Impact Score	Scope	Severity	Immediacy	Comments
Residential & Commercial Development	2026-04-15	Low	Restricted	Slight	High	Development of valley bottom habitat into housing and urban areas leading to habitat fragmentation and destruction. Predation from domestic and feral cats and dogs stemming from urban development.
Transportation & Service Corridors	2026-04-15	Low	Restricted	Slight	High	Habitat fragmentation due to existing and new road construction. Direct mortality due to vehicle collisions. Direct mortality on trails from bike and vehicle collisions
Climate Change & Severe Weather	2026-04-15	Medium	Large	Moderate	Moderate	Increased in temperatures and dryer climate may impact soil moisture and groundcover.
Threat Tally: 0 - Very High, 0 - High, 1 - Medium, 2 - Low Overall Threat Impact* = Medium						

*See [Conservation Status Assessment Definitions, Process, Rank Factors, and Calculation of State Ranks for Montana Species](#) for calculation of Overall Threat Impact based on the number and impact of individual threats.

Conservation Status Rank Calculation

Raw score

Rarity: $(3.93 \times 70\%)$ + Threats: $(3.67 \times 30\%)$ + Trends: $(0.00) = 3.85$

Calculated Rank: S4

Accepted Rank	S4
Author(s)	Dan Bachen
Rank Approved By	MTNHP Staff
State Rank Reason	Species is apparently secure and widely distributed across forested areas of Montana. Threats are poorly characterized but include impacts from development and roads and changing climate.

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=ARADA01040>

Predicted Suitable Habitat Model:

<https://mtnhp.mt.gov/resources/models/?elcode=ARADA01040>

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

Rarity data are available for ranking. Trend and threats are poorly characterized.

Summary of Information Needs

Monitoring of known sites would address the lack of short-term trend. Species may occur outside of the current range polygon, so extralimital surveys may be useful to characterize range extent. Threats are poorly understood, further research would help clarify this.

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	Immediacy	Comments
Residential & Commercial Development - 1.1 - Housing & Urban Areas	2026-04-15	Dan Bachen	SWAP Assessment	Restricted	Slight	High	Development of valley bottom habitat into housing and urban areas leading to habitat fragmentation and destruction. Predation from domestic and feral cats and dogs stemming from urban development.
Transportation & Service Corridors - 4.1 - Roads & Railroads	2026-04-15	Dan Bachen	SWAP Assessment	Restricted	Slight	High	Habitat fragmentation due to existing and new road construction. Direct mortality due to vehicle collisions. Direct mortality on trails from bike and vehicle collisions
Climate Change & Severe Weather - 11.2 - Droughts	2026-04-15	None	None	Large	Moderate	Moderate	Increased in temperatures and dryer climate may impact soil moisture and groundcover.