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Oregon State Ranking Assessment for Columbia pebblesnail (*Fluminicola fuscus*)

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Natural Heritage Ranking Form - Oregon State Rank

Oregon Ranking Form Columbia pebblesnail (*Fluminicola fuscus*)

Oregon Biodiversity Information Center

SPECIES ASSESSED

Scientific Name	<i>Fluminicola fuscus</i>	ELCODE	IMGASG3500
Common Name	Columbia pebblesnail	Element ID	365449

Liu, H.P., Walsh, J. and Hershler, R. 2013. Taxonomic clarification and phylogeography of *Fluminicola coloradensis* Morrison, a widely ranging western North American pebblesnail. Monographs of the Western North American Naturalist 6(1):87-110.

CONSERVATION STATUS RANK

Assigned Rank	S2		
Rank Assignment Author	Nelson, Misty	Rank Review Date	11/14/2023
Rank Factors Author	Nelson, Misty	Rank Factors Date	11/14/2023
Calculated Rank	S2	Rank Change Date	01/08/2024
Rank Methodology Used	Rank calculation - Biotics v2		

Assigned Rank Reasons

This species has been extirpated from much of its historic range, and existing populations are highly fragmented.

RANGE/DISTRIBUTION

Range Extent

Rating	20,000-200,000 square km (about 8000-80,000 square miles)		
Estimate	116147	Unit Used for Estimate	Square Kilometer s
Comments	116,147 sq km calculated using NatureServe RARECAT tool and 27 EOs		

Area of Occupancy

Grid Cell Size	4 km ² Grid Cells		
Rating (as Number of 4 km² Grid Cells)	E = 26-125		
Comments	27 4-sq-km grid cells calculated using NatureServe RARECAT tool and 27 EOs		

ABUNDANCE AND CONDITION

Rating	21 - 80
Estimate	27
Comments	27 EOs in Biotics

Rating	Unknown
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Number of Occurrences with Good Viability/Ecological Integrity

Rating	Few (4-12)
Comments	12 post-2000 EOs

THREATS						
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<u>Threat Category</u>	<u>Threat Category</u>	<u>Calculated Impact</u>	<u>Scope</u>	<u>Severity</u>	<u>Timing</u>	<u>Comments</u>
7.2	Dams & water management/use	B = High	Pervasive: Affects all or most (71-100%) of the total population or occurrences or extent	Serious: Likely to seriously degrade/reduce occurrences or habitat, or reduce population 31-70%	High: Continuing	Water diversions, impoundments, and other stream modifications contribute to widespread habitat loss and fragmentation.
7	Natural system modifications	B = High	Pervasive: Affects all or most (71-100%) of the total population or occurrences or extent	Serious: Likely to seriously degrade/reduce occurrences or habitat, or reduce population 31-70%	High: Continuing	
9	Pollution	B = High	Pervasive: Affects all or most (71-100%) of the total population or occurrences or extent	Serious: Likely to seriously degrade/reduce occurrences or habitat, or reduce population 31-70%	High: Continuing	Impaired water quality resulting from increased siltation and industrial pollution.
Calculated Overall Threat Impact		A = Very high				
Assigned Overall Threat Impact		A = Very high				
Overall Threat Impact Comments						

The few remaining populations of this species are threatened by habitat loss and fragmentation and impaired water quality resulting from stream modifications, impoundments, water diversions, and industrial and agricultural pollution.

TRENDS

Short-Term Trend

Rating U = Unknown

Long-Term Trend

Rating EF = Decline of 10-50%

Comments

This species has been extirpated from much of its historic range.

ADDITIONAL SPECIES INFORMATION

Oregon Habitat Comments

Within its present range, it is common at rapids edges or immediately downstream from whitewater areas, and becomes much less common or absent in major rapids. The species is most abundant in highly oxygenated environments on gravel to boulder stable substrates (Neitzel and Frest, 1993, N93NEI01ORUS).

RESOURCES

Oregon Biodiversity Information Center, Institute for Natural Resources
Portland State University, Mail Stop: INR, PO Box 751, Portland, OR 97207-0751 Phone: 503-725-9950

Additional ORBIC species ranking forms posted at
<https://inr.oregonstate.edu/orbic/rare-species/ranking-documentation>

Information on Natural Heritage ranking methodology is available at
<http://www.natureserve.org/biodiversity-science/publications/natureserve-conservation-status-assessments-methodology-assigning>

The Conservation Rank Calculator is developed and maintained by NatureServe and is available from
<http://www.natureserve.org/conservation-tools/conservation-rank-calculator>

ASSESSMENT CITATION

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