Amphiscirpus nevadensis (Nevada Clubrush) Predicted Suitable Habitat Modeling

Distribution Status: Present State Rank: <u>S2</u> (Species of Concern) Global Rank: <u>G4</u>

Modeling Overview

Data Source Last Updated: January 20, 2023 Model Produced On: January 31, 2025



Deductive Modeling

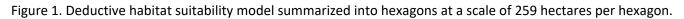
Modeling Process, Outputs, and Suggested Uses

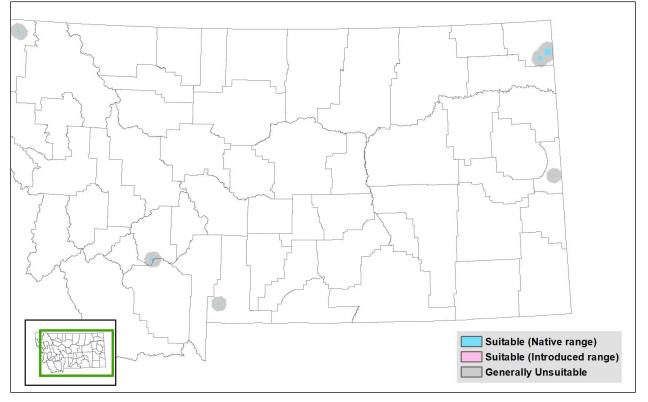
This is a simple rule-based model using species occurrences delineated for vascular and non-vascular plant species. These species could not be modeled with inductive methods, either due to limited observations or spatial extent or because an inductive model had poor performance. Species occurrences are discretely mapped polygons where the species has been documented. Plant species occurrence polygons are delineated by the MTNHP Botanist, and can be generated in two ways: 1) Polygons are hand-mapped and scaled to aggregate neighboring observation points and their adjacent habitat, while trying to exclude barriers, reduce known unoccupied habitat, and ignore management boundaries, or 2) Circular polygons are automatically generated by buffering the single observation point by its location uncertainty distance. For compatibility with other predictive distribution models the Montana Natural Heritage Program produces, we have intersected these species occurrences with a uniform grid of hexagons that have been used for planning efforts across the western United States (e.g. Western Association of Fish and Wildlife Agencies - Crucial Habitat Assessment Tool). Each hexagon is one square mile in area and approximately one kilometer in length on each side. Any hexagon that intersected a species occurrence was classified as suitable habitat. Model outputs are not evaluated and we suggest they be used to generate potential lists of species that may occupy lands within each hexagon for the purposes of landscape-level planning. Model outputs should not be used in place of on-the-ground surveys for species and wildlife and land management agency biologists should be consulted about the value of using model output to guide habitat management decisions for regional planning efforts or local projects. See Suggested Contacts for State and Federal Natural Resource Agencies attached to this document.

Suggested Citation: Montana Natural Heritage Program. 2025. *Amphiscirpus nevadensis* (Nevada Clubrush) predicted suitable habitat models developed on January 31, 2025. Montana Natural Heritage Program, Helena, MT. 5 pp.

Montana Field Guide Species Account: <u>http://fieldguide.mt.gov/speciesDetail.aspx?elcode=PMCYP0Q130</u>

Deductive Model Map Output





Suggested Contacts for Natural Resource Agencies

As required by Montana statute (MCA 90-15), the Montana Natural Heritage Program works with state, federal, tribal, nongovernmental organizations, and private partners to ensure that the latest animal and plant distribution and status information is incorporated into our databases so that it can be used to inform a variety of planning processes and management decisions. In addition to the information you receive from us, we encourage you to contact state, federal, and tribal resource management agencies in the area where your project is located. They may have additional data or management guidelines relevant to your efforts. In particular, we encourage you to contact the Montana Department of Fish, Wildlife, and Parks for the latest data and management information regarding hunted and high profile management species and to use the U.S. Fish and Wildlife Service's Information Planning and Conservation (IPAC) website http://ecos.fws.gov/ipac/ regarding U.S. Endangered Species Act listed Threatened, Endangered, or Candidate species.

For your convenience, we have compiled a list of relevant agency contacts and links below; check our website for updates.

Zachary Shattuck <u>zshattuck@mt.gov</u> (406) 444-1231				
or				
Eric Roberts <u>eroberts@mt.gov</u> (406) 444-5334				
Lauri Hanauska-Brown LHanauska-Brown@mt.gov (406) 444-5209				
				John Vore jvore@mt.gov (406) 444-5209
Smith Wells – MFWP Data Analyst smith.wells@mt.gov (406) 444-3759				
Ryan Alger – MFWP Data Analyst <u>ryan.alger@mt.gov</u> (406) 444-5365				
http://fwp.mt.gov/doingBusiness/licenses/scientificWildlife/				
Kammi McClain for Wildlife <u>Kammi.McClain@mt.gov</u> (406) 444-2612 Kim Wedde for Fisheries <u>kim.wedde@mt.gov</u> (406) 444-5594				
				Renee Lemon RLemon@mt.gov (406) 444-3738
See also:				
http://fwp.mt.gov/fishAndWildlife/livingWithWildlife/buildingWithWildlife/subdivisionRecommendations/				
Region 1 (Kalispell) (406) 752-5501				
<u>Region 2</u> (Missoula) (406) 542-5500				
Region 3 (Bozeman) (406) 994-4042				
Region 4 (Great Falls) (406) 454-5840				
Region 5 (Billings) (406) 247-2940				
<u>Region 6</u> (Glasgow) (406) 228-3700				
Region 7 (Miles City) (406) 234-0900				

Montana Fish, Wildlife, and Parks

United States Fish and Wildlife Service

Information Planning and Conservation (IPAC) website: <u>http://ecos.fws.gov/ipac/</u> Montana Ecological Services Field Office: <u>http://www.fws.gov/montanafieldoffice/</u> (406) 449-5225 USFWS Information on Species Listed under the Endangered Species Act in Montana https://www.fws.gov/montanafieldoffice/Endangered Species/Species information.html

Bureau of Land Management

Montana Field Office Contacts:		
The second summer	Billings:	(406) 896-5013
HAVRE GLASGOW	Butte:	(406) 533-7600
CRIAT MAUA	Dillon:	(406) 683-8000
MISSOULA	Glasgow:	(406) 228-3750
	Havre:	(406) 262-2820
MILES CLIV	Lewistown:	(406) 538-1900
EUNE	Malta:	(406) 654-5100
EILINGS	Miles City:	(406) 233-2800
1 There we	Missoula:	(406) 329-3914

United States Forest Service

Regional Office – Missoula, Montana Contacts				
Wildlife Program Leader	Tammy Fletcher	tammyfletcher@fs.fed.us	(406) 329-3588	
Wildlife Ecologist	Cara Staab	cstaab@fs.fed.us	(406) 329-3677	
Fish Program Leader	Scott Spaulding	scottspaulding@fs.fed.us	(406) 329-3287	
Fish Ecologist	Cameron Thomas	<u>cathomas@fs.fed.us</u>	(406) 329-3087	
TES Program	Lydia Allen	lrallen@fs.fed.us	(406) 329-3558	
Interagency Grizzly Bear Coordinator	Scott Jackson	sjackson03@fs.fed.us	(406) 329-3664	
Regional Botanist	Steve Shelly	<u>sshelly@fs.fed.us</u>	(406) 329-3041	
Invasive Species Program Manager	Michelle Cox	michelle.cox2@usda.gov	(406) 329-3669	

Tribal Nations



Natural Heritage Programs and Conservation Data Centres in Surrounding States and Provinces

Alberta Conservation Information Management System

British Columbia Conservation Data Centre

Idaho Natural Heritage Program

North Dakota Natural Heritage Program

Saskatchewan Conservation Data Centre

South Dakota Natural Heritage Program

Wyoming Natural Diversity Database

Invasive Species Management Contacts and Information

Aquatic Invasive Species <u>Montana Fish, Wildlife, and Parks Aquatic Invasive Species staff</u> <u>Montana Department of Natural Resources and Conservation's Aquatic Invasive Species Grant Program</u> <u>Montana Invasive Species Council (MISC)</u> <u>Upper Columbia Conservation Commission (UC3)</u>

Noxious Weeds

Montana Weed Control Association Contacts Webpage Montana Biological Weed Control Coordination Project Montana Department of Agriculture - Noxious Weeds Montana Weed Control Association Montana Fish, Wildlife, and Parks - Noxious Weeds Montana State University Integrated Pest Management Extension Integrated Noxious Weed Management after Wildfires