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Comments on Preble's Meadow Jumping Mouse Delisting Proposal

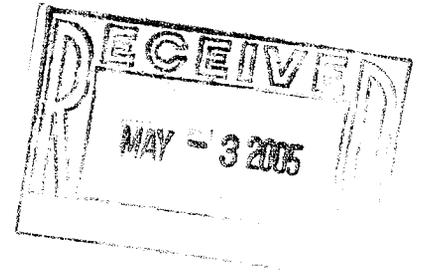
1. 1/31/05 Robert B. Hoff Colorado Springs, CO
2. 2/2/05 Nathan Arentsen Simpson College Progressive Action Coalition
Indianola, Iowa
3. 2/2/05 Maria DeLeon
4. 2/5/05 Miranda Mockrin Graduate Student
Dep. of Ecology, Evolution, and Environmental Biology
Columbia University, NY
5. 2/14/05 B. Scahau Florham Park, NJ
6. 2/10/05 Robert B. Hoff Green Valley, AZ (see 1 above)
7. 2/16/05 Christopher T. Massey Mountain States Legal Foundation
Lakewood, CO
8. 4/8/05 Andrew Martin Dep. Of Ecology and Evolutionary Biology
University of Colorado, Boulder, CO
9. 4/28/05 Pat Devers Department of Fisheries and Wildlife Sciences
Paul Grobler Virginia Polytechnic Institute and State University
Eric Hallerman Blacksburg, VA
Nataniel Hitt,
10. 4/29/05 Melissa I. Young Regulatory Specialist
Colorado Rock Products Association
Centennial, CO
11. 5/2/05 Ken Hamilton Executive Director
Wyoming Farm Bureau Federation
Laramie, WY
12. 5/2/05 Renee C, Taylor Environmental Coordinator
True Ranches
Casper, WY
13. 5/2/05 Jim Bensberg Chairman
Board of County Commissioners of El Paso County, CO
Colorado Springs, CO
14. 5/3/05 John A. Kolanz Office of the City Attorney
City of Greeley

- Greeley, CO
15. 5/3/05 Leah Berkman Denver, CO
16. 5/3/05 Jerry Sonnenberg President
Coloradoans for Water Conservation and Development
Denver, CO
17. 5/3/05 Dr. Tom W. Quinn Associate Professor
Codirector, Rocky Mountain Center for Conservation
Genetics and Systematics
Department of Biological Sciences
University of Denver
Denver, CO
18. 5/3/05 Ken Faux CO
19. 5/3/05 Cheryl Matthews Director
Douglas County
Division of Open Space and Natural Resources
Castle Rock, CO
20. 5/3/05 Mark Maslyn Executive Director, Public Policy
American Farm Bureau Federation
Washington, DC
21. 5/3/05 Dave Freudenthal Governor
State of Wyoming
Office of the Governor
Cheyenne, WY
22. 5/3/05 Dr. Mark Bakeman
Craig Hansen
Dr. Andrew Martin
Dr. Carron Meaney
Dr. Ann Ruggles
Ryon Thomas
23. 5/3/05 Erin Robertson Center for Native Ecosystems, Denver, CO
Jeremy Nichols Biodiversity Conservation Alliance, Denver, CO,
Nichol Rosemarino Forest Guardians, Santa Fe, NM
Brian Brademeyer Native Ecosystem Council, Rapid City, SD
24. 5/3/05 Ann Bonnell 2nd Vice President, Audubon Society of Greater Denver
Polly Reetz Board Member and Conservation Chair
Littleton, CO

25. 5/3/05 Richard C. Stem Deputy Regional Forester, Resources
Forest Service
Rocky Mountain Region
Lakewood, CO
26. 5/4/05 Guy N. Cameron President
American Society of Mammalogists
27. 5/4/05 Paul Kruse Albany, Converse, Goshen, Laramie, Platte counties, WY
28. 5/4/05 Russell George Executive Director
Department of Natural Resources
State of Colorado
Denver, CO



Division of
Open Space and Natural Resources



May 3, 2005

Ms. Susan Linner
Field Supervisor
Colorado Field Office
Ecological Services
755 Parfet Street, Suite 361
Lakewood, CO 80215

Re: Douglas County's Comments on the U.S. Fish and Wildlife Service's 12-Month Finding and Proposed Delisting of the Preble's Meadow Jumping Mouse

Dear Ms. Linner:

The Douglas County Division of Open Space and Natural Resources submits these comments in response to the U.S. Fish and Wildlife Service (Service) 12-Month Finding and Proposed Delisting of the Preble's meadow jumping mouse, *Zapus hudsonius preblei* (Preble's), published in the Federal Register on February 2, 2005. The Service's proposed action is based on a review of the available data which indicate that Preble's is not a discrete taxonomic entity, does not meet the definition of a subspecies, and was listed in error. 70 Fed. Reg. 5404, 5405 (February 2, 2005). The federal notice states that before the Proposed Delisting is finalized, the Service will complete a status review, evaluate threats to the combined *Z. h. campestris* entity in all or a significant portion of its range, and analyze whether the Preble's portion of *Z. h. campestris* qualifies as a Distinct Population Segment (DPS) in need of protection. 70 Fed. Reg. at 5405 & 5410.

By letter dated May 27, 2004, Douglas County has submitted detailed comments for consideration during this status review addressing Preble's biology (including population trends, abundance and distribution, demographics, genetics and taxonomic classification); habitat conditions; current conservation measures; potential threats; and the DPS issue as it relates to Douglas County. We have attached those comments and incorporate them here by this reference.

The County has continued affirmative actions to protect the riparian conservation zone for the benefit of Preble's and other riparian species. These actions include the land conservation efforts outlined in our previous comments and land use protection measures which are outlined in the attached Table.

We point out that the Proposed Rule at issue here addresses only the delisting of the subspecies *Zapus hudsonius preblei*. Should the Service's status review indicate that a combined *Z. h. campestris* entity or a DPS of meadow jumping mice may be in need of ESA protection, any affirmative listing action related to those populations would require commencement of a new proposed rulemaking process, with additional opportunity for public comment. With that in mind, this letter focuses on procedural issues that should be addressed as part of any final action on the Proposed Delisting for Preble's.

Douglas County requests that the Service expressly clarify the following items in any final decision on the Proposed Delisting:

1. If Preble's is delisted on the basis that its original classification was in error (rather than based on recovery), the Service should confirm that subsequent monitoring is not required by Section 4(g)(1) of the Endangered Species Act. *See* 70 Fed. Reg. at 5410.
2. Any final rule delisting Preble's due to error in its original classification should expressly clarify that terms and conditions (including mitigation, monitoring, reporting and funding requirements) in Incidental Take Permits and associated Habitat Conservation Plans and Implementing Agreements pertaining to Preble's would no longer be regarded by the Service as enforceable obligations under the Endangered Species Act. The Service should recognize that, upon such a delisting, Incidental Take Permittees could discontinue implementation of HCPs for Preble's upon notice to the Service.
3. Similarly, any final rule delisting Preble's due to listing error should expressly clarify that terms and conditions (including mitigation, monitoring, reporting and funding requirements)

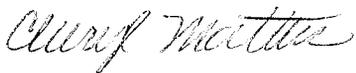
pertaining to Preble's in any Biological Opinion or Incidental Take Statement issued pursuant to Section 7 of the Endangered Species Act will not be considered by the Service as enforceable obligations or as required for compliance under the Endangered Species Act. The Service should include guidance to federal permitting and action agencies that, upon such a delisting, removal or nonenforcement of permit conditions pertaining to Preble's would be consistent with the federal agencies' ESA Section 7 responsibilities.

4. Similar clarification should be offered concerning the effect of the delisting upon compensatory mitigation banking instruments or other existing protected habitat for Preble's. The Service should recognize that, in appropriate circumstances, mitigation or enhancement "credit" for other habitat needs may be recognized for conservation easements that were established previously for Preble's.

The federal notice states that additional scientific information will likely be obtained and considered by the Service as part of its status review subsequent to the close of this comment period. 70 Fed. Reg. at 5410. This information is expected to include additional genetics data (the results of nuclear DNA analysis); additional information on species distribution and abundance; and information concerning interaction among the populations of meadow jumping mice. We reserve the opportunity to supplement these comments in response to such additional information.

We appreciate the opportunity to provide input concerning the proposed delisting of Preble's. Should you require additional information or clarification regarding our comments, please let me know.

Yours truly,



Cheryl Matthews
Director

Attachments

APPENDIX A

REGULATIONS

Douglas county Zoning Resolution

Section 3-A: Rural Site Plan provides an administrative site plan process for alternative 35-acre development that considers preservation of open space, rural landscapes, important wetland and riparian areas, and reduces environmental impacts. Criteria for approval consider protection and preservation of riparian areas and critical wildlife habitats. Rural site plans require permanent protection of either 50% or 67% of included land as open space by conservation easement or similar method.

Section 15: Planned Development District is designed, in part, to allow flexibility and promote layout, design, and construction of residential development that is sensitive to the natural land form and environmental conditions, such as riparian areas and wildlife habitat.

Section 16: Open Space Conservation District is designed, in part, to preserve certain natural features such as wildlife corridors/habitats and other areas of important environmental significance.

Section 18: Floodplain Overlay District restricts development within the 100-year floodplain, effectively preserving and protecting some riparian corridors and potential PMJM habitat. District is overlay on existing zoned areas containing 100-year flood plain areas including planned developments.

Grading, Erosion, and Sedimentation Control Manual

Section 3: Requires permits as well as disturbance containment and erosion control measures for any disturbance to soils within 150 feet of a drainage.

Regulations for Areas And Activities Designated Matters of State Interest

Section D: The approval criteria for development of areas along the shorelines of a major publicly owned reservoir considers its effects on aquatic habitats, marshlands and wetlands and significant wildlife production areas.

INCENTIVES

Douglas County Zoning Resolution

Section 3-A: Optional Rural Site Plan process allows 40% to 100% density bonus if lots are clustered and 50% to 67% of included lands are permanently preserved as open space through a conservation easement or similar method.

Purchase Programs

Douglas County Open Space Program

Douglas County open space acquisition program is funded with a sales and use tax. Funding is leveraged through the establishment of partner funding from GOCO, State Parks, Division of Wildlife and others.



Division of
Open Space and Natural Resources

May 27, 2004

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Ecological Services
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Lakewood, Colorado 80215

Subject: Douglas County's Response to the U.S. Fish and Wildlife Service's
Request for Public Comment on its Status Review for the 12-month
Finding and 5-year Review of the Preble's Meadow Jumping Mouse

Dear Susan:

On behalf of Douglas County Division of Open Space and Natural Resources, I am pleased to submit the following comments for consideration under the U.S. Fish and Wildlife Service's (Service) status review for the 12-month review finding and 5-year review of the Preble's meadow jumping mouse (*Zapus hudsonius preblei*) (hereinafter Preble's). The 12-month review of Preble's was launched as a result of the Service's 90-day finding that petitions filed with the Service by the State of Wyoming and Coloradoans for Water Conservation and Development to remove Preble's from the federal list of threatened species present substantial information that a delisting may be warranted.¹ A 5-year review of listed species is required under section 4(c)(2)(B) of the Act; therefore, it is our understanding that the Service will be undertaking the 5-year review of Preble's simultaneous with the 12-month status review.

In its notice of the status reviews, the Service requested comment on: 1) Preble's biology including population trends, distribution, abundance, demographics, genetics, and taxonomic classification; 2) habitat conditions including amount, distribution and suitability; 3) conservation measures implemented to protect Preble's; 4) threat, status and trends; and 5) other information, data or corrections. Our comments focus on these issues with particular attention given to the conditions and trends within Douglas County. In addition, we specifically address the issue of distinct population segments as it relates to Douglas County.

A. Species Biology

The known distribution of Preble's has substantially increased in Douglas County since Preble's was listed as threatened. When Preble's was listed in May 1998, it was known to occur in Douglas County in the Plum Creek watershed. Since listing, numerous

¹ 62 Fed. Reg. 16944 (March 31, 2004).

trapping surveys for Preble's have documented that Preble's is now known to occur in all three major watersheds (Plum Creek, Cherry Creek, and South Platte River) from near the El Paso County line in the south, to near the Arapahoe County line in the north, along the Elbert County line to the east, and along the Jefferson County line to the west. This broad distribution within Douglas County includes riparian areas with stream reaches located in the plains, foothills and lower montane areas of Douglas County.

B. Habitat Conditions

At the time of the listing decision, "the Preble's meadow jumping mouse [had] not been studied as extensively as other subspecies of *Z. hudsonius* [had] been studied elsewhere,"² and its habitat needs and conditions were discussed in general terms based on a few capture sites.³ Since the time of the listing, Douglas County has worked with the Colorado Division of Wildlife (by providing research sites as well as funding) to study Preble's movement and habitat preferences. In addition, Douglas County invested substantial resources to analyze DOW's movement data, map habitat, and gain a better understanding of the habitat needs of Preble's. These efforts have yielded a better range-wide understanding of Preble's habitat, and a recognition that Preble's enjoys an abundance of habitat in Douglas County.

According to White and Shenk (2000), riparian shrub cover, tree cover, and the amount of open water are good predictors of Preble's densities. Quality riparian habitat which exhibits these characteristics is prevalent throughout the County's three major watersheds and exists as part of current land use patterns. Riparian habitat within Douglas County currently provides a system of connected habitat for Preble's. This system has been enhanced since 1998 by the successful land protection efforts undertaken by Douglas County and others. This system of protected open space along riparian corridors provides the fundamental building blocks for secure and sustainable habitat conditions needed to promote the long term viability of Preble's. The ongoing maintenance, protection and enhancement of these areas will continue to provide quality habitat for Preble's even as the land use matrix within Douglas County continues to change. These efforts are discussed in more detail below.

C. Conservation Measures

As discussed above, more information is available now than there was at the time of the listing regarding Preble's biology, and its habitat needs and conditions. In addition, significant conservation measures within Douglas County are now in place that benefit and protect Preble's and its habitat. Douglas County has taken a leadership role in permanently protecting open space for the benefit of Preble's and other wildlife species. These efforts have protected over 44,000 acres of open space since the establishment of a sales and use tax to support the County open space program nearly 10 years ago.

² 63 Fed. Reg. 26517 (May 13, 1998).

³ Ibid. at 26519. "Field studies at Rocky Flats led to the conclusion that Preble's is typically found in or near complex riparian communities with multi-strata woodland and herbaceous species (Harrington et al. 1996.)"

Additionally, numerous private conservation efforts have assisted in protecting lands within Douglas County. These public and private land protection efforts are in addition to substantial State-protected lands (CDOW, State Parks, and State Land Board) that encompass approximately 12,175 acres and the Pike National Forest (144,000 acres in Douglas County). In total, approximately 37 percent of the landmass of Douglas County is currently protected from future development, with new land conservation efforts under consideration all the time.

Lands protected by Douglas County, the Towns of Castle Rock, Parker and Larkspur, private organizations, the State, and Pike National Forest conserve substantial habitat for Preble's. As part of its ongoing habitat conservation planning effort, the County has mapped the potential habitat for Preble's located on non-federal land. That habitat area encompasses approximately 284 miles of riparian habitat and over 18,800 acres. The combined and concerted conservation effort of numerous entities and private landowners within Douglas County has resulted in the permanent protection of approximately 23 percent of the stream miles, or 25 percent by acreage (approximately 4,807 acres) of the mapped riparian habitat area (Table 1). Seventy-six percent of the permanent land conservation measures that currently benefit Preble's have occurred since its listing in 1998, and eighty-eight percent of those protection efforts have been conducted with the leadership of Douglas County. Douglas County owns 14 properties which encompass approximately 15 stream miles and over 1100 acres of the riparian habitat. All of these properties were acquired after the Preble's was listed in 1998, and are being managed in a manner that maintains or enhances the property's riparian resources and thus provide benefit to Preble's (Table 2).

D. Threats to the Species

Potential threats to Preble's in Douglas County have been reduced since Preble's was listed. Substantial amounts of habitat have been preserved as previously discussed, and the following measures that reduce potential threats to Preble's and its habitat have been put in place subsequent to the listing of Preble's as threatened:

- The County distributes information on Preble's as part of the land use and development review process (Attachment A). The County notes on the applicants' plans or files that Preble's information has been provided.
- The County recently finalized and implemented its Grading, Erosion, and Sedimentation Control (GESCC) Manual. The GESCC Manual increases protection of streams and riparian areas in the County by establishing strict criteria to control and minimize erosion and sedimentation, and requires revegetation of disturbed areas. The GESCC Manual discusses the need for other types of authorizations, including ESA compliance, when working in streams and riparian areas. The Manual also considers riparian areas and habitat for threatened and endangered species as sensitive areas. Sensitive areas require a resource inventory and impact avoidance and minimization.
- County open space lands have been managed to make the public aware of Preble's and improve habitat for Preble's. (See Photo 1.)

E. Distinct Population Segments

In 1996, the Service adopted a policy “to clarify their interpretation of the phrase ‘distinct population segment of any species of vertebrate fish or wildlife’ for the purposes of listing, delisting, and reclassifying species under the Endangered Species Act of 1973.”⁴ The Service’s policy provides for the sequential consideration of three elements. These three elements are:

- Discreteness of the population segment in relation to the remainder of the species to which it belongs;
- The significance of the population segment to the species to which it belongs; and
- The population segment’s conservation status in relation to the Act’s standards for listing (i.e., is the population segment, when treated as if it were a species, endangered or threatened?).⁵

As discussed below, the Service cannot conclude that the populations within Douglas County are a distinct population segment for Preble’s.

1. Discreteness

According to the Service’s policy, a vertebrate species may be considered discrete if it satisfies one of two conditions. Only the first condition may apply to Preble’s because the other relates to international governmental boundaries. Thus, the Service must determine if Preble’s is “markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, or other behavioral factors.”⁶

Douglas County occurs as part of and south of the Denver metropolitan area. The Denver metropolitan area forms a substantial area in which Preble’s has not been found since prior to the listing of Preble’s in 1998. However, the Denver metropolitan area does not completely separate the populations of Preble’s in Douglas County from the populations of Preble’s north and west of the metropolitan area. Jefferson County borders Douglas County along the South Platte River and extends along the western boundary of the metropolitan area north to Boulder County. Preble’s is known to occur along the South Platte River and its tributaries in Douglas and Jefferson counties upstream of Chatfield Reservoir. Preble’s also occurs sporadically in Jefferson County south of Coal Creek and the creeks that drain Rocky Flats (e.g., Ralston Creek and Elk Creek). It is not known how well defined the connections for Preble’s are around the western flank of the metropolitan area. It is clear, however, that Preble’s does occur in this area and there is

⁴ 61 Fed. Reg. 4722 (February 7, 1996).

⁵ *Ibid.* at 4725

⁶ *Id.* “Quantitative measures of genetic or morphological discontinuity may provide evidence of this separation.”

~~not a substantial continuous void of unoccupied habitat for Preble's between Boulder County and Douglas County.~~

Therefore, there is not substantial information to demonstrate that the Preble's is discrete from other populations of the same taxon based on physical separation or isolation from other populations. There are no known distinct differences in physiological, behavioral, or ecological traits of the Preble's south of the Denver metropolitan area and the rest of the Preble's range.

2. Significance

As stated above, Preble's populations within Douglas County are not discrete as defined under the Service's policy. However, if the Service determines a population segment to be discrete, then its biological and ecological significance will be considered. This analysis is guided by the ESA's legislative history which provides that the authority to list DPS's should be used "sparingly" within the context of conserving genetic diversity.⁷

In considering the significance of a discrete population, the Service considers the following non-exclusive factors:

a. Persistence of the DPS in an ecological setting unusual or unique for the taxon.

Douglas County does not provide an unusual or unique ecological setting for Preble's. The ecological setting in Douglas County is common along the Front Range. Douglas County is blessed with extensive riparian habitats, in part due to its rural and agricultural land uses. Only five percent of the unincorporated areas of the County are occupied by urban development or urban zoned land (Douglas County 2001). However, the riparian habitats that support the Preble's in Douglas County are found throughout the range for Preble's.

b. Evidence that loss of the DPS would result in a significant gap in the range of taxon.

First, for the reasons discussed elsewhere in these comments, Preble's is secure and has improved in Douglas County (e.g., reduction of potential threats, increased habitat preservation and management, and extensive habitat well distributed throughout the County).

If the Douglas County population of Preble's was lost it would not create a significant gap in the overall range of Preble's. Douglas County is near the southern limit of the range of Preble's. There is no evidence that there is currently movement of Preble's over the Palmer Divide from the South Platte River watershed into the Arkansas River watershed. If the Douglas County population was lost, and this seems highly unlikely, the loss would merely trim the periphery of the southern most range of Preble's, and would not form a significant gap in its range.

⁷ Id.

c. Evidence that the DPS represents the only surviving natural occurrence of a taxon that may be more abundant elsewhere as an introduced population outside its historic range.

This is not the situation with Preble's.

d. Evidence that the DPS segment differs markedly from other populations of the species in its genetic characteristics.

There is no evidence of this in Preble's for any portion of its range. In a review of several subspecies of *Zapus hudsonius*, Ramey et al. (2003) found that genetic variation within subspecies as indicated by mtDNA nucleotide diversity was lowest in *Z. h. preblei*.

3. Conservation Status

As discussed above, Preble's conservation status in Douglas County is secure and has improved since the species was listed as a federally protected species in 1998. Since 1998, over 3650 acres of Preble's habitat has been protected, and more land conservation projects are under consideration. Douglas County has also adopted management practices that serve to maintain or enhance riparian resources on properties it owns that contain over 1100 acres of the riparian conservation zones (RCZ) mapped by Douglas County (See Tables 2 and 3). These management practices provide benefits to Preble's that were not available at the time of the listing in 1998.

In May 2001, Douglas County adopted its Comprehensive Master Plan. The Master Plan articulates planning objectives and policies for the unincorporated parts County. These objectives continue to promote the rural character of the county by directing urban development to areas contained within only 5 percent of the unincorporated area of the County. In addition, the Master Plan contains a separate section on wildlife, wildlife habitat and movement corridors. This section states that wildlife was named as the number one value of importance to Douglas County residents.⁸ The Master Plan encourages that several steps be taken in areas considered wildlife habitat or movement corridors, including: stricter review of development and other land uses to ensure quality wildlife habitat and movement opportunities to minimize habitat fragmentation and disturbance; and encouragement of habitat restoration and improvements.⁹ These and other elements of the Master Plan assist in the conservation of wildlife habitat and are of benefit to Preble's.

In addition, Douglas County recently adopted its Grading, Erosion and Sediment Control Manual (Douglas County GESC Manual, 2002) which increases protection of streams and riparian areas in the County. The GESC Manual establishes strict criteria to control and minimize erosion and sedimentation, and requires revegetation of disturbed areas. The GESC Manual considers riparian areas and habitat for threatened and endangered

⁸ Douglas County 2001 Comprehensive Master Plan, May 2001, p. 11-1.

⁹ Ibid. at 11-2.

species as sensitive areas, and recognizes the need for other regulatory authorizations, including ESA compliance, and 404 Clean Water Act permits, when working in streams and riparian areas. Under the GESC Manual provisions, resource inventories and impact avoidance and minimization are required when conducting activities in sensitive areas. Thus, these recently approved provisions provide additional protection benefiting Preble's. Such provisions were not in place when the species was listed in 1998.

F. Conclusion

Preble's should be delisted based upon the new information provided to the Service since the time it was listed in 1998. This includes new information on the species' biological status, habitat needs and conditions, conservation status, and threats. In Douglas County in particular, Preble's enjoys a secure environment that has been improved both through new regulatory requirements adopted by the County and through significant permanent land conservation measures that have been put in place since 1998. If the Service decides not to delist Preble's throughout its entire range, the designation of a distinct population segment in Douglas County is not warranted for the reasons provided in these comments.

Again, we appreciate the opportunity to provide the Service with these comments. Please feel free to contact me should you require any addition information or clarification of our comments.

Yours truly,



Cheryl Matthews
Director

Property	Year Protected	Total Area (Acres)	County Protected RCZ		Castle Rock Protected RCZ		Parker Protected RCZ		Larkspur Protected RCZ		State Protected RCZ		Private Conservation Easements in RCZ	
			RCZ Acres	Stream Miles	RCZ Acres	Stream Miles	RCZ Acres	Stream Miles	RCZ Acres	Stream Miles	RCZ Acres	Stream Miles	RCZ Acres	Stream Miles
Jones Ranch	1995	?	?	0.2										
Lake Gulch Open Space*	1999	790.0												
Lake Gulch Open Space Fee	1999	210.0	13.4	0.1										1.4
Lambert Ranch**	1999	506.0												
Nelson Ranch Fee	2001	565.0	17.7	0.7										1.7
North Willow Creek Ranch	1999	698.0	8.9	0.4										
Norton Property*	1999	75.0						17.4	0.3					
Perry Park Gateway	2001	68.0	37.3	0.3										
Pine Cliff	1999	3559.6												
Prairie Canyon Ranch	1996 - 2000	978.0	57.7	1.3										8.9
Red Mesa Ranch*	2003	105.0												
Red Mesa Ranch Fee	2002	245.0	19.6	0.5										0.3
Roxborough State Park		3309.9												
Snortland Property	2000	105.0	87.9	1.3							93.8	1.8		
Spencer Property	2002	364.0												
Spruce Mountain Easement	2003	965.0												
State Land Board		2744.8												
Town of Castle Rock Open Space		827.0			15.1	0.5								
Town of Parker Open Space		1697.5					268.0	3.2						
True Mountain	2003													
Totals		54276.6	1527.5	18.9	15.1	0.5	285.4	3.5	0.0	0.0	356.5	7.8	2622.8	35.8

* County contributed to the purchase of the conservation easement

** County rural site plan created specifically with Preble's in mind; County holds conservation easement.

Total RCZ Stream Miles Protected = 64.5
Total RCZ Acres Protected = 4807.3

Table 2. Properties Owned by the Local Jurisdictions That are Managed to Maintain, Restore or Enhance the RCZ.

Property	Year Protected	Total Area (Acres)	County Protected RCZ		Castle Rock Protected RCZ		Parker Protected RCZ		Larkspur Protected RCZ	
			RCZ Acres	Stream Miles	RCZ Acres	Stream Miles	RCZ Acres	Stream Miles	RCZ Acres	Stream Miles
Columbine Open Space	1997	321.0	117.3	1.7						
Douglas Valley Estates	2001	5.4	5.4	0.0						
Dupont Property Fee	2002	506.0	285.2	1.9						
Gondolier Farms	2000	289.0	101.9	1.5						
Grange Property	2002	652.5	47.4	0.8						
Greenland Ranch Fee	2000	3444.0	332.7	4.4						
Hungry Horse	2003	?	12.7	0.0						
Lake Gulch Open Space Fee	1999	210.0	13.0	0.1						
Nelson Ranch Fee	2001	565.0	18.0	0.7						
North Willow Creek Ranch	1999	698.0	8.7	0.4						
Norton Property	1999	75.0					21.9	0.3		
Prairie Canyon Ranch	1996 - 2000	978.0	56.0	1.2						
Red Mesa Ranch Fee	2002	245.0	19.3	0.5						
Snortland Property	2000	105.0	87.9	1.3						
Town of Castle Rock					13.6	0.5				
Town of Parker							267.5	3.2		
Totals		8093.9	1105.5	14.9	13.6	0.5	284.4	3.5	0.0	0.0

Total RCZ Stream Miles Protected = 18.9
Total RCZ Acres Protected = 1403.5

Table 3. Management of Protected Lands Benefiting Preble's.

Property	Livestock Management	Weed Control	Limitation to Number of Structures	Fencing	Other	Comments
Allis Property	X	X	X		X	Trail alignment diverted out of Preble's habitat
Allis Ranch Preserve	X	X			X	Wildlife habitat improvements]
Barber Property (CE)*	X					
Brooks Ranch (CE)			X		X	Adjoins National Forest
Cherry Creek Trail/Pfeifer Property	X	X				
Columbine Open Space*	X	X			X	Habitat signage; coordination with the Service and CDOW; dogs excluded; beaver have returned and are not controlled; CDOW has a management zone; Preble's research site; CDOW holds a conservation easement
Douglas Valley Estates	X					
Duncan Ranch (CE)						
Dupont Property (CE)		X		X	X	Area patrolled to control ATVs
Dupont Property Fee	X	X		X	X	Control of ATVs
Gondolier Farms	X	X				
Grange Property	X	X		X		
Greenland Ranch (CE)	X		X		X	Land management plan required; protects important watershed connection between East Plum Creek and upper Cherry Creek
Greenland Ranch Fee	X	X			X	Riparian plantings around ponds; erosion control
Greenland Townsite					X	Trash clean up; eliminated 96 lots from future proposed development
Hungry Horse					X	
J A Cattle Ranch (CE)	X	X	X		X	Required to maintain, enhance, or improve wildlife habitat
Jones Ranch			X			
Lake Gulch Open Space (CE)	X		X		X	Annual grazing and land management plan required
Lake Gulch Open Space Fee	X	X				
Lambert Ranch	X	X			X	County rural site plan created to protect Preble's habitat; clustered development plan created to keep development out of riparian area
Neison Ranch Fee		X	X	X	X	Adjoins Roxborough State Park
North Willow Creek Ranch	X	X			X	Reseeded; CDOW conservation easement

Property	Livestock Management	Weed Control	Limitation to Number of Structures	Fencing	Other	Comments
Norton Property	X	X				County holds conservation easement
Perry Park Gateway					X	Section 1006 money used to purchase and protect Preble's habitat
Pine Cliff		X	X		X	Cats are prohibited within 1000 feet of stream; conservation easement recognizes Preble's habitat; use restrictions; CDOW Preble's research site
Prairie Canyon Ranch		X		X	X	Willow plantings; site adjoins State Land Board land and Castlewood Canyon State Park
Red Mesa Ranch (CE)	X	X		X	X	Conservation easement recognizes conservation of Preble's
Red Mesa Ranch Fee				X		
Snortland Property	X	X			X	Trash clean up; specifically bought for the conservation of Preble's; beaver have returned and are not controlled
Spencer Property	X	X	X			
Spruce Mountain			X		X	
Town of Castle Rock Open Space						
Town of Parker Open Space						

* Conservation easement (CE)

Attachment A

PREBLE'S MEADOW JUMPING MOUSE

What is the Preble's meadow jumping mouse?

The Preble's meadow jumping mouse is a rare mouse designated by the United States Fish and Wildlife Service as a threatened species under the Endangered Species Act. The federal threatened species designation prohibits the unlawful take of the Preble's meadow jumping mouse or its habitat.

Where does the mouse live?

The Preble's meadow jumping mouse lives primarily in heavily vegetated riparian habitats, but may also use adjoining uplands. In Douglas County, the mouse has been located in or near many drainages, including tributaries and the main stream reaches, of East and West Plum Creek, Cherry Creek and South Platte River. However, *any* stream reach or potential habitat within Douglas County may be subject to the requirements of the Endangered Species Act. At this time, the Fish and Wildlife Service considers areas 300 feet from the 100-year flood plain of streams to be potential habitat for the mouse.

The mouse has also been found in Boulder, Elbert, El Paso, Jefferson, Larimer and Weld counties and in parts of Wyoming.

What activities may be considered a violation of the Endangered Species Act?

In its listing decision, the United States Fish and Wildlife Service identified activities that may result in violation of the Endangered Species Act to include:

- 1) Unauthorized or unpermitted collection, handling, harassing, or taking of the species;
- 2) Activities that directly or indirectly result in the actual death or injury of the mouse, or that modify the known habitat of the species, thereby significantly modifying essential behavioral patterns (e.g., plowing, mowing, or cutting; conversion of wet meadow or riparian habitats to residential commercial, industrial, recreational areas, or cropland; overgrazing; road and trail construction; water development or impoundment; mineral extraction or processing; off-highway vehicle use; and, hazardous material cleanup or bioremediation); and
- 3) The application or discharge of agrichemicals, or other pollutants, and pesticides, onto plants, soil, ground water, or other surfaces in violation of label directions or any use following Service notification that such use, application or discharge is likely to harm the species; would be evidence of unauthorized use, application or discharge.

How to determine if a proposed activity would violate the Endangered Species Act.

Any questions regarding ESA compliance or whether an activity will impact the Preble's meadow jumping mouse or its habitat should be directed to:

Peter Plage or Kathleen Linder
Fish and Wildlife Biologist
United States Fish and Wildlife Service
755 Parfet Street
Suite 361
Lakewood, Colorado 80225
303-275-2370

Any approval obtained from Douglas County does not obviate your need to comply with the requirements of Sections 7 and 9 of the Endangered Species Act of 1973, 16 U.S.C. 1531, et seq., as amended, or with any other applicable federal, state or local laws or regulations.

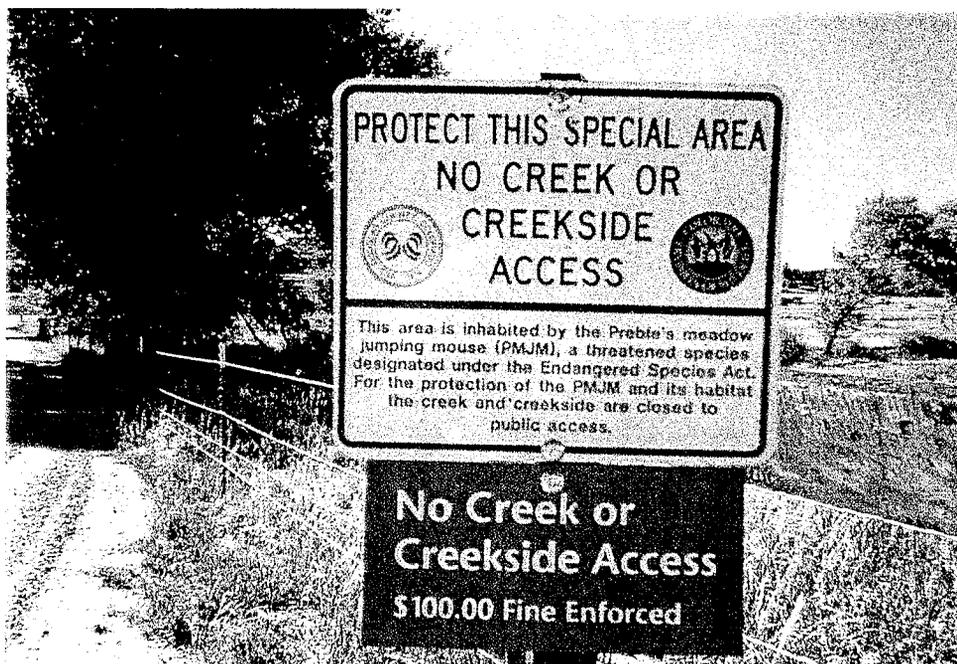


Photo 1: Restrictive signage.



"Lauren DeKosky"
<laurend@fb.org>
05/03/2005 03:13 PM

To <FW6_PMJM@fws.gov>
cc
bcc
Subject COMMENTS ON DE-LISTING PROPOSAL

Lauren DeKosky
American Farm Bureau Federation
600 Maryland Ave SW, Suite 800
Washington, DC 20024
ph: 202-406-3686
fax: 202-406-3604



esa-mouse05.503.pdf



AMERICAN FARM BUREAU FEDERATION®

600 Maryland Avenue S.W. • Suite 800 • Washington, DC • 20024 • (202)406-3600 • fax (202)406-3604 • www.fb.org

Field Supervisor
Colorado Field Office
Ecological Services
755 Parfet Street, Suite 361
Lakewood, CO 80215

RE: Proposed De-Listing of the Preble's Meadow Jumping Mouse RIN 1018-AU12

To Whom It May Concern:

The American Farm Bureau Federation (AFBF) is pleased to offer these comments in support of the proposed de-listing of the Preble's meadow jumping mouse.

We commend the Fish & Wildlife Service (service) for its finding that the Preble's is not a separate subspecies of mouse based on comprehensive DNA evidence. The agency acted according to the careful, thorough "best science" approach required by the Endangered Species Act (ESA) before making a decision to de-list a species.

The mouse was listed amid controversy as a threatened species in 1998 on the basis that it was a separate subspecies. Its listing has cost farmers, ranchers and other entities in Colorado and Wyoming millions of dollars in compliance costs.

The ESA requires that listing and de-listing decisions be made on the basis of "the best scientific and commercial data available." For purposes of de-listing actions, that means that when better scientific, biological or geospatial data becomes available, the service must act in accordance with the findings of that new data. That is exactly how the service responded in this case.

Dr. Ramey performed a comprehensive genetic comparison of the Preble's and the Bear Lodge mouse, which is closest to the Preble's in make-up. Dr. Ramey's study concludes that there is no genetic distinction between the Preble's and the more plentiful Bear Lodge mouse, and therefore the Preble's should not have been listed.

Dr. Ramey's study and results were extensively peer-reviewed before the service made its finding on the petition to de-list. The results of the peer-review are documented in the proposed rule.

Dr. Ramey's extensively peer-reviewed study clearly represents the "best scientific or commercial data available." In addition, the study meets all of the goals of the Data Quality Act, which requires that scientific evidence used in federal decision-making meets standards of quality, objectivity and utility.

The fact that fourteen qualified scientists reviewed Dr. Ramey's study more than satisfies the Data Quality Act, which requires that influential scientific studies, such as that performed by Dr. Ramey, be peer reviewed before they are disseminated by the agency.

Based on the "best scientific and commercial data available," there is no basis for listing the Preble's meadow jumping mouse. The evidence conclusively proves that the Preble's is not a separate subspecies as set forth as the basis for listing.

This is a prime example of how the Endangered Species Act is supposed to work. Major new scientific studies that affect the status of a listed or unlisted species should be promptly reviewed by the service and a decision made based on the best science. Furthermore, any new science must have undergone the rigors of peer review before being used by the agency as a basis for decision-making. All of these procedures were followed in this case.

The ESA was enacted to ensure that science guided the agency's listing and de-listing decisions. By the same token, the service should reconsider its decision to undertake a status review for the entire Bear Lodge meadow jumping mouse. There is no evidence that this more common species of jumping mouse is or may be imperiled. We question spending scarce resources on a status review for a species for which no threats have been identified. We are mindful of the time and resources that were expended to list the Preble's; the same time and resources would be required to conduct a status review of the entire Bear Lodge population. We do not think that expenditure is justified.

We also question the decision to consider whether the Preble's is a distinct population segment of the Bear Lodge mouse. Genetic tests have shown that there are no differences between the Preble's and the rest of the Bear Lodge population of jumping mouse. There is also no evidence to indicate discreteness or any impact of the Preble's mouse on the rest of the Bear Lodge population. Scientific information premised on the Preble's being a separate subspecies is much different from information premised on Preble's being part of the Bear Lodge mouse. Consideration of whether this population is a distinct population segment of the Bear Lodge meadow jumping mouse requires the Service to take a fresh look at the status of this population in the context of the entire Bear Lodge population. With the scarce resources available to the service, and with all the service's listing funds being used to respond to court-ordered matters, we would not recommend undertaking this review at this time.

In any event, if the service moves forward with either or both of these reviews, we urge the service to publish results of the finding and a proposed rule before finalizing any rule. It is important that the public be given an opportunity for additional review and comment before finalizing a rule.

Sincerely,



Mark Maslyn
Executive Director, Public Policy

Office of the Governor

May 3, 2005

Field Supervisor
Colorado Field Office, Ecological Services
755 Parfet Street, Suite 361
Lakewood, Colorado 80215

VIA FACSIMILE: (303) 275-2371

To Whom It May Concern:

Thank you for the opportunity to provide comments relative to the 12-Month Finding on a Petition To Delist the Preble's Meadow Jumping Mouse (*Zapus hudsonius preblei*) and Proposed Delisting of the Preble's Meadow Jumping Mouse. The State is pleased with the proposed rule and looks forward to a final delisting rule, which will hopefully bring the tortured history of the Preble's to a close in Wyoming and Colorado.

Comments on Specifically Requested Information

First, I would like to provide a detailed account of the information requested in the proposed rule. While I unequivocally dispute the need for the requested information, as will be discussed later, the State is not willing to pass on the questions presented and leave the U.S. Fish and Wildlife Service (FWS or Service) to its own devices to provide the requisite data.

1. Information, data and comments concerning the taxonomic classification and conservation status of Preble's and Bear Lodge meadow jumping mouse.

The State of Wyoming questions why the FWS is linking the delisting of Preble's with a status review for *Z. h. campestris*. A status review of *Z. h. campestris* is far beyond the four corners of the petition we filed to delist *Z. h. preblei* and contradicts current FWS Petition Management Guidance. It also allows the FWS to avoid answering the fundamental assertion of our petition – information collected post-listing that indicates that FWS-listing assumptions for *Z. h. preblei* were erroneous.

Although we agree that recent phylogenetic and morphological comparisons completed by Dr. Ramey indicate that Krutzsch's designation of *Z. h. campestris*, *Z. h. preblei* and *Z. h. intermedius* as distinct subspecies was inappropriate and that they are a monophyletic group, the State's petition asked you to delist *Z. h. preblei* based on two primary factors: 1) *Z. h. preblei* was not distinct from *Z. h. campestris* (and perhaps *Z. h. intermedius*); **AND** 2) conclusions reached by the FWS regarding the distribution, abundance, trends and threats to *Z. h. preblei* were, based on post-listing trapping, factually and substantially incorrect. The FWS has focused most its attention on the genetics analysis completed by Dr. Ramey and has essentially ignored the bulk of the State's petition regarding distribution, abundance, trends and threats.

The State of Wyoming has continually asserted, based upon the best available scientific information which is thoroughly and clearly presented in the petition, that even if *Z. h. preblei* were a valid taxonomic entity, and it were geographically isolated from other *Z. hudsonius* in northeastern Wyoming and Montana (which it does not appear to be), the threats in southeastern Wyoming and along the Colorado Front Range do not rise to the level of justifying listing. Post-listing trapping indicate there have been no range reductions of significance for *Z. hudsonius* in southeastern Wyoming and along the Colorado Front Range. *Z. hudsonius* is now known from more sites and from more hydrologic units than at any time in the past (see Section 4 of the State's petition). The recent discovery of *Z. hudsonius* west of the Laramie Range in Wyoming is very significant and clearly demonstrates that *Z. hudsonius* is distributed much more widely than assumed at the time of the listing (see Section 4.6.17 of the State's petition).

a. Specifically, data from any systematic surveys for Bear Lodge meadow jumping mouse.

We are unaware of any systematic surveys for *Z. h. campestris* although additional records from recent captures in Montana are available (see discussion below). However, the lack of information can not be viewed in any way as a demonstration of lack of viability for the species, as was done for the original listing of *Z. h. preblei*. It simply means that systematic surveys have not been completed. As such, no conclusions - affirmative or negative - can be reached from the lack of information.

b. Specifically, studies that may show population size and trends.

We are unaware of any studies that demonstrate population size or trends for *Z. h. campestris*.

c. Specifically, qualitative information regarding the life history, ecology and habitat of Bear Lodge meadow jumping mouse.

We are unaware of any specific information regarding the life history, ecology and habitat of *Z. h. campestris*.

d. Specifically, information regarding the applicability of information relevant to other subspecies.

We are unaware of any specific information relevant to other subspecies.

e. Specifically, threats faced by the Bear Lodge meadow jumping mouse and Preble's in relation to the five listing factors.

The State's petition contains extensive information regarding threats to *Z. hudsonius* in southeast Wyoming and along the Colorado Front Range. Please see pages 66 through 99 of the State's petition. The information contained in the petition demonstrates that the threats analysis conducted by the FWS during the listing process was substantially incomplete and resulted in erroneous conclusions. In the end, the obvious and only conclusion is that the threats to what was then known as *Z. h. preblei* do not rise to a level sufficient to justify listing the subspecies as threatened.

f. Specifically, the effects of current land management on population distribution and abundance of the Bear Lodge meadow jumping mouse.

We are unaware of any information regarding threats to *Z. hudsonius* in Montana or South Dakota. In fact, Montana Fish, Wildlife & Parks specifically state they have no information regarding population density or trends in the state (see www.fwp.state.mt.us).

We are aware that Center for Native Ecosystems et al. have provided the FWS with a report titled "The Conservation Status of Preble's Meadow Jumping Mouse and Bear Lodge Jumping Mouse" dated June 3, 2004. As expected, this report asserts that the status of the Bear Lodge meadow jumping mouse in the Black Hills is dire. However, the report provides **no** quantitative or qualitative information to indicate population declines or loss of populations in the Black Hills. We urge the FWS to look at the information contained in Center for Native Ecosystems' report critically and not fall prey to the sorts of "chicken little" broad brush threats discussion that resulted in the original listing of *Z. h. preblei*. General threats do not warrant listing, particularly in the absence of credible information that suggests that the species has declined or is likely to decline over a significant portion of its range in the foreseeable future, as mandated by the Endangered Species Act to justify a listing.

2. Information regarding the possibility of contact and interaction between Bear Lodge meadow jumping mouse and adjacent subspecies of meadow jumping mouse (*intermedius* and *pallidus*).

Dr. Ramey's analysis suggests that *Z. h. campestris* and *Z. h. intermedius* are monotaxic. If he is correct, any attempt to distinguish between the ranges of the two putative subspecies is inappropriate and futile. Again, we believe that the FWS, by asking for this type of information, is avoiding addressing the point of the State of Wyoming's petition. Interaction between putative subspecies of *Z. hudsonius* in Montana and North Dakota is irrelevant to whether *Z. hudsonius* in southeastern Wyoming and along the Colorado Front Range are threatened.

3. Other information informing a Distinct Population Segment Analysis.

We addressed the potential for a distinct population segment (DPS) in our petition (see Section 3 of the State's petition). To support *Z. h. preblei* as a separate subspecies, Krutzsch noted the apparent lack of integration between *Z. h. campestris* and *Z. h. preblei* based on what he described as "much territory inhospitable to *Zapus*" between the ranges of the two subspecies. According to Krutzsch, the area between the ranges of the two subspecies of *Z. hudsonius* (northern Platte, Goshen, eastern Converse, Niobrara, and southern Weston counties, Wyoming) consists primarily of rolling hills and short grass prairie which is largely unsuitable (except perhaps locally) for *Zapus*. This area has been termed the "gap". Although at least one later researcher (Jones, 1981) questioned the validity of a number of the subspecies of *Z. hudsonius* designated by Krutzsch, it was commonly accepted by most that the "gap" resulted in reproductive isolation sufficient to lead to allopatric speciation and formation of a *preblei* monotaxic group.

If *Z. h. preblei* and *Z. h. campestris* are actually monotaxic, as recent work by Ramey suggests, then gene flow between the Black Hills and the Laramie Range must occur either through or around the "gap" described by Krutzsch at a frequency to prevent allopatric speciation. We believe information currently available from a variety of sources, and described in detail in the State's petition, suggests that *Z. hudsonius* exists in contiguous habitat between the Black Hills and Laramie Mountain Range west of the "gap" along the eastern flank of the Bighorn Mountains and through southeastern Montana north of Krutzsch's "gap". The hypothesis is supported by trapping data west and north of

the “gap” in the Bighorn Mountains in Wyoming; population genetics analysis conducted by Riggs *et al.*; and habitat suitability modeling conducted by the Wyoming Natural Diversity Database (WYNDD). This information is provided in Section 3 of the State’s petition. The hypothesis that *Z. h. campestris* occurs in the Bighorn Mountains in Wyoming was first proposed by Charles Long in 1965 (Long, 1965). He first suggested that *Z. h. campestris* may occur in the Bighorn Mountains in Wyoming because they had been collected from the Bighorns in adjacent portions of Montana. *Z. hudsonius* were first captured from the Montana portion of the Bighorn Mountains by Vernon Bailey in 1894. A complete list of *Zapus* records from Montana, including captures made in 2004, are provided in Tables 1 and 2, which are attached to this comment letter. This information supplements and updates information contained in the State’s petition. Wyoming records included in our petition have not been updated.

Understanding the biogeography of *Zapus* in northeastern Wyoming is complicated by the lack of morphological characteristics to allow distinguishing *Z. hudsonius* from *Z. princeps princeps* in the field. Throughout the Laramie Range in southeastern Wyoming and northern Colorado, the range of *Z. hudsonius* overlaps the range of *Z. p. princeps* and in at least one location (North Sybille Creek, WY) the taxa appear to be syntopic (Conner and Shenk, 2001). The same overlap may occur in the Bighorn Mountains in Montana and Wyoming. Clark and Stromberg (1987) noted the lack of obvious differences in habitat preference between *Z. hudsonius* and *Z. p. princeps*. Because the taxa are so morphologically and ecologically similar, there is no reliable technique to distinguish live specimens in the field (Conner and Shenk, 2003). The long-relied upon use of diagnostic dentation (anterior median toothfold) has been shown by Conner and Shenk (2003) to be unreliable. Consequently, many of the field identifications of *Zapus* in southeastern Wyoming are thought to have been erroneous. In fact, when Conner and Shenk (2003) applied discriminate function analysis using repeated cranial measurements to 10 museum-labeled specimens of *Z. p. princeps* from southeastern Wyoming, they found 7 were actually *Z. hudsonius*. Misidentification has likely also occurred for many northeastern Wyoming specimens.

As we stated in Section 3 of the petition, there are a number of records of low elevation *Zapus* from the eastern flank of the Big Horn Mountains in northeastern Wyoming that indicate the potential for contiguous occupied range between the Laramie Range and the Black Hills. Of particular note are records from the WYNDD database for low elevation *Zapus* from the Dry Fork Cheyenne River in Converse County and from Gorden Creek, Badwater Creek and Buffalo Creek in Natrona County at the southern end of the Bighorn Mountains. It is also important for the FWS to recognize that Riggs *et al.* found the Badwater Creek mouse in Natrona County to be genetically no different from *Z. h. campestris* collected in the Black Hills in Weston County. In other words, Riggs *et al.* verified that *Z. hudsonius* was present the southern end of the Bighorn Mountains.

Records of low elevation *Zapus* also occur in Johnson County from the Middle Fork Powder River, Sayles Creek and from Lake De Smet between Buffalo and Sheridan, Wyoming. Although genetics analysis has been completed for mice from Lake De Smet, the results disagree. Low elevation *Zapus* have been collected from one site in Bighorn County (Shell Canyon) and three sites in Sheridan County (Amsden Creek, Youngs Creek and Stockade Creek).

Big Horn County Montana, directly north of Sheridan County, Wyoming appears to be the eastern extent of *Z. hudsonius*’ range in Montana (see Table 1). Records from the MTNHP indicate captures of *Z. hudsonius* from Big Horn County from the Little Bighorn River (2 miles north of the Wyoming border) and Rosebud Creek at Rosebud Battlefield State Park (see Table 2).

Also of note is the fact that additional captures of *Z. hudsonius* were made in Montana in Richland County (see Table 2). These 2004 captures further extend the northern range of *Z. hudsonius* in Montana and are directly adjacent to that portion of North Dakota previously considered to be the range of *Z. h. intermedius*. These records further support Montana Fish, Wildlife & Parks' latest range map for *Z. hudsonius* that encompasses a large portion of the eastern portion of the state from the eastern flank of the Bighorn Mountains across the southern border of the state to the Black Hills and north to the Canadian border. The map from the Montana Fish, Wildlife & Parks website is attached, which spatially denotes such distribution.

As we concluded in the petition, the State of Wyoming believes the best available scientific information indicates that contiguous distribution of low elevation *Zapus* is supported by trapping conducted in northeastern Wyoming and southeastern Montana. This information contradicts the notion that a "gap" exists in *Z. hudsonius* distribution between southeastern Wyoming and the Black Hills. Further, trapping results from Wyoming and Montana support Ramey's conclusion of contiguous distribution across the putative ranges of *Z. h. preblei*, *Z. h. campestris* and *Z. h. intermedius*. The best available scientific information argues against classifying what was previously known as *Z. h. preblei* as a distinct population segment of *Z. h. campestris*.

Peer Review

Beyond the information specifically requested in the proposed rule, I would like to address several other issues brought forward through the 12-month finding. First, I contend that the FWS should not rely upon the Colorado Division of Wildlife (CDOW) peer reviews as apparently it has chosen to do. As stated in an April 5, 2004 letter, which is attached for your reference, I have extreme concerns related to the independence and impartiality of the soliciting agency (CDOW) and several of the reviewers and would thus counsel that the reviews be more judiciously screened. To include any reference to the reviews will only inflame the delisting process and re-open a somewhat healed wound. Because I do not wish to belabor the point, I reassert and incorporate my April 5, 2004 comments and request that the decision to include the CDOW reviews in the final analysis be reconsidered.

Distribution, Abundance, Trends and Threats

Foreshadowed in prior discussion is the thought that the 12-month finding does not adequately account for detailed information provided in the petition relative to the distribution, abundance, trends and threats of the Preble's mouse. In its 90-day finding on the State's petition, the Service wrote: "While most of the information presented in the petition is duplicative of information contained in the Service's files, particularly with regard to distribution, abundance, and threats, the petition does raise novel taxonomic questions..." Such a dismissive response is wholly unwarranted and does not adequately address the major components of the State's petition.

First, if the passage in the 90-day finding is true that the Service does have such information in its files, the question is – why was the mouse listed and why does the listing continue. In the view of many, including myself, the distribution, abundance, trends and threats analysis detailed in the petition, and apparently contained in the Service's files, is **of itself** sufficient to justify the delisting rule.

Second, while I certainly cannot disprove the assertion that the Service's files contain the information, I have sincere doubts that the Service has ever endeavored to synthesize the data into form that explicitly address listing criteria. In fact, I would hazard a guess that the State's petition is the first such effort, which is extremely unfortunate for those that have been impacted by the listing. As a result, I insist that the Service provide a more cogent and detailed explanation as to its use and consideration of

the distribution, abundance, trends and threats data contained in the petition beyond the very insufficient and dismissive reference in the 90-day finding.

Information Requested in 12-Month Finding

The first five (5) pages of this letter are dedicated to answering questions presented in the 12-month finding. The solicitation of information encompasses data related to *Z. h. campestris* and other subspecies of *Zapus hudsonius*. I assume the requested information comes from a reading of the Petition Management Guidance (PMG), which authorizes a “broadening” of the scope of review when “information indicates that such an action is appropriate.” (see PMG, p. 6). To me, the expedition that the Service has undertaken is wholly unwarranted and only delays the inevitable.

First, the petition clearly indicates that the listing of the Preble’s is not warranted – based mainly on the distribution, abundance, trends and threats analysis, although the genetics information is very helpful. In fact, the data, almost entirely disregarded by the Service, indicates that the mouse is now found in 14 hydrologic units, where previously the Service had believed it to only exist in 9 hydrologic units. Further, the mouse was previously only found at 29 sites, where now the mouse is found in 126 sites. Beyond the distribution, abundance, trends and threats data relative to the Preble’s, the Service has no systematic, quantitative or qualitative information, other than the allegations contained in the Center for Native Ecosystems document, which demonstrates that the other subspecies of *Zapus hudsonius* are threatened. In fact, the Montana Division of Fish, Wildlife & Parks site lists the meadow jumping mouse as having a G5 rating (or globally secure). One would think, by simple deduction that a secure Preble’s population added to a secure meadow jumping mouse population would equal no additional analysis. Yet, the Service persists on pursuing the matter. Why?

Second, and somewhat related, according to the 90-day finding on the State’s petition, the Service agreed to “address the appropriate application of the DPS policy during the status review of the listed species as it is required by the DPS policy.” Yet in the 12-month review, the Service seemingly acknowledges the fact that it absconded from the self-assumed responsibilities set forth in the 90-day finding by implicitly failing to “address the appropriate application of the DPS policy” but also by expressly soliciting additional information related to the DPS. All of this, in the face of a petition that explicitly detailed the fact that a DPS was clearly not warranted. Again the PMG is especially instructive where it sets forth that “the collection of relevant literature and contacting of experts shall not be carried out in a manner that prevents issuing a timely 12-month finding on the merits of the petition.” (PMG, p. 10). To now engage in the collection of information while neglecting a finding on the merits of the petition **relative to the DPS** is absolutely inappropriate. The DPS finding should have been made at the 12-month stage.

To the substantive merits of a DPS, as mentioned in the State’s petition and set forth above, the DPS is clearly not warranted. Congress expressly counseled that DPS’s are to be employed “...sparingly and only when the biological evidence indicates that such action is warranted.” The current efforts of the Service to somehow contrive a DPS certainly do not comport with a “sparing” application of the policy. Based upon the trapping information, connectivity of the species through the Big Horns and likely elsewhere and greatly expanded range of the species it is clear that there is no “discrete” or “significant” population segment nor a population segment, if treated as a species, that would warrant listing of itself.

Finally, I ask why the delisting of the Preble’s is being withheld while the Service engages in this extensive and unwarranted fact-finding expedition. Clearly, Preble’s is not threatened. If the Service wants to embark on following the trail of the meadow jumping mouse, it should do it on its own time and dollar. The Preble’s has already cost the states of Wyoming and Colorado millions of dollars and

Field Supervisor

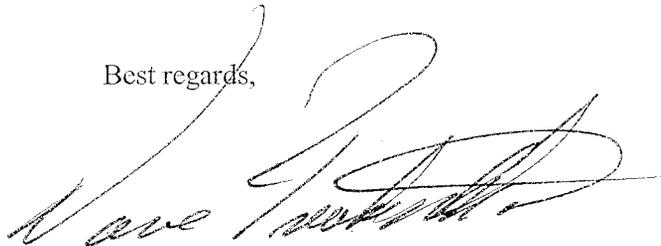
May 3, 2005

Page 7

countless man-hours. The time has come to de-list the Preble's on its merits and conduct any status review or DPS analysis in a separate process. If the Center for Native Ecosystems et al. believes that a petition for the meadow jumping mouse or a DPS thereof is warranted, **they** should bring such a petition forward. To reroute precious federal dollars to such an effort, in the absence of any apparent threatened or endangered meadow jumping mouse and in the presence of several species that clearly need federal budgetary attention, contravenes the essence of the Listing and Recovery Priority Guidelines where "[t]he Service recognize[d] that it is necessary to assign priorities to listing, delisting, reclassification and recovery actions **in order to make the most appropriate use of the limited resources available to implement the Act.**" (Emphasis added.)(48 F.R. 184 – dated September 21, 1983).

To conclude, I thank the Service for its timely and appropriate finding on the State's petition to delist the Preble's meadow jumping mouse. I ask that you immediately delist the mouse and, if you deem it necessary, separate out the meadow jumping mouse analysis and leave it for another and more appropriate day.

Best regards,

A handwritten signature in black ink, appearing to read "Dave Freudenthal", written in a cursive style.

Dave Freudenthal
Governor

DF:RL:pjb

C: Senator Craig Thomas
Senator Mike Enzi
Representative Barbara Cubin

Table 1
 Montana Natural
 Heritage Program Pre-
 2004 Zapus Records

CNAME	ELCODE	GEN_LATITU	GEN_LONGIT	OBSERVATIO	OBSERVAT_1	OBSERVER	SOURCE_FEA
Western Jumping Mouse	AMAFH01020	45.16824900000	111.24130000000	7/25/1984		DeBry, R.W.	Red Cliff Campgrnd, 7 mi S, 1 mi
Western Jumping Mouse	AMAFH01020	48.293331800000	113.37565800000	7/23/1984		DeBry, R.W.	Skyland Ck, 2 mi S, 1 mi W E of Big Sky
Western Jumping Mouse	AMAFH01020	48.48127800000	113.38553600000	8/1/1956		Curtis, R.D.	Two Medicine Lake, Glacier NP Summit
Western Jumping Mouse	AMAFH01020	48.79947500000	113.67053600000	7/21/1954		Manville, R.H.	Many Glacier Ranger Station
Western Jumping Mouse	AMAFH01020	48.69999800000	113.50105400000	18950520		Howell, A.H.	St. Mary Lake
Western Jumping Mouse	AMAFH01020	48.55917500000	113.00855200000	18950612		Howell, A.H.	Blackfoot Agency
Western Jumping Mouse	AMAFH01020	48.31783800000	113.35240200000	18950615		Howell, A.H.	Summit
Western Jumping Mouse	AMAFH01020	48.33661600000	113.63747700000	18950621		Howell, A.H.	Paola, GNNR
Western Jumping Mouse	AMAFH01020	47.57743600000	115.39774400000	18950703		Howell, A.H.	Upper Stillwater Lake
Western Jumping Mouse	AMAFH01020	46.60963500000	114.12257400000	5/7/1910		Birdseye, C.	Florence, 3 mi SW of
Western Jumping Mouse	AMAFH01020	46.03954500000	110.26397700000	6/17/1917		Hanna, M.A.	Near head Big Timber Ck, Crazy
Western Jumping Mouse	AMAFH01020	45.99898000000	110.06549900000	6/21/1917		Hanna, M.A.	Big Timber Ck, Crazy Mtns
Western Jumping Mouse	AMAFH01020	45.52022900000	110.33276800000	6/30/1917		Hanna, M.A.	W Boulder Ck 18 mi SE
Western Jumping Mouse	AMAFH01020	45.29364000000	110.68339400000	7/14/1917		Hanna, M.A.	Livingston
Western Jumping Mouse	AMAFH01020	45.89011200000	111.40169800000	7/21/1917		Hanna, M.A.	Chico, 3 mi SE of, Emigrant Gulch
Western Jumping Mouse	AMAFH01020	45.26511800000	112.17626000000	8/4/1917		Hanna, M.A.	Alder, 12 mi SW of, Hinch Ck, Ruby Mtns
Western Jumping Mouse	AMAFH01020	45.48223500000	111.90999800000	7/30/1917		Hanna, M.A.	Ward Peak, Madison NF, Washington Creek
Western Jumping Mouse	AMAFH01020	46.97926300000	110.52277600000	8/8/1919		Hanna, M.A.	Little Belt Mtns, Dry Wolf Ck, 20 mi SW Stanford
Western Jumping Mouse	AMAFH01020	44.85330600000	113.26842800000	8/30/1918		Goldman, L.J.	Donovan

Western Jumping Mouse	AMAFH01020	46.80465500000	110.01538100000	-	8/27/1918		Hanna, M.A.	Buffalo, 13 mi W of, Buffalo Canyon
Western Jumping Mouse	AMAFH01020	46.79736000000	110.90800500000	-	8/20/1919		Malleis, H.	White Sulphur Springs, 16 mi N of, Sheep Ck, Little Belt Mtns
Western Jumping Mouse	AMAFH01020	46.97949100000	110.52344100000	-	8/11/1919		Malleis, H.	Stanford, 20 mi SW of, Dry Wolf Ck, Little Belt Mtns
Western Jumping Mouse	AMAFH01020	46.66881300000	111.19167500000	-	8/22/1919		Hanna, M.A.	Ft Logan, 4 mi S of, Camas Ck, Big Belt Mtns
Western Jumping Mouse	AMAFH01020	46.93277800000	110.73567400000	-	8/16/1919		Malleis, H.	Neihart, Little Belt Mtns
Western Jumping Mouse	AMAFH01020	48.77652700000	110.73567400000	-	1/1/1917		Bailey, V.	McDermitt Lake
Western Jumping Mouse	AMAFH01020	45.50280800000	113.67816100000	-	7/6/1972		Davis, W.B.	Livngston, 16 mi S of, Pine Ck
Western Jumping Mouse	AMAFH01020	48.85437800000	110.53565000000	-	9/7/1975		Thompson, L.	East Butte - Upper Ribbon Gulch
Western Jumping Mouse	AMAFH01020	48.43312300000	111.16471100000	-	1/1/1934		Dice	Nyack
Western Jumping Mouse	AMAFH01020	48.69342700000	113.80120400000	-	1/1/1926		Murie	Glacier NP St Marys
Western Jumping Mouse	AMAFH01020	48.81715800000	113.52807200000	-	8/26/1949		Constantine	Glacier NP Lake Sherburne
Western Jumping Mouse	AMAFH01020	44.80920100000	113.58023700000	-	6/27/1948		Cozacos, N.J.	W end Watkins Ck Ranch
Western Jumping Mouse	AMAFH01020	45.40418400000	111.27731300000	-	7/23/1947	Additional Collectors: Reynolds, H. C., Russell, W. C.	Dixon, K.L.	Birch Ck, 18 mi NW Dillon
Western Jumping Mouse	AMAFH01020	48.80221700000	112.83471700000	-	6/14/1935		Dale, F.H.	Glacier NP, Many Glacier Campground
Western Jumping Mouse	AMAFH01020	48.79806100000	113.68612000000	-	5/30/1940		Dale, F.H.	Glacier NP, Many Glacier
Western Jumping Mouse	AMAFH01020	46.75545600000	113.65221400000	-	5/30/1940		Alcorn, J.R.	Lolo Ck, 6.5 mi W Lolo
Western Jumping Mouse	AMAFH01020	45.04073100000	114.21677300000	-	8/20/1967		Russell, W.C.	Yellowstone NP, 3 mi W Gardiner
Western Jumping Mouse	AMAFH01020	46.20708200000	110.77588300000	-	1/1/1932		Smith, T.	Sawtooth Canyon
Western Jumping Mouse	AMAFH01020	48.95630800000	114.26258500000	-	7/4/1966		Conard, D.W.	Pete Ck head
Western Jumping Mouse	AMAFH01020	48.26391700000	115.84199000000	-	6/16/1966		Conard, D.W.	Spar Lake
Western Jumping Mouse	AMAFH01020	48.94217800000	115.94910700000	-	6/28/1966	Additional collector: Russell, W. C.	Conard, D.W.	Yaak R., W FK
Western Jumping Mouse	AMAFH01020	47.44325500000	115.73842400000	-	6/29/1975		Thompson, L.S.	Highwood Mtns
Western Jumping Mouse	AMAFH01020	46.23682000000	110.55551400000	-	7/22/1975		Thompson, L.S.	Upper Daly Ck near Skalkaho Pass
Western Jumping Mouse	AMAFH01020	46.23682000000	113.78829500000	-	7/22/1975		Thompson, L.S.	Upper Daly Ck near Skalkaho Pass

Western Jumping Mouse	AMAFH01020	48.8684200000	111.1563820000	9/7/1975		Thompson, L.S.	East Butte, Ribbon Gulch
Western Jumping Mouse	AMAFH01020	44.5916880000	111.7212740000	7/26/1980		Thompson, L.S.	Upper Red Rock Lakes
Western Jumping Mouse	AMAFH01020	47.8376530000	112.8119910000	7/12/1981		Thompson, L.S.	Campground Our Lake
Western Jumping Mouse	AMAFH01020	45.0364400000	110.7199660000	5/23/1976		Berlin, J.A.	Gardiner
Western Jumping Mouse	AMAFH01020	47.9487560000	114.1942950000	7/2/1966		DeCoursey	Poison, 20 mi N
Western Jumping Mouse	AMAFH01020	45.5943280000	111.2049980000	7/7/1937		Kenyon, K.W.	Gallatin Gateway
Western Jumping Mouse	AMAFH01020	48.7167160000	113.4808450000	6/29/1971		Hoffmeister, D.	Glacier NP, N side St. Mary's
Western Jumping Mouse	AMAFH01020	45.6014930000	113.3864000000	6/22/1975	add. coll., De La Fuente, M. H., Dowler, R. C.	Carroll, L.E.	Wisdom, 1 mi S, 3.5 mi E
Western Jumping Mouse	AMAFH01020	45.5929540000	113.3708230000	6/24/1975	add. coll., Burns, J. C., Carroll, L. E., Davenport, E. A., De La Fuente, M. H., Dowler, R. C., Kerridge, D. C., Smollen, M. J.	Alexander, L.K.	Wisdom, 1 mi S, 4.5 mi E
Western Jumping Mouse	AMAFH01020	46.4743860000	111.5657310000	8/2/1949		Lloyd, A.C.	Winston, 4 mi E of
Western Jumping Mouse	AMAFH01020	48.7664980000	114.2771830000	7/30/1955		Wible, M.	N Fork Flathead R, near
Western Jumping Mouse	AMAFH01020	47.6816240000	113.8185810000	8/1/1954		Wible, M.	Swan R Valley, Lion Cr, near
Western Jumping Mouse	AMAFH01020	46.0798990000	113.5084210000	8/5/1948		Wible, M.	Deerodge NF, Rock Cr and
Western Jumping Mouse	AMAFH01020	45.9417730000	112.1074050000	7/1/1943		Doutt, J.K.	Squaw Cr, near Philipsburg
Western Jumping Mouse	AMAFH01020	45.8918270000	112.2273640000	7/28/1944		Fricke, R.L.	Fitz Canyon, 6 mi N Whitehall
Western Jumping Mouse	AMAFH01020	47.0013440000	115.0012670000	8/10/1947		Wible, M.	Pipestone Hot Springs, 20 mi SE
Western Jumping Mouse	AMAFH01020	45.1576290000	110.8266230000	8/16/1949		Wible, M.	Lolo NF, N Fork Trout Cr, 20 mi
Western Jumping Mouse	AMAFH01020	45.8426520000	112.3940310000	6/20/1949		Wible, M.	On Yellowstone R, 10 mi below
Western Jumping Mouse	AMAFH01020	45.8426520000	112.3940310000	8/2/1956		Wible, M.	Toll Mtns, near Butte
Western Jumping Mouse	AMAFH01020	48.7709960000	114.2862300000	1/1/1940	Collection year estimated from accession number.	Wright, P.L.	Toll Mtns, near Butte
Western Jumping Mouse	AMAFH01020	48.1531350000	113.9154120000	7/16/1948		Conaway, C.	Polebridge
Western Jumping Mouse	AMAFH01020	48.6042360000	113.3845410000	7/23/1950		Mammalogy Class	Mt. Aeneas
Western Jumping Mouse	AMAFH01020	48.6302660000	113.3845410000	7/21/1953	3805 collected 7/20/52.	Wright, P.L.	Cut Bank Campground, Glacier NP
							Camas Creek, Glacier NP

Western Jumping Mouse	AMAFH01020	48.60434200000	114.01669700000	7/29/1952		Wright, P.L.	Fish Lake, Glacier NP
Western Jumping Mouse	AMAFH01020	48.66164700000	113.85802700000	7/27/1953		Mammalogy Class	McDonald Creek, Glacier NP
Western Jumping Mouse	AMAFH01020	46.72206700000	113.83832800000	7/1/1956		Hoffman, R.S.	Hoover Spring, Little Belt Mtns
Western Jumping Mouse	AMAFH01020	45.41968900000	110.53119800000	5/29/1949		Conaway, C.	Thief Creek
Western Jumping Mouse	AMAFH01020	47.80429600000	112.88986400000	7/2/1949		Conaway, C.	Boulder Creek
Western Jumping Mouse	AMAFH01020	47.97858800000	114.00186700000	7/23/1949		Jackson, R.	NW of Swan Lake
Western Jumping Mouse	AMAFH01020	48.05977300000	113.90286800000	8/7/1949		Conaway, C.	Branigan, W. Fisher Creek, Cabinet Mtns.
Western Jumping Mouse	AMAFH01020	48.61492000000	115.53780100000	8/7/1949		Clothier, R.R.	Jackson Creek, Glacier NP
Western Jumping Mouse	AMAFH01020	48.80487600000	113.86603000000	7/30/1924		Bailey, V.	Many Glaciers, Glacier NP
Western Jumping Mouse	AMAFH01020	47.92927100000	113.63072200000	8/21/1900		unknown	Swan Lake
Western Jumping Mouse	AMAFH01020	48.69501300000	113.83629600000	8/1/1/1959		Shelton, P.C.	Logan Pass, Glacier NP
Western Jumping Mouse	AMAFH01020	45.46316900000	113.71896300000	8/22/1959		Hoffman, R.S.	Palace Butte Camp, Hyalite Creek, Gallatin Mtns.
Western Jumping Mouse	AMAFH01020	45.90760400000	110.96069400000	8/21/1959		unknown	Fairy Lake Camp, Bridger Range
Western Jumping Mouse	AMAFH01020	48.14291500000	110.95902100000	7/13/1960		Wastcoat, B.	Outlet of Birch Lake
Western Jumping Mouse	AMAFH01020	46.95863000000	113.91477500000	5/13/1961		unknown	Browns Lake
Western Jumping Mouse	AMAFH01020	48.86106600000	113.00533300000	7/25/1961	13592 collected 7/12/68 by G. Anderson	Mottus, L.	S shore of Duck Lake
Western Jumping Mouse	AMAFH01020	48.70255000000	113.33674700000	7/10/1961		Choate, T.	Sub-alpine meadow, Logan Pass, Glacier NP
Western Jumping Mouse	AMAFH01020	48.69824200000	113.71424100000	7/23/1962		Mills, H.	Rising Sun, Glacier NP
Western Jumping Mouse	AMAFH01020	47.32468900000	113.52049500000	7/4/1962	Collected near slaughter house, 7/9/69 by S.M. Solomon & C.H. Frab	Hoffman, R.S.	Indian Springs, Nat'l Bison Range
Western Jumping Mouse	AMAFH01020	46.70977900000	114.23541700000	6/10/1962		Marshall, D.	Beamouth, 1.5 mi W of
Western Jumping Mouse	AMAFH01020	44.63162800000	113.33432400000	7/17/1963		Passmore, J.	Red Rock Lakes
Western Jumping Mouse	AMAFH01020	47.87699600000	111.77260900000	1/1/1966		P.J.H.	MSU Biological Station, 0.25 mi S of, on Hwy 35, Flathead Lake
Western Jumping Mouse	AMAFH01020	47.88449300000	114.02437200000	6/25/1966		S.R.P.	MSU Biological Station, 0.25 mi

Western Jumping Mouse	AMAFH01020	47.07821800000	110.72517300000	-	8/21/1954	Rose, B.J.	Rogers Pass
Western Jumping Mouse	AMAFH01020	45.51964300000	112.37224100000	-	8/16/1968	Hodgson, J.R.	Little Bear Creek
Western Jumping Mouse	AMAFH01020	45.52282500000	111.15256800000	-	8/16/1968	Hodgson, J.R.	Big Bear Creek
Western Jumping Mouse	AMAFH01020	44.87310100000	111.12090600000	-	7/28/1949	Quimby, D.C.	Dillon, 23 mi S of
Meadow Jumping Mouse	AMAFH01010	45.02333100000	112.62519600000	-	18940701	Bailey, V.	Little Bighorn R, 2 mi N WY border
Meadow Jumping Mouse	AMAFH01010	45.64117100000	107.59242300000	-	6/2/1916	Kellogg	8 mi E of Sykes - Sioux (Custer) NF
Western Jumping Mouse	AMAFH01020	46.79102900000	104.22397100000	-	8/14/1918	Hanna, M.A.	Heath, 15 mi S of, Big Snowy Mtns, N Fk Flatwillow Ck Upper Muddy
Western Jumping Mouse	AMAFH01020	48.20607600000	109.27031200000	-	18890515	Monroe, J.B.	
Western Jumping Mouse	AMAFH01020	45.33916800000	109.75765400000	-	5/28/1917	Kellogg, R.	Rottengrass Ck, N base Bighorn Mtns
Western Jumping Mouse	AMAFH01020	45.83289000000	107.62760100000	-	6/23/1917	Hanna, M.A.	Big Timber
Western Jumping Mouse	AMAFH01020	47.10823800000	109.96321800000	-	8/20/1918	Hanna, M.A.	7 mi NE of Lewistown, Judith Mtns, Limekiln Gulch
Western Jumping Mouse	AMAFH01020	46.61249000000	109.33084400000	-	8/11/1918	Hanna, M.A.	Tyler, 10 mi W of, N Fk Flat Willow Ck
Western Jumping Mouse	AMAFH01020	48.52810900000	108.83443400000	-	18940628	Loring, J.A.	Ft Assiniboine
Western Jumping Mouse	AMAFH01020	48.26193000000	109.74611100000	-	18940704	Loring, J.A.	Ft Assiniboine, 20 mi SE of, Bear Paw Mtns
Western Jumping Mouse	AMAFH01020	48.19965500000	109.44587400000	-	6/17/1910	Anthony, H.E.	Paw Mtns Glasgow
Western Jumping Mouse	AMAFH01020	48.23003100000	106.63982900000	-	9/27/1975	Thompson, L.	Bear Paw Mtns, Beaver Ck
Western Jumping Mouse	AMAFH01020	45.01813400000	109.58806200000	-	1/1/1959	Hooper	Red Lodge, 23 hwy mi SW of
Western Jumping Mouse	AMAFH01020	45.172286400000	109.40188900000	-	1/1/1959	Hooper	Red Lodge, 3.5 mi WSW of
Western Jumping Mouse	AMAFH01020	46.80316500000	109.29648200000	-	1/1/1942	Hooper	Big Snowy Mtns, Crystal Lake
Western Jumping Mouse	AMAFH01020	46.82131800000	109.51504300000	-	1/1/1942	Hooper	Big Snowy Mtns, Rock Ck
Western Jumping Mouse	AMAFH01020	46.74411100000	109.50134100000	-	1/1/1942	Hooper	Big Snowy Mtns, Swimming Woman Canyon, 0.75 mi S Fergus Co line
Western Jumping Mouse	AMAFH01020	45.03597000000	109.90646600000	-	1/1/1959	Hooper	Cooke, 2 mi NE of

Meadow Jumping Mouse	AMAFH01010	47.60609800000	104.28368400000	8/8/1979	Matthews, W.	8 mi S of Sidney
Western Jumping Mouse	AMAFH01020	45.06989900000	104.18051200000	7/22/1976	Dickerman, R.W.	11 mi SW of Rd Lodge
Western Jumping Mouse	AMAFH01020	45.59894000000	109.39094400000	6/21/1975	Williams, S.L.	Wisdom, 1 mi S, 4.5 mi E of
Western Jumping Mouse	AMAFH01020	44.70466100000	113.36376300000	6/29/1953	Wible, M.	Baker hole on Madison R., near W Yellowstone
Western Jumping Mouse	AMAFH01020	44.80557400000	111.10124900000	7/1/1947	Wible, M.	Gallatin NF, Grayling Ck, 10 mi from W Yellowstone
Western Jumping Mouse	AMAFH01020	44.83933000000	111.10366600000	8/7/1953	Wible, M.	Gallatin NF, Madison R Canyon at Rock Cr. near Ennis
Western Jumping Mouse	AMAFH01020	44.83411100000	111.41786300000	7/19/1947	Wible, M.	Gallatin NF, mouth of Trappers Cr at Hebgen Lake
Western Jumping Mouse	AMAFH01020	44.80560300000	111.31414400000	7/6/1946	Wible, M.	Grayling Cr at Teepee Cr, Gallatin NF
Western Jumping Mouse	AMAFH01020	44.57967000000	111.10374800000	7/17/1947	Wible, M.	Headwaters of S Fork Madison R, Gallatin NF
Western Jumping Mouse	AMAFH01020	45.53943200000	111.16470000000	7/17/1948	Wible, M.	Hyalite Canyon and Cr, near Bozeman
Western Jumping Mouse	AMAFH01020	44.83927200000	111.02153700000	7/2/1947	Wible, M.	Madison R Canyon at Rock Cr, below Hebgen Dam
Western Jumping Mouse	AMAFH01020	45.01184100000	111.41769900000	7/1/1946	Wible, M.	Specimen Cr at Gallatin R.
Western Jumping Mouse	AMAFH01020	44.67978500000	111.08515800000	6/28/1947	Wible, M.	Targhee NF Madison R, 5 mi W W Yellowstone
Western Jumping Mouse	AMAFH01020	44.85409300000	111.19320500000	8/13/1948	Wible, M.	Beaver Ck & Madison R, Gallatin NF
Western Jumping Mouse	AMAFH01020	44.87037900000	111.36531500000	6/28/1948	Wible, M.	Cabin Cr and Madison R, Gallatin NF
Western Jumping Mouse	AMAFH01020	44.83915600000	111.34125300000	8/7/1953	Wible, M.	Gallatin NF, Madison R Canyon at Rock Cr, near Ennis
Western Jumping Mouse	AMAFH01020	44.97267600000	111.41806800000	7/1/1946	Lloyd, A.C.	Jct Cottonwood Cr and Ruby R Canyon, 20 mi SE Alder
Western Jumping Mouse	AMAFH01020	45.58794100000	111.97721900000	7/19/1948	Wible, M.	Potosi Hot Spring and Willow Ck, Beaverhead NF
Western Jumping Mouse	AMAFH01020	45.57213500000	111.89824100000	7/23/1913	unknown	Middle Creek
Western Jumping Mouse	AMAFH01020	46.24552000000	111.09736100000	8/13/1949		Hamilton, 6 mi E of
Western Jumping Mouse	AMAFH01020	45.14004800000	114.02073100000	8/22/1970	Woltersdorf, DW	Bridger, 11 mi S, 23 mi E of
Western Jumping Mouse	AMAFH01020	45.09842800000	108.44237800000	8/24/1970	Woltersdorf, DW	Bridger, 14 mi S, 25 mi E of
Western Jumping Mouse	AMAFH01020	45.21051500000	108.40163600000	8/12/1970	Woltersdorf,	Bridger, 6 mi S, 18 mi E of

Reported as Gallatin Co.

Western Jumping Mouse	AMAFH01020	45.19763500000	108.55259200000	8/15/1970		DW	
Western Jumping Mouse	AMAFH01020	45.18386200000	108.46330600000	8/13/1970		Woltersdorf, DW	Bridger, 7 mi S, 22 mi E of
Western Jumping Mouse	AMAFH01020	45.21457800000	108.47165400000	8/9/1970		Woltersdorf, DW	Bridger, 8 mi S, 22 mi E of
Western Jumping Mouse	AMAFH01020	45.21267000000	108.55323300000	8/11/1970		Woltersdorf, DW	Pryor Mtns: 0.25 mi E of Sage CK Comprd
Western Jumping Mouse	AMAFH01010	45.57938800000	108.56144700000	7/3/1970		Woltersdorf, DW	Pryor Mtns: 200 yds N of Sage CK RS
Meadow Jumping Mouse	AMAFH01010	45.60402400000	104.06980500000	7/25/1970	add. coll. Lowther, P.E.	Lowther, P.E.	Camp Crook, 2 mi N, 4.5 mi W of
Meadow Jumping Mouse	AMAFH01010	45.61991700000	104.14243000000	7/21/1970		Bleiweiss, S.J.	Camp Crook, 4 mi N, 8 mi W of
Meadow Jumping Mouse	AMAFH01010	45.62052000000	104.05240300000	7/21/1970		Pelfaur, J.E.	Camp Crook, 5 mi N, 3.5 mi W of
Meadow Jumping Mouse	AMAFH01010	45.62052000000	104.09270500000	7/24/1970		Lowther, P.E.	Camp Crook, 5 mi N, 5.5 mi W of
Meadow Jumping Mouse	AMAFH01010	45.42702800000	104.04242800000	7/4/1970		Gorman, J.C.	Camp Crook, 8 mi S, 3 mi W of
Meadow Jumping Mouse	AMAFH01010	45.65326000000	104.50839300000	7/1/1970			Ekalaka, 3 mi S, 1.75 mi E
Meadow Jumping Mouse	AMAFH01010	45.62947900000	104.19152600000	7/1/1970			Camp Crook, 5.5 mi N, 10 mi W of
Western Jumping Mouse	AMAFH01020	46.82756500000	104.04828600000	8/18/1966		Kinsella, M.	Camp Crook, 5.5 mi N, 3.5 mi W of
Western Jumping Mouse	AMAFH01020	46.82248600000	113.96105600000	7/19/1966		Kinsella, M.	Larch Rd., Pattee Canyon
Western Jumping Mouse	AMAFH01020	46.95698700000	113.94461100000	6/9/1967	8/12/67	Kinsella, M.	Pattee Canyon
Western Jumping Mouse	AMAFH01020	46.81588700000	113.91605400000	7/6/1965		Kinsella, M.	Rattlesnake Creek
Western Jumping Mouse	AMAFH01020	46.62956100000	113.94866500000	8/8/1911		Kinsella, M.	Mitten Mtn. Rd., Pattee Canyon
Meadow Jumping Mouse	AMAFH01010	47.46890700000	114.08378300000	8/2/1988		Spaulding, M.H.	Florence (and vicinity)
Western Jumping Mouse	AMAFH01020	47.87618800000	104.31939900000	6/24/1913		Lavelle, D.	Elk Island WMA, NE of Savage
Western Jumping Mouse	AMAFH01020	47.87622600000	114.03304700000	7/14/1948	Collected 5/18/46 by P.L. Wright.	P.M.S.	MSU Biological Station, Yellow Bay, Flathead Lake
Western Jumping Mouse	AMAFH01020	47.87619100000	114.03299700000	6/28/1953		Conaway, C.	MSU Biological Station, Yellow Bay, Flathead Lake
Western Jumping Mouse	AMAFH01020	47.87577500000	114.03299400000	6/25/1966		Missing. Senger, C.M.	MSU Biological Station, Yellow Bay, Flathead Lake
Western Jumping Mouse	AMAFH01020	47.87577500000	114.02815300000			J.S.R.	Hwy 35 at MSU Biological Station, Yellow Bay, Flathead Lake

Western Jumping Mouse	AMAFH01020	45.61988900000	111.21664000000	-	1/1/1968	Also collected 1969.	Gallatin Only TRS
Western Jumping Mouse	AMAFH01020	45.47455500000	111.34089200000	-	1/1/1968	Also collected 1969.	Gallatin Only TRS
Western Jumping Mouse	AMAFH01020	45.59504900000	110.80380000000	-	1/1/1968	Also collected 1969.	Gallatin Only TRS
Western Jumping Mouse	AMAFH01020	45.58571300000	110.79043400000	-	1/1/1968	Also collected 1969.	Park Only TRS
Western Jumping Mouse	AMAFH01020	45.82650700000	110.90273400000	-	1/1/1968	Also collected 1969.	Gallatin Only TRS
Western Jumping Mouse	AMAFH01020	45.44582300000	111.17599700000	-	1/1/1968	Also collected 1969.	Gallatin Only TRS
Western Jumping Mouse	AMAFH01020	45.49356800000	110.99734300000	-	1/1/1968	Also collected 1969.	Gallatin Only TRS
Western Jumping Mouse	AMAFH01020	45.96909900000	111.17007100000	-	1/1/1968	Also collected 1969.	Gallatin Only TRS
Western Jumping Mouse	AMAFH01020	45.50830700000	111.13213700000	-	1/1/1968	Also collected 1969.	Gallatin Only TRS
Western Jumping Mouse	AMAFH01020	45.70650600000	110.94878300000	-	1/1/1968	Also collected in 1969.	Gallatin Only TRS
Western Jumping Mouse	AMAFH01020	45.52832300000	111.02458800000	-	1/1/1968	Also collected in 1969.	Gallatin Only TRS
Western Jumping Mouse	AMAFH01020	45.73557300000	110.88951700000	-	1/1/1968	Also collected in 1969.	Gallatin Only TRS
Western Jumping Mouse	AMAFH01020	45.86358200000	111.06413600000	-	1/1/1968	Also collected in 1969.	Gallatin Only TRS
Western Jumping Mouse	AMAFH01020	48.52002800000	114.94971000000	-	7/1/1992		Twin Meadows Ck
Western Jumping Mouse	AMAFH01020	48.66660700000	114.79054900000	-	7/1/1992	also section 36	Jumbo Lake
Western Jumping Mouse	AMAFH01020	48.93040300000	114.87735500000	-	7/1/1992		Big Therrault Lake
Western Jumping Mouse	AMAFH01020	48.95618500000	114.76992400000	-	7/1/1992		Divide Ck
Western Jumping Mouse	AMAFH01020	48.97129600000	115.84360900000	-	7/26/1992		Pete Ck Meadow
Western Jumping Mouse	AMAFH01020	48.60263800000	115.68201200000	-	6/22/1992	also section 25	Loon Lake
Western Jumping Mouse	AMAFH01020	48.16249700000	115.40862700000	-	6/17/1992		Teppee Lake
Western Jumping Mouse	AMAFH01020	48.49570900000	114.36329200000	-	7/21/1992		Helthroaring Basin
Western Jumping Mouse	AMAFH01020	48.64623500000	115.66233600000	-	6/21/1992	also section 7	Rainbow Lake
Western Jumping Mouse	AMAFH01020	48.59605500000	114.81169100000	-	8/26/1993		Paul Ck. LINC Co. reported in original data.

Western Jumping Mouse	AMAFH01020	0.000000000000	0.000000000000	1/1/1940	Goodpaster, W.	Glacier NP
Western Jumping Mouse	AMAFH01020	0.000000000000	0.000000000000	6/14/1949	Lloyd, A.C.	Head of Muddy Ck Basin
Western Jumping Mouse	AMAFH01020	0.000000000000	0.000000000000	6/7/1956	Wible, M.	Near West Yellowstone
Western Jumping Mouse	AMAFH01020	0.000000000000	0.000000000000	8/14/1949	Wible, M.	Absaroka NF, abv Yellowstone R, near Livingston Cabinet Forest
Western Jumping Mouse	AMAFH01020	0.000000000000	0.000000000000	7/20/1948	Brunson, R.	Glacier NP
Western Jumping Mouse	AMAFH01020	0.000000000000	0.000000000000	7/20/1952	Wright, P.L.	Games Creek, Glacier NP
Western Jumping Mouse	AMAFH01020	0.000000000000	0.000000000000	7/28/1965	Wright, P.L.	Pryor Mtns
Western Jumping Mouse	AMAFH01020	0.000000000000	0.000000000000	1/1/1970	Wollersdorf, DW	No Locality
Western Jumping Mouse	AMAFH01020	0.000000000000	0.000000000000	1/1/1970	Wollersdorf, DW	No Locality
Western Jumping Mouse	AMAFH01020	0.000000000000	0.000000000000	1/1/1970	Wollersdorf, DW	No Locality
Western Jumping Mouse	AMAFH01020	0.000000000000	0.000000000000	5/21/1958	Graham, R.J.	Centennial Valley
Meadow Jumping Mouse	AMAFH01010	0.000000000000	0.000000000000	8/29/1978	Matthews, W.	Wilbaux Co.
Western Jumping Mouse	AMAFH01020	47.320900000000	108.059100000000	7/20/1946	Lloyd, A.C.	Medicine Lodge, 15 mi S of
Western Jumping Mouse	AMAFH01020	48.829030000000	113.806973000000	9/3/1994	GNIADAK, STEVE J	HIGHLINE TRAIL AT CATTLE QUEEN SPRING
Western Jumping Mouse	AMAFH01020	48.511830000000	113.987112000000	5/24/1998	GNIADAK, STEVE J	GTSR north of West Entrance Station.
Western Jumping Mouse	AMAFH01020	48.694870000000	113.519527000000	7/27/2000	ELWOOD, DEBRA	OTOKOMI LAKE TRAIL HEAD
Western Jumping Mouse	AMAFH01020	48.748490000000	113.777855000000	8/7/2002	ELZE, LAURA K	ON GTSR 1 MILE SOUTHEAST OF LOOP
Western Jumping Mouse	AMAFH01020	48.724070000000	113.722928000000	8/30/2002	ELZE, LAURA K	GTSR 0.15 MI SOUTH OF WEEPING WALL
Western Jumping Mouse	AMAFH01020	48.723165000000	113.723152000000	8/30/2002	ELZE, LAURA K	GTSR 0.2 MILE SOUTH OF WEEPING WALL
Western Jumping Mouse	AMAFH01020	48.647337000000	113.841404000000	9/26/2002	ELZE, LAURA K	ON GTSR 0.3 MI NE OF MOOSE COUNTRY
Western Jumping Mouse	AMAFH01020	44.867680000000	112.971700000000	7/29/1998	HOCKETT	JOHNSON GULCH
Western Jumping Mouse	AMAFH01020	46.624796000000	110.224513000000	7/1/1980	Flath, Dennis	SCS Type 54
Western Jumping Mouse	AMAFH01020	47.985415000000	115.709580000000	7/1/1978	Flath, Dennis	SCS Type 58
Western Jumping Mouse	AMAFH01020	47.863374000000	115.517172000000	7/1/1978	Flath, Dennis	SCS Type 59
Western Jumping Mouse	AMAFH01020	47.967601420000	-	7/30/2002	Ryan Rauscher	Blackleaf Willow Riparian

Western Jumping Mouse	AMAFH01020	47.98716009000	112.65078315000	-	7/30/2002	Trap Type: Museum Special	Ryan Rauscher	Blackleaf: Willow Swamp
Western Jumping Mouse	AMAFH01020	47.98716009000	112.61090943000	-	7/31/2002	Trap Type: Snap	Ryan Rauscher	Blackleaf: Willow Swamp
Western Jumping Mouse	AMAFH01020	47.98716009000	112.61090943000	-				

Table 2
Montana Natural Heritage Program 2004 Zapus Records

CNAME	SNAME	B_LATITUDE	B_LONGITUD	CATCH_ID	TITLE	DATE
MEADOW JUMPING MOUSE	ZAPUS HUDSONIUS	45.24632	-106.99939	5/7/1976	Rosebud Battiefield SP	7/9/2004
MEADOW JUMPING MOUSE	ZAPUS HUDSONIUS	47.50617	-104.07953	5/8/1983	Buxaum CE	7/27/2004
MEADOW JUMPING MOUSE	ZAPUS HUDSONIUS	47.54370	-104.06812	12/3/1969	Buxaum CE	7/24/2004
MEADOW JUMPING MOUSE	ZAPUS HUDSONIUS	47.54370	-104.06812	12/3/1993	Buxaum CE	7/25/2004
MEADOW JUMPING MOUSE	ZAPUS HUDSONIUS	47.54370	-104.06812	12/5/1951	Buxaum CE	7/24/2004
MEADOW JUMPING MOUSE	ZAPUS HUDSONIUS	47.54370	-104.06812	12/5/1952	Buxaum CE	7/24/2004
MEADOW JUMPING MOUSE	ZAPUS HUDSONIUS	47.54370	-104.06812	12/5/1953	Buxaum CE	7/24/2004
MEADOW JUMPING MOUSE	ZAPUS HUDSONIUS	47.54370	-104.06812	12/5/1971	Buxaum CE	7/24/2004
MEADOW JUMPING MOUSE	ZAPUS HUDSONIUS	47.54645	-104.07440	10/7/1933	Buxaum CE	7/23/2004
MEADOW JUMPING MOUSE	ZAPUS HUDSONIUS	47.68264	-104.63606	3/2/1931	Fox Lake WMMA	7/9/2004
MEADOW JUMPING MOUSE	ZAPUS HUDSONIUS	47.68264	-104.63606	3/2/1947	Fox Lake WMMA	7/10/2004
MEADOW JUMPING MOUSE	ZAPUS HUDSONIUS	47.68264	-104.63606	3/3/1981	Fox Lake WMMA	7/12/2004
MEADOW JUMPING MOUSE	ZAPUS HUDSONIUS	47.68264	-104.63606	3/7/2009	Fox Lake WMMA	7/8/2004
MEADOW JUMPING MOUSE	ZAPUS HUDSONIUS	47.68264	-104.63606	3/8/1966	Fox Lake WMMA	7/11/2004
MEADOW JUMPING MOUSE	ZAPUS HUDSONIUS	47.68264	-104.63606	3/8/1967	Fox Lake WMMA	7/11/2004
MEADOW JUMPING MOUSE	ZAPUS HUDSONIUS	47.68264	-104.63606	3/9/1948	Fox Lake WMMA	7/10/2004
MEADOW JUMPING MOUSE	ZAPUS HUDSONIUS	47.68264	-104.63606	3/9/1982	Fox Lake WMMA	7/12/2004
WESTERN JUMPING MOUSE	ZAPUS PRINCEPS	48.51376	-107.47493	7/7/1985	Milk River WMMA	7/26/2004

Animal Field Guide

Meadow Jumping Mouse

Zapus hudsonius
(Dipodidae)

Montana Species of Concern

Global Rank: G5
State Rank: S2

Agency Status
USFWS: none
USFS: none
BLM: none



Meadow Jumping Mouse

General Description

The meadow jumping mouse has coarse yellowish-brown upperparts, a broad dark dorsal stripe, a white venter, and yellowish-brown sides paler than the back. The young have softer, paler pelage. The tail is longer than the head and body, is round, sparsely haired, and bicolored (dark above, light below); the hind legs are much longer than the forelegs. The preorbital foramen of the skull is large and oval, and the nasals extend noticeably beyond the incisors. There are 18 teeth in the skull (dental formula: I 1/1, C 0/0, P 1/0, M 3/3). The upper incisors are grooved on the anterior surface, and the single upper premolar is quite small. Body measurements are: total length 187 to 255 millimeters, tail 108 to 155 millimeters, hind foot 28 to 35 millimeters, ear 11 to 16 millimeters and mass 12 to 22 grams (Whitaker 1972).

Diagnostic Characteristics

The only species with which the meadow jumping mouse might be confused is the western jumping mouse (*Zapus princeps*) where their ranges overlap. The western jumping mouse is smaller and darker in color, with more yellowish-brown on the sides. The tail is sharply bicolored, unlike the bicolored tail of the western jumping mouse. The premolar is small, and the maxillary tooth row is less than 3.7 millimeters in length (Clark and Stromberg 1987, Foresman 2001a, 2001b). Jumping mice lack the external fur-lined cheek pouches present in pocket mice.

Range

Montana is on the western edge of the global distribution in the Northern Great Plains. Meadow jumping mouse has been documented in six eastern and southeastern counties (Bighorn, Carter, Dawson, Powder River, Richland, Wibaux), at elevations to 4200 feet (1272 meters) (Foresman 2001a, Montana Natural Heritage Program database).

Migration

This species is non-migratory. No information is available specific to Montana. Elsewhere, home ranges were determined to vary from 0.14 to more than 4.0 acres (Jones et al. 1983), and location shifts of up to 0.8 kilometer were observed (Whitaker 1972).

Habitat

In Montana, meadow jumping mice have been found in dense, tall and lush grass and forbs in marshy areas (sometimes with standing water), riparian areas, woody draws, and grassy upland slopes, sometimes within or near forested sites of ponderosa pine (Lampe et al. 1974, Matthews 1980, Matthews and Swenson 1982).

The meadow jumping mouse is generally described as a species which occupies moist

lowland habitats rather than drier uplands, preferring relatively dense vegetation in open grassy and brushy areas of marshes, meadows, swamps, open conifer forest, and often favor sites bordered by small streams. On the Northern Great Plains this usually results in its restriction primarily to riparian habitats. When inactive, they occupy underground burrows, usually in banks or hills (winter), or under logs or grass clumps. Young are born in an underground nest or under other cover (Krutzsch 1954, Whitaker 1972, Jones et al. 1983).

Food Habits

The diet of the meadow jumping mouse includes a wide variety of invertebrates (especially insects), seeds, leaves, buds, fruits, and subterranean fungi (Krutzsch 1954). They forage mostly on the surface, but sometimes dig. In one New York study, animal matter composed close to half the diet in spring, and seeds about 20%. As the season progressed more seeds and less animal matter were consumed, and fungi (*Endogone*) became more important. Seeds, particularly grass seeds, were the basic food in general, used in sequence as they appeared in the field. The most important animal foods were lepidopteran larvae, and beetles in the ground beetle and weevil families. Available evidence indicates the meadow jumping mouse does not store food (Whitaker 1972). The diet in Montana has not been studied or reported.

Ecology

Meadow jumping mice are basically solitary and docile, and usually nocturnal. They hibernate in winter, beginning in late September in the east, but more often in October, and emerge in late April and early May (Krutzsch 1954, Whitaker 1972). The inactive period in Montana may be longer; all individuals have been captured during June to August (June 2 to August 29), and none have been taken in the same areas during spring trapping sessions (Lampe et al. 1974, Matthews 1980). They may shift their activity area in response to seasonal drying of habitat. Neither runways nor burrows are used extensively during the active period, other than the burrow leading directly to nests or hibernacula. Summer nests are usually on the surface of the ground in globular balls of grass. Winter burrows are placed underground or under logs and lined with leaves or grass, and placed approximately 0.3 to 0.5 meter below the ground surface, using moist locations (Krutzsch 1954, Whitaker 1972). Predators include Barn and Long-eared owls, Red-tailed Hawk, weasels, mink, skunks, foxes, coyotes, frogs and rattlesnakes (Krutzsch 1954, Whitaker 1972, Jones et al. 1983). Predators of meadow jumping mice in Montana have not been reported. Winter mortality is probably the most important cause of death in jumping mice less than one year old, and possibly adults as well (Jones et al. 1983).

Population density varies considerably from year to year and with site quality. Estimates in Minnesota ranged from 48.3 per hectare at one site to monthly estimates of 7.4 to 14.4 per hectare at a second site (Whitaker 1972). There is no information on population density or trends in Montana.

Reproductive Characteristics

Little information is available on reproduction in Montana. Six of 14 females captured in July in Carter County were carrying embryos; mean number of embryos was 6.0. Three adult and five juvenile females were neither pregnant nor lactating (Lampe et al. 1974).

In general, the meadow jumping mouse is known to breed from late April to early September. Gestation lasts 17 to 21 days. Litters were born in every 10-day period in New York from May 11 to September 20; most litters in Minnesota were born between mid-June and the end of August. Litter size is 2 to 9 (averages from different studies ranged from 4.5 to 5.7); individual females may produce up to 2 or 3 litters per year (Whitaker 1972). Young are weaned and independent in about 4 weeks. Most first breed in the summer following their birth. Maximum longevity is 2 to 3 years.

Management

No special management activities have been developed or implemented for this species in

Montana. Alteration of natural surface water sources for livestock, especially free-flowing springs and seeps, could have negative impacts on populations, given the preference of meadow jumping mice for grassland sites whose structure is influenced by the nearby presence of water (Lampe et al. 1974, Matthews 1980, Matthews and Swenson 1982). A thorough small mammal survey of appropriate mesic grassland, shrub-grassland, and meadow habitats in eastern and southeastern Montana is desirable to define the distribution and relative abundance of this species in the state.

Citations & Sources

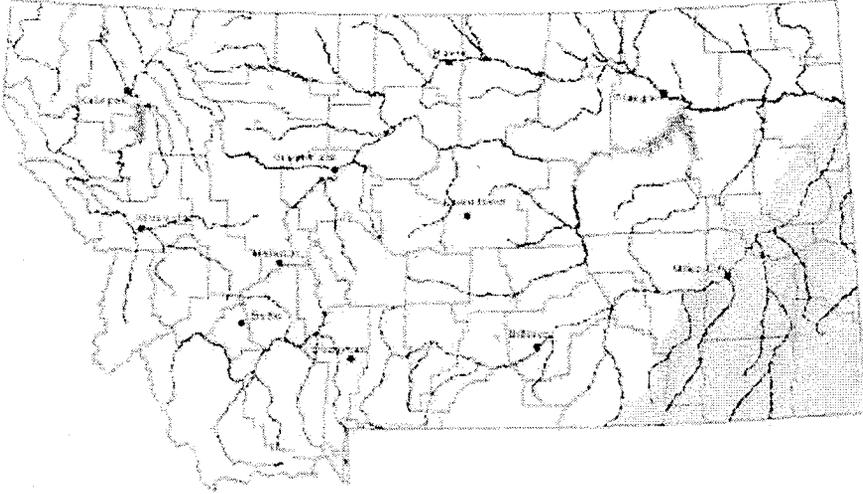
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Thursday, April 21, 2005 - 2:06:05 PM

Animal Field Guide

Meadow Jumping Mouse

Return to Species Detail



Meadow Jumping Mouse Range Map - Meadow Jumping Mouse Range Map, statewide scale

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Thursday, April 21, 2005 - 2:06:17 PM

→ Ryan

DAVE FREUDENTHAL
GOVERNOR



STATE CAPITOL
CHEYENNE, WY 82002

Office of the Governor

April 5, 2004

The Honorable Gale Norton
Secretary, U.S. Department of Interior
1849 C St., NW
Washington, D.C. 20240

Dear Secretary Norton:

Let me begin by commending the U.S. Fish and Wildlife Service (Service) for its timely 90-day finding on the state's *Petition to Remove the Preble's Meadow Jumping Mouse from the List of Endangered and Threatened Wildlife (Petition)*. While we certainly are pleased with the 90-day result, we understand that the 9-month status review will be determinative.

As has been well documented in the press, the peer review is a central element in the status review, which leads me to the central purpose for this correspondence. In short, I have great reservations about the composition and objectivity of the peer review team assembled to evaluate the state's *Petition*. To this end, I have been advised that the peer review team was selected, at the request of the Service, by the Colorado Division of Wildlife (CDOW).

While several team members are appropriate, I ask you to review the overall composition of the team for the reasons set forth below. I understand that several team members were peer reviewers on the original listing decision, one of which who has documented his view that the mouse should remain listed. Another member co-authored a study that is directly refuted by Dr. Ramey's work. The spouse of another team member submitted a similar proposal to that of Dr. Ramey, to the Recovery Team, that was not funded. Still another wrote an unpublished report, cited in the original listing, that postulated that Krutzsch (the scientist whose work was widely relied on by the Service to support the Preble's listing) was correct and should not be questioned. As you can see, many of the peer reviewers were supportive of the science behind the original decision to list the mouse. To include these individuals on a peer review team places them in the

difficult, and potentially embarrassing, situation where they may be forced to defend, or admit errors regarding their previous work. At a minimum, the appearance of objectivity within the peer review team has been compromised. Structured properly, this panel could be a tremendous opportunity to set a standard for objective peer review of new scientific research presented in support of listing or delisting petitions of threatened and endangered species and distinct population segments.

A reliable peer review of scientific work must depend on the competence and total objectivity of the reviewers. They must be recognized experts in the proper scientific discipline, and independent of the specific issues being studied. The majority of the peer reviewers selected for this particular task do not meet these basic requirements. Several are not geneticists, and many have significant previous exposure, financial interests and public stances regarding the very contentious issues that the science seeks to clarify.

While I support stronger state roles in Endangered Species Act issues, the CDOW has been directly involved in many mouse-related activities since its initial listing, and has been awarded direct Congressional appropriations and Service grants to perform these activities. I understand a direct FY 2000 Department of the Interior appropriation in the amount of \$400,000.00, was made to CDOW for Preble's-related work. In 2003, \$1,740,000.00, from a Land Owner Incentive Program grant, administered by the Service, was awarded to CDOW. A portion of that funding was to be used to "focus on Front Range habitat for the Preble's Meadow Jumping Mouse." (USDO I Press Release dated February 25, 2003). Most recently, a \$1,270,452.00 State Wildlife Grant, again administered by the Service, was awarded to CDOW in significant part to complete Preble's Meadow Jumping Mouse Surveys in Colorado. (USDO I Press Release dated March 10, 2004). I am concerned about what may be an appearance of conflict of interest, since a peer review conclusion in support of de-listing may reduce funding in this area.

Common sense alone would seem to indicate that the decision to allow CDOW to select the peer review team was improper. However, federal regulations lead to the same conclusion. *The Inter agency Policy to Provide Criteria, Establish Procedures, and Provide Guidance to Ensure that Decisions Made under the authority of the Endangered Species Act of 1973 Represent the Best Scientific and Commercial Data Available* was adopted to ensure that the science used by the Service is "**reliable, credible** and represents the best scientific and commercial data available." 59 Fed. Reg. 34271 (July 1, 1994) (Emphasis added). In the same *Policy* guidance, agencies are directed to "gather and **impartially** evaluate biological, ecological, and other information that disputes official positions, decisions and actions proposed or taken by the Service during their implementation of the Act." (Emphasis added.) While the Service is allowed to outsource peer review selection to an outside agency, the chosen agency vicariously assumes the same responsibilities that the Service would otherwise have in selecting a review team, including those set forth above. This would, of course, apply to CDOW and any actual or

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implied conflicts of interest it may possess. At the very least, CDOW personnel that directly benefit from the listing should be fire-walled from the process to ensure objectivity.

While other agencies directly address conflicts of interest in the peer review context, the Service has not chosen to do so. For example, in the second edition of the U.S. Environmental Protection Agency *Peer Review Handbook* (EPA 100-B-00-001 December 2000), the following guidance is provided related to conflicts of interest:

Conflict of interest is a situation in which, because of other activities or relationships with other persons, an individual is unable or potentially unable to render impartial assistance or advice to the Agency, or the person's objectivity in performing the work is or might be otherwise impaired, or a person has an unfair competitive advantage. Generally, a conflict of interest arises when the person is affected by his/her private interests, when he/she or his/her associates would derive benefit from incorporation of their point of view in an Agency product, or when their professional standing and status or the significance of their principal area of work might be affected by the outcome of the peer review. Clearly, peer reviewers should not be placed in the position of reviewing their own research and analyses that form the basis of the work product under review as this might impair their objectivity.

Although the EPA *Handbook* is not directly applicable to the Service, surely these basic principles of fairness have been assumed by the agency. Assuming this to be true, CDOW and many of the peer reviewers appear to maintain clear conflicts of interest related to the state's *Petition*.

Beyond implied adoption of conflict of interest rules, the recently released *Proposed Bulletin on Peer Review and Information Quality*, while not formally adopted, points to a federal penchant for demanding an impartial and fair peer review process. The background materials for the proposed regulation indicate that “[i]ndependent, objective peer review has long been regarded as a critical element in ensuring the reliability of scientific analyses.” 68 Fed. Reg. 178 (September 15, 2003) (Emphasis added). Most pointedly, and perhaps most indicting of the decision to choose CDOW as the peer review team selecting agency, the *Bulletin* states:

It is also important to understand the relationship of the peer reviewers with the agency, including their funding history. A peer reviewer who is financially dependent on the agency, or at least hopes to profit financially from other dealings with the agency, may not always be completely independent, or appear truly independent.

The position of CDOW personnel to summarize, edit and present the peer reviewers comments puts them in the same category as the peer reviewers and obligates them to abide by the cited standards. In my view, CDOW should not have been put in the position of having to defend against such an insinuation. Regardless, they are now going to be forced to do so because of the appearance of impropriety.

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The exact wording from the *Bulletin* provides, in my view, sound guidance for the selection of peer reviewers, not followed in the present case. The pertinent section of the *Bulletin* reads as follows:

Selection of Peer Reviewers: Peer reviewers shall be selected primarily on the basis of necessary scientific and technical expertise. When multiple disciplines are required, the selected reviewers should include as broad a range of expertise as is necessary. When selecting reviewers from the pool of qualified external experts, the agency sponsoring the review shall strive to appoint experts who, in addition to possessing the necessary scientific and technical expertise, are independent of the agency, **do not possess real or perceived conflicts of interest, and are capable of approaching the subject matter in an open-minded and unbiased manner.** Factors relevant to whether an individual satisfies these criteria include whether the individual: (i) Has any financial interests in the matter at issue; (ii) has, in recent years, advocated a position on the specific matter at issue; (iii) is currently receiving or seeking substantial funding from the agency through a contract or research grant (either directly or indirectly through another entity, such as a university); or (iv) has conducted multiple peer reviews for the same agency in recent years, or has conducted a peer review for the same agency on the same specific matter in recent years. If it is necessary to select a reviewer who is or appears to be biased in order to obtain a panel with appropriate expertise, the agency shall ensure that another reviewer with a contrary bias is appointed to balance the panel. (Emphasis added.)

CDOW personnel, and more than half of the peer reviewers selected by that agency, do not meet one or more of the factors mentioned above to ensure an “open-minded and unbiased” review of the state’s *Petition*. Thus, my great degree of concern.

In light of the information provided in this letter, I encourage you to re-evaluate the decision to allow CDOW personnel to choose the peer review team for the state’s *Petition*. I would also ask that the peer review team selected by CDOW be reconsidered. While I do not think it appropriate to give you recommendations of my own, in the face of an obvious conflict of interest, I would suggest enlisting the services of the National Academies of Science, or another reputable entity of unquestionable objectivity, to complete the task at hand.

Finally, while Dr. Ramey’s work is a central element of Wyoming’s *Petition*, I remind you that, in the selection of the peer review team, you must not ignore the other contentions made in the *Petition*. Beyond Ramey’s analysis, the state presents a scientifically sound position indicating that the mouse maintains a wide and abundant distribution in plentiful habitat, thereby putting into question the actual “threatened” nature of the species. I also call on the Service to thoughtfully and thoroughly review the “science” which was relied upon in the original listing decision. These reviewers should be qualified to judge the ecological threats, presented in the original listing, against the present-day state of knowledge of mouse distribution and abundance.

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Again, as with Dr. Ramey's genetics research, the reviewers should have no preconceived biases regarding the original listing decision.

I have the reasonable expectation that each of the important facets of the state's petition will be adequately addressed. In order to so address the central questions posed in Wyoming's *Petition*, I counsel that the peer review team, however assembled, be admonished of its task with proper direction and a clear understanding of what is expected of them, in the form of specific questions that adequately relate the issues set forth in the *Petition*.

Thank you for your time and attention to this important matter. I would greatly appreciate your prompt response as to how you intend to proceed.

Sincerely,



Dave Freudenthal
Governor

Cc: The Honorable Craig Thomas
The Honorable Mike Enzi
The Honorable Barbara Cubin
The Honorable Bill Owens
-Steve Williams, Director, U.S. Fish and Wildlife Service
-Ralph Morgenweck, Regional Director, U.S. Fish and Wildlife Service
-Brian Kelly, Wyoming Field Supervisor, U.S. Fish and Wildlife Service
Terry Cleveland, Director, Wyoming Game and Fish Department
John Etchepare, Director, Wyoming Department of Agriculture
Russ George, Director, Colorado Department of Natural Resources