



Frequently Asked Questions About the Preble's Meadow Jumping Mouse (*Zapus hudsonius preblei*)

- **What is the Preble's meadow jumping mouse?**

The Preble's meadow jumping mouse is a rare mouse species that lives in streamside habitats along the foothills of the Front Range of Colorado and southeastern Wyoming. Like its name suggests, the mouse has large hind feet and long hind legs, enabling it to jump up to three feet in the air. The Preble's meadow jumping mouse is listed as threatened under the Endangered Species Act.



- **Why does the mouse need Endangered Species Act protection?**

The Preble's meadow jumping mouse was listed under the Endangered Species Act because of declining populations, habitat loss, the lack of adequate protection measures, and continued threats. Because the Preble's needs high quality streamside habitat, including dense vegetation and a clean water source, it is extremely sensitive to environmental damage. Urban sprawl and unmanaged growth along the Front Range of Colorado, domestic livestock grazing, and irrigation diversions have all degraded or destroyed streamside habitats, threatening the Preble's with extinction. The Preble's has completely disappeared from the County of Denver because of habitat destruction. Along with the failure of governmental and private entities to conserve the Preble's, Endangered Species Act listing was essential to prevent its extinction and ultimately provide for its recovery.

- **What benefits has the Endangered Species Act provided?**

Listing the Preble's meadow jumping mouse has resulted in improved protection for the Preble's, encouraged governmental and private entities to conserve its streamside habitat, and has set in motion a process that will lead to the mouse's recovery. For these reasons, Endangered Species Act protection is also resulting in improved protection for open space, streams, and streamside habitats across Colorado's Front Range and the foothills of southeastern Wyoming.

- **Why is there so much controversy over this mouse?**

Controversy stems from misconceptions over its listing under the Endangered Species Act. Even though the Preble's was facing extinction and continues to face numerous threats, a handful of developers and people in the agriculture business oppose protecting it. It is their belief that the Endangered Species Act will destroy economies, prevent access, and stop development. This is not true. Protecting the Preble's under the Endangered Species Act simply means that cities, counties, and private landowners must plan more thoughtfully for development and growth, and ensure open space, healthy streams, and streamside habitat are protected. The Endangered Species Act is about balance – balancing land use with the importance of protecting values shared by everyone, like open space, clean water, and healthy communities.



- **Is the Preble’s meadow jumping mouse a real species?**

The Preble’s meadow jumping mouse is one of twelve distinct subspecies of meadow jumping mice. Each of these species is physically different, inhabits different habitats, or is found in different parts of the country. First recognized in 1899 as unique, scientific studies have since found the Preble’s is unique in terms of its behavior, the shape of its head and teeth, its DNA, and where it lives – namely the Front Range of Colorado and southeastern Wyoming. All these factors have led scientists to conclude the Preble’s meadow jumping mouse is a unique subspecies in need of protection.

- **What about genetics?**

While a clearer picture of the genetics of the Preble’s meadow jumping mouse is helpful, “there is so much more involved in understanding species differentiation than examining a genetic distance and extrapolating taxonomic rank... It is clear that a single measure of genetic distance cannot be used” to distinguish species.¹ In other words, genetics research alone is “not appropriate” for distinguishing unique plants and animals.² Genetics are but a small part of the overall picture and cannot alone determine whether the Preble’s is unique. As one scientist commented, “when dealing with the complexities of nature, the simplest explanation is usually wrong.”³ Scientists have so far found the Preble’s meadow jumping mouse to be unique in many ways, telling us the mouse is truly one-of-a-kind.

- **What do we need to continue protecting the Preble’s meadow jumping mouse under the ESA?**

From a conservation standpoint, the greatest news in the world would be that the Preble’s meadow jumping mouse is more abundant than previously thought, is not threatened with extinction, and can be removed from the list of threatened and endangered species. However, studies so far have overwhelmingly found the Preble’s to be a distinct creature that is now so rare it is in danger of extinction. In addition, threats to the Preble’s and its habitat continue to increase as uncontrolled sprawl consumes more open space, more streams, and more streamside habitat along the Front Range. Although genetic research is important, it alone cannot tell us if the Preble’s is or is not a unique subspecies. Scientists have already found the Preble’s to be one-of-a-kind in many different ways and deserves Endangered Species Act protection.

“...when dealing with the complexities of nature, the simplest explanation is usually wrong.”

- Robert J. Behnke

Keeping the Preble’s meadow jumping mouse listed is also needed to ensure the health of our environment and our communities along Colorado’s Front Range and in southeastern Wyoming. As one researcher stated, “***The issue is about preserving the integrity of functioning landscapes... The Meadow jumping mice are not a problem; broadly speaking, they are a symptom, an indicator of the state of a system—of something going right where they are present and of something gone wrong where they once were present but now are absent.***”⁴ To ensure recovery of the mouse and of our environment, it is crucial that the Preble’s meadow jumping mouse remain protected under the Endangered Species Act until it is recovered.

¹ Crandall, K.A., et al. 2000. Considering evolutionary processes in conservation biology. *Trends in Ecology and Evolution*, vol. 15(7):290-295.

² Davis, G. M. 1994. Molecular Genetics and Taxonomic Discrimination. *The Nautilus*, Supplement 2: 3-23.

³ Behnke, R.J. 2002. Trout and Salmon of North America. The Free Press, New York.

⁴ Comments from Dr. David M. Armstrong, University of Colorado, on Draft Recovery Plan for the Preble’s Meadow Jumping Mouse