

Preble's Meadow Jumping Mouse

East Plum Creek Conservation Bank

Here on the banks of East Plum Creek is a fine new home for the Preble's meadow jumping mouse. A much needed new home. In 1965 a record-breaking flood deeply eroded the creek bed as floodwaters washed away highways, bridges, and homes throughout the Front Range area. In the aftermath, the water table was too low to support streamside trees and shrubs necessary for the Preble's survival. Further complicating the mouse's life, the population in the Denver Metro area increased over 35% in the last decade, and homes and businesses moved into the landscape that the mouse once thrived on. So imperiled was the plight of this jumping mouse that the U.S. Fish and Wildlife Service (USFWS) listed it as threatened under the Endangered Species Act in 1998.

Preble's meadow jumping mice live in riparian, or streamside areas with adjacent undisturbed uplands in the foothills of the Southern Rocky Mountain Front Range. The mouse is 8-10 inches long, its tail accounting for 60 percent



Preble's meadow jumping mouse (Zapus hudsonius preblei)

of its length! It has powerful hind legs and large feet adapted for jumping. Preble's can be distinguished from other riparian mice by a distinct dark, broad stripe, bordered on either side by cream to orange-brown fur, running from head-to-tail, down the center of its back. During the summer months, Preble's spend the majority of their time in streamside (riparian shrub) habitat. Preble's are adept at swimming both above and below the water surface, allowing the mouse to move about rather

freely and explore the riparian zone. In winter, some of the mice remain near the stream bank area to hibernate, while others move to the drier uplands nearby. Preble's preferred habitat is more severely restricted when erosion down-cuts the streams, vegetation dies off, or when extreme drought occurs, such as in the early years of the 21st century.

At the same time that the habitat of the Preble's jumping mouse was shrinking due to erosion, and precious habitat was being lost to development, CDOT found its transportation capacity along the Front Range stressed. During the planning process for roadway expansion one criterion CDOT weighed was stewardship of the mouse. In cooperation with the Federal Highway Administration and the USFWS, a construction project was developed to improve the riparian habitat along

East Plum Creek, allowing existing populations of the Preble's mouse to persist in this area.

Check Dams were constructed to slow down the flow of the stream water and catch sediment behind the dams. By accomplishing this, groundwater levels would be restored and riparian vegetation and habitat conditions would improve. In an amazingly short time, less than two weeks, a rainstorm filled the channel behind the check dams and the vegetation began to bloom! CDOT was so enthused by the immediate success that the Program Engineer proposed to expand the project by installing six more check dams downstream. The protected and restored habitat within the ecosystem restoration area presently encompasses more than 25 acres and more than 1 mile in length.



Above: After construction, looking upstream at a restored portion of East Plum Creek.



Right: Pre-construction looking upstream showing the degraded ecosystem of the East Plum Creek.

The Colorado Department of Transportation, Federal Highway Administration, and U.S. Fish and Wildlife Service worked cooperatively on this ecosystem restoration project.

