

Mosquito Range Mustard

Eutrema penlandii



Mosquito Range mustard / USFWS

When Congress passed the Endangered Species Act (ESA) in 1973, it recognized that many of our nation's native plants and animals were in danger of becoming extinct. The U.S. Fish and Wildlife Service administers the ESA to preserve these imperiled species and their habitats for future generations.

On July 28, 1993, Mosquito Range mustard was listed as a threatened species (58 FR 40539).

What does the Mosquito Range mustard look like?

Mosquito Range mustard (also known as "alpine fen mustard") is a small perennial plant species in the

mustard family. Though the mustard family itself is large, Mosquito Range mustard is one of only two species within its genus (*Eutrema*) found in North America. During June through August, Mosquito Range mustard can be seen blooming; the clusters of white, four-petaled flowers topping each stem. Leaves are shiny and oval along the stem but shovel-shaped at the base of the plant. Plant height ranges from 1/2 to 6 inches.

Where does Mosquito Range mustard occur?

Mosquito Range mustard was first collected near Hoosier Pass in 1935 by C. William T. Penland, a

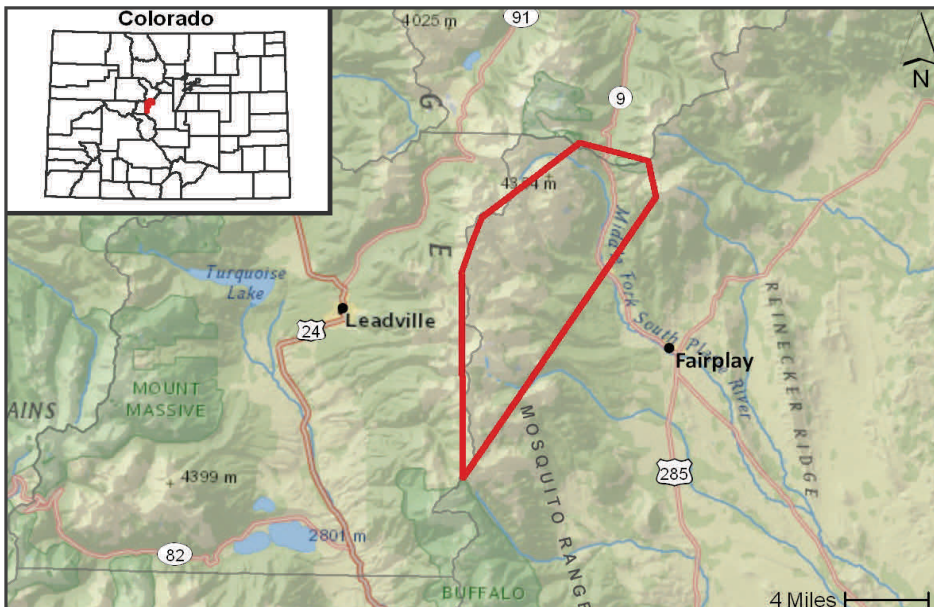


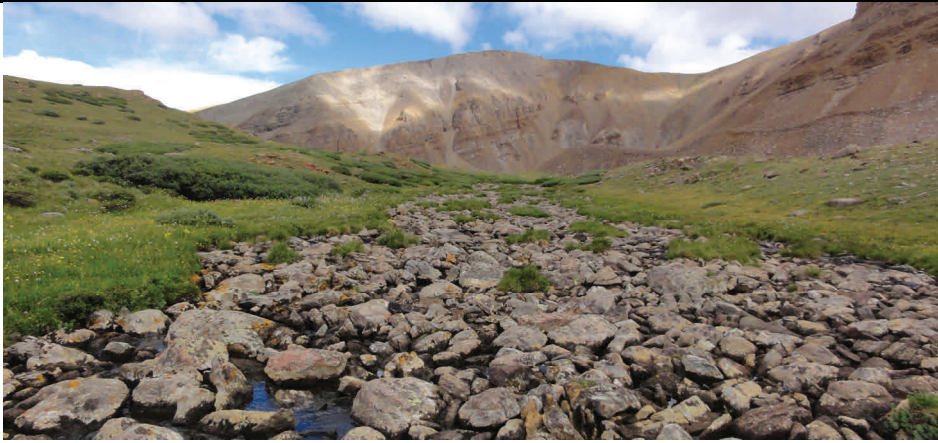
Alicia Langton / USFWS

professor of botany at Colorado College. The species occurs only in alpine meadows at elevations above 11,800 feet in the Mosquito Range of the Rocky Mountains in central Colorado. Plants are most often found along east facing, gentle slopes and basins that are fed moisture by slow-melting snowfields above. However, they can also be found in drier locations. In either habitat, they are often rooted in tufts of mosses or hidden among short-bladed grasses. This harsh alpine environment is also home to many other rare plant species known only to the Rocky Mountains.

Why does Mosquito Range mustard need protection?

Mosquito Range mustard is threatened by activities that damage its





Mosquito Range mustard habitat, Andrew Kratz / USFS

sensitive habitat or alter local hydrology. Because of the Mosquito Range's spectacular views and scenery, it is a draw for recreation, especially in the summer months. Recreation activities such as off-road vehicle use (including winter travel), camping, hiking, and roads pose a great threat to Mosquito Range mustard and its habitat. Land development, including mining, also have an impact on the species. In addition, the effects of climate change are likely to endanger the survival of Mosquito Range mustard, as well as many other plant and animal species adapted to alpine ecosystems.

What have we done to recover Mosquito Range mustard?

We have collaborated with our Federal, State, and private partners to implement these recovery efforts, which include:

- Designating areas to protect the species and its habitat, including the Mosquito Pass Area of Critical Environmental Concern (BLM), Hoosier Ridge Research Natural Area (USFS), and Treasurevault Mountain Natural Area (Colorado Natural Areas Program).
- Trail restoration and re-routing to mitigate and minimize recreation impacts to the species.
- Surveying for and inventorying the species to better document its range.
- Funding research endeavors to understand the species including genetic research, and habi-

tat and seed germination requirements. Scientific information forms the backbone of all conservation and recovery efforts.

What do we need to do to recover Mosquito Range mustard?

We will finalize our Recovery Plan for Mosquito Range mustard in the next few years. Actions necessary to achieve the recovery of the species will include:

- Establish a management plan to address threats and protect the species in perpetuity.
- Further inventory locations and habitat of Mosquito Range mustard.
- Establish permanent population monitoring for the species.
- Incorporate protections into existing management plans.
- Establish conservation areas on Federal lands for Mosquito Range mustard and its habitat.
- Develop propagation and transplantation protocols for future restoration or reintroduction efforts.



*Mosquito Range mustard close-up
Sheila Lamb / USFS*

- Help private landowners, and State and Federal organizations to conserve the species and its habitat.
- Conduct education and outreach in the community.

What can you do to help conserve Mosquito Range mustard?

- "Stay the trail!"
- Spread the word about this local treasure!
- Contact us and network with others working to conserve the species.
- Participate in recovery planning and conservation efforts.
- Funding and assistance may be available to help conserve the species and its habitat on private and local government lands. Funding opportunities could include costs for fencing, tax credits, or assistance with conservation easements.



*Mosquito Range mustard fruits
Andrew Kratz / USFS*

Western Colorado Field Office
764 Horizon Drive
Grand Junction, CO 81506
(970) 243-2778
<http://www.fws.gov/coloradoes>

U.S. Fish and Wildlife Service
Region 6
PO Box 25486
Denver Federal Center
Denver, Colorado 80225

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