

Project Title: Extending USGS Research on Ecological Impacts of Plague in the Western U.S.

Task Agreement #: G19AC00401

Modification(s):

Discipline: Natural

Type of Project: Research

Funding Agency: USGS

Other Partners/Cooperators: Colorado State University

Student Participation:

Effective Dates: 9/15/2019 – 9/14/2020

Funding Amount: \$75,000

Investigators and Agency Representative:

USGS Contact: David Eads; deads@usgs.gov

Investigator: Michael Antolin, Colorado State University Fort Collins, CO; Michael.Antolin@colostate.edu

Project Abstract: The goal of this research is to investigate the effects of plague on survival rates and other population attributes of not only the Peñasco least chipmunk, but also of associated rodent species that may be the reservoirs for plague. Goals will be to determine whether plague intervention can result in population growth for the remaining population of chipmunks, and a spinoff benefit will be a better understanding of the ecology of this disease with additional ramifications for human and environmental health.

Objectives include:

1. Identify effects of plague on Peñasco least chipmunks and provide recommendations for reducing impacts of plague on this imperiled species.
2. Identify effects of plague on associated small mammal species.
3. Evaluate the effectiveness of insecticides and vaccines for flea control and plague mitigation.
4. Provide management recommendations to appropriate professional organizations, including local, State, regional and Federal agencies