

1997 Plague Summary

For the fourth year plague activity remained at low levels state-wide and nationally. Colorado reported one of eight human plague cases that occurred in the U.S. Only three localized die-offs were investigated and 69% of animal specimens tested and 79% of the positives were submitted from two counties.

While the number of specimens tested (n=547) increased from the previous two years, only 66 (13%) were plague positive. This included 37 (16%) of 242 rodent/lagomorphs, 12 (12%) of 97 flea pools, 12 (14%) of 84 cats and 5 (4%) of 124 other specimens (positives: 3 dogs, coyote, bobcat) which were mostly dogs serums from special serosurveys conducted in El Paso and Delta counties. These totals do not include 379 negative flea pools from the Rocky Mountain Arsenal and 132 serologies done in conjunction with the black-footed ferret recovery project.

An epizootic in tree squirrels (*Sciurus niger*) continued for the second year in El Paso County extending along Fountain Creek from Manitou Springs to Colorado Springs, south of the Garden of the Gods Park. In addition to routine surveillance, a serosurvey of domestic pets and two field studies were done by local, state and CDC staff. Blood samples were collected from 106 dogs and cats at the local animal shelter of which two cats, living in the area of the epizootic, were antibody positive. A third, clinically suspect cat from the area was also confirmed with plague. Except for two rock squirrels the remaining thirty positive specimens were all tree squirrels. These studies demonstrated that the die-off has remained confined along Fountain Creek and plague was infrequently spreading to domestic pets or other rodent species populations. The die-off continued through the winter and early spring, stopped during the summer and then resumed again in the fall. This may be due to the abundance and seasonal activity levels of the tree squirrel flea (*O. howardii*). Studies are underway at CDC to determine the competence of this flea species as a plague vector.

A epizootic involving a prairie dog die-off was reported in subdivisions southwest of Fort Collins. Four rodent carcasses and 4 flea pools were positive. Larimer County veterinarians have been actively submitting cat specimens in that county for several years. Seven of 24 cats were positive as was a dog and a bobcat. Other counties with plague positive specimens were Adams (flea pool), Delta (dog), Douglas (2 flea pools), Gunnison (flea pool), Jefferson (cat), LaPlata (coyote), Teller (cat), and Weld (4 flea pools).

A human plague case was reported on April 18 by the local hospital in Cortez , Montezuma County. The patient, a 46 year-old woman, became ill on April 14 with fever, chills, nausea, vomiting and myalgia. When she was hospitalized two days later an enlarged inguinal bubo and 4 insect bites on her lower back were noted. The patient recovered uneventfully. She lived north of Cortez in a rural area and had not traveled outside the county prior to her illness. Although there was little rodent activity around her home, a prairie dog colony within a mile of her house yielded a positive carcass. She indicated her dog roamed freely and often visited this colony. The dog had a positive plague antibody titer (1:256). It appeared that during one of its forays the dog brought home some fleas that then bit the owner.