

STATE OF COLORADO

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Dedicated to protecting and improving the health and environment of the people of Colorado

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Colorado Department
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Colorado Plague Summary, 2004

Following the near absence of plague in the past three years, plague activity in Colorado increased considerably during 2004. A total of 92 animal specimens tested positive for plague from 24 counties representing all areas of the state. After a 3-year hiatus, Colorado reported 3 human cases of plague, one of which was fatal. Two of these cases were associated with rabbit hunting.

In terms of its seasonality, the 2004 plague season was unusual for the considerable activity being observed in late fall and early winter. Activity was observed practically year-round from March and April (9% of positive specimens) through November and December (18% of positive specimens). Cats and prairie dogs accounted for 48% (n = 22 each) of the positive specimens, coyotes (n = 19) 21%, flea pools (n = 13) 14%; squirrels (n = 8), rabbits (n = 7) and lynx (n = 1) comprised the remaining 17%.

The first human case in Colorado since 2000 was reported in a 52 year-old Weld County woman who developed bubonic plague that subsequently progressed a few days later to secondary pneumonic plague. She became ill in August shortly after camping in the Red Feather's Lake area in Larimer County. She had an extended hospitalization and recovery period. An environmental investigation around the lake revealed plague activity in the area. Based on her clinical presentation and the environmental findings it appears she was bitten by an infected flea.

The second human case was a Morgan County man who had been hunting and skinning rabbits in Goshen County, Wyoming at the beginning of October. He was aware of the risk of contracting plague and alerted his physician about his potential exposure when his symptoms first appeared. This quick recognition resulted in a two-day hospitalization and rapid recovery. One of the 12 rabbits he shot tested positive for plague.

Colorado's fatal plague case occurred in December. The Pueblo County man had been hunting and skinning rabbits near the Tarryall Reservoir in Park County 24 hours before the abrupt onset of symptoms. Despite his worsening illness he remained at the family trailer for 4 days before driving home. At hospital admission he was noted to have bacterial sepsis, multi organ failure and a right axillary bubo. He developed ARDS but no pneumonia and died six days after admission. Plague was isolated from bubo aspirates; however blood cultures grew *E. coli*. It appears he was co-infected with two bacteria while skinning the rabbits, *Y. pestis* from rabbit's blood and *E. coli* most likely from fecal contamination with intestinal contents. Five rabbit carcasses tested positive for plague; however, because they were all stored in the same plastic bag cross contamination may have taken place.

