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Laramie cat dies of bubonic plague

Bubonic plague was diagnosed in a cat in Laramie last week by the Wyoming State Veterinary Laboratory, according to lab director Donal O'Toole.

The cat's owners from southeast Laramie had left for a week and upon returning June 4 found their cat extremely ill under their porch. The cat was examined by a local veterinarian, treated with fluids and antibiotics and taken home by the owners, but it died shortly afterward.

The owners brought the animal to the College of Agriculture's state veterinary diagnostic lab for necropsy. Assistant professor Todd Cornish, veterinary pathologist

with the state laboratory, thought the changes in the cat, which had large, pus-filled lymph nodes and pneumonia, were consistent with the plague. His diagnosis was confirmed with two sets of tests, according to O'Toole. O'Toole said the Wyoming Department of Health was immediately informed.

Amy Boerger-Fields, the lab's bacteriology laboratory technician who confirmed the diagnosis, said she tests about 100 animals a year for the plague. "The majority of animals are prairie dogs, but I also test rabbits, cats, ground squirrels, ferrets and anything else the pathologists or veterinarians think may be positive," she said.

Cats can contract the disease by eating an infected rodent or by being bitten by fleas from an infected host. "Plague in cats is relatively common, especially in the southwestern part of the United States," O'Toole said. "In Wyoming, it is less common, but we have seen previous cases in cats. Infected cats have been associated with 23 cases of human plague in the U.S. in the last 20 years."

The disease in cats can be readily controlled by appropriate antibiotics, he said.

Bubonic plague is endemic to Wyoming and is seen just about everywhere, said Hank Edwards, Wyoming Game and Fish Department wildlife disease laboratory supervisor in Laramie.

"We've been living with this disease for years and years," he said. "It's been everywhere."

The plague was discovered in the Yellowstone area in 1930, and "we've been monitoring the plague throughout the years," he said. "We now know it extends throughout Wyoming with the exception of the far northeast corner."

The disease has not spread beyond the eastern borders of Wyoming. “Nobody knows what the magical fence is that stops this agent from spreading,” said Edwards.

There have been five cases of humans in Wyoming contracting the disease since 1978, and one of those cases was last year, said Dr. Tracy Murphy, Wyoming Department of Health state epidemiologist.

“Most counties in Wyoming have had documented plague in animals,” he said. “There certainly is a chance for human exposure to the organism that causes the plague in Wyoming, but it is rare that humans actually acquire it.”

A case last year in Goshen County marked the fifth case of plague in humans since the late 1970s. The other recorded cases involving Wyoming residents occurred in Washakie County in 1978, Laramie County in 1982, in Sheridan County in 1992, and in Washakie County in 2000. The Sheridan County case in 1992 resulted in death. The man contracted the plague when skinning an infected bobcat.

An average of five to 15 cases of the plague in humans has been reported in the United States per year since 1971, according to the Centers for Disease Control and Prevention.

Murphy said the typical sign of the most common form of human plague is a swollen and very tender lymph gland, accompanied by pain. The swollen gland is called a "bubo" (hence the term "bubonic plague"). Bubonic plague should be suspected when a person develops a swollen gland, fever, chills, headache, and extreme exhaustion and has a history of possible exposure to infected rodents, rabbits or fleas. He advised that anyone experiencing these symptoms see his or her healthcare provider.

"Most human cases will survive if diagnosed and treated early; however, if treated late, some forms of plague are invariably fatal," Murphy said.

He suggested ways to avoid the plague, including:

- Avoiding unnecessary contact with rodents and their nests and burrows.
- Avoiding unnecessary contact with sick or dead animals, especially rodents and rabbits, and wearing protective gloves when handling sick or dead animals.
- Having severely ill pets, such as cats and dogs, examined by a veterinarian.
- Avoiding areas where a large number of unexplained rodent deaths have been observed.

Since pets can acquire and transmit plague to humans, people also need to take similar precautions with regard to potential exposure of their pets to plague, Murphy said. This would also include adequate flea control for their pets.

"Even though it is not that common, it still happens and we want people to think about it and take appropriate precautions," Murphy said.

The Wyoming Game and Fish Department monitors the disease by examining blood samples from animals such as mountain lions, coyotes and foxes. These animals survive the plague. "We use them as a sentinel, an indicator of what the disease is doing out in the wild," Edwards said. "We see it just about everywhere. It has its peaks and drops."

On the Web: <http://www.cdc.gov/ncidod/dvbid/plague/qa.htm>

<http://www.cdc.gov/ncidod/dvbid/plague/facts.htm>

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