



Rabies in Animals, Texas - 2019

Prepared by
Zoonosis Control

Rabies is a viral zoonosis affecting the central nervous system of warm-blooded animals. Transmission occurs when saliva containing rabies virus is introduced into an opening in the skin, usually via the bite (or possibly scratch) of a rabid animal. Though rare, transmission can also occur through contamination of mucous membranes. Animals considered to be high risk for transmitting rabies in Texas include bats, skunks, foxes, coyotes, and raccoons. Bats and skunks are the primary reservoirs for specific rabies virus variants (types) in Texas. Rabies infection in a species other than the reservoir species for the variant is considered "spillover." An example of spillover would be a cat infected with a skunk variant of rabies virus.

In 2019, 565 (5%) of 11,962 animal specimens in Texas that were tested (this report refers only to specimens confirmed as positive or negative) were positive for rabies. This was a 19% decrease in cases from the 694 cases confirmed in 2018. In 2019, there were 47 positive rabies cases per 1,000 specimens tested, which was down from 60 positive rabies cases per 1,000

specimens tested in 2018. Yearly totals for 1994 through 2019 are illustrated in Figure 1.

During 2019, the highest monthly number of laboratory-confirmed rabies cases (89) occurred in April with skunks (44) being the predominant rabid species reported; May had the second highest number of cases (71) with skunks (30) being the predominant rabid species as well. For 2018, April also had the highest number of reported cases (104, including 52 bats), and August had the second highest number (100, including 80 bats). Cases of rabies were confirmed in 112 of the 254 Texas counties (Figure 2) compared with 109 counties with reported cases in 2018. Travis County had the highest number of reported rabies cases per county statewide with 72 cases (66 of which were bats) in 2019; Bexar County had the second highest number of cases with 40 (all of which were bats). In 2018, Travis County again had the highest number of reported cases (115, all of which were bats), and Hays County had the second highest (61, including 60 bats).

Rabid wildlife accounted for 535 (95%) of the confirmed cases throughout the state in 2019; in 2018, rabid wildlife accounted for 658 (95%) of the confirmed cases (Table 1). Bats were the primary source of positive cases reported in 2019 (51% of all positive cases). During 2019, 289 bats were positive for rabies compared with 421 (61% of all positive cases) in 2018. Of

all bats tested for rabies, 11% were positive in 2019 and 14% were positive in 2018. Rabies in bats is enzootic (endemic in animals) in Texas; there are numerous bat variants of rabies virus throughout the state. In 2019, there was one identified case in which there was spillover of a bat rabies virus variant to a terrestrial animal, which was a raccoon.

During 2019, skunks had the second highest number of confirmed rabies cases with 173 (31% of all positive cases) compared with 188 (27% of all positive cases) in 2018. Of all skunks tested for rabies, 23% were positive in 2019 and 31% were positive in 2018. South-central skunk (SCS) remains an established variant of terrestrial rabies virus in Texas. Rabies cases in 2019 in which the SCS rabies virus variant could be confirmed included 172 skunks, 42 raccoons, 28 foxes, 16 cats, 6 dogs, 4 bovines, 3 equines, and 1 coyote.

Rabid domestic animals continue to be a concern because they are more likely to have contact with humans than are rabid wildlife. In 2019, there were 30 reported rabies cases in domestic animals (5% of all positive cases); of these rabies cases, 16 were cats and 6 were dogs (Table 2). In 2018, there were 36 reported rabies cases in domestic animals (5% of all positive cases); of these rabies cases, 15 were dogs and 14 were cats.

Oral Rabies Vaccination Program

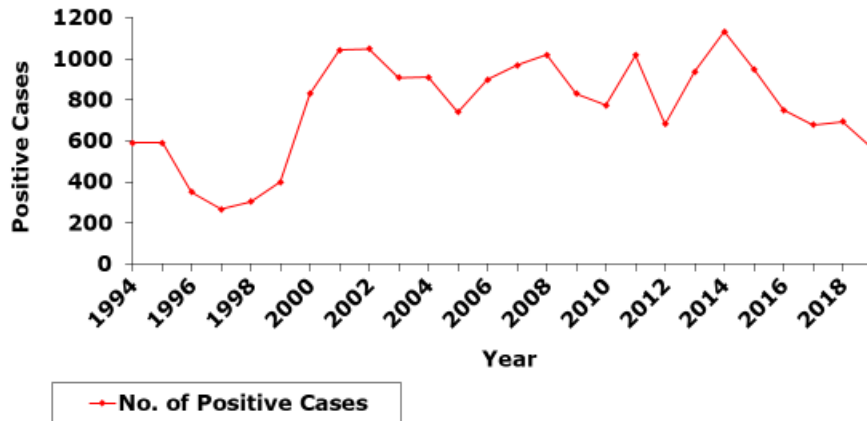
A canine rabies epizootic (an epidemic in animals) began in 1988 and ultimately involved 21 counties in South Texas. Statewide there were no reported cases with the domestic dog/coyote (DDC) variant of the rabies virus in 2019. The last reported case with the DDC rabies virus variant was in March 2004.

Similarly, a Texas gray fox rabies epizootic began in 1988, but it eventually involved 53 counties in West-Central Texas. Statewide there were no reported cases with the Texas fox (TF) variant of the rabies virus in 2019. The last reported case with the TF rabies virus variant was in a bovine in May 2013; previous to this case, the last reported case was in May 2009.

To control the canine and gray fox rabies epizootics, the Department of State Health Services initiated the Oral Rabies Vaccination Program (ORVP) for coyotes in South Texas in February 1995 and for gray foxes in West-Central Texas in January 1996. The goals of the ORVP were to create zones of vaccinated coyotes and gray foxes across the epizootic areas or, at a minimum, along the leading edges of the areas where these rabies variants were detected in order to halt the geographic spread of those variants and eventually eliminate the epizootics. Immunization was accomplished by

aerial distribution of edible baits containing oral rabies vaccine. The programs have continued annually and are now combined into a maintenance zone along the border with Mexico targeting reservoir species for the DDC and TF variants of the rabies virus, specifically coyotes and gray foxes, respectively. With the elimination of the DDC and TF variants from Texas, the ORVP now serves as an ongoing barrier to prevent reintroduction from Mexico.

Figure 1. Positive Animal Rabies Cases:
Texas 1994 - 2019



**Table 1. Confirmed Cases of Rabies in Wild Animal Species:
Texas 2018 and 2019**

Species	2018	2019
Bat	421	289
Bobcat	1	0
Coyote	1	1
Fox	15	29
Opossum	2	0
Raccoon	30	43
Skunk	188	173
Total	658	535

**Table 2. Confirmed Cases of Rabies in Domestic Animal Species:
Texas 2018 and 2019**

Species	2018	2019
Bovine	2	4
Cat	14	16
Dog	15	6
Equine	3	4
Goat	2	0
Total	36	30