

Rabies in Animals, Texas - 2013

Department of State Health Services 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; the first three of these wildlife species currently serve as reservoirs for specific rabies virus variants (types) in Texas (previously, coyotes also served as a reservoir for a specific rabies virus variant, but that variant is now considered to have been eliminated from 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 2013, 937 (8%) of 12,007 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 37% increase in cases from the 683 cases confirmed in 2012. In 2013, there were 78 positive rabies cases per 1,000 specimens tested, which was up from 64 positive rabies cases per 1,000 specimens tested in 2012. Yearly totals for 1994 through 2013 are illustrated in Figure 1.

During 2013, the highest monthly number of laboratory-confirmed rabies cases (127) occurred in September with bats (98) being the predominant rabid species reported; April had the second highest number of cases (125) with skunks (77) being the predominant rabid species. Cases of

rabies were confirmed in 123 of the 254 Texas counties (Figure 2) compared with 102 counties with reported cases in 2012. Williamson County had the highest number of reported rabies cases per county statewide with 132 cases in 2013, 130 of which were bats. In 2012, Williamson County also had the highest number of reported cases with 89 (88 of which were bats).

Rabid wildlife accounted for 876 (93%) of the confirmed cases throughout the state in 2013; in 2012, rabid wildlife accounted for 639 (94%) of the confirmed cases (Table 1). Bats were the primary source of positive cases reported in 2013 (47% of all positive cases). During 2013, 437 bats were positive for rabies compared with 331 (49% of all positive cases) in 2012. Of all bats tested for rabies, 14% were positive in 2013 and in 2012. Rabies in bats is enzootic in Texas; there are numerous bat variants of rabies virus throughout the state. In 2013, there were no cases in which there was spillover of a bat rabies virus variant to terrestrial animals.

Skunks had the second highest number of confirmed rabies cases with 402 (43% of all positive cases) in 2013 compared with 273 (40% of all positive cases) in 2012. Of all skunks tested for rabies, 48% were positive in 2013 and 43% were positive in 2012. South-central skunk (SCS) remains an established variant of terrestrial rabies virus in Texas. Rabies cases in 2013 in which the SCS rabies virus variant could be confirmed included 396 skunks, 23 cats, 23 raccoons, 16 dogs, 12 bovines, 10 foxes, 6 equines, and 2 goats.

There were 61 reported rabies cases in domestic animals (7% of all positive cases) (Table 2).

Rabies in domestic animals continues to be a concern because they are more likely to have contact with humans than are rabid wildlife. Cats (23) represented 3% and dogs (16) represented

2% of all positive cases in 2013. In 2012, there were 44 reported rabies cases in domestic animals (6% of all positive cases); of these rabies cases, 16 were dogs and 14 were cats.

Twenty-one counties have been involved in the South Texas canine rabies epizootic since it began in 1988. Statewide there were no reported cases with the domestic dog/coyote (DDC) variant of the rabies virus in 2013. The last reported case with the DDC rabies virus variant was in March 2004.

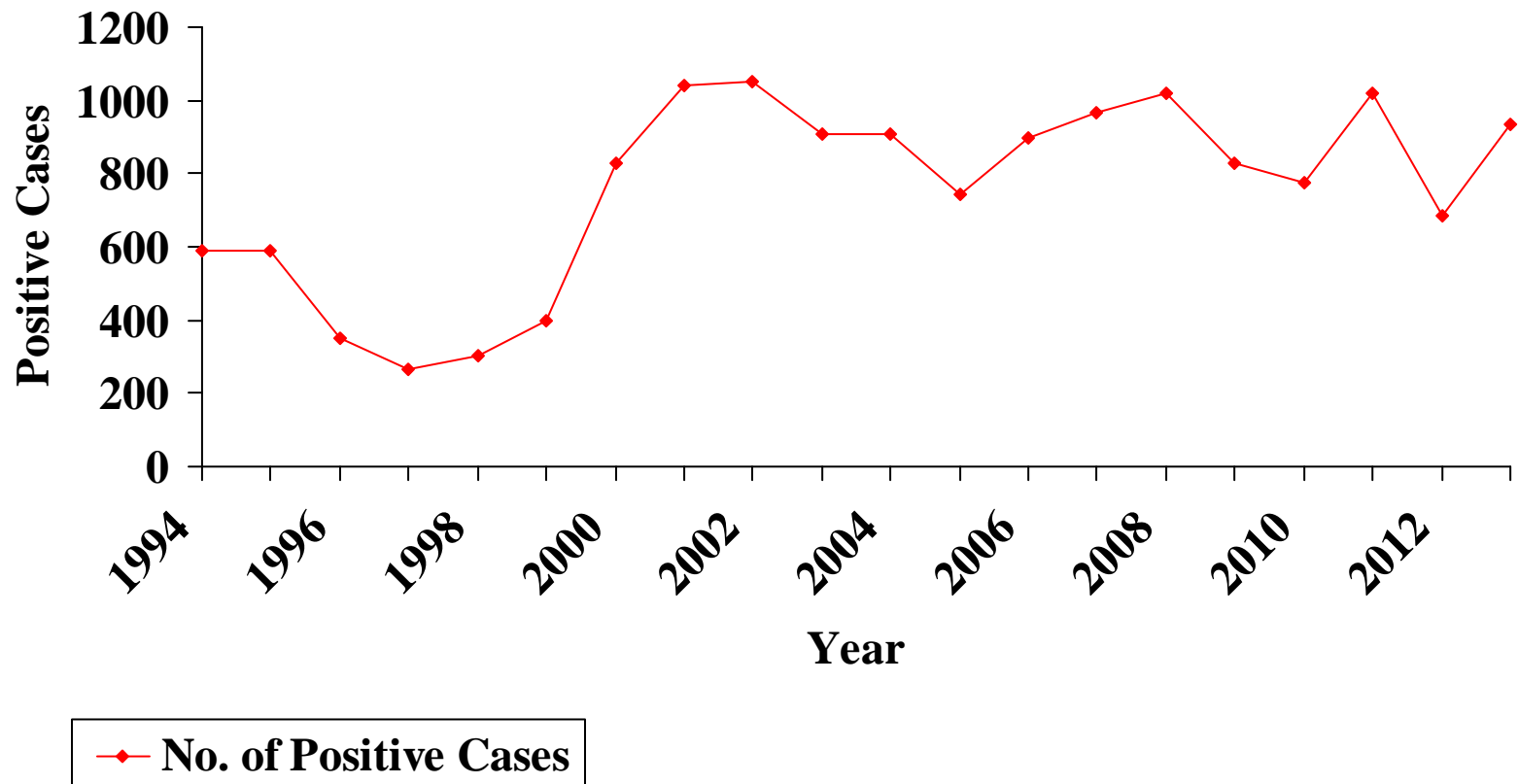
Fifty-three counties have been involved in the West-Central Texas gray fox rabies epizootic since it began in 1988. There was 1 recorded case of the Texas fox (TF) variant of the rabies virus in May 2013 in a bovine from Concho County. Previously, the last reported case with the TF rabies virus variant was in May 2009.

In response to the canine and gray fox rabies epizootics, the Oral Rabies Vaccination Program (ORVP) for coyotes in South Texas was initiated in February 1995, and the ORVP for gray foxes in West-Central Texas was initiated in January 1996; the programs have continued annually. These programs target reservoir species for the DDC and TF variants of the rabies virus, specifically coyotes and gray foxes, respectively. Immunization is accomplished by aerial distribution of edible baits containing oral rabies vaccine. The goal of the ORVP has been 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 are located in order to eventually eliminate the epizootics. With the elimination of the DDC variant from Texas, the ORVP now serves as an ongoing barrier to prevent reintroduction from Mexico. The program targeting the

TF variant currently consists of a border maintenance zone and a contingency zone around the 2013 case.

Proof-of-concept studies to evaluate the effectiveness of an ORVP for skunks began in Fort Bend County in September 2012 and were expanded to include the counties of both Fort Bend and Waller in September 2013. Analysis of the results is ongoing.

Figure 1. Positive Animal Rabies Cases:
Texas 1994 - 2013



**Table 1. Confirmed Cases of Rabies in Wild Animal Species:
Texas 2012 and 2013**

Species	2012	2013
Bats	331	437
Coyotes	2	0
Deer	1	0
Foxes	13	10
Raccoons	19	27
Skunks	273	402
Total	639	876

**Table 2. Confirmed Cases of Rabies in Domestic Animal Species:
Texas 2012 and 2013**

Species	2012	2013
Bovines	9	13
Cats	14	23
Dogs	16	16
Equines	4	7
Goats	1	2
Total	44	61