



## **Rabies in Animals, Texas - 2023**

Prepared by Zoonosis Control

### **Purpose**

This annual report provides clinical and epidemiological backgrounds on rabies, presents current and historical case data for rabies testing in Texas, and describes preventive measures implemented by the Texas Department of State Health Services for rabies containment.

### **Background Summary**

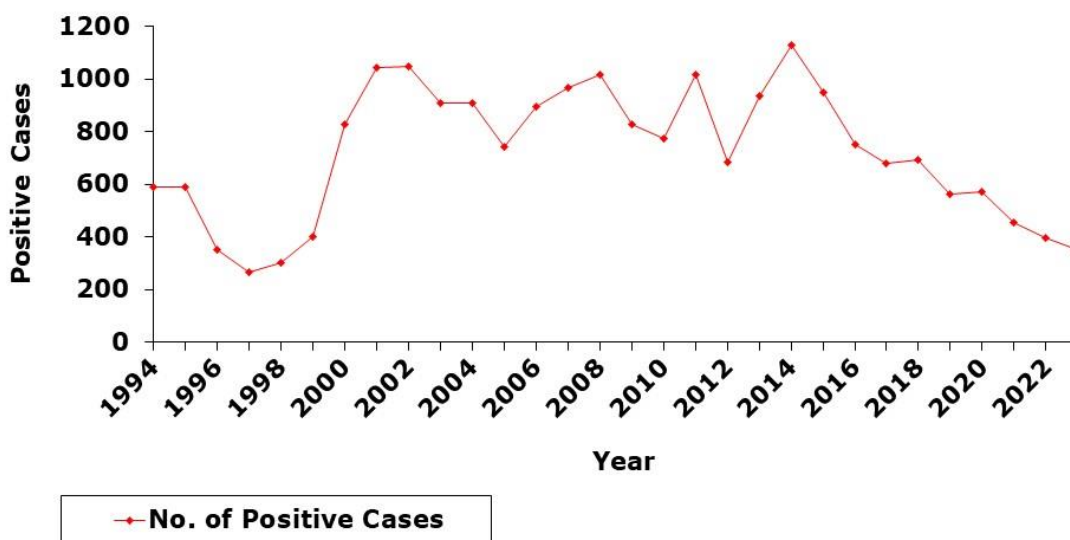
Zoonoses are diseases transmitted between animals and people. Rabies is a zoonotic disease in which the rabies virus infects the central nervous system of warm-blooded animals and almost universally results in death if postexposure prophylaxis (immunizing products to prevent disease) is not prescribed by a physician and administered with urgency. Transmission occurs when saliva containing the rabies virus is introduced into an opening in the skin, usually via the bite (or less likely a scratch) of a rabid animal. Though rare, exposure can also occur through infected saliva contacting mucous membranes. As defined in Texas law, high-risk animals for rabies include bats, skunks, foxes, raccoons, and coyotes. Bats and skunks are the primary reservoirs (hosts) 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.

### **Case Analysis**

In 2023, 350 (4%) of 9,413 animal specimens in Texas that were tested were positive for rabies (this report refers only to specimens confirmed as positive or negative). This was a 11% decrease in cases from the 395 cases confirmed in 2022. In 2023, there were 37 positive rabies cases per 1,000 specimens tested, which was down from 44 positive rabies cases per 1,000 specimens tested in 2022. The reason for yearly fluctuations in statewide rabies cases is difficult to assess. There are a variety of variables that can affect trends for the number of laboratory-confirmed rabid animals, such as movement and population density of animals (the higher the population

density, the higher the possibility of transmission of rabies between animals) or an increase in awareness to submit animals for testing due to an increase in public announcements on a human rabies case or an encounter of a person or domestic animal with an animal confirmed to have rabies. Yearly totals for 1994 through 2023 are illustrated in Figure 1.

Figure 1. Positive Animal Rabies Cases:  
Texas 1994 - 2023



Rabies in Animals, Texas - 2023

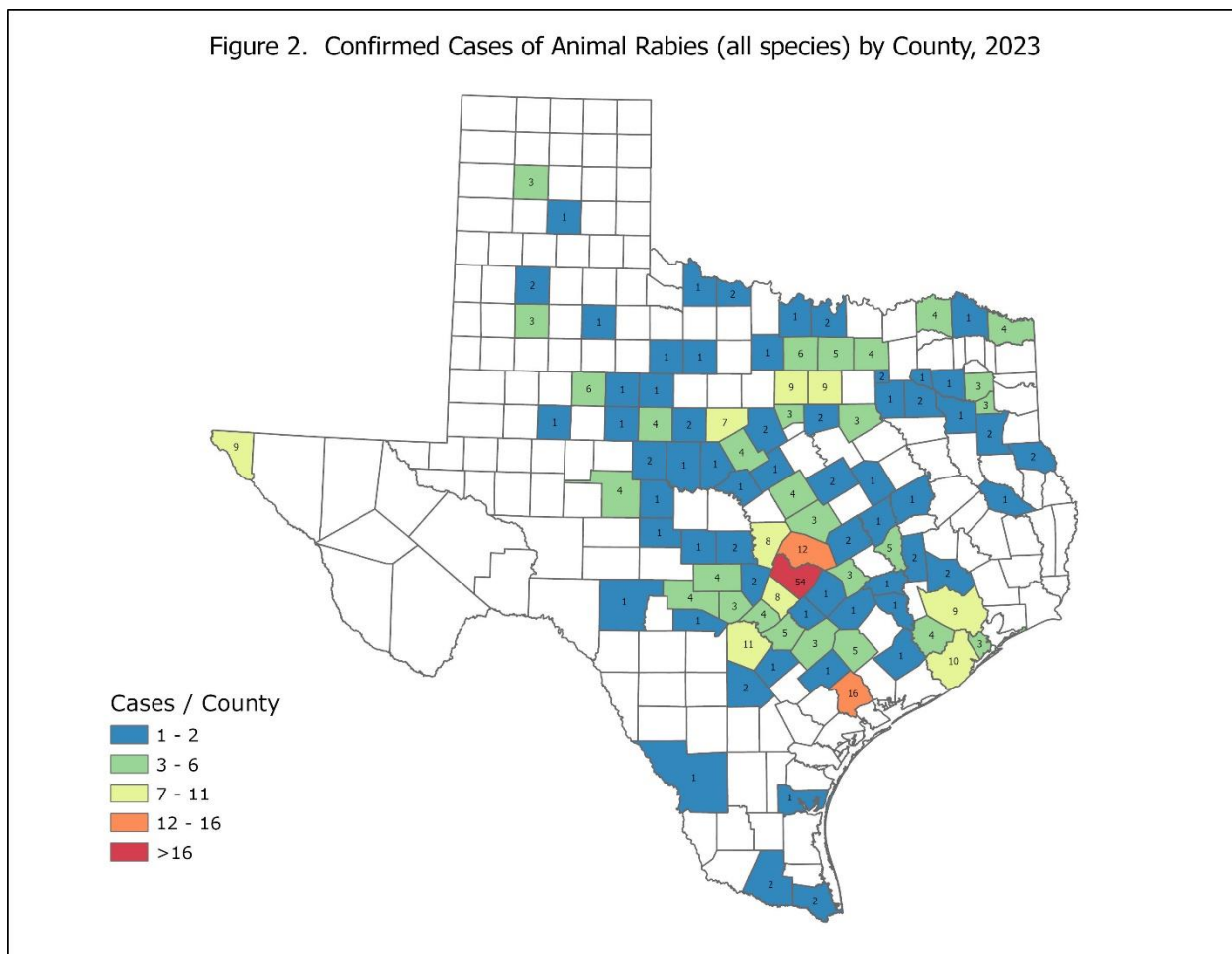
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## **Discussion**

During 2023, the highest monthly number of laboratory-confirmed rabies cases (51) occurred in May with skunks (24) being the predominant rabid species reported; March had the second highest number of cases (49) with skunks (26) being the predominant rabid species. For 2022, April had the highest number of reported cases (63, including 29 skunks), and May had the second highest number (60, including 24 skunks).

Cases of rabies in 2023 were confirmed in 99 of the 254 Texas counties as shown in Figure 2 compared with 104 counties with reported cases in 2022. Travis County had the highest number of reported rabies cases per county statewide with 54 cases (53 of which were bats) in 2023; Victoria County had the second highest number of cases with 16 (14 of which were skunks).

In 2022, Travis County also had the highest number of reported cases with 50 (49 of which were bats), and Williamson County had the second highest with 29 (16 of which were bats).



Rabies in wildlife accounted for 320 (91%) of the confirmed cases throughout Texas in 2023; in 2022, rabies in wildlife accounted for 345 (87%) of the confirmed cases (refer to Table 1).

**Table 1. Confirmed Cases of Rabies in Wild Animals: Texas 2022 and 2023**

	<b>2022</b>	<b>2023</b>
Bat	156	159
Bobcat	1	0
Fox	17	16
Raccoon	20	20
Skunk	151	125
<b>Total</b>	<b>345</b>	<b>320</b>

Bats were the primary source of positive cases reported in 2023 (45% of all positive cases). During 2023, 159 bats were confirmed positive for rabies compared with 156 (40% of all positive cases) in 2022. Of all bats tested for rabies, 10% were positive in 2023 and 10% were positive in 2022. Rabies in bats is enzootic (endemic in animals) in Texas; there are numerous bat variants of the rabies virus throughout the state.

During 2023, skunks had the second highest number of confirmed rabies cases with 125 (36% of all positive cases) compared with 151 (38% of all positive cases) in 2022. Of all skunks tested for rabies, 34% were positive in 2023 and 39% were positive in 2022. South-central skunk (SCS) remains an established variant of the rabies virus in Texas; there is notable spillover of this variant into other terrestrial species.

Rabid domestic animals continue to be a concern because they are more likely to have contact with humans than rabid wildlife. In 2023, there were 30 reported rabies cases in domestic animals (9% of all positive cases); of these rabies cases, 13 were cats and 4 were dogs. In 2022, there were 50 reported rabies cases in domestic animals (13% of all positive cases); of these rabies cases, 20 were cats and 17 were dogs (refer to Table 2). Rabies vaccination of dogs and cats is required by state law in Texas; vaccination is

also recommended for ferrets, wolf-dog hybrids, and livestock (vaccination is strongly advised for equines and other livestock that have frequent contact with people).

**Table 2. Confirmed Cases of Rabies in Domestic Animals:  
Texas 2022 and 2023**

	<b>2022</b>	<b>2023</b>
Bovine	9	9
Caprine	1	2
Cat	20	13
Dog	17	4
Equine	2	2
Rabbit	1	0
<b>Total</b>	<b>50</b>	<b>30</b>

### **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 2023. 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 2023. 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 Texas 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 Texas-Mexico border 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.

### **Conclusion**

Rabies in Texas is enzootic in wildlife with bats and skunks typically being the primary sources of positive cases. A yearly decrease in the number of reported cases, which can be caused by multiple variables, is not necessarily indicative that rabies cases are perpetually diminishing. Rabies is a disease of significant public health concern because it can be transmitted between animals and people. Education and awareness of the existence of rabies and how it is transmitted is paramount as it is nearly 100% fatal if administration of postexposure prophylaxis is not achieved in an urgent manner. State law requires vaccination against rabies for dogs and cats and recommends it for ferrets, wolf-dog hybrids, and livestock. The ORVP, which has coyotes and gray foxes as its target species, has successfully eliminated the DDC and TF rabies virus variants in Texas and continues to serve as a barrier for their reestablishment in the state.