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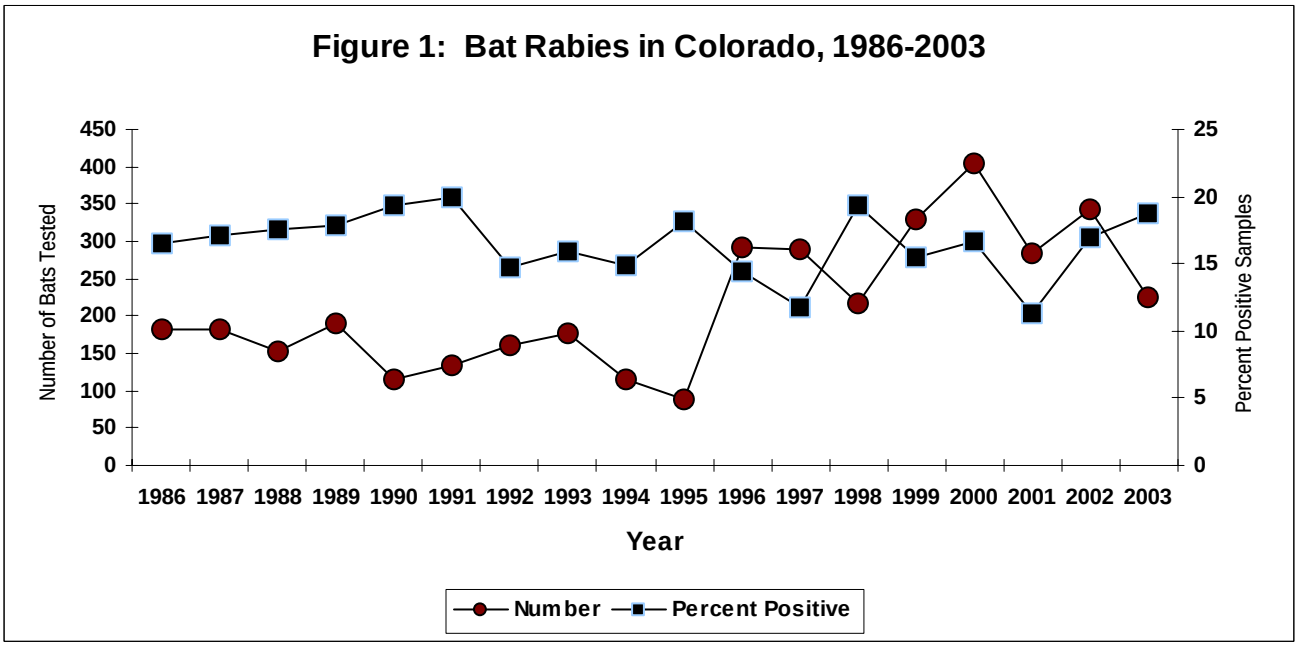
The epidemiology of rabies in Colorado during 2003 varied in many ways from past years. Although total specimen submissions remained constant (n=651), there was a large increase in testing of dogs (n=170), and a large decrease in testing of bats (n=225) (Tables I and II). Nearly twice as many dog samples were tested in 2003 compared to 2002.

This large increase in canine testing coincided with the first detection of a rabid dog in the state of Colorado since 1973. A Morgan County family reported that this puppy was the only surviving member of a litter that was attacked by a skunk in Amarillo, Texas on July 1st. The animal was well during a veterinary examination on July 18. On June 27th, the puppy developed left forelimb lameness, soreness, loose stools and a fever of 104.4. Despite veterinary care the animal's condition rapidly deteriorated and it died on July 31st. A total of 23 persons were identified that had potential exposure to the puppy in the two weeks prior to onset and initiated rabies post-exposure prophylaxis (PEP). Only one bite, to the teenage puppy owner, was reported. Twenty-two other family friends and veterinary hospital staff were started on PEP due to potential exposure to the puppy's saliva through licking, scratching, playing with the puppy and for contact during veterinary care. The Texas skunk was not submitted for testing. Monoclonal antibody testing determined the strain of rabies virus was the south-central skunk variant, which is prevalent in Texas skunk populations.

The number of bat submissions showed a marked decrease in 2003 compared to previous years, which may be a result of instituting a $50 charge for each rabies test. It is unclear if this trend will continue. As shown in Figure 1, the number of bat submissions showed a large increase in 1996 due to changes in the national rabies prevention recommendations for bats and an increased public awareness of the rabies risk from bats.



In spite of the number of specimens fluctuating from year to year, the percentage of positive bat samples, approximately 15%, has remained consistent. The lowest percentage of positive samples was in 2001 (11.3%), and the highest was in 1991 (20%). As the number of bats being submitted increases, the overall positive rate decreases due to dilution by low rabies risk bats being submitted. As submissions are limited to bats with possible human or pet exposures, the percentage of positives increases as this selects for a higher risk sample.

Rabies tests on bats, canines, and felines accounted for 547 (86%) of the rabies tests in 2003 (Table II). Felines showed an increase (n=152) as compared to 2002, and both skunks (n=22) and raccoons (n=36) showed a decrease.

The number of persons receiving post-exposure prophylaxis (PEP) increased slightly in 2003 (n=76) (Table III). In response to the rabid puppy, 23 people received PEP, which accounts for 30% of all treatments. Importantly, over 50% of PEP instances relating to bat exposure occurred when the bat was unavailable to be tested. In many of these cases, PEP could have been eliminated if the bat were caught and tested negative.

COLORADO DEPARTMENT OF HEALTH
DISEASE CONTROL AND ENVIRONMENTAL EPIDEMIOLGY DIVISION
RABIES REPORT, 2003

TABLE I - FLUORESCENT RABIES ANTIBODY (FRA) EXAMINATIONS

YEAR	EXAMS	CONFIRMED POSITIVE RABIES BY SPECIES					TOTAL POSITIVES	% POSITIVES
		Dogs	Cats	Skunks	Bats	Others		
2003	651	1	0	0	42	0	43	6.6
2002	657	0	0	0	58	1*	59	9.0
2001	646	0	0	0	32	0	32	5.0
2000	806	0	0	0	67	0	67	8.3
1999	722	0	0	0	51	0	51	7.1
5 YEAR TOTAL	3482	1	0	0	250	1*	252	7.2
Annual Average	**696**	**<1**	**0**	**0**	**50**	**<1**	**50**	**7.2**

* bobcat

TABLE II - EXAMS AND POSITIVE TESTS BY SPECIES

2003				**2002**			
SPECIES	EXAMS	POSITIVE	PERCENT POSITIVE	SPECIES	EXAMS	POSITIVE	PERCENT POSITIVE
Dogs	170	1	0.6	Dogs	90	0	0
Cats	152	0	0	Cats	111	0	0
Skunks	22	0	0	Skunks	32	0	0
Bats	225	42	18.8	Bats	343	58	16
Raccoons	36	0	0	Raccoons	65	0	0
Foxes	4	0	0	Foxes	5	0	0
Coyote	5	0	0	Coyote	2	0	0
Ferrets	4	0	0	Ferrets	1	0	0
Livestock	15	0	0	Livestock	6	0	0
Wolf-hybrid	1	0	0	Wolf-hybrid	0	0	0
Other domestic	2	0	0	Other domestic	0	0	0
Other wild	15	0	0	Other wild	2	1*	50.0
TOTAL	**651**	**43**	**6.6**	**TOTAL**	**657**	**59**	**9.0**

* bobcat

TABLE III - REPORTED POST-EXPOSURE RABIES PROPHYLAXIS BY EXPOSURE (N=76)

	DOG	CAT	BAT	FOX	RACCOON	WILD CARNIVORE	OTHER
FRA+	23	-	15	-	-	1	-
FRA-	-	-	4	-	-	-	-
NOT TESTED	3	-	21	2	4	2	1**
TOTAL	**26**	**-**	**40**	**2**	**4**	**3**	**1**

** Monkey in Kenya