

Colusa County Animal Bite Report for 2003/2004

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Objective

This report is a descriptive study of animal bites, particularly dog bites, in Colusa County conducted as part of a research project. The purpose of the study was to determine the extent of dog bites and identify problem areas and potential risk factors that could lead to development of intervention programs to reduce the occurrence of dog bites.

Introduction

Animal bites are a serious public health concern a source of significant injury and illness due to wounds and infection and the possible exposure to rabies. It is estimated that animals bite more than 5 million people in the United States each year. Dog bites account for nearly 90% and cat bites approximately 8% of the total animal bites. Bites from other small animals, like rodents, ferrets, and rabbits make up about 2%. Bites from snakes, lizards, and other exotic animals are rare. Approximately 800,000 people seek medical treatment in emergency departments for bites. The estimated number of bites actually reported are believed to be only about 10% of the total number of bite incidents that occur.

Dog bites are particularly of concern due to increased civil and criminal liability. Insurance costs were \$345 million dollars in 2002 for homeowner's liability claims for dog bites. Health costs are in excess of \$102 million dollars per year. Other costs include workmen's compensation, lost wages, and sick leave associated costs have not been determined.

Currently in the United States there are an estimated 65 million dogs in 39.0% of households. On average households have almost 2 dogs. There are an estimated 77 million cats in 34% of US households, with an average of 2 cats.

Dog bites are a highly preventable injury. Most of the dog bites occur as a result of some interaction with the dog, playing or breaking up a dogfight. The vast majority of bites are minor, requiring little to no medical attention. Dog behavior can be misunderstood. Aggressive behavior in dogs usually takes the form of dominance, particularly within the family, or possessive involving prized toys or treats. Dominance aggression is towards family members where the dog considers himself the alpha. The dog does not like to be reached for, being petted, pushed from a favored spot, or being disturbed while eating. Protective or territorial aggression occurs from perceived threats from strangers or if the owner is present, the dog perceives a threat to the owner.

Method

In Colusa County all bite reports are investigated by the county animal control officer under the jurisdiction of the Colusa County Sheriff's Department. During the 2-year period of 2003-2004, 154 bite incidents were reported to the animal control office. Of these in 2003, 2 were out of county and 1 of unknown location. In 2004 there were 2 out of county reports. These 5 were removed from the analysis, leaving 149 bite reports for the county. Table 1 lists the bite incidents for the county in 2003 and 2004 and the relative percent of the total reports.

Table 1: Reported bites to Colusa County for 2003 and 2004.

Species	2003 Number	% Total	2004 Number	% Total
Bat	6	7.5	10	14.5
Cat	13	16.3	9	13.0
Dog	57	71.3	46	66.7
Gopher	0	0	2	2.9
Mouse	2	2.5	0	0
Raccoon	1	1.3	0	0
Skunk	0	0	2	2.9
Snake	1	1.3	0	0
Total	80	100	69	100

For the 2 year period, dog bites make up the 69.1% (n=103) of reported bites to the county. Cat bites for the reporting period made up 14.7% (n=22) of the bites, with bats third at 10.7% (n=16). The balance of the bites (5.5%) were from rodents, skunks, gophers, and snakes.

Geographic Location of Bites

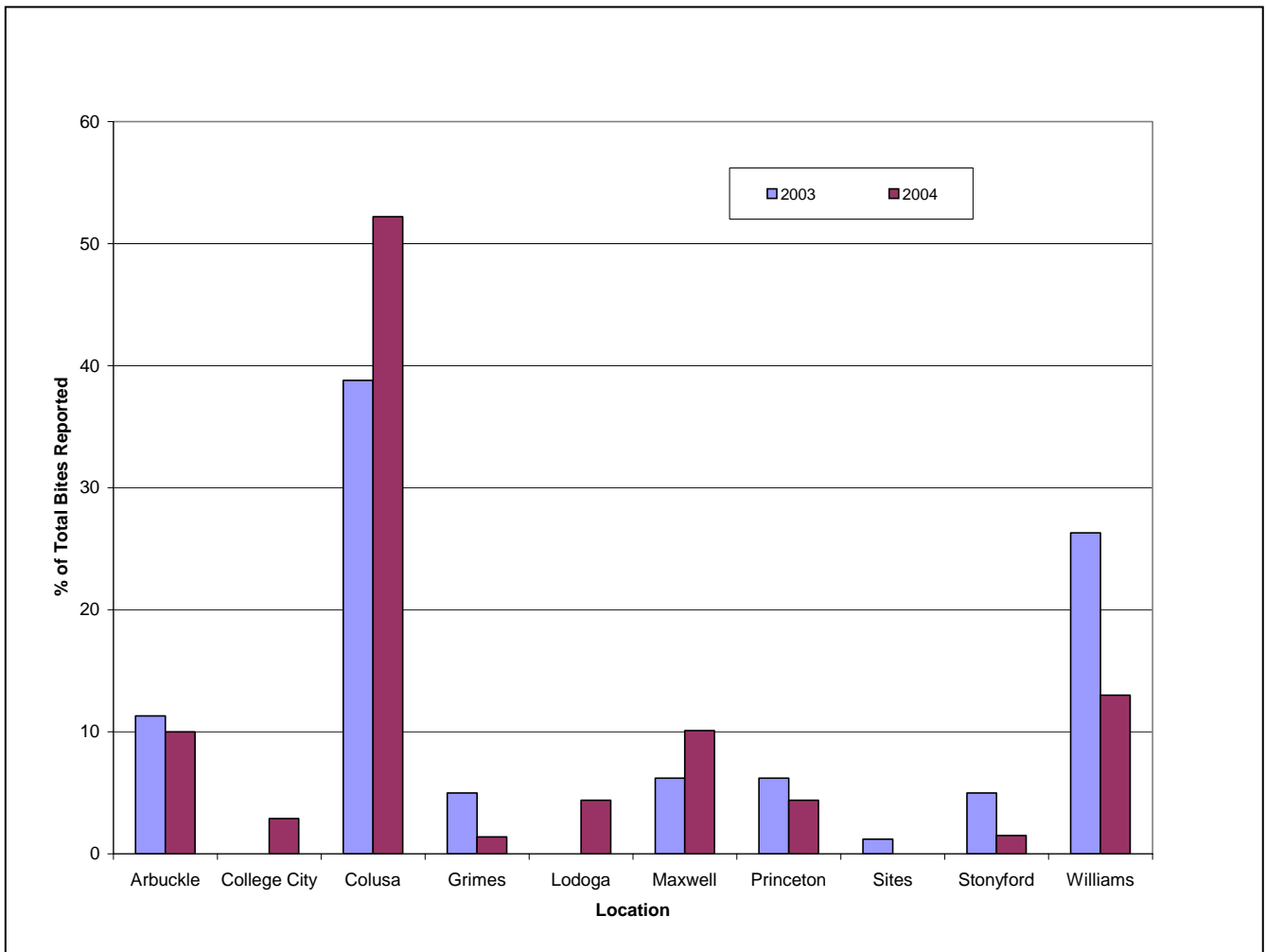
Colusa County has an estimated population of 19,678 (2003 estimate, US Census). The 2 largest towns are Colusa with 28.8% (n=5662) of the county population and Williams with 19.9% (n=3925). Table 2 lists the towns where bites were reported for the 2-year period and figure 1 shows the frequency of bites per town.

The city of Colusa which has about 1/3 of the county population, had 38.8% of the bite reports in 2003. This number increased in 2004 to 52.2% of the bite reports. For Williams, with 20% of the county population, 2003 had 26.3% of the bites, which decreased by half to 13.0% in 2004. In 2003 the animal control officer spent a great deal of patrol time in Williams, with an effort to enforce the leash laws in the town. The drop in bites for 2004 may be a reflection of fewer dogs running at large in the Williams area.

Table 2: Location by town of reported bites in Colusa County

Location	2003	%Total	2004	%Total
Arbuckle	9	11.3	7	10.1
College City	0	0	2	2.9
Colusa	31	38.8	36	52.2
Grimes	4	5.0	1	1.4
Lodoga	0	0	3	4.3
Maxwell	5	6.3	7	10.1
Princeton	5	6.3	3	1.4
Sites	1	1.3	0	0
Stonyford	4	5.0	1	1.4
Williams	21	26.3	9	13.0
Total	80	100	69	100

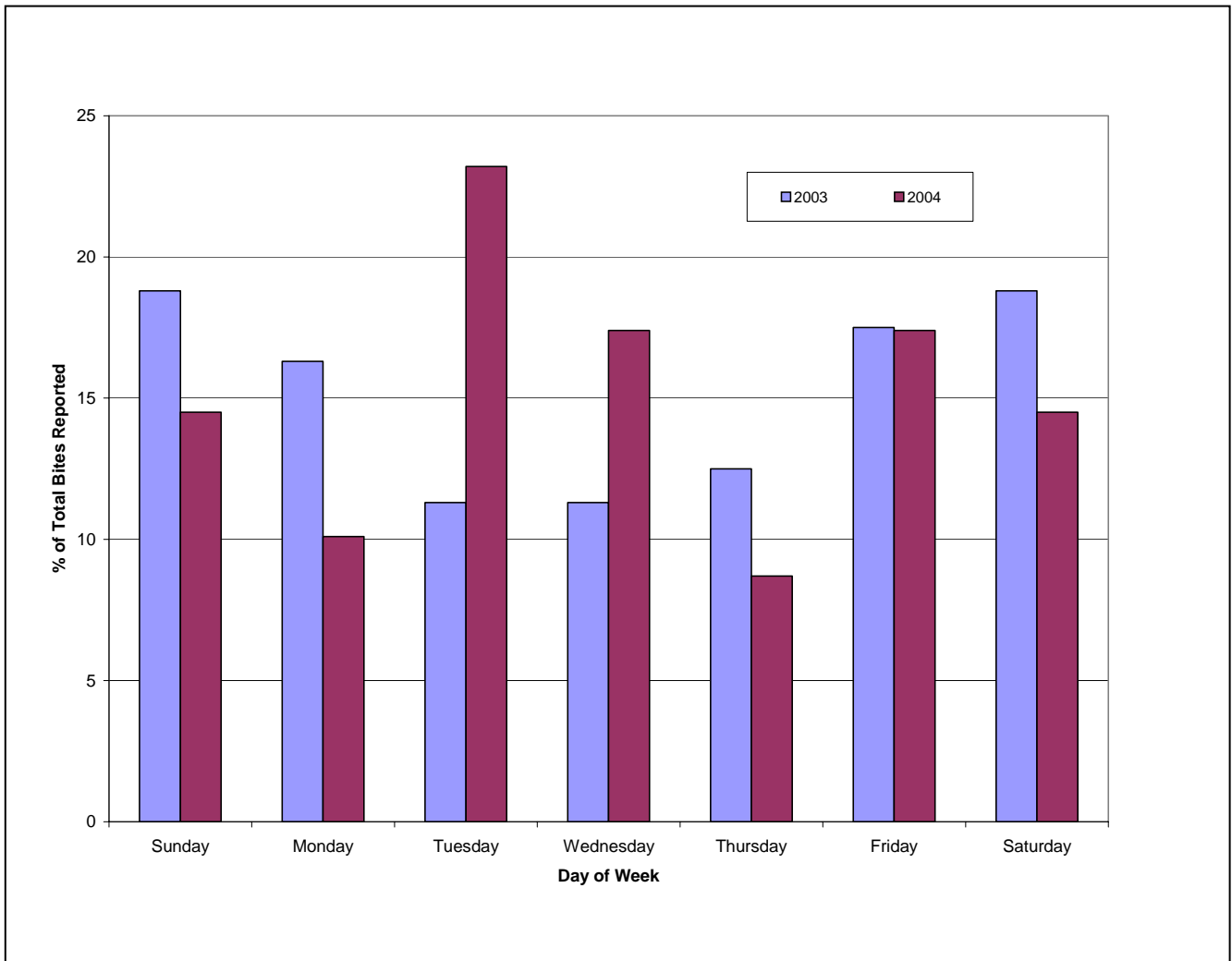
Figure 1: Location of reported bites by town in Colusa County for 2003 and 2004.



Day of Week of Bite Occurrence

Figure 2 shows the frequency of bites for each day of the week for the 2 year period. Bites happen at any time during the week. While in 2003, a trend is seen where most of the bites occur toward the weekend, Friday, Saturday, and Sunday, the same is not observed for 2004. It is not clear why the increase in bite reports for the middle of the week seen in 2004.

Figure 2: Frequency of bites reported to the county during 2003 and 2004 by day of week.



Victim Gender

Figure 3 shows the frequency of the victim's gender in the animal bite reports for the 2 year period. Figure 4 shows the frequency of the victim's gender based on bites from cat or dogs only for the same period. The gender of the victim in the bite reports overall for the 2 years were almost equally distributed 50/50 females/males. The difference is observed when looking at victims of cat or dog bites. For the 2 year period, females were victims in nearly 2/3 (66.7%) of the cat bite reports, while males were victims to the same degree (60%) of the dog bite reports.

Figure 3: The victim gender of reported bites in 2003/2004 in Colusa County.

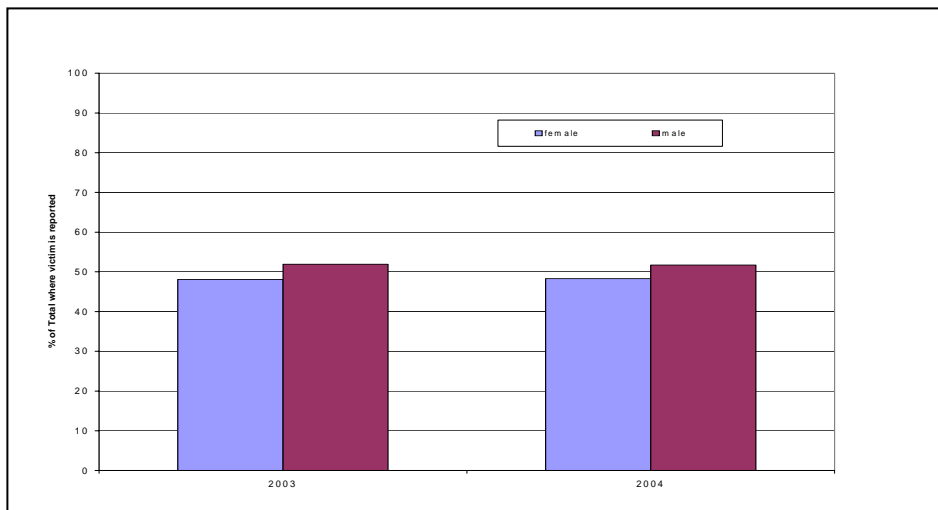
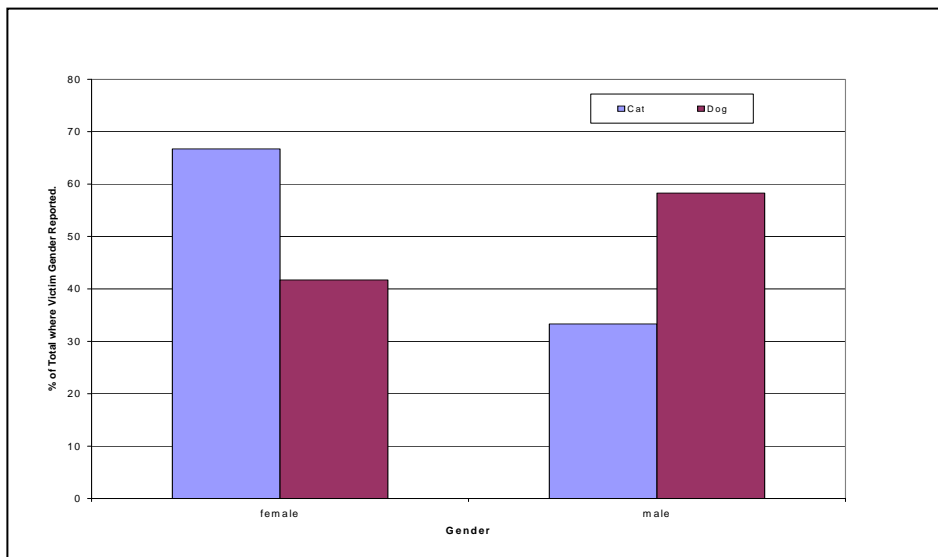


Figure 4: The victim gender of reported cat and dog bites in 2003/2004 for Colusa County.



Colusa County Dog Bites for 2003/2004

There were a total of 103 dog bites in the county for the 2-year period. Figure 5 shows the distribution of the total dog bites through out the county by the town. Colusa has the most with 45.6% of the reported bites, followed by Williams at 22.3%. Figure 6 shows the frequency of the days of the week for the reported dogs bites. Since this is the total number, no specific trend seems to be present.

Figure 5: Frequency of total dog bites in Colusa County for 2003/2004 by town.

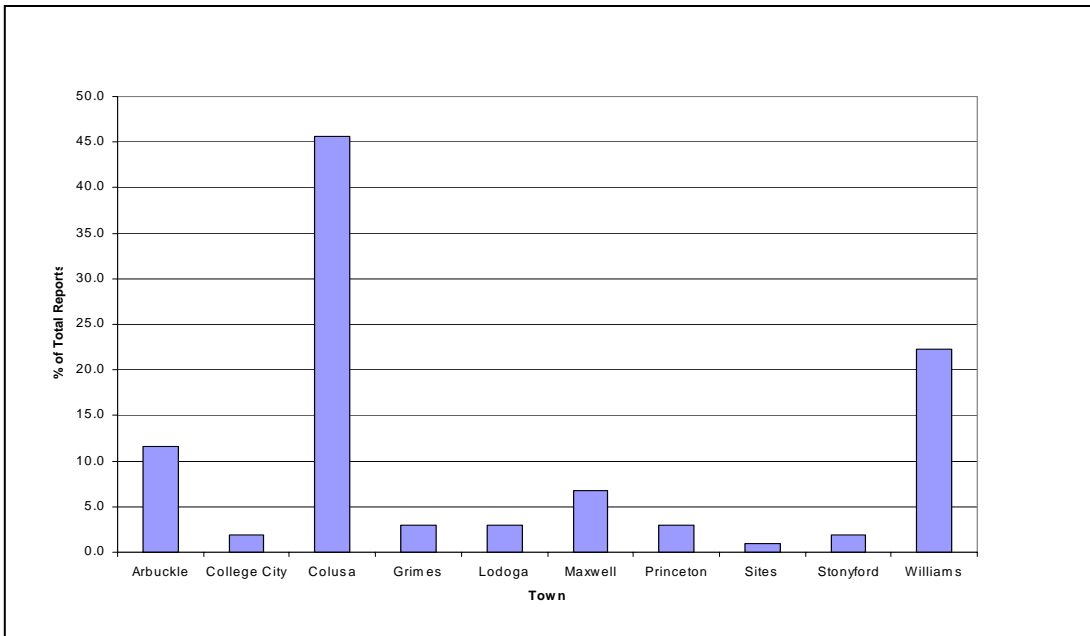
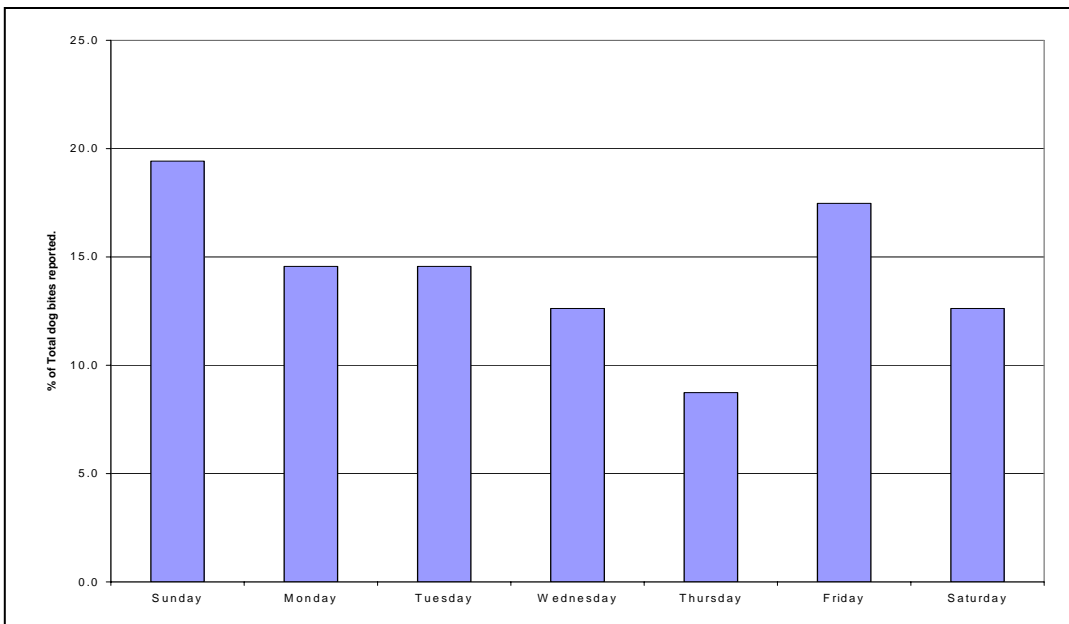


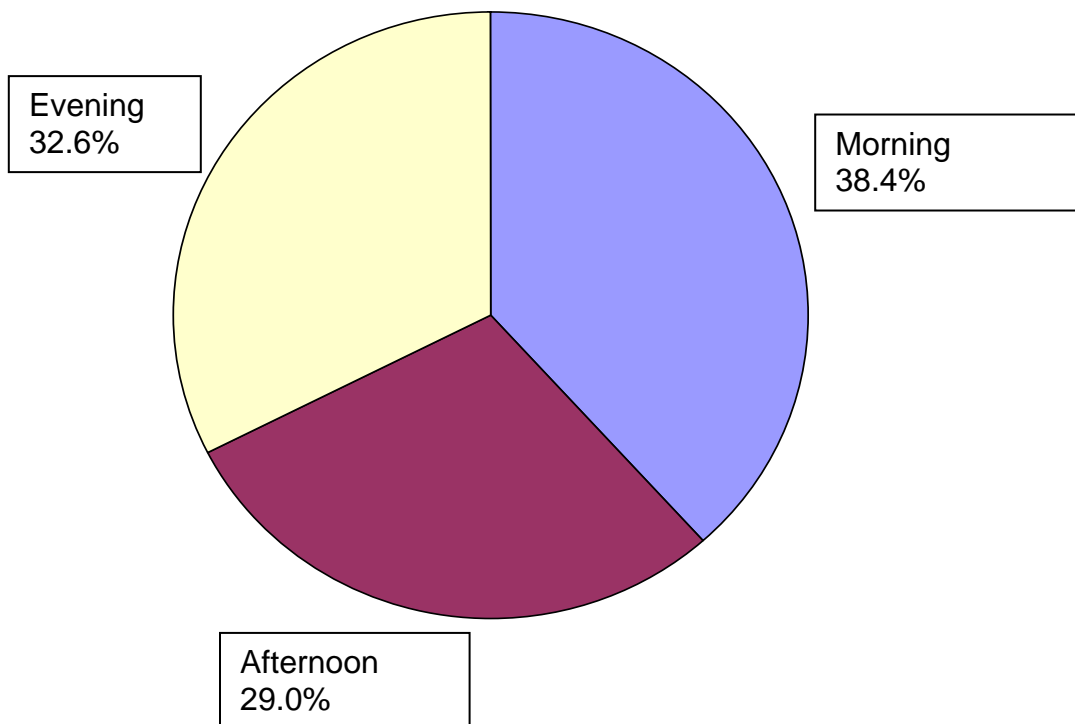
Figure 6: Frequency of dog bites during the week in the county for 2003/2004.



Time of Day

The time of day when the bite occurs is evenly distributed, with slightly more reported in the morning time. The time of day was identified in 86 of the reports and defined as:

Time of day	Number of reports	% of Total
Morning 12:01 AM to 12:00	33	38.4
Afternoon 12:01 PM to 17:00 PM	25	29.0
Evening 17:01 PM to 24:00 PM	28	32.6

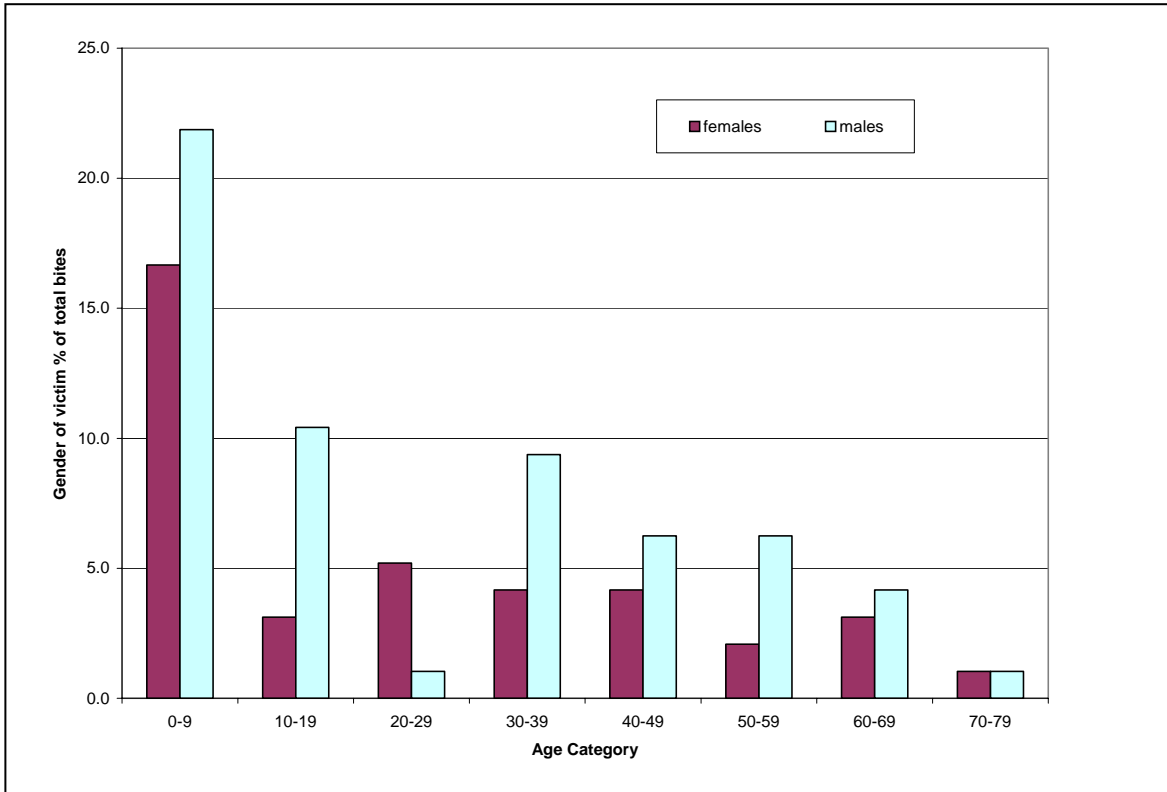


Victims Characteristics

The victim gender in the 103 dog bites reported to the county was a male in 60 (58.3%) the incidents. (Figure 4). Females were implicated in 43 (41.7%) of the dog bites.

The age of the victim was identified in 96 of the reports. Dog bites occurred in all age groups, with the most frequent (38.6%) in children 9 years and younger. Males were the most frequently reported victims in all age categories except 20-29 year olds where more females were reported. The incidence of dog bites generally decreased with increasing age.

Figure 7: Age category and gender of dog bite victim in Colusa County for 2003/2004.



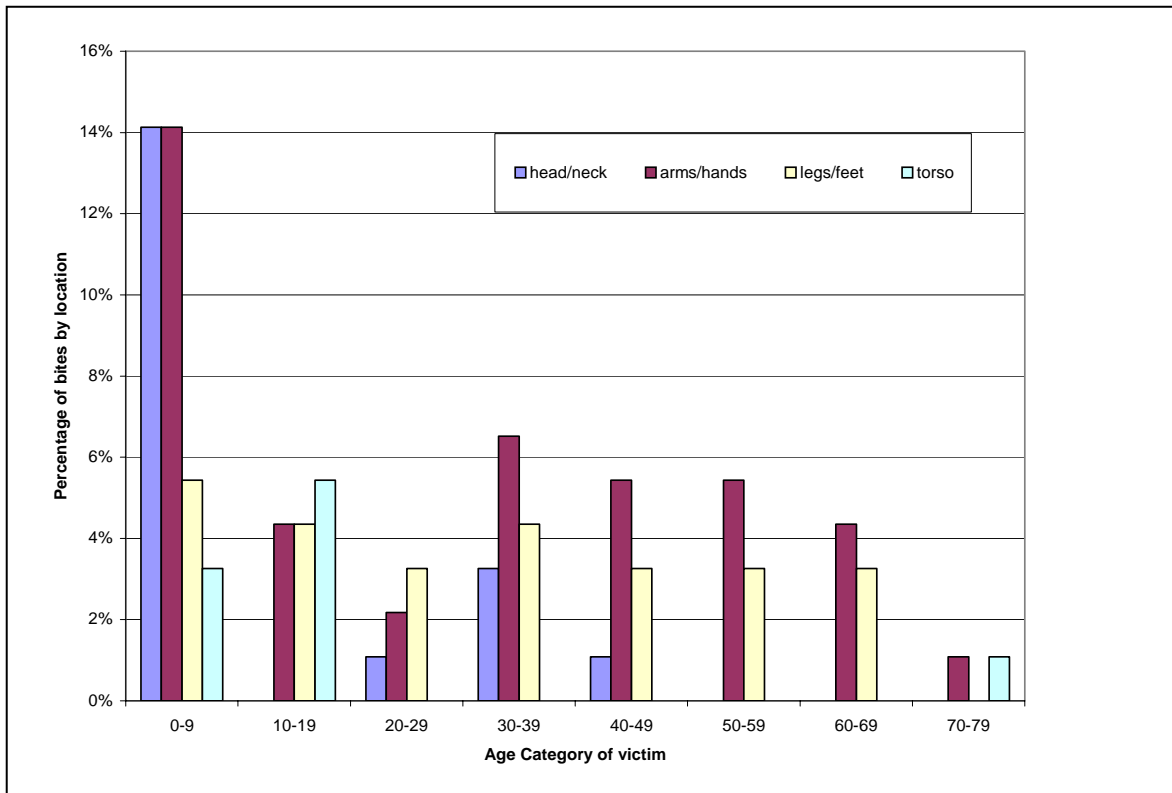
Anatomical Location of Bite

Of the 103 dog cases, the anatomical location of the bite was given in 98. Of these 72.5% of the bites were on the extremities (arms/legs), 18.4% were on the head/neck area, and 9.2% were on the torso.

Anatomy of bite	Frequency	% of reported
Head/Neck	18	18.4
Arms/Hands	43	43.9
Legs/Feet	28	28.6
Torso	9	9.2
Total	98	100

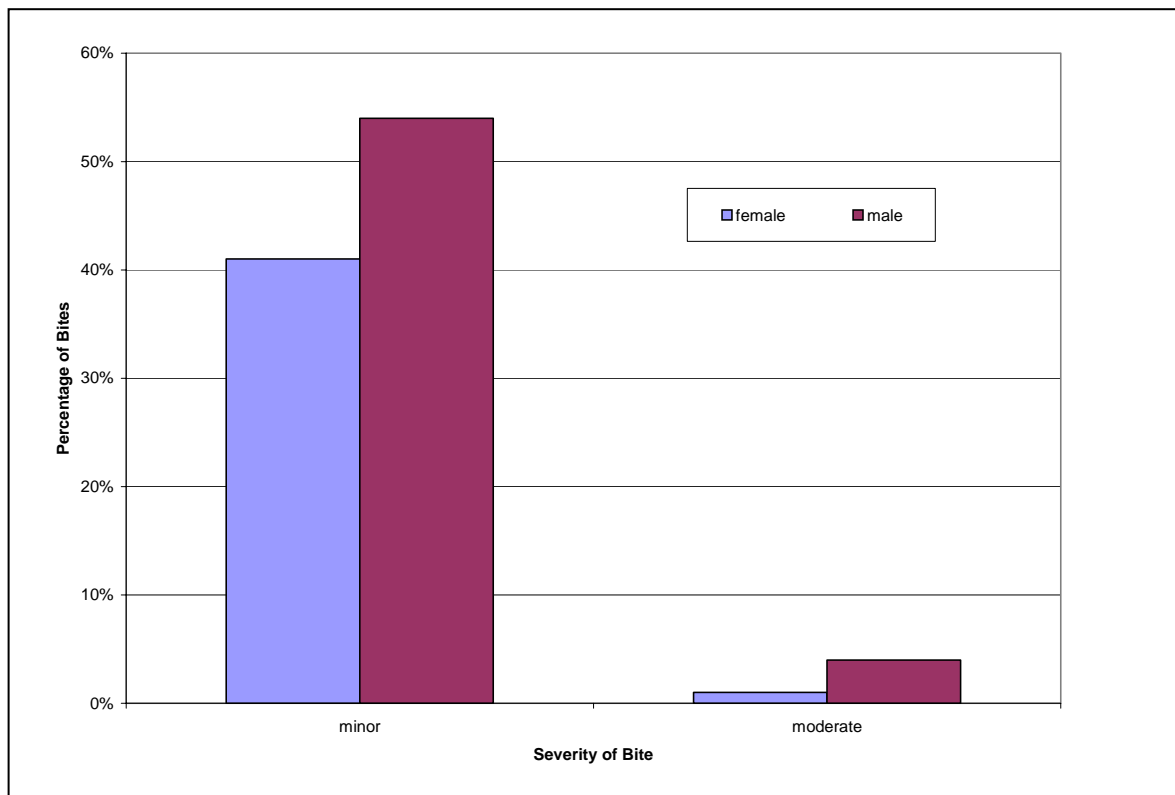
The age category of the victim and the location of the bite were given in 92 of the cases. Children under 9 years old are more likely to be bitten in the face/neck area (14.1%) and the arms/hands (14.1%). This would be expected because children interact with a dog usually by sitting by the dog or kneeling, attempting to pet the dog's head/face or give the dog "kisses" on the muzzle. In addition, children often will have food in their hands, and may attempt to give some to the dog.

Figure 8: Age category and anatomical location of a dog bite.



Severity of Bite

The severity of the bite was reported in 100 of the 103 cases. Of the reported cases, 95% of the bites were minor or untreated. And 5% were considered moderate. Moderate bites are described as having 4 or more punctures. Severe bites are ones that have muscle tears, disfiguring lacerations or requires sutures. The victim gender and severity showed that males reported minor bites in 54 cases and females in 41. Moderate bites were seen more in males (4) compared to females (1).



Dog Factors

Dog specific factors examined were the breed, age of the dog, gender, reproductive status, current rabies, and current county license.

Breed

Of the 103 dog bites reported, mixed breed dogs were identified in 41 (39.8%) of the cases. Of the purebred dogs, 25 different breeds were identified.

Breed	Frequency of Bites (% of Total)
Mixed breeds and unidentified dogs	41 (39.8)
Labrador Retriever	13 (12.7)
Bull Breed	8 (7.8)
Chihuahua	5 (4.9)
Rottweiler	4 (3.9)
Border Collie	3 (2.9)
Fox Terrier	2 (1.9)
Golden Retriever	2 (1.9)
Great Dane	2 (1.9)
German Shepherd	2 (1.9)
German Shorthaired Pointer	2 (1.9)
Jack Russell Terrier	2 (1.9)
All Other Breeds (14 breeds)	17 (16.6) (1 each)
Total	103 (100)

Dog Age

The dog's age was reported in 73 of the 103 reported cases. Dogs of any age can bite, the oldest was 18 years, but the average age of the biting dog was 5.3 years. Most of the bites are from young dogs, 49% of the bites were from dogs 2 years of age and younger.

Dogs Age in Years	Frequency	% of Total
Less than 1	6	8
1	11	15
2	19	26
3	6	8
4	3	4
5	8	11
6	3	4
7	4	5
8	2	3
9	0	0
10	5	7
Greater than 10	6	8
Total	73	100

Dog Gender

In 90 of the bite reports, the dog's gender is given, with males comprising 61 (67.8%) of the cases. The neuter status of the dog was not identified in 55 (61.1%) of the cases. Only 17 (18.9%) of the dogs were indicated to have been spayed or neutered. This maybe a result of not recording the neuter status, or more likely the dog was intact.

	Spay/ Neuter Status			Total
	No (%)	Yes (%)	Unknown (%)	
Female	8 (8.9%)	9 (10.0%)	12 (13.3%)	29 (32.2%)
Male	10 (11.1%)	8 (8.9%)	43 (47.8%)	61 (67.8%)
Total	18 (20.0%)	17 (18.9%)	55 (61.1%)	90 (100%)

Rabies Vaccination

Of the 103 cases, 54 (52.4%) reported that the dog had a current rabies vaccination. The information was not known in 25 (24.3%) of the cases.

Rabies Vaccination	Frequency (% of Total)
Yes	54 (52.4%)
No	24 (23.3%)
Unknown	25 (24.3%)
Total	103 (100%)

County License

Only 19 (18.4%) of the reported dogs were identified as having a current county license. Most of the dogs (46.6%) were not indicated as having a license.

County License	Frequency (% of Total)
Yes	19 (18.4%)
No	36 (35.0%)
Unknown	48 (46.6%)
Total	103 (100.0%)

Events Leading To Bite

In 100 of the cases, comments indicated the events that lead to the bite. Nearly half of the events were due to dogs running at large, a child's interaction with the dog, or petting the dog. The following table lists the most frequently reported reasons for a dog bite. The most frequently reported incident due to a dog running at large comprises 22% of the cases. A child's interaction with the dog included laying on the dog, running from a dog, petting a dog, disturbing a sleeping dog, or taking food from a dog, in 13% of the cases. Older children or adults received 13% of the bites from playing with the dog or attempting to pet or pick up a dog. Walking, jogging, or riding a bike was noted in 10% of the cases. Dogs will chase after moving objects, typical of the prey drive.

<u>Event</u>	<u>Frequency %</u>
Dog at large	22
Child interaction with the dog:	13
Playing with the dog	13
Walking/jogging/riding a bike	10
Neighbor's dog/visiting friends	9
Breaking up dog fight	7
Trying to help an injured or sick dog	4
Work occurring on the dog's premises	3

Recommendations

The reported cases of bites in Colusa County are consistent with the known information on bites. Children are highly represented, with males being more often bitten than females. A large number of different breeds are implicated in bites, with most of the bites being minor or requiring no treatment. Yet the reported cases probably represent about 10% of the actual bites that occur. For a county the size of Colusa, about 400 dog bites are expected annually. The reporting of a bite depends a lot on the perception of the seriousness of a bite. And parents are more likely to seek medical treatment for a bite to a child regardless of the severity.

The city of Colusa has the highest number of bites for the county. It is recommended that the city pay for the services of an additional animal control officer for the county. It should be noted that there was a 50% drop in bite reports for Williams. This corresponds to the time that the county animal control officer was paid by the city to patrol the area to issue citations to enforce the leash laws. Clearly enforcement of leash laws go a long way to reduce the incidence of dog bites.

Additional attention needs to be made in the county to encourage spay/neutering. Programs are needed to increase awareness of the importance of veterinary medical care and basic animal behavior. Such programs will not only benefit the animals, but also increase public health and safety by reducing the incidences of dog bites and risks of rabies, bordetella, distemper, and other diseases.

Update for 2007:

In August of 2005, a second animal control officer was added to the Sheriff's Department, specifically to patrol the city of Colusa. The following is an update of bite reports for 2006.

Colusa County Bite Reports Summary for 2006

Colusa County for 2006 investigated 70 animal bite reports. Three of these occurred out of the county, with 1 each from Lake, Glenn, and Sutter Counties. All three of these incidents were dog bites. The following table lists the bite reports by species.

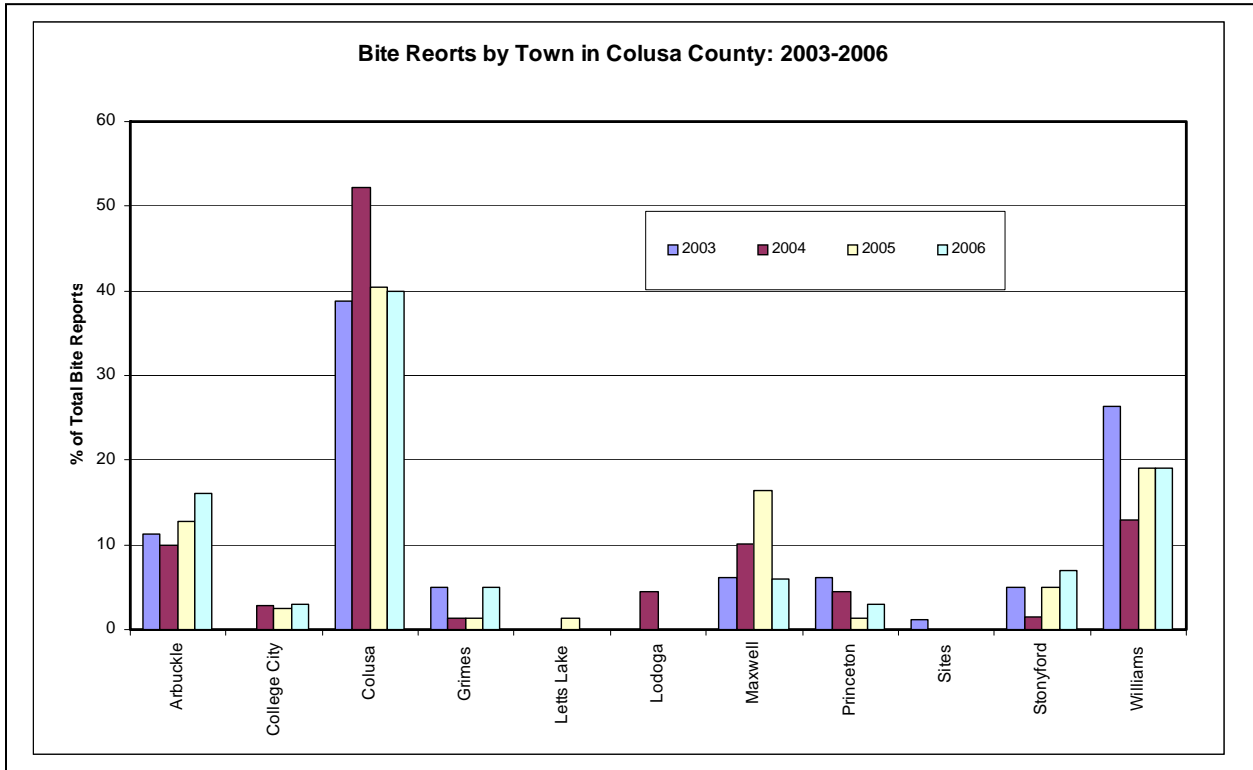
2006 Bite reports:

Animal	Total Reports	Percent of Total
Bat	7	10
Cat	16	23
Dog	45	65
Horse	1	1
Skunk	1	1
Total	70	100

The total number of dog bites for the county is 42, after accounting for the 3 out of county reports. The percent distribution of dog and cat bites is similar to past years, with dog bites averaging about 48 bites, and cats about 15. The dog bites are still down from the 57 seen in 2003. The number of cat bites seems to be fairly consistent. The bat reports are all possible rabies exposures.

Towns:

The bite reports by town in the county follows similar pattern as previous, the larger communities of Colusa and Williams seeing the larger number of reports.



Towns for 2006:

The breakdown of reports by town in county for 2006 is as follows, for a total of 67:

Town	Number Reports
Arbuckle	11
College City	2
Colusa	27
Grimes	3
Maxwell	4
Princeton	2
Stonyford	5
Williams	13

Victim:

The distribution of victims bites from cats and dogs are similar to past reports, slightly more males are implicated in dog bites than females. This year slightly more males were noted in cat bites than in previous.

Victim Gender	Cat	Dog
Female	7	19
Male	9	23
Total	16	42

Breed of dog:

There were approximately 18 different breeds and their mixes identified in the reports.

Breed and their mixes	Number reports
Chihuahua	5
Labrador	5
Pit Bull	5
Border Collie	3
Terrier mixes	3
Unidentified mixes	3
Australian Shepherd	2
Beagle	2
Fox terrier	2
German Shorthaired	2
Husky	2
(Boxer, Corgi, Jack Russell, McNab, Poodle, Rottweiler mix, Retriever mix, Springer Spaniel)	1 (each)

Comments:

The majority of dog bites come as a result of some interaction with the dog and usually occurs in and around the home territory of the dog. Some of the more common incidents are:

Victim is at the dog's house, this can include a family dog, a visitor coming on to the property, a person delivering something to the residence, or person doing maintenance work on the property. In many cases this is the dog responding as protection of territory. Of note, is if there is an argument between individuals and the dog's owner or just in the dog's property area, the dog may bite, possibly perceiving the behavior as a potential threat.

Breaking up dog fights is another one of the major causes of injuries. People try to break up a fight, and usually get caught in the middle with misdirected aggression by the dog. This can happen with any breed, any size.

Riding bikes or walking by the area of the dog's property is another common cause of a bite. The dog's prey drive is aroused by the moving objects, with the potential of a bite. This also occurs of course when the dog is not properly contained, and the dog is allowed to run at large or accidentally gets out of his enclosed yard area.

A child playing or interacting with a dog may accidentally cause a bite. Children all too often display behaviors that are not conducive to safety. A child runs up to a dog and tries to give it a "hug". A child may be playing with the dog's toys, or near where the dog is eating. Sometimes a child will accidentally fall on a dog that may be sleeping, particularly smaller children. This is why it is essential that parents understand the importance of supervising the child around the family dog.

Dogs running at large are another potential source of bites. The dog extends "his territory" and may respond to what he perceives as trespassers. This is the case if a person is walking their dog on lead and a dog that is at large approaches. The dog at large may view the situation as a threat, particularly towards the leashed dog, hence a dog fight and a bite.

Cat bites appear to be predominantly a result of trying to catch a cat/kitten, particularly a feral or stray one. Handling the family cat that becomes frightened by a dog is another source of injury