



Moose Fatalities on Tudor Road

How Does Weather, time of day, and road conditions, impact of car accidents involving moose?
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Introduction

We wanted to research moose because they are a common Anchorage animal and because they are often hit by cars in the municipality, we also wanted to know more about them because we see them all the time. Our study area is along Tudor Road where a lot of vegetation grows in the highway right of way. On Tudor Road (from Minnesota to Elmore) there is housing and businesses on both sides. On the east side of Elmore (on the north side of the street) there is park land, and on the south side of the street there is business. In addition ADOT figures show that an average of 50,000 vehicles travel Tudor Road each day. Other studies by the state department of transportation have been done and they were kind enough to give us some of their information. Moose are most active in the late afternoon and early in the morning. According to the Alaska State Troopers' Bureau 90 moose were killed in Anchorage by vehicles from July through December 2006. (Sinnott, et al ADF&G; Wednesday, January 17, 2007).



Fig. 1. This map shows the location of the moose vehicle collisions along Tudor Road. Each circle represents one collision that was reported between 2001-2005.

Materials and methods

We used a GPS to mark waypoints on the road and on the side of the road. We would mark some deep footprints from moose, moose scat and small willow trees that had been chewed on by a moose. We also used a pencil, and notebook to write notes about vegetation. We used computers, and a camera to take pictures and download the pictures and GPS markings on the computer and of course to type the project. We used ARC GIS to make the maps that we use for the project. A member of the team took moose kill data from 2001 through 2005 from the Alaska Department of Transportation and marked waypoints on the road.



Fig. 2 This photo shows where a moose was laying. It was laying up on a hill next to Tudor road. Near Baxter intersection. Photo taken by Team members in October 2007

Data

The Alaska Department of Transportation keeps records of moose vehicle collisions that are reported on state maintained roads around the state. Tom Scott who provided us with our data pointed out that there may be additional collisions that aren't reported. Some reasons for this include that the moose isn't immediately killed or drivers fail to report the incidents. The table below shows the reported accidents along Tudor Road in Anchorage from 2001-2005.

This table shows the moose accidents from 2001-2005.

ACCIDENT	TIME	ROUTE	MP	MPF	LIGHT	RD SUR
20010209	28	117790	0.822		1 DARK - ROADWAY c	
20011303	1748	117790	1.263		2 DARK - ROADWAY SNOW	
20011213	1628	117790	1.698		3 DARK - ROADWAY SNOW	
20020810	939	117790	1.316		4 DAYLIGHT DRY	
20020831	2218	117790	0.966		5 DARK - ROADWAY DRY	
20030306	2111	117790	2.351		6 DARK - ROADWAY DRY	
20030515	2148	117790	1.568		7 DAYLIGHT DRY	
20031018	740	117790	2.657		DARK - ROADWAY DRY	
20031126	1810	117790	1.42		1 DARK - LIGHTED ICE	
20040112	1810	117790	0.891		2 DARK - ROADWAY ICE	
20040121	9090	117790	1.566		3 DARK - ROADWAY ICE	
20040428	1620	117790	1.525		4 DAYLIGHT DRY	
20041212	448	117790	0.993		5 DARK - ROADWAY SNOW	
20050101	25	117790	1.072		6 DARK - ROADWAY ICE	
20050119	1645	117790	1.472		7 DARK - ROADWAY ICE	
20050219	2005	117790	1.036		8 DARK - ROADWAY ICE	
20050430	67	117790	1.525		9 TWILIGHT DRY	
20050524	2143	117790	3.113		DARK - ROADWAY DRY	
20051214	1801	117790	3.123		DARK - ROADWAY ICE	
					LIGHT	RD SUR

Table 1 The table shows the reported moose vehicle collisions from 2001-2005 as reported by the Alaska Department of Transportation. The dates are shown as year/month/date. The times are using a 24 hour clock with the exception of the January 21, 2001 which had no time reported (9999).

Results

Moose are large mammals that are common in the Anchorage area. In 1994 there were estimated to be 2,100 moose in the Anchorage area and as many as 1000 spending the winter in the Anchorage Bowl. Between 1994-1999 an average of 156 moose were killed in vehicle collisions in the entire Anchorage area. Moose are hit over 50%(10/19) of the time in the dark months in the winter (December, January, and February), when the roads are the most icy. Also more than 50% (10/19) of the accidents occurred when the road conditions were icy or snowy.

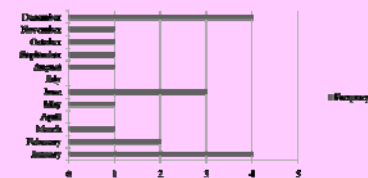


Figure 3 Bull moose walking up Campbell Airstrip Road. The road were very icy and the moose slipped several times

Discussion

Based on the review of the moose/car collision data, moose are mostly hit during the months that are dark. They were hit late at night and early in the morning. Most of the collisions along the Tudor Road corridor took place when the roads were icy which may also be a contributing factor.



Fig. 4 Moose crossing Tudor Road in the daylight. The moose ignored the traffic and crossed the intersection safely. (Note the antlers are broken off on the left side.)

Fig. 5. Tudor Road is a five lane, high use, east-west corridor in Anchorage. On the east end of the road the south side is parkland and the north side is residential.



Conclusions

As long as moose are present in the Anchorage area collisions between moose and motorized vehicles will happen. Based on what we learned we think that there are some things that can be done to make moose/vehicle less likely to happen. One is that people should try to slow down during the dark winter months. This would give them a better chance of stopping before hitting the moose. They should also make sure that their headlights are working and make sure that they can see where they are going and what you are doing. Since moose are going to travel where it is the easiest to get around people need to be more careful when they are traveling in Anchorage.

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For further information

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