

HUMAN-COYOTE INCIDENT REPORT

CHICAGO, IL

April 2014

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Date: July 22, 2014



EXECUTIVE SUMMARY

- ✓ Numerous incidents involving a coyote attacking dogs on leash were reported between April 7 and April 15, 2014.
- ✓ Each incident occurred in the same location, in early evening, and involved a single, radio-collared coyote.
- ✓ In each case, the coyote was focused on the dog, usually making contact with the dog but not resulting in any injuries.
- ✓ The coyote implicated in the incidents was coyote 748, an adult male previously captured and radio-collared as part of a larger monitoring program, and likely was paired with a breeding female in the area.
- ✓ Because the incidents were restricted to a single coyote and a specific site, and the coyote had not exhibited aggressive tendencies prior to the litter-rearing season, hazing was initiated in an attempt to change his behavior or cause him to relocate the litter to a less public location.
- ✓ Coyote 748 was hazed repeatedly on the nights of April 15, 16, and 17. Noisemakers, chasing on foot, and in a single case, a paintball gun were used.
- ✓ Coyote 748 apparently relocated the litter to a more remote location and greatly reduced his use of the area of conflict. There were no further reports of attacks on dogs, as of July 15.
- ✓ A litter of pups was confirmed on May 14, which was likely the cause of 748's aggressive behavior toward dogs.
- ✓ Hazing had little effect on coyote 748's home range location and his movements within the home range, only causing him to reduce the use of the area near the incidents.
- ✓ Coyote 748 continued to use his home range without incident until an apparent collision with a car on or around June 16, approximately two months after the hazing exercise.

INTRODUCTION

Late in the evening of April 9, 2014, a report was received via email from a Chicago resident of an incident that occurred a few hours earlier regarding a radio-collared coyote. The resident was walking his dog on leash when a coyote attacked the dog. Following this report, additional incidents occurred over the next week, all involving a radio-collared coyote showing aggression towards dogs in the same general area.

This report provides background information on the coyote involved in the incidents, details of the incidents, the coyote behavior at that site, management action to mitigate the conflict, the effectiveness of that action, and the final disposition of the coyote. In addition, we provide a summary and interpretation of the incident as it relates to coyote management and public safety. The primary goal is to provide clarity as to the details of the incident, the response of agency personnel, and justification for that response.

The Max McGraw Wildlife Foundation and Cook County Animal and Rabies Control have had a long-standing relationship regarding monitoring of coyotes for diseases and other issues related to public and pet health. The following report presents the actions and timelines of the activities of Max McGraw Wildlife Foundation coyote research project personnel and associated participants as they relate to these specific coyote incidents in Chicago during April 2014.

Hazing was employed as a management response in this case. Given the paucity of information on the effectiveness of hazing to alter coyote behavior and mitigate conflict, we believe information from this incident can serve as an important case study for future management decisions.

BACKGROUND

The coyote implicated in the domestic dog aggression incidents was originally captured by project personnel on February 24, 2014. This trapping effort was part of a large, long-term monitoring program. The coyote was an adult male, identification number 748 (Fig. 1), with worn teeth (indicating older individual) and was in breeding

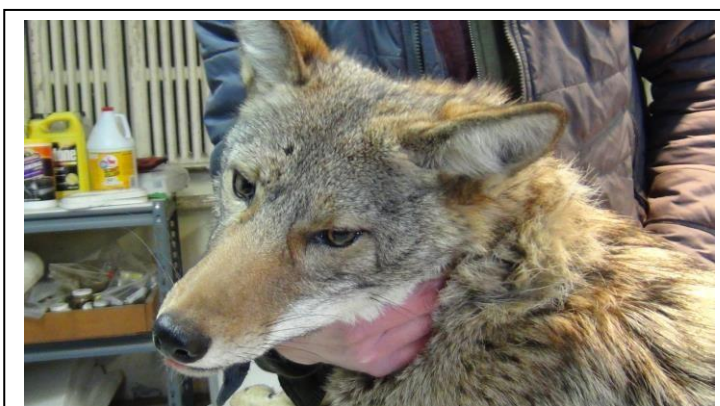


Figure 1. Coyote 748, an adult male

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condition. His weight was 13.3 kg (29.3 lbs) and he was in excellent health. Blood and fecal samples were collected, and he was fitted with a GPS radio-collar. He was released at the capture site later that evening and tracked via satellites to record movements and survival information.

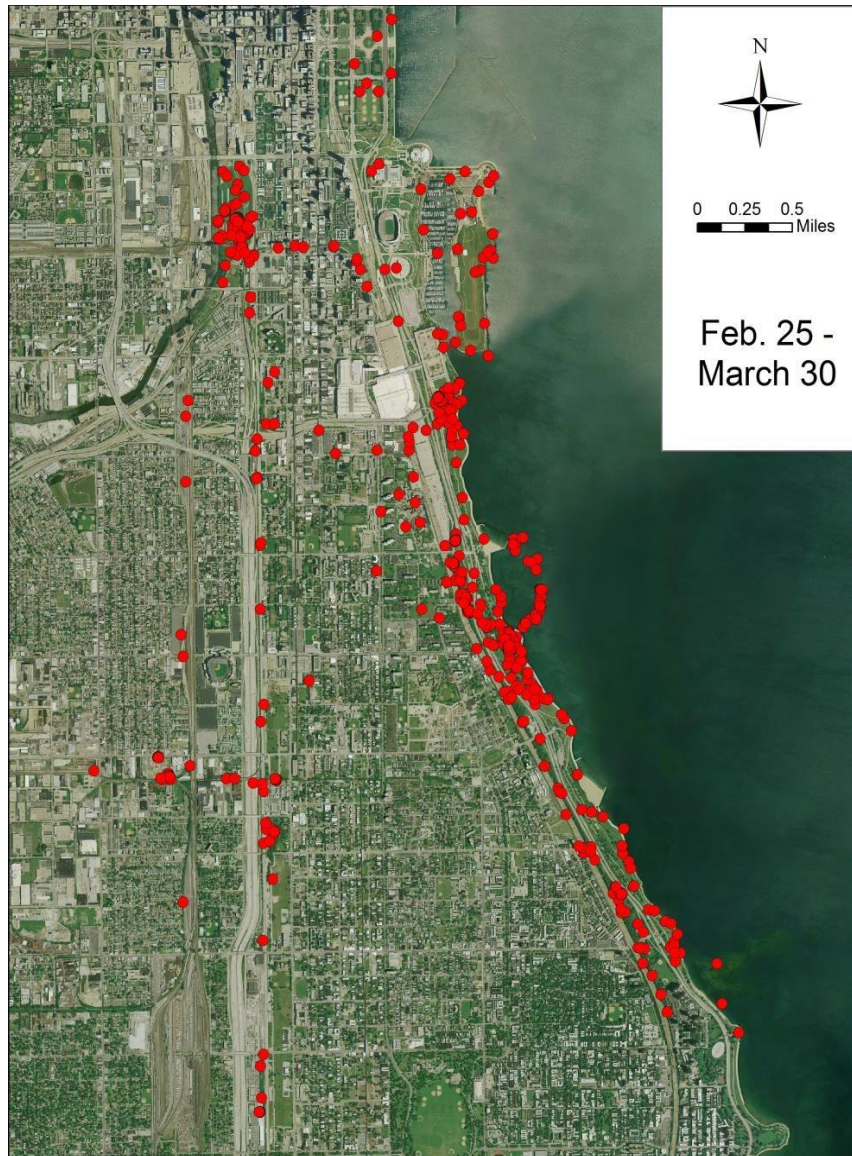


Figure 2. Satellite locations (n=912) of coyote 748 following his capture in February 2014 and prior to the incidents in April.

His movements over subsequent weeks indicated that he was a resident animal and, given his age and reproductive status, likely an alpha male of a resident group (see Fig. 2). During this time, 912 locations were recorded; his home range encompassed 22.3 km². Until mid-April, there were no complaints from the public associated with this animal, and he appeared to avoid people as much as possible despite his urban lifestyle.

TIMELINE/ACTIONS

Apr. 7th - Stan Gehrt was notified via email by a resident that his dog had been attacked the previous night by a radio-collared coyote. Gehrt called the resident the following day for details. The man was walking his dog, a mastiff mix, near dusk. His dog was on a leash. As they were walking, he noticed a coyote lying on top of a mowed berm near the sidewalk. As they walked by, the coyote approached and aggressively interacted with his dog. It is notable that his dog weighed approximately 110 lbs. He described the coyote as 'attacking' his dog, repeatedly. He had to intervene by kicking the coyote and pulling his dog away. He reported that the coyote and dog definitely came into physical contact, however, his dog was uninjured. He emailed Gehrt after they returned home. It is also notable that the dog owner described the radio-collared coyote as 'quite large', nearly as big as his dog. The resident indicated that he preferred a nonlethal response as he did not think the coyote should be lethally removed.

Apr. 8th-14th - Over the next week, there were repeated reports (at least 5) of a radio-collared coyote acting aggressively toward dogs; in each case the dogs were on leash with the owners, and the incidents were clustered in the same location. Usually, the coyote was observed resting on a berm near a walkway, and approached the dog as they walked by. The attacks always occurred during dusk or early evening, but there was no pattern regarding the type of breed or size of dog. There were no reports of a dog actually sustaining injuries from the coyote, but in each case the incident was described as an 'attack' and could only be stopped by aggressive intervention by the dog owner or bystanders. Common details in each case included only one radio-collared coyote was involved, that it apparently made contact with the dogs but the dogs did not sustain injuries, and the coyote had to be forced off the dog by people. In some cases the incidents were reported to Chicago Animal Control or the Chicago police.

Satellite data of the locations of coyote 748 confirmed that he was the coyote involved in the reports.

Gehrt was contacted by Cook County Animal and Rabies Control on April 13 in response to reports from both Chicago Animal Control and Cook County Rabies Control of a coyote threatening people and dogs. After discussion, it was determined that an attempt at hazing would be the first approach to try adjusting the coyote's behavior. The rationale for this approach was the coyote had focused its aggression on dogs and not people, and to that point no dogs had actually been injured in the incidents. If hazing was unsuccessful in altering the coyote's behavior, then a removal would be the next step given the increase in complaints.

Gehrt arrived at the area of conflict at approximately 1700 on the 14th during a spring snowstorm and encountered 748 immediately. The coyote was not aggressive and quickly moved away from

him. There was no opportunity to haze the coyote at this point since he moved away and did not return. Gehrt left the area by 1800, however, within 45 minutes of leaving, there was a report of an attack on a dog by the coyote about 100 m from the area he had been. In this case, a woman was walking a dog and the coyote attacked the dog, the woman was unable to stop the attack and a man used a hockey stick to deter the coyote. As in the previous cases, the dog was apparently uninjured but the dog owner was shaken and reported the incident to animal control and Chicago police.

HAZING SEQUENCE

April 15 – Gehrt returned to the site at 0900 hrs, and found the coyote (Fig 3). The coyote ran away and no further action took place that day.

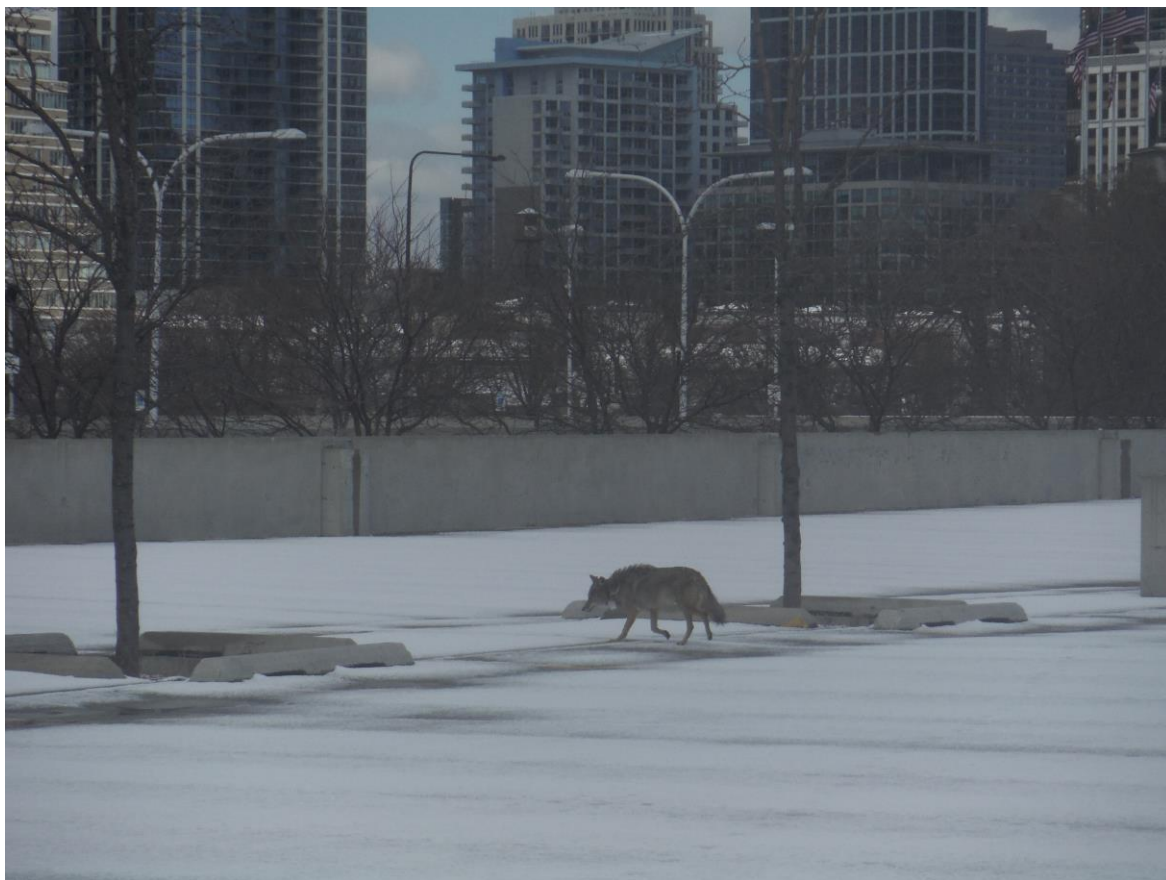


Figure 3. Coyote 748 on April 15, 2014.

At 1800 hrs, Gehrt returned to the site with the McGraw research team including Shane McKenzie and Abby-Gayle Prieur, and McKenzie's dog to use as a test. As the team arrived, the coyote attacked a dog that was on a leash with two owners. Once again, the dog was uninjured but the owners had to force the coyote off the dog and were upset. At 1900 hrs, the coyote was lying on his normal berm and McKenzie approached with his dog. The coyote stood, growled, and moved

toward the dog, and at that point was hazed with noisemakers. We continued to chase him on foot and with vehicles until he moved to another area. Soon after, he attempted to return and we hazed him again with noisemakers and chasing on foot. This process was repeated every 15-20 minutes as the coyote would move south and then eventually attempt to return to the berm area. Hazing was repeated each time the coyote returned, and at 2300 hrs, Gehrt eventually used a high velocity paintball gun. Once the gun was used, the coyote moved away for a longer period, and at that point we left the area at around 2400 hrs.

Throughout the evening there were also sightings of a second, uncollared coyote in the area. We believed this second coyote to be the mate to 748. The uncollared coyote was neither aggressive nor bold. The first night of hazing was the only time this second coyote was ever seen.

Towards the end of this evening, a pattern was noticed in the behavior of 748, in which he kept returning to a particular area. Upon further investigation, the area contained tree plantings; the dimension of each tree planting was 6 feet by 6 feet, and the trees were spaced approximately 12 feet from each other. We found fresh digging within a single tree planting. The tree planting with the fresh digging had exposed a hole that led under the concrete. Once it was determined that coyote 748 could possibly be attempting to den within this tree planting, the area was disturbed by leaving our scent at the entrance, with the intent of stimulating the coyotes to move the litter to a different location, if a litter existed.

April 16 – At 0430 hrs McKenzie returned to the site alone and found coyote 748 back in the area. Over the course of one hour, he hazed the coyote.

At 1830 hrs, McKenzie, Prieur, and Eric Ness, returned to the area of conflict and again repeatedly hazed coyote 748. Gehrt returned to the site at 2100 hrs, and found the coyote in the same area. The coyote ran away and no further action took place that evening.

April 17 – McKenzie returned to the area of conflict at 0500 hrs. However, upon arrival coyote 748 was not in the area. No hazing occurred that morning. At 1800 McKenzie returned to the area of conflict and waited for 748. At 1840, he hazed coyote 748 out of the area. At 1930, 748 returned to the area and as before was hazed from the site. That was the last time that evening that they saw coyote 748. McKenzie left the area around 2100.

April 18 – McKenzie returned to the site at 1900 hrs, and 748 was not present. He remained at the site waiting for 748 and left around 2100. Coyote 748 did not make an appearance during those two hours.

April 19 – McKenzie returned to the site at 0730 hrs. Coyote 748 was not within the area of conflict at that time. Coyote 748 had not appeared by the time he left at 0900. Satellite data indicated that 748 was no longer using the area

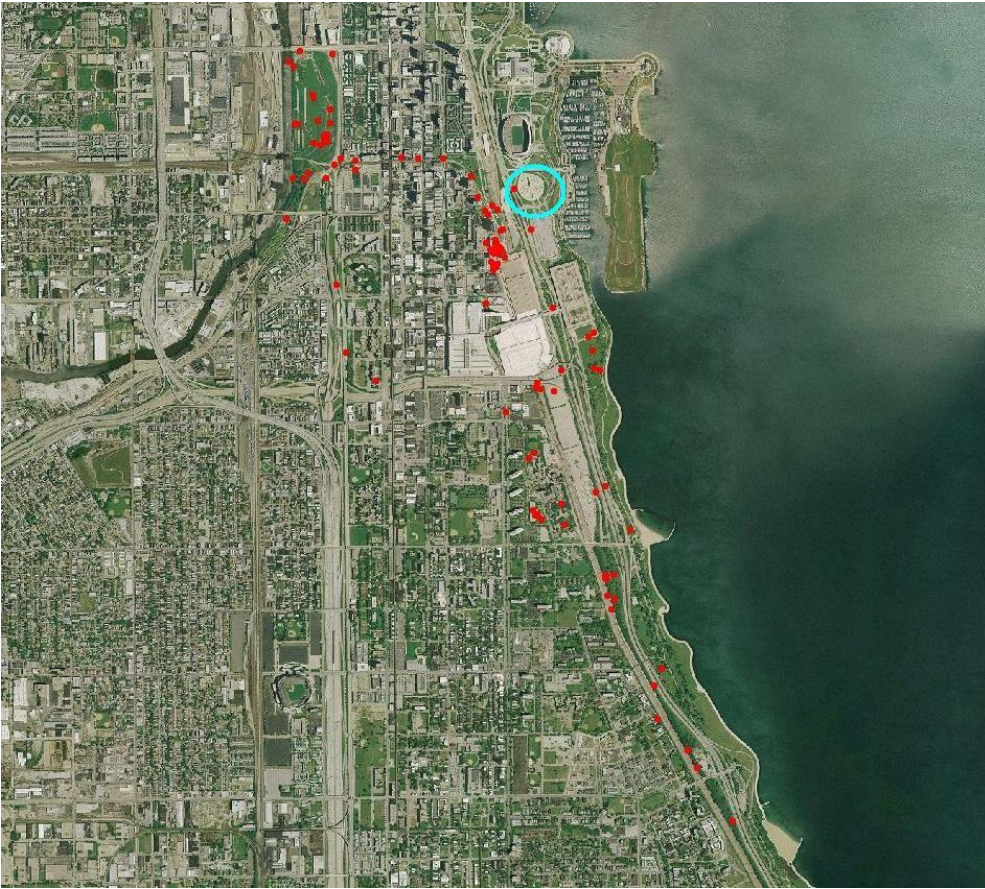


Figure 4. Locations of coyote 748 during April 24-28, 2014.

April 24th and April 25th was the last time any attempt at hazing coyote 748 was performed. On both nights, McKenzie returned at 1800 and stayed until 2000 hrs, but 748 did not return to the area. Again, satellite data indicated this coyote was no longer using the area (See Fig. 4), and no further hazing was attempted. No coyote attacks on dogs were reported following the hazing on April 15.

As the data in Table 1 indicate, Coyote 748 clearly reduced his use of the area following hazing attempts. This reduction in use likely reflects a relocation of the litter by his mate and/or himself.

Table 1. Coyote 748's use of the incident area near Soldier Field prior to denning, during denning, and post hazing.

Time Period	No. locations	Pts. In the incident zone	Percent	Period
Capture-March 31	912	2	0.22%	Pre-denning/attacks
April 1-April 6	317	51	16.10%	Denning begins
April 7-April 15	78	43	55.10%	Period of attacks
April 16	54	11	20.40%	Hazing period
April 17	60	15	25.00%	Hazing period
April 18	59	10	17.00%	Hazing period
April 19	59	2	3.39%	Hazing period
April 20-June 14	1305	50	3.83%	Post-hazing

POST-HAZING ACTIVITIES

We continued to monitor the movements of 748 following the hazing exercise. It was apparent during the hazing that 748 was tending to a litter, and that this parental behavior was likely the cause of the conflict with dogs. Thus, our goals for the hazing were to either: 1) Change 748's behavior toward people/dogs to a higher level of fear so that he would avoid them, but still attempt to rear the litter at the site, or 2) Stimulate 748 and his mate to move the litter to a different location, hopefully one with less public access. It was obvious that by April 20, coyote 748 had completely stopped using the area. Therefore, the litter had either been abandoned or moved.

Subsequent monitoring of 748's locations indicated that he had shifted the concentration of his locations to a vacant field <1 km to the west of his original range. This movement typically indicates a relocation of a litter. On May 14, McGraw research technicians approached the location and quickly located the den with pups in it. Coyote 748 was actually lying on top of the den when the technicians approached. He moved away without incident as they approached. Five pups from the den were tagged - 4 males and 1 female (Fig. 5). The pups were healthy and were relatively advanced in age (at least 6 weeks old) compared to other litters processed at the same time. This confirmed that the cause of the original conflict and reason for aggression toward dogs, was pup defense, and also confirmed that we were successful at provoking the coyotes to move the litter.

We continued to monitor 748's movements during May and June. On May 23rd, one of the McGraw researchers received a report, and observed that 748 was severely injured and was in view of the public. Apparently he had lost part of his lower hind limb, possibly due to a collision with a car. Although severely wounded, he was still able to move away from people approaching him, so we determined that the best course was to leave him alone, as capture would be difficult and could exacerbate his condition.

Coyote 748 was soon moving along the same pathways he had used before, and there was little, if any, difference in the spatial pattern of his locations pre- and post-hazing (Fig.6). His post-hazing home range spanned 12.1 km², based on 1,305 locations.

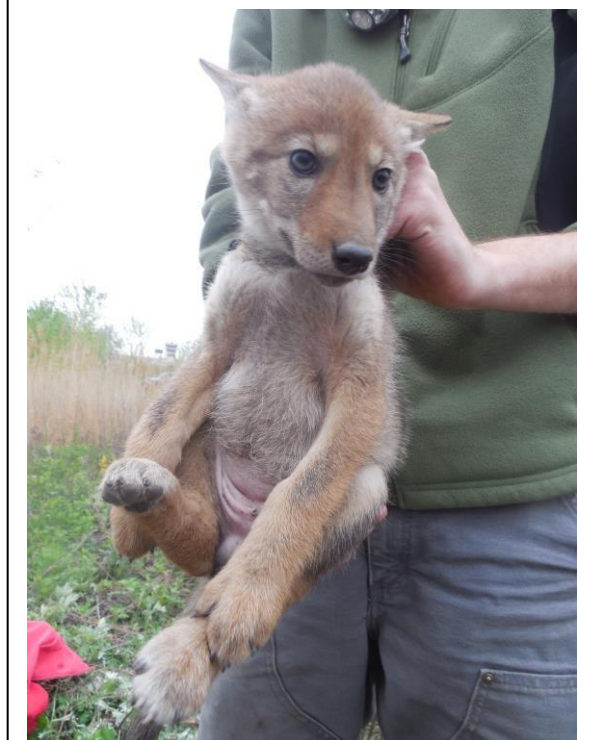


Figure 5. A pup from coyote 748's litter, May 14, 2014.

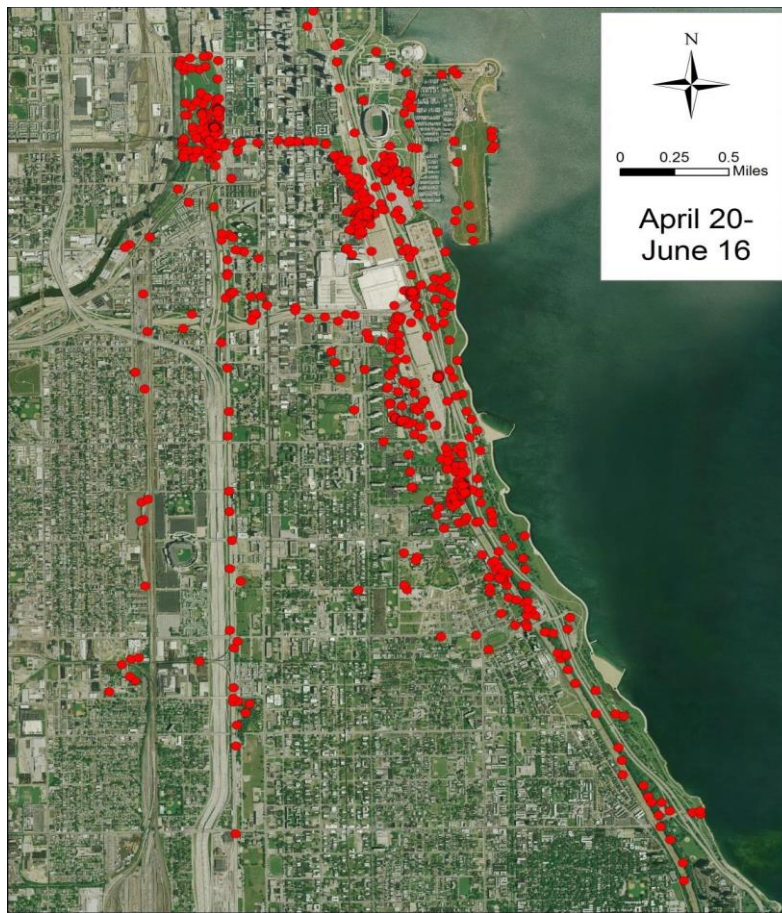


Figure 6. Satellite locations of coyote 748 mid-April until his death on June 16.

On June 15, 748 was found in the McCormick parking lot in distress. It was decided by Chicago Animal Control to humanely euthanize him as he was unable to move. Necropsy revealed that he had been hit by a car (the report only identified massive blunt trauma, which is typical of collisions with cars). The hind leg wound was actually healing relatively well, however, there were indications that he was under stress prior to the car collision, possibly due to the severed leg. The pathology report stated he was in poor physical condition, and had dropped his weight to only 10.1 kg (22.4 lbs), over 3 kg less (or a 24% loss) than when he was originally captured in February.

Although coyote 748 was removed from the area on June 16 due to a car collision, it is likely that the coyote family will continue to use the area, and he will be replaced soon by another adult coyote. Data from the long-term study reveal that following the death of a parent, especially the father, the remaining parent will stay with the pups and continue to raise them to independence.

CONCLUSIONS

Although hazing is often recommended as a management strategy to reduce coyote-human conflicts, there is very limited data available on the effectiveness of the technique, or the conditions

associated with effectiveness. This case study represents a rare opportunity to evaluate hazing and measure coyote response to efforts to change behavior. In this extremely urban site, hazing was effective at eliciting a relocation of the litter to a less public area. It also caused a shift in the male's behavior to avoid people and dogs, returning to the same behavior he exhibited prior to reproduction. The hazing effort was substantial, however, requiring coordinated, repeated efforts by multiple individuals over a series of days and nights.

It is likely the presence of a litter, and therefore pup defense, was the reason why extreme hazing efforts were required in this case. Hazing is more typically employed when coyotes are exhibiting habituation because of feeding by people, or other attractants. Our case study indicates that hazing can be effective in reducing coyote conflicts caused by pup defense, but that hazing can require more extreme measures. Hazing may not be the most practical solution to employ but it can be the best resolution when human safety is not an eminent threat.

ACKNOWLEDGMENTS

Hazing activities were carried out by research technicians from the Max McGraw Wildlife Foundation. Monitoring movements pre- and post-hazing were made possible through the research program supported by Cook County Animal and Rabies Control and the Forest Preserve District of Cook County. Chicago Animal Control shared information and assisted with monitoring coyote movements. Dog owners were quite helpful in providing details of the incidents, and expressed concern for the coyote as well as their dogs. Evan Wilson produced some of the GIS images for this report.

