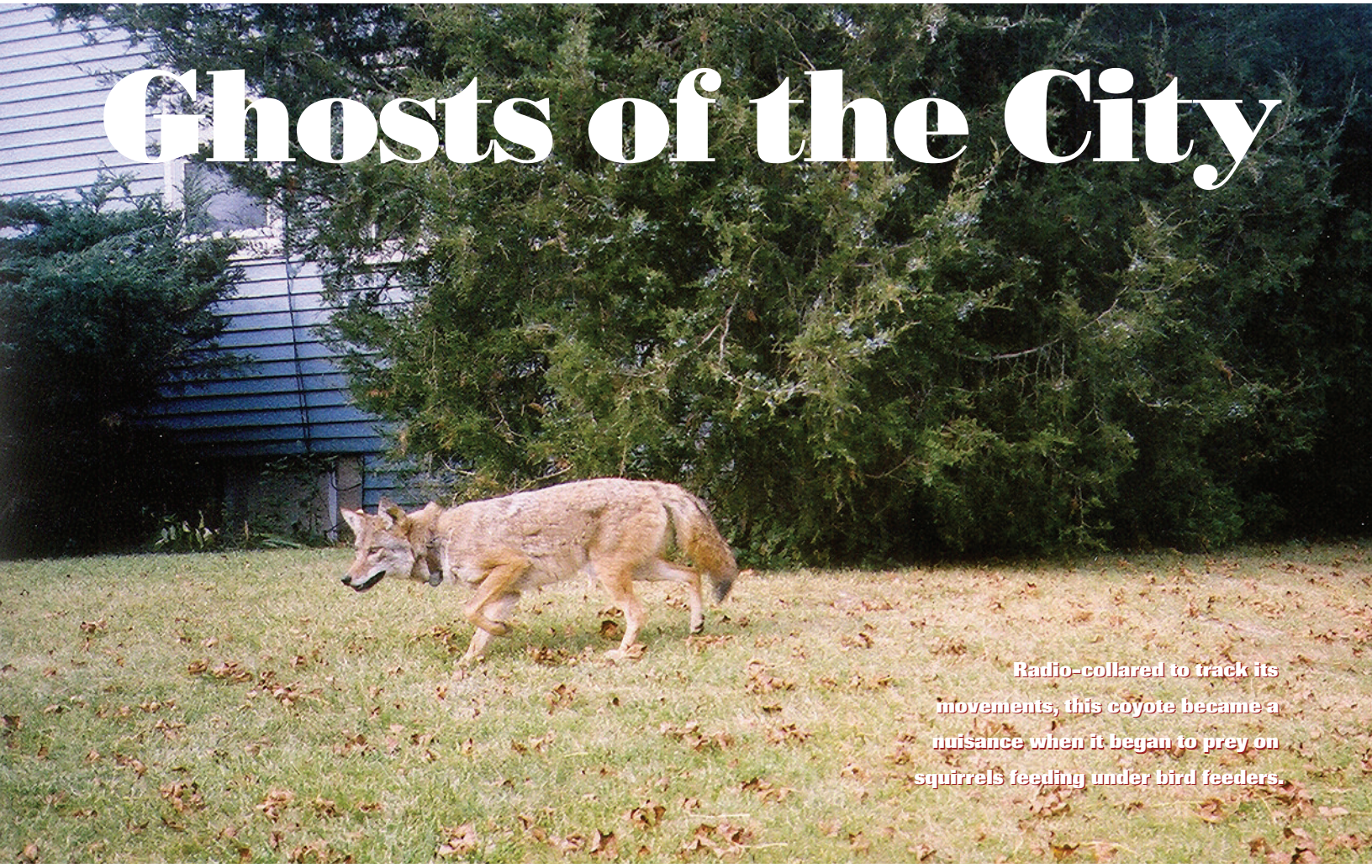
Coyotes have become amazingly adept at living in urban environments—and avoiding detection by their human neighbors.

Ghosts of the City



Radio-collared to track its movements, this coyote became a nuisance when it began to prey on squirrels feeding under bird feeders.

Story and Photos
By Stanley D. Gehrt

You may live next to the largest carnivore in Illinois and not know it, especially if you reside in a large city.

Originally known as ghosts of the plains, coyotes (*Canis latrans*) have become ghosts of the cities, occasionally heard but rarely seen. After having been excluded by force or by choice from cities for most of the 20th century, coyotes have recently re-established themselves as top carnivores in an increasing number of cities across North America, including one of the largest urban centers in the Midwest, the Chicago metropolitan region.

Unfortunately, as coyotes become more common in urban areas, so do their conflicts with people. Indeed, most of our knowledge of urban coyote ecology comes through newspaper articles of the latest attack on a pet. Compared with other urban wildlife, little is known about how coyotes are becoming successful in urbanized landscapes.

This rare, nocturnal photo shows coyote depredation of a Canada goose nest in an urban forest preserve.

With keenly developed senses of sight, hearing and smell, coyotes are highly successful and effective predators.

For the last six years, researchers with Max McGraw Wildlife Foundation have been using technology, hard work and a little luck to peer into the mysterious world of Chicago metropolitan area coyotes. Questions before the research team were: How do coyotes live among 9 million people? Do all coyotes come into conflict with people? Is it possible for people and coyotes to coexist in urban areas? Do urban coyotes live on a diet of Chihuahuas, the neighbor's cat and a side of fries?

In 2000, through the unique support of the Cook County Animal and Rabies Control agency, a radiotelemetry study of coyotes in Cook County began. Radio-collars placed on coyotes allowed the animals to be tracked, located and slices of their life observed. During the process, more about the animal—and humans—has been learned than originally planned.

Studying coyotes in urban areas is not easy.

Across the country, only handfuls of studies of urban coyotes have been conducted, all small-scale studies involving few coyotes. The coyote undeniably is the most challenging animal to capture because its extremely keen senses, high intelligence and wary nature are unmatched. Also, finding suitable locations for traps that won't also capture pets or raccoons means traps usually aren't set in the best locations.

Because of these difficulties, and the belief that coyotes need large, protected patches of habitat, the study began in the forest preserves in the northwest suburbs of Chicago. Almost immediately, two types of coyotes emerged—the resident population and the floaters.

Within each of the forest preserves live resident family groups, or packs. Study groups, averaging about five to six adults and the pups of the year, are territorial and defend their property from other coyotes, especially other groups. Territory sizes and shapes reflect roads and borders, usually the borders of the preserves. Thus, coyotes identify their own property boundaries with human-constructed boundaries. Packs socialize and defend territories together, but since they rarely hunt together they are seldom seen as a group.

In contrast to the restricted, well-defined territories of residents are floaters—solitary animals that have left their packs, popping up anytime and anywhere, including downtown Chicago. Floaters can be male or female and may make up more than one-third of the urban population of coyotes. Their

Researcher Stan Gehrt holds an adult female that was captured, tranquilized, tagged and fitted with a radio collar.

(Photo courtesy of Doug Herr, Painet, Inc.)

Both the backs of the ears and the snout are reddish in color on coyotes.

movements were surprising: Home ranges regularly covered 20 to 30 square miles, spanning multiple cities, and they seemed to move across heavily developed areas with ease. One old, three-legged male had an area that encompassed five suburban towns, which is typical of floaters.

Floaters regularly visit forest preserves looking for vacancies, but move through quickly, before residents find them. Because of their transient existence, floaters use a variety of habitats and are quite skilled at crossing roads. They have been found using small patches of ornamental shrubs surrounded by parking lots, retention ponds, baseball diamonds, golf courses and small buffer strips between subdivisions and interstates.

As the study progressed, the movements of floaters forced redesign of the study from three to four distinct study areas to an area encompassing nearly 300 square miles, including O'Hare International Airport. In addition, another part of the coyote population that had remained hidden began to emerge—resident packs living in downtown areas without the benefit of large blocks of habitat.

Using radio telemetry to track a collared adult, researchers located a den. Hair and blood collected from the pups will allow identification of individuals subsequently captured.

A more complex picture emerged as more individuals were tracked. Some floaters, and even some residents, carved out territories in completely developed areas, such as downtown districts, countering the assumption that coyotes could only successfully establish packs and raise young in relatively large and protected areas. Each night, coyotes were observed hunting in small patches of habitat, crossing many roads, yards and parking lots. In most cases, the human residents had no idea that coyotes were crossing their yards or using the sidewalks, and coexistence was the rule, not the exception.

Coyotes have forced biologists to view the urban landscape in a different light than traditionally held in wildlife management. Small isolated areas, surrounded by steel and concrete, once assumed to have little wildlife value, are extremely important to coyotes and allow them to maintain their secretive lifestyles.

Although coyotes regularly negotiate a seemingly hostile landscape, there is a cost. Most—about 70 percent—are eventually hit by cars. Pups are particularly vulnerable and less than half live to be a year old.

So how much human-related food do coyotes use?

For 18 months, graduate student Paul Morey collected and analyzed scats and found less than 1 percent contained evidence of refuse. Observations of the coyotes at night confirmed this finding as they often passed trash cans or Dumpsters (usually occupied by raccoons) in search of their prey. Common food items were rodents, rabbits and fruit, with their diet shifting with the

Whether residing in the city or country, the primary diet of coyotes is rabbits and small rodents researchers learned.

(Photo courtesy of Bob Gress.)

seasons. Surprisingly, coyotes in this urban landscape have similar diets to their rural cousins.

Coyotes commonly prey on free-ranging house cats, but don't always eat them as cat hair showed up in less than 1 percent of the scats. Why coyotes respond so strongly to cats is not understood, but it is not uncommon for free-ranging cats to begin disappearing when coyotes are in an area.

Coyotes use three to five dens while rearing pups. Adults will move pups if they feel threatened.

The study has documented the frequency with which coyotes share areas with people on a regular basis. To achieve this, coyotes in the study areas shift their activities to the nighttime, and become adept at crossing roads, with some coyotes crossing hundreds of roads nightly. These traits are passed on to each successive generation of pups born in the urban areas. To date, more than 200 individual coyotes have been tracked, and all but a handful have lived in relative obscurity and presented no problems for people. These coyotes do not make the media, and had they not been radio-collared little would be known of the level of daily coexistence between coyotes and people.

The focus of the research project is expanding to the potential relationships between coyotes and other urban wildlife. Although coyotes usually make the news when there has been a conflict with people, the ecological services performed every day go unnoticed. The importance of rodents in their diet is documented as coyotes have been observed hunting mice and voles for hours. In fact, some golf courses prefer to keep the resident coyotes on the property for rodent control, possibly including woodchucks. Coyotes also may help control deer and Canada geese, two species that have become overabundant in urban areas.

Tracking urban coyotes has been challenging and exciting, and there are still many questions left to explore. Research on the ghosts of the city continues.

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