

Coyotes in New York City do not need to rely on human food

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Credit: Unsplash/CC0 Public Domain

Researchers in New York City have analyzed the DNA of urban coyotes and discovered that the coyotes eat a variety of native prey species and supplement this diet with human-sourced food items. The study is

published in *PeerJ*.

"Urban areas have lots of people and thus greater availability of anthropogenic foods," says Dr. Carol Henger, lead author on a paper detailing the New York coyote diet. Since urban coyote research began in the 1980s and 1990s, there has been considerable interest in the foods they are eating, specifically whether they are relying on human foods. "Knowing what the coyotes are eating can help inform management practices by city officials."

Coyotes are opportunistic omnivores and will take advantage of whatever food is available. Previous coyote research performed in cities such as Chicago and Las Angeles has found that coyotes eat mainly "natural" food such as rodents and rabbits, but city coyotes still tend to eat more human-sourced food items than country coyotes.

To find out what the New York coyotes are eating, Henger and her team analyzed the DNA from coyote fecal (scat) samples collected in parks and other green spaces throughout the city. The researchers used [fecal samples](#) collected from 2010-2017 by members of the Gotham Coyote Project, a group of scientists and educators who are interested in learning about coyote ecology throughout New York City and the region. They found that the urban coyotes consumed a variety of mammalian prey such as raccoons, rabbits, deer, and voles. They also ate birds, insects, plants, as well as human foods such as chicken, beef, and pork.

"What's unique about our study is that by sequencing the DNA of coyote scat we were able to detect diet items that might not be detected through a visual analysis of the scat samples, such as specific human food items. There are no wild cows, chickens, or banana trees in New York City parks, so if we got a DNA hit on something like that, we knew that coyote had eaten from an anthropogenic source," says Henger.

The researchers also compared the New York City coyote diet to that of coyotes living in non-[urban areas](#) north of the city. The main differences in diet between the urban and non-urban coyotes were that raccoons and deer made up a bigger proportion of the non-urban coyote diet than the urban coyote diet. The two groups of coyotes ate similar proportions of human food (~60% of scats contained at least one human food item), but the urban coyotes ate a wider variety, including rice, goat, banana, and guinea fowl.

"Raccoons were the most prevalent mammal detected in the New York City coyote diet," says Henger. "With no other [natural predators](#) to limit their populations, coyotes provide an important ecological service. Raccoons can carry diseases such as rabies and canine distemper that can be transmitted to humans and pets. By preying on raccoons, coyotes are helping to provide healthy ecosystems."

"Our results show that coyotes are not reliant on [human food](#) to survive in New York City," continues Henger. "Instead, [coyotes](#) are eating natural [food](#) items that are available in the city parks. This study highlights the importance of creating and maintaining green spaces where wildlife can thrive."

More information: Carol S. Henger et al, DNA metabarcoding reveals that coyotes in New York City consume wide variety of native prey species and human food, *PeerJ* (2022). [DOI: 10.7717/peerj.13788](https://doi.org/10.7717/peerj.13788)

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