

WHERE THE WILD THINGS ARE

Tracking coyotes and owls in Mianus River Gorge

BY | ABBY LUBY

RACING THROUGH THE DEEP-FORESTED TERRAIN

at the Mianus Gorge Preserve is a large black dog named Quinoa. He zigzags between trees and stumps, pausing only to drive his snout under a pile of dried leaves. Then he stops, barks, and sits down. He's found what he was looking for—coyote scat—and gets his reward from his owner, biologist Linda Gormezano, who tosses him a green tennis ball.

Gormezano, working with the Division of Vertebrate Zoology at the American Museum of Natural History, is researching shifts in coyote population at the Mianus River Gorge Preserve and the Ward Pound Ridge Reservation. Coyotes are considered the only natural predators for the ever-invasive deer who threaten native plant species in North American forests. If both land areas being researched show an increase in coyotes, the hope is they will thin out the deer population. The research will also indicate whether coyotes like it here enough to stay and raise families. That would be a good thing, says Gormezano, because coyotes also balance the ecosystem; as a top predator, they prey on raccoons and skunks. "You can get too many skunks and raccoons, and that puts pressure on smaller mammals like





Local researchers are trying to discover where and how screech owls find a home.

the course of four years, were released in Central Park.

Today, Nagy tracks screech owls not only at Mianus Gorge, but also at three city parks including Inwood Park in Manhattan, Van Cortlandt Park in the Bronx, and Alley Pound Park in Queens. Nagy wants to know if specific parks and preserves are where owls call home. Catching the nocturnal hooter is not easy, but Nagy has it down to, well, a science. It's a stealth mission that starts at dusk and ends in late evening. For several days, Nagy sits in the fading forest light and patiently entices the owls with a series of recorded hoots playing from a small boom-box. He listens for a response, hoping to lure the owls closer. Using a stuffed owl as bait, and surrounding the area with special bird netting (similar in mesh to a volleyball net), Nagy says owls will swoop in to investigate because they are either curious or angry. "When they do, they get tangled in the net

because they can't see it." But catching owls is only half the battle. Attaching a tiny transmitter to their back is a job for four hands. Mianus's Wild Life Technician Program invites area high-school students to mentor with scientists like Nagy and Gormezano. The trick to attaching the transmitter is tipping the owl on its side, which puts it into a sleep state, explains Nagy. "The tiny transmitters are 3.9 grams for small or young owls and up to 230 grams for large ones"—the larger being about a half-pound. "We fit them with a small backpack." Nagy also plucks a few feathers for DNA testing.

The transmitters track owls up to a quarter of a mile. Telemetry tracking with the GIS system tells Nagy if owls commute or migrate between each of the tracking areas, such as Mianus Gorge. "If owls live in isolation in one area, they may not venture out to see what's going on in other areas," says Nagy. "If one park consistently has good reproduction,

the question is: Do owls spend any time in parks that have low reproduction?" Data from the transmitters will help answer that.

When it comes to wildlife closer to home, do cities and suburban communities tend to support it or wipe it out? Nagy says nature doesn't necessarily stop where the concrete starts. "Pigeons, rats, and raccoons already live here without our help," he explains. "We can either maintain conditions to protect some species, or we can accommodate other species by adapting our world to better suit them."

For both Gormezano and Nagy, the ultimate question is how wildlife can survive on an overpopulated planet. Their premise is that land preserves, hemmed in by developing suburbs and parks, and sandwiched between pavement and buildings, can be managed to support wildlife—while gracing us with much-needed respites of green space. ■

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mice and chipmunks. A top predator controls and maintains everything below that." The study will also be part of Gormezano's doctoral thesis for City University. Illusive and tricky, coyotes are a challenge to track. Do they travel in packs? Are their territories defined by roads and urban sprawl? Notating scat locations with a geographical information system (GIS) and charting them on a map using DNA from both scat and hair will provide some answers. According to Gormezano, "DNA makeup shows if different animals are related to each other. We assign a DNA fingerprint to each unique sample, which tells us how many coyotes are in the area." Small barbed-wire traps are used to catch wisps of hair from a roaming coyote. "It doesn't hurt them," she says, "and it can get the hair root, which has more DNA."

Coyote research started about a year ago with the Research Assistantship Program (RAP) at Mianus Gorge Preserve. Executive Director Rod Christie says the program received grant monies from private foundations such as the AE Charitable Trust. "Linda's project will last about five years," says Christie. "The idea is to eventually apply the research to our management here at the gorge." Christie is ultimately interested in lessening the growing deer population because deer consume precious undergrowth that is the main staple for other wildlife. "Rather than humans filling that role by culling the herds each season, we want to see coyotes reduce the deer population to a manageable level. It's a way of balancing nature."

Coyotes have been the target of bad press, mainly for attacking domesticated

pets. But Gormezano says coyotes have only attacked smaller dogs, and only when no one is around. "Coyotes are scared to death of people; that's why it's so difficult to see one. To my knowledge, there is no documented case in New York of a coyote attacking a human." Gormezano says her tracking method is passive and non-invasive, as opposed to more aggressive methods like capture and release for the purpose of tagging. "We never impact coyotes," she explains. "Once you capture an animal, it could be traumatic, and there's always a chance you'll change its behavior."

But the non-invasive approach doesn't work for biologist Chris Nagy, who is researching screech owls. Nagy, also in the RAP program and working on his doctorate at City University, spearheaded a project in 2001 when 38 Eastern screech-owls, to be studied over



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