

# OH DEER!

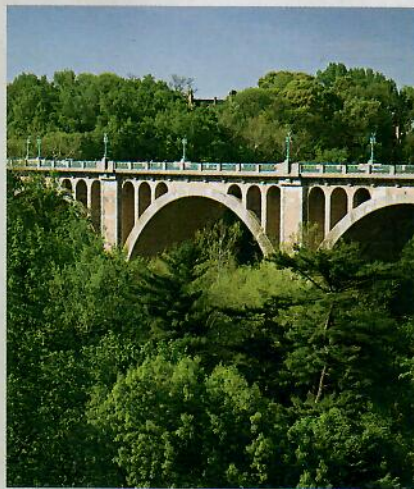
BY MICHAEL LIPSKÉ

*Rebounding white-tailed deer in one of the nation's largest urban parks may be growing so numerous that they threaten their own habitat*

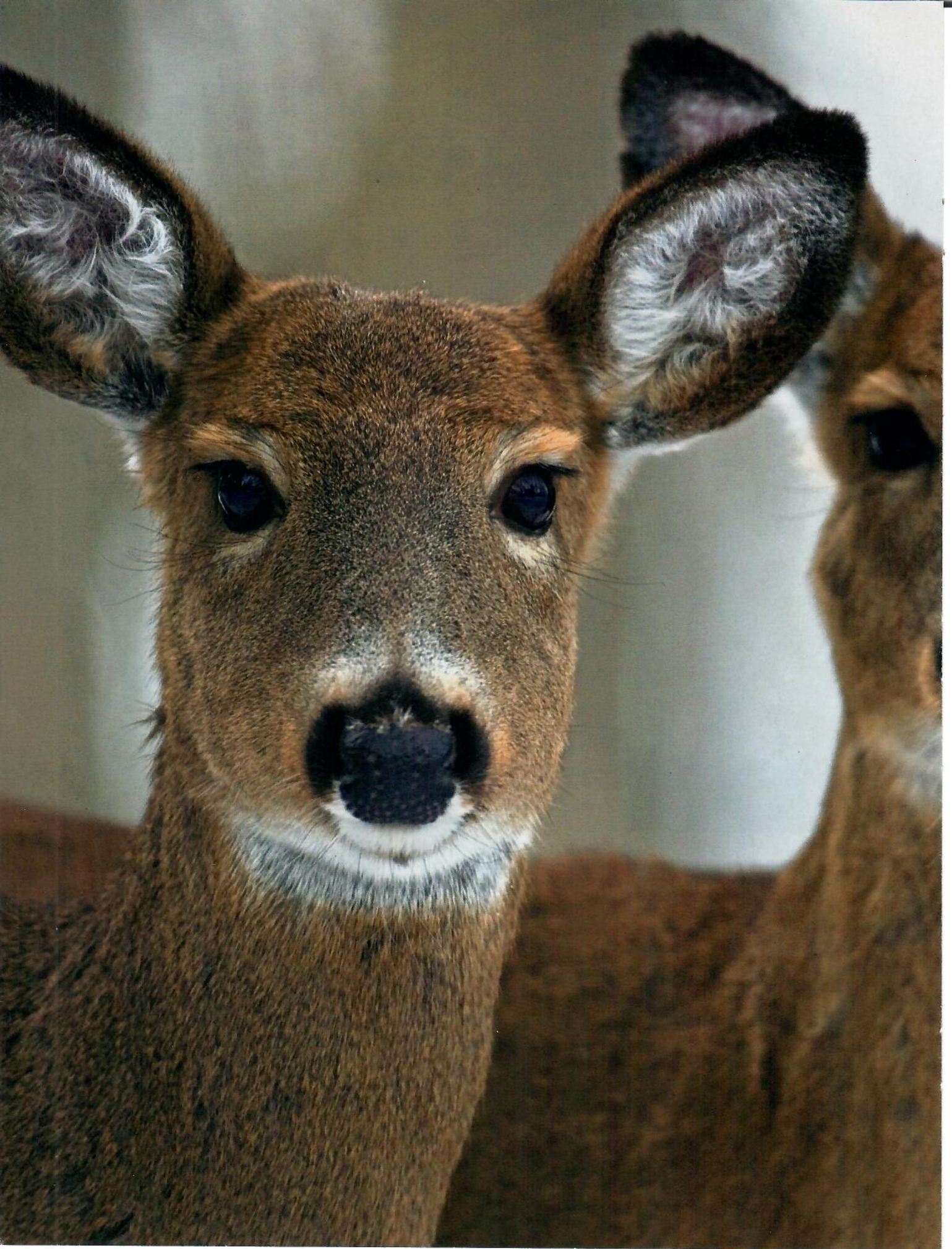
**“I can see her butt,”** says Ken Ferebee. He waits several seconds before letting forth with what he hopes is an enticing whistle, but still the demure subject of his interest stays half hidden. “Ah, she doesn’t want to cooperate,” Ferebee says, and lets the truck roll forward.

Ferebee has been cruising Rock Creek Park’s two-lane blacktops since sundown this November evening. A natural resource manager specialist at the national park in Washington, D.C., he is counting white-tailed deer. Because his bashful doe—Ferebee was almost sure it was a doe—had her head behind a tree, the animal was designated ‘sex unknown’ on his clipboard.

Creeping along at 5 to 10 miles an hour in a white pickup, Ferebee and a National Park Service (NPS) biologist aim powerful spotlights into the dark woods on either side of the road, looking for yellow-green deer eyeshine. “Buck and two does at 84 meters,” Ferebee’s sidekick says, using a laser rangefinder to measure the dis-



**WHITE-TAILED DEER** populations have exploded in many urban areas, creating wildlife crises in places such as Washington, D.C.’s Rock Creek Park, which is heavily trafficked during rush hour and crossed by major roads (above).



tance between the deer and the truck.

Between sightings, the men chat about a doe that a week earlier, for unknown reasons but with predictable results, leapt over a wall and into the lions' den at the National Zoo, located at the park's southern end. From Ferebee's perspective, it's perhaps a pity that Rock Creek's only large predators are locked up. Free-roaming lions would do more than put a spring in the step of joggers. They'd probably be good for the park.

Conducted over several nights, the November 2009 Rock Creek deer census revealed an estimated population of 67 whitetails per square mile. That amounts to hundreds of mid-sized herbivores roaming, mating and eating in the forested heart of the nation's capital. For the park service and many people living in homes just outside the park, that's too many deer.

But nowadays "too many deer" is "situation normal" across much of the

animal's range. Nor is Rock Creek's whitetail density outrageously high compared to some places. Fort Washington National Park, just south of Washington, D.C., counted 200 deer per square mile in a recent census. At Pennsylvania's Gettysburg National Military Park, bullets whizzing through winter air come not from Yanks and Rebs but from sharpshooters keeping down deer numbers. Similar deer-culling programs take place

**A WHITE-TAIL HERD BOLTS** across Rock Creek Park's grassy slopes. Biologists estimate that about 165 deer roam the 1,754-acre park, about three times the number that National Park Service biologists believe the area should hold. Heavy foraging by the deer threatens the largest unbroken forest in the Washington, D.C., area by removing tree seedlings needed to sustain native woodland.



in many state and county parks. In some places, even homeowner associations invite hunters to reduce the neighborhood deer herd.

### STARTLING RECOVERY

Rock Creek is America's oldest urban national park. Even before it became an official park in 1890, the 1,754-acre wooded stream valley was a haunt for nature lovers. During the Civil War, naturalist John Burroughs sought out Kentucky warblers and other birds along Rock Creek's "thick, rank undergrowths." Decades later, President Theodore Roosevelt led mem-



MICHAEL FAY (NATIONAL GEOGRAPHIC STOCK)

## MONITORING AT ROCK CREEK INDICATES THAT AS THE DEER POPULATION HAS GROWN, SHRUB COVER HAS DECLINED

BY ROUGHLY 40 PERCENT

bers of the capital's diplomatic corps through the park on sweaty hikes he called "scrambles." But it's unlikely either Burroughs or Roosevelt saw many deer on their outings.

White-tailed deer are found from southern Canada to northern Brazil. There may have been more than 20 million of the animals in North America before European settlement, although their numbers began falling precipitately as soon as colonists unpacked their muskets. By the late 19th century, professional hunters—bagging deer for the venison market—had brought the species to near extinction throughout much of its range. With new hunting laws and help from conservationists, whitetails have rebounded with a vengeance, becoming this country's most abundant large mammal.

Until the early 1990s, whitetails remained so scarce in Rock Creek that park staff filled out wildlife observation cards whenever one was seen. According to a park service report, "In the late 1980s (1987-1989) there were 39 deer sightings." By 2003, however, cars were killing more deer than that on park roads every year. No one needed to file whitetail reports. Deer had moved into the park (probably following the Rock Creek corridor south from Maryland), and they were hungry.

### DEER ALTER THE PARK

The week before the November 2009 census, Ferebee leads a visitor on a short walk from his park office and into the woods. Autumn leaves crunch under his boots. He stops at a small

study plot, one of several set up in 2000. It's really two plots, side-by-side, each 15 feet long and 4 feet wide. One plot is surrounded by deer-proof fencing that stands 8 feet high. The other is unfenced. That's not the only difference between them.

In the fenced plot, even in November, waist-high green plants grow—mapleleaf viburnum, euonymus (an invasive species), spicebush, a tulip tree seedling and others. Next door, the unfenced plot contains leaf litter and a solitary spicebush. "They've munched this pretty good," Ferebee says.

"Munched" describes much of Rock Creek Park—a deer-manicured landscape of towering oaks, hickories and other trees, but far less in the way of shrubs or other vegetation. Any palatable plant under 4 feet tall is fair game for whitetails. Monitoring at Rock Creek indicates that as the deer population has grown, shrub cover has declined by roughly 40 percent.

Under such conditions, there is less habitat for a range of wildlife, whether small mammals or shrub-nesting birds like Kentucky warblers. "A lot of these smaller critters that live on the forest floor—chipmunks, shrews, even mice—some of the cover that they would naturally have is gone," Ferebee says. That leaves the micro mammals more at risk of predation by the park's owls, hawks and foxes.

Even Rock Creek's trees—composing the largest unbroken forest in the Washington area—may be vulnerable to deer. By counting the dwindling number of tree seedlings in unfenced study plots, park staff have shown that tree regeneration rates are declining

and are well below the level considered necessary for forest regeneration. Yet if park habitat is ailing, the deer themselves seem in good health. Deer killed by cars—the only whitetail predator in Washington—and examined by park staff show no sign of malnutrition. Another indicator of good condition, says Ferebee, is that most does have twin fawns. “It doesn’t take long to increase the population that way.”

## CONTROLLING DEER

Back at Rock Creek, the good times may be over for at least some deer. Last year, park management issued a 400-page deer-management plan. Pointing to impacts of deer browsing on park habitat, the park service has set a goal of reducing deer density to 15 to 20 animals per square mile. To get there, the park proposes to kill deer using sharpshooters and also by capturing and euthanizing them. Once deer numbers are down, they would be kept that way “via reproductive control methods if these are available and feasible” or by further culling, according to the plan. A final decision on the deer plan could come by the end of 2010.

Not everyone thinks this is the right answer to Rock Creek’s deer problem. John Hadidian, a former

NPS wildlife biologist with experience working at the park, acknowledges the impact of deer on woodland plants. But he suggests that Rock Creek’s present plant community is an unnatural outgrowth of the many years during which deer were nearly gone from the East. What did Rock Creek look like originally, when deer were performing their ecological role as herbivores, asks Hadidian, now director of Urban Wildlife Programs at the Humane Society of the United States. “What’s a natural ecosystem? What’s a ‘right’ number of deer?”

Hadidian’s organization opposes the plan to cull Rock Creek deer by shooting and euthanasia and says the park service should tackle the problem through a combination of non-lethal means, such as controlling deer fertility with a contraceptive vaccine delivered with dart guns.

Can a forest within a city ever be truly natural? William McShea, a National Zoo wildlife ecologist studying deer impacts in Virginia’s Shenandoah Valley, an hour or so west of Washington, D.C., says it probably makes sense to reduce the number of Rock Creek deer to ease conflicts with the park’s human neighbors. But we shouldn’t delude ourselves that a place like Rock Creek can be a properly functioning natural



ecosystem. “These urban parks, in my mind, are primarily for people to get out of the concrete and get into the woods,” McShea says. “But I think it’s too much to expect those areas to have all successional stages of trees and a high diversity of plants and a complete repertoire of small mammals.”

While some park neighbors bitterly

## YOUNG BREEDERS

NEW FINDINGS on whitetail mating behavior suggest that relations among Rock Creek deer are as dynamic as those in D.C.’s human singles scene. For years, behavioral observations of deer led scientists to believe that a handful of dominant, mature bucks were responsible for most matings and fathered most fawns. “It was pretty much thought that there wouldn’t be opportunities for younger males” to mate, says Randy DeYoung, research scientist at Texas A&M University’s Caesar Kleberg Wildlife Research Institute and lead author of a recent paper on the subject.

DeYoung’s study used genetic paternity tests to show that, to the contrary, many whitetail fathers are young, subdominant animals. In fact, he found that bucks from one and a half to two and a half years old father around a third of all fawns. “It seems like when these young bucks are successful, it’s during the peak of the rut,” DeYoung explains. “There’s maybe a three-week period or so when most of the does are bred, and right in the middle of that period is when most of the young bucks seem to be siring fawns. It may simply be that there are a lot of does in estrus during that time, and there’s only so many mature bucks out there, and they can only cover so much ground. Whether [young bucks are] employing some other kind of sneaky tactics, well, that might be the case, too.”



STEPHEN ST. JOHN (NATIONAL GEOGRAPHIC STOCKS); ABOVE, BRYAN KEEVER



**DESPITE WARNING SIGNS** for motorists, deer moving across roads in Rock Creek pose a hazard to drivers as well as to themselves. More than 40 deer are killed by motor vehicles in the park each year. The National Park Service plans to cull the herd, reducing it from about 67 deer per square mile to no more than 20 per square mile, and later to use birth control to keep the animals from rebounding.

oppose the idea of shooting the deer (“I am heartsick—and shaking with anger and disgust,” one citizen posted on a local listserv after reading the plan), others say bring it on. As a woman at a public meeting on the plan said, “Bambi has to go.”

If only the deer would keep their dainty hooves off people’s lawns, the animals’ approval rating might be higher. The same night Ken Ferebee was counting deer inside Rock Creek Park, D.C. government wildlife biologist Betty Ackerson was counting them outside it. “They were at about nine deer per square mile,” she says of her census of whitetails visiting residential areas to munch on succulent shrubs and other garden plants.

Herbivores will be herbivores, whether in Washington, D.C., or the Great North Woods. Back in the 1890s, 220 white-tailed deer were introduced to Anticosti Island, Quebec, at the northern limit of the species’ range. Aerial surveys, begun in the 1960s, showed that the deer population

had exploded and numbered anywhere from 60,000 to 120,000. Down on the ground, scientists found that the whitetails were eating away berry-producing shrubs that sustained the island’s abundant black bear population. Make that “formerly abundant.” Anticosti’s bears are no more, all gone, their food source and, indirectly, themselves, done in by deer.

Of course, it wasn’t the deer so much as the people who brought them to the island who wiped out the bears,

just as we the people, by extirpating predators and reshaping the landscape, have created a world conducive to large deer populations. “They’re an edge species,” McShea says. “And we’ve gone and taken this deep, dark forest and made it one big edge.” Throughout the eastern United States, deer-sheltering woodlands abut farmland or the kind of neighborhoods around Rock Creek, with front yards brimming with nutritious vegetation.

Almost 400 years ago, an Englishman named Henry Fleet became the first European to set foot on the land that would become Washington, D.C. He reported enthusiastically on the pleasant climate, the plenitude of sturgeon and other fish. “And as for deer, buffaloes, bears, turkey, the woods do swarm with them.”

Well, Henry, when it comes to deer, you can say that again.

*Washington, D.C., writer* **MICHAEL LIPSKE** is a former National Wildlife senior editor.

#### NWF IN ACTION

#### PROTECTING HABITAT

Protecting habitat is one of NWF’s top conservation priorities. In some areas, wildlife populations that are increasing in the wake of sound management create new challenges in balancing the needs of various species. To learn more about NWF’s wildlife work, visit [www.nwf.org/wildlife](http://www.nwf.org/wildlife).

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**FRONT COVER:** *James D. Watt (SeaPics.com) photographed a yellow tang cleaning a green sea turtle in Hawaiian waters. Both species are among the tropical creatures found in the nation's four far-flung marine national monuments in the Pacific. See page 36.*

**BACK COVER:** *Judd Patterson photographed an eastern meadowlark perched on a pole in central Florida. For more about meadowlarks and other grassland birds, turn to page 22.*