

## Steward's Corner



A coyote in Piedmont Park in Midtown Atlanta is captured on camera as part of the Atlanta Coyote Project. Photo courtesy of Dr. Larry Wilson.

a morning commute into Atlanta, sitting in bumper-to-bumper in traffic, what we see out of our car window may seem like the antithesis of conservation. The high rises, parking decks, and apartment complexes that characterize our urban centers stand in stark contrast to the vast undisturbed wilderness of places like the Smokey Mountains, the Sonoran Desert, or the Amazon rainforest, leading many of us to think of developed landscapes as irreparably damaged areas, permanently detached from nature and natural processes.

However, within the guise of concrete and metal are unique and often thriving ecosystems that may play an increasingly important role in global biodiversity conservation. Just like humans, wild plants and animals can be highly adaptable and resilient, maintaining their presence in the face of rapidly changing environments, and, in many cases, even flourishing in the new habitats and ecological niches created by human development.

The suitability of a given habitat for a wildlife species is primarily based on the availability of four essential elements: food for nourishment; water for hydration; cover from weather and predators; and enough space to locate the previous three elements and a mate. Humans mostly rely on the same things, which is why many of our large cities were built on level, fertile valleys

near the confluence of major rivers—areas that would otherwise provide high-quality wildlife habitat. Urban areas usually lack natural food sources, but wildlife can obtain plenty of nutrients from our gardens, ornamental trees and bushes, supplemental feed like birdseed, and our own high-calorie garbage. Additionally, developments and habitat modifications that make an area more habitable for us can also increase livability for some wildlife species in a way that can't be matched in natural wildlands.

Species especially common in human communities—such as raccoons, pigeons, crows, squirrels, and mice—are often called "human associates." They exploit human food sources, use our structures for nesting habitat, and take advantage of the release from apex predators that human presence provides (house cats notwithstanding). This is how a woodland species like the grey squirrel can do so well in the middle of Manhattan parks, and why cliff swallows, if they were named today, would likely be called "bridge swallows."

Although less directly associated with human presence, highly adaptable species such as white-tailed deer, coyotes, black bears, red foxes, and red-tailed hawks have taken advantage of our presence and altered landscapes as well. These animals often

remain on the fringes where human-created food sources are protected by nearby forest cover, living in and exploiting edge habitat along the wildland-urban interface and occupying forested patches near residential communities. Though the sighting of these creatures is less common, they are likely to elicit far more emotions than the more common human associated species, whether it be excitement, awe, or fear. Their presence and management can often lead to political polarization.

In 2015, Dr. Chris Mowry, Associate Professor of Biology at Berry College, and Dr. Larry Wilson, a Lecturer in Biology at Emory University, established the Atlanta Coyote Project to address some of the questions arising from growing coyote populations in Georgia. Through the use of citizen-reported sightings and camera traps, the project aims to better understand the distribution of coyotes occupying the Atlanta Metropolitan Area, and determine how coyote presence influences ecosystem function and species richness, particularly in human-dominated landscapes.

"The project provides an educational resource for the public as coyotes become permanent fixtures in the Southeastern United States." Dr. Mowry says, "Our efforts have not only discovered that coyotes are fairly ubiquitous across the landscape, but there is also a corresponding rich tapestry of other forms of biodiversity in many locations. The presence of a top predator like the coyote can actually promote higher levels of biodiversity by keeping other species in check."

Countering the claims that coyote presence has a negative impact on native wildlife, Dr. Mowry's use of camera traps at a known coyote den near Roswell, Georgia identified 14 different mammal species, two reptile species, and 22 bird species. "By looking simply at species richness, we have found relatively high levels of biodiversity, including coyotes, red and gray foxes, bobcats, raccoons, North American river otters, white-tailed deer, and great horned owls."

This work has led to partnerships with other regional conservation organizations, such as the Chattahoochee Nature Center, Fernbank Science Center, and Trees Atlanta. The project also caught the attention of personnel from Lincoln Park Zoo's Urban Wildlife institute in Chicago, who contacted Dr. Mowry about joining a consortium of other organizations in major cities throughout the country. This consortium, called the Urban Wildlife Information Network, works to better understand wildlife communities through large-scale standardized biodiversity surveys.

Dr. Mowry sees the project as having a multitude of benefits, ranging from increasing our scientific understanding of urban wildlife and connectivity in urban environments to fostering appreciation and reducing negative interactions between humans and their wild neighbors. Citizen science is a major component of the project (over 1,600 geotagged coyote sightings have been logged since the project began), and the researchers have emphasized engagement through public lectures and events like Atlanta's Lantern Parade. "Our participation is the first by a city in the Southeast," he says. "It will contribute to our understanding and management of urban wildlife, thereby providing a wonderful educational opportunity for the Greater Atlanta community, helping to prevent and manage potential human-wildlife conflict."

Conservation does not need to be an all-or-nothing game, and urban and suburban areas should not be considered a lost cause. The protection of urban and suburban greenspace, particularly in riparian areas, can help preserve habitat that provides a permanent home to reptiles, amphibians, and small mammals. It can also link important habitat cores for larger species and maintain stopover sites for migrating birds. By overlooking urban areas in our conservation efforts, we risk further fragmenting larger natural landscapes and, perhaps as important, may squander an opportunity to connect the citizens of our most populated areas with the natural world of which we are all a part.



River otters and white-tailed are part of the diverse wildlife thriving nearing a coyote den in suburban Roswell, Georgia. "The presence of a top predator like the coyote can actually promote higher levels of biodiversity by keeping other species in check," says Dr. Chris Mowry. Photos courtesy of Atlanta Coyote Project.



Director of Stewardship Mike Heneghan earned his Bachelor of Science in Forestry from Northern Arizona University and a Master of Science in Natural Resource Management from Auburn University, where his research focused on assessing public attitudes toward black bear populations in Alabama. Mike has also worked on a number of wildlife management and research projects in the U.S. and sub-Saharan Africa, most recently as a volunteer for the Atlanta Coyote Project with Dr. Chris Mowry. To learn more about the project or become involved, visit the website at www.atlantacoyoteproject.org or contact them directly at info@atlantacoyoteproject.org.