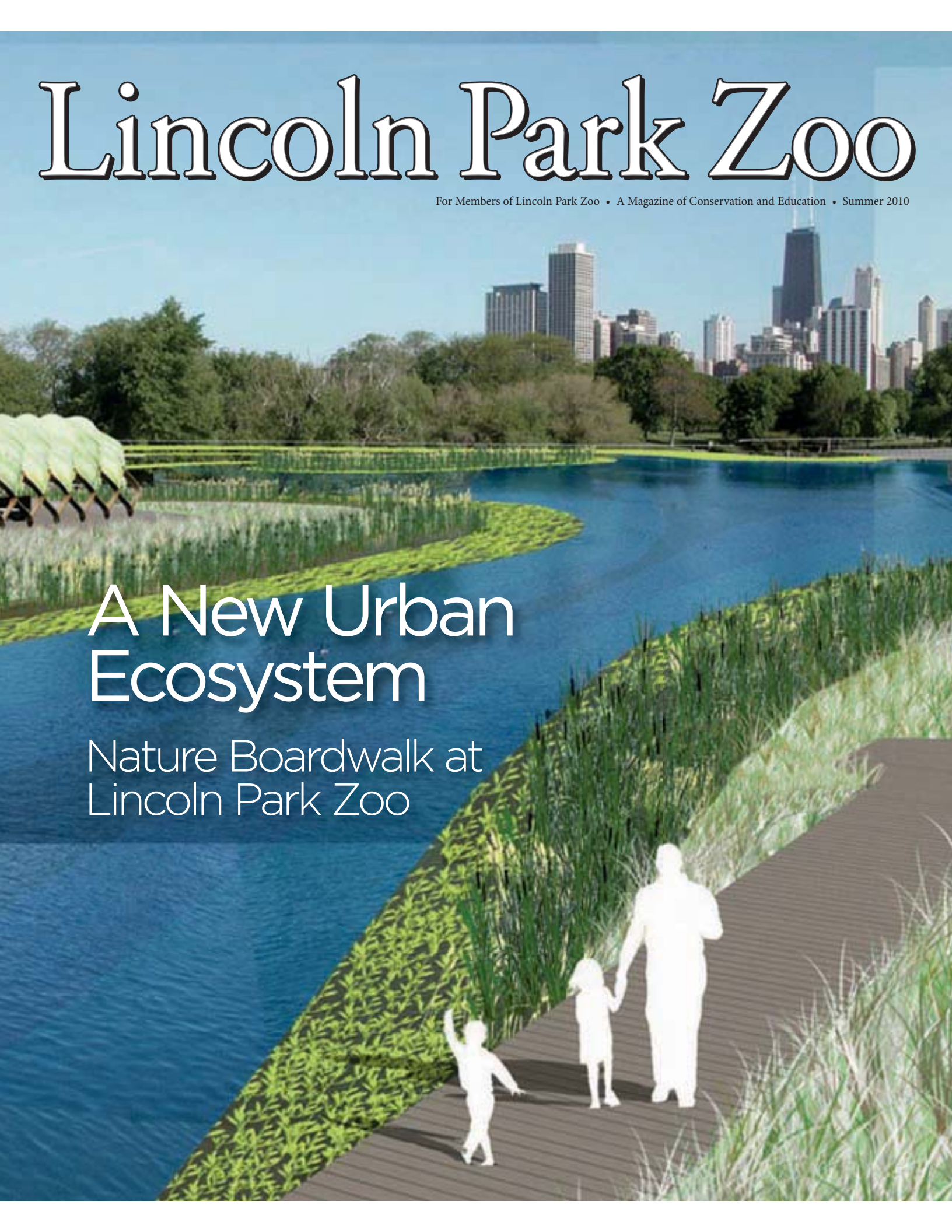


Lincoln Park Zoo

For Members of Lincoln Park Zoo • A Magazine of Conservation and Education • Summer 2010

A New Urban Ecosystem

Nature Boardwalk at
Lincoln Park Zoo

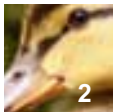


Lincoln Park Zoo

IN THIS ISSUE

Volume 9 Number 1 • For Members of Lincoln Park Zoo

FEATURES



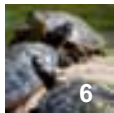
Built to Be Natural

A tour of the new Nature Boardwalk, from shoreline plants to skyscraper views.



A Proud History

Lincoln Park Zoo and the South Pond share a history that spans swans, cemeteries and decades of family fun.



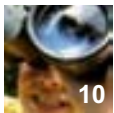
Pond Profile

Learn about the birds, frogs, fish, turtles and insects that will make their homes in this new urban ecosystem.



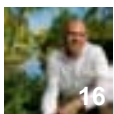
Designing Nature

The pond's planners weigh in on building a natural ecosystem.



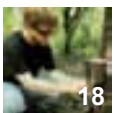
Lessons at a Wet, Wild Classroom

Feathered Friends, Fishy Fun—see what you can learn at the city's newest outdoor classroom!



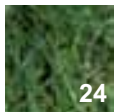
Taking Root in Chicago

Lincoln Park Zoo's first director of horticulture is growing the rich legacy of the zoo's gardens.



An Urban Ecosystem?

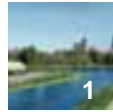
Mapping local wildlife is the first step in a plan to minimize conflict between the natural ecosystem and urban development.



Reptile Recovery

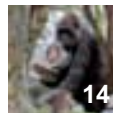
Zoo scientists are tipping the scales toward recovery for reptiles throughout northeastern Illinois.

DEPARTMENTS



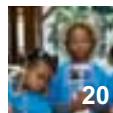
Perspective

Nature Boardwalk at Lincoln Park Zoo represents a historic vision for sustainability and urban conservation.



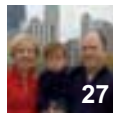
The Wild File

A silverback celebration, red wolves return to the wild, a splash of color at the Helen Brach Primate House and new digs for rhinos.



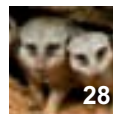
News of the Zoo

A Science Celebration, Nature Boardwalk in bloom, updates from Africa and honors for Lincoln Park Zoo magazine.



Your Story

Readers share their perfect pose from Nature Boardwalk's Lester E. Fisher Bridge.



Continue the Conversation

Plan your visit, find slideshows and movies, and increase your support for the zoo's mission of conservation and care.

Continue Your Visit Online

Visit www.lpzoo.org for Lincoln Park Zoo photos, videos and up-to-date info on events and animals. You can also find us on Facebook and Twitter!

We'd Like to Hear from You!

Send your feedback on this issue of Lincoln Park Zoo magazine to magazine@lpzoo.org.

QUESTIONS?

Contact the Membership Department. Staff are on hand during normal business hours—phone 312-742-2322 or visit us online at www.lpzoo.org.

LINCOLN PARK ZOO MAGAZINE

President and CEO
Kevin J. Bell

Editor
James Seidler

Art Director
Peggy Martin

Staff Writer
Chris McNamara

Lincoln Park Zoo, 2001 North Clark Street, Chicago, IL 60614, 312-742-2000, www.lpzoo.org. Lincoln Park Zoo is supported through a public/private partnership between the Chicago Park District and The Lincoln Park Zoological Society. The only privately managed free zoo in the country, Lincoln Park Zoo relies on membership, individual, foundation and corporate support as well as earned revenue.





perspective

A Letter From President and CEO Kevin J. Bell

A Model Ecosystem

Stretching back to its founding vision, Chicago has been a city of gardens. As the centennial celebration of Daniel Burnham's great plan for the city makes clear, green space is a cornerstone of the Chicago legacy.



This love for nature can be seen in the untouched expanse of the city's lakeshore. It exists in Chicago's parks—green havens stretching from the city's core to its furthest reaches. It is central to the lives of residents and visitors who stroll the living landscapes of the Museum Campus, relax on the grass in Millennium Park and

refresh themselves in the urban gardens of Lincoln Park Zoo.

With the unveiling of Nature Boardwalk at Lincoln Park Zoo, the zoo is offering a historic advancement to the city's legacy of gardens. The transformed South Pond will be more than just an open space for rest and reflection. It will be a new urban ecosystem, a living pond in the heart of the city.

Nature Boardwalk will be a natural space in the shadow of skyscrapers: a home for birds, fish, frogs, turtles, insects, mammals and countless visitors who will experience first-hand the richness of nature.

By integrating a natural setting into the heart of the city, Lincoln Park Zoo is providing cities around the world a new model for sustainable living. This new vision complements our ambitious urban conservation program, which aims to develop scientific standards to enable the coexistence of natural ecosystems and urban development.

As you'll read in this issue, the new Nature Boardwalk will serve as a living laboratory, outdoor classroom and urban ecosystem. Beyond that, it exemplifies the city's vision for a conservation campus where Lincoln Park community groups and cultural and educational institutions will collaborate to explore how this unique urban area can provide more opportunities for people to experience and enjoy nature.

Enjoy your introduction to the zoo's historic urban ecosystem. After you've finished reading, be sure to experience it for yourself.

A handwritten signature in black ink that reads "Kevin J. Bell".

Kevin J. Bell
President and CEO

Built to Be Natural

A DECADE. It seems like a long time to plan something, but considering the South Pond has been nestled within Lincoln Park since 1876, and its new incarnation—Nature Boardwalk at Lincoln Park Zoo—will host wildlife and visitors for generations to come, a decade of planning begins to seem appropriate.

Nature Boardwalk was an idea in planners' heads and a dream sketched on blueprints for a long time before construction got underway. And even then, as the pond was drained and crews began the physical transformation, the process seemed as slow as, well, a turtle circling a pond.

But over the winter in 2009 and 2010, the shape of the new habitat was carved out of the old South Pond. Then workers began installing the posts and planks that would become the boardwalk, and the mind's eye could better envision what was coming.

Then the Patio at Café Brauer was built. And the handrails were installed along the boardwalk. And one day in early May, as crews continued to work, a bird paddled through a puddle that had formed in the northern end of the pond basin and—as if it were immediate—Nature Boardwalk seemed real. It seemed tangible, ready to be explored by visitors both human and animal.

But we'd have to wait, still. The opening wasn't scheduled for another month.

Finally, in late June, Nature Boardwalk at Lincoln Park Zoo officially opened. And it was worth the wait.

"The landscape of this newly naturalized oasis in the heart of the city has been completely transformed," says Kevin Bell, President and CEO of Lincoln Park Zoo. "The new environment provides a haven of native trees and plants for local wildlife and will offer unique opportunities for visitors to engage and connect with the natural world like never before."

You'll read elsewhere in this magazine about the bluegill and bass that populate the water, the black-crowned night herons that enliven the sky and the still-maturing golden rod and purple coneflowers that beautify the grounds.

Those wild elements are complemented by the work of human hands. About a half-mile of boardwalk (crafted from earth-friendly recycled materials) surrounds the body of water, giving the public maximum access to enjoy the serene environment.

At the north end of the stroll is historic Café Brauer. This landmark building's beautiful interior remains unchanged, but its exterior has been updated with the Patio (top, right), an outdoor destination for drinks and dining that welcomes crowds to sip cocktails while soaking up the scenery.

Part of that scenery is the Peoples Gas Education Pavilion, inspired by the shape of a turtle's shell, and the Lester E. Fisher Bridge. While this crossing was repaired, and the underside was retrofitted with slats to prompt nest making by swallows, the view of Chicago's skyline from atop the bridge remains unchanged. It's still breathtaking, and now the view is aided by the ArcelorMittal skyline interpretive, which informs visitors about the buildings they're admiring.

When your eyes move from the skyscrapers in the distance down to the surrounding natural habitat, the changes are drastic—simultaneously natural and constructed and welcoming to all that walk, wing or wade.

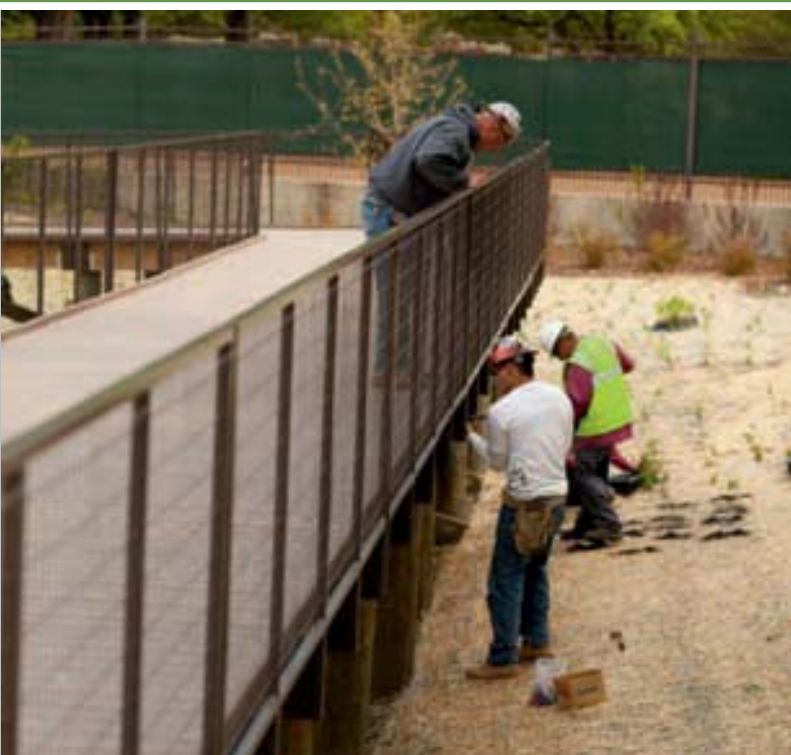


Return to Nature

While the South Pond had been a place of relaxation for more than a century, it was far from a natural refuge. It housed stocked fish and whatever aquatic residents people had dumped in it over the years. It wasn't deep enough to properly support wildlife. The water quality was poor. And the asphalt sidewalk that ringed it didn't exactly scream "natural."

But all that has changed. A host of Lincoln Park Zoo scientists teamed with construction crews and environmental engineers to develop Nature Boardwalk, with a focus on making the habitat not only ideal for native species of animals and plants, but also to serve as an advertisement, of sorts, for the zoo's commitment to sustainable practices.

"It was important to not only naturalize this area, but also to create a self-sustaining ecosystem with this rehabilitation," says Senior Vice President for Conservation Programs Steve Thompson, Ph.D. "We've accomplished that. Now, the exciting part is watching how all of these natural elements—from plants to fish to birds to bugs—take hold."





Beyond the Boardwalk

Eyes will be drawn to Nature Boardwalk at Lincoln Park Zoo this summer. And rightfully so. But just like every other summer, there are countless wild, wonderful things to see and do at the rest of the zoo.

The Francois' langur born at the Helen Brach Primate House in mid-March continues to wow visitors with its orange coat (top, left), which contrasts elders' black coats. (We're still using a gender-neutral pronoun for the little one, as its sex has yet to be determined.)

The rhino exhibit at the north end of Regenstein African Journey is inhabited by three of the massive mammals, which in warmer months wallow in the mud hole and paint their gray coats a color that befits their name—black rhinoceros.

Hatchlings are appearing all over the zoo. European white storks and a cinereous vulture chick graced Regenstein Birds of Prey Exhibit in May, while hooded mergansers hatched at the Waterfowl Lagoon and a sunbittern chick enlivened the McCormick Bird House.

Over at the Pritzker Family Children's Zoo, the red wolves that were born in April are scampering through their exhibit (top, center), exhibiting the same vigor of youth displayed by the knee-high guests that marvel at them.

The seals are again swimming in their exhibit, after a brief off-exhibit period during a rehab of their rocky home. The red pandas at the Kovler Lion House continue to elicit gushing from guests. Few animals at the zoo are as cute as this pair.

And down at the Farm-in-the-Zoo Presented by John Deere—amid the blooming gardens and ripening vegetables (below)—the cows, ponies (top, right) and Jacob sheep serve not only as ambassadors of farm life, but also as guides to some fantastic views of the new Nature Boardwalk.



A Proud History

The shared history of Lincoln Park Zoo and the South Pond stretches back to the era of the zoo's founding in 1868. Ponds in Lincoln Park provided homes for the zoo's inaugural gift: a pair of swans from New York City's Central Park. The South Pond filled this same role after its construction in 1876.

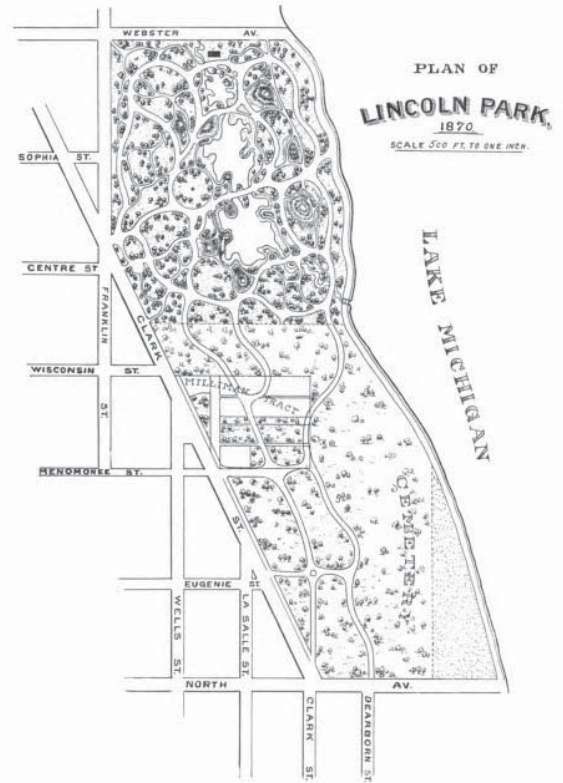
The zoo and the pond were built on a landscape in transition. From 1843–1866 the area surrounding the pond had served as City Cemetery, providing a resting place for more than 30,000 people. In the late 1850s, however, public-health advocates began to question the wisdom of having a cemetery next to Lake Michigan, the city's water supply. Burials stopped in 1866, and many of the "residents" were moved in following years. (Not all made the trip, though; a skeleton was unearthed during the construction of the Farm-in-the-Zoo's Main Barn in 1962.)

A park was a more-appealing prospect for the land, and the state of Illinois soon created the Lincoln Park Commission to provide green space to a growing city. Park planner Swain Nelson and landscape architects Olaf Benson and J.G. Gindele proposed green walkways and artificial ponds. These ideas became a reality by the end of the 19th century, joining the zoo with the park that surrounds it to this day.

Lincoln Park Zoo and the South Pond have continued to grow from these humble roots. Both sites have become beloved destinations for generations of Chicago visitors. Lincoln Park Zoo has introduced millions of guests to the wonders of wildlife while the South Pond has provided space for boating, ice-skating and outdoor explorations.

The creation of Nature Boardwalk at Lincoln Park Zoo reflects the next step in the pond's evolution, one that matches the zoo's transition from a place of recreation to today's home for conservation, science and education. As the transformed ecosystem welcomes native species and eager students, it will build a proud past into an even-brighter future.

This 1870 Lincoln Park plan laid out a map for generations of fun, including skating, boating and simple relaxation.



Pond Profile

BY JAMES SEIDLER

DRAGONFLIES PERCH on shoreline plants as minnows find shelter among their watery roots. Wood ducks paddle in search of meals next to water striders walking the pond's surface. Largemouth bass prowl beneath the water while black-crowned night herons wheel overhead. Rabbits scrape dens in the prairie grass, and American toads call from unseen homes.

These scenes and more are part of the living ecosystem on display at Nature Boardwalk at Lincoln Park Zoo. By re-engineering the South Pond to provide natural shorelines and welcoming depths, the zoo has laid the foundation for a new urban ecosystem. Some species have flown, crawled or hopped to this new refuge. Others have been introduced to fill watery niches that might otherwise remain unoccupied.

But from shores to depths, surface to sky, Nature Boardwalk at Lincoln Park Zoo is a living place, one that will amaze visitors as it continues to grow, adapt and change. Here's an introduction to some of the life you'll find in this urban oasis.



Above: Dragonflies will buzz the pond's waters. Opposite, clockwise from top-left: Red-eared sliders, bluegill, ducklings and switchgrass will enliven Nature Boardwalk at Lincoln Park Zoo.



Taking the Plunge

The South Pond sits at the heart of Nature Boardwalk, and the pond's waters are central to the surrounding ecosystem. Dredged and deepened during the renovation, the pond provides a year-round haven for a range of aquatic wildlife.

Swimming at the top of the pyramid are largemouth bass. These aptly named fish are the pond's top predators, using their big maws to feed on fish and invertebrates. Native to the region, these scaled carnivores can reach up to two feet in length.

Their healthy appetites provide a vital ecosystem service: "Without a larger predator to keep them in check, the smaller fish can overpopulate," says Coordinator of Wildlife Management

Vicky Hunt. "That leads to stunted growth and increased disease risk, which isn't healthy for the pond."

The fish whose populations are kept in check include bluegill, pumpkinseed and fathead minnows. Bluegill, the Illinois state fish, occupy deep water in schools of 10–20 individuals. In contrast to the bass above them on the pyramid, bluegill have small mouths well adapted to feeding on plankton, insects and smaller fish.

Brilliantly patterned pumpkinseed specialize in eating slugs and snails. They can often be found in shallow water, nosing the plants that house their slimy prey. Fathead minnows also stick to the shallows. Topping out at 4 inches in length, they feed on algae and mosquito larvae, a role that should make them popular with evening visitors to the Patio at Café Brauer.





Left-to-right: Nature Boardwalk should play home to water striders, knotting onion and wood ducks.

Standing at the Shoreline

While the pond provides a home for fish and other wildlife, the surrounding shoreline is key to Nature Boardwalk's living ecosystem. Green, sloping banks provide a natural path into the water, one that is easily navigated by painted turtles, American toads and wood ducks.

These living shorelines are anchored by a variety of pond plants. Sedges and bulrushes grow where water meets land; lilies and lotuses bloom on floating islands. Their root systems hold the soil together, preventing erosion while naturally filtering sediment from the water.

The plants also provide shelter for shoreline animals. Green darner dragonflies land and alight, using delicate iridescent wings to maneuver in search of insect prey. Aquatic snails and tumbling water boatmen feed on leaves and aquatic debris.

Walking on Water

The pond surface provides a home to one species specially suited to life at the margins. Water striders can literally walk on water, hunting the insects and small animals that live along the surface.

How do they do it? Long legs help these small insects distribute their weight evenly over the water's surface. They stay afloat through a combination of natural surface tension and air bubbles trapped by tiny hairs on their feet. They even have body hairs that trap air, helping them to breathe—and float back to the top—if they fall into the water.

At the water's edge, you can spot water striders by the shadows they make as they skim the surface. It's easy to lose track of time while following their quick bursts, marveling at their ability to straddle two worlds.

Life on Land

While water and shore provide the centerpiece for Nature Boardwalk at Lincoln Park Zoo, there's plenty of life on land surrounding it. Northern cardinals and black-crowned night herons fly overhead, making their distinctive calls. Eastern gray squirrels

chatter from leafy penthouses, and eastern cottontail rabbits enjoy cautious nibbles of the lush greenery.

A native prairie landscape provides a healthy home for these species and many others. More than 100 new trees—hawthorns, birch, oaks, serviceberry and more—provide shade, food and spots to nest. Switchgrass, milkweed, golden rod, sunflowers and purple coneflowers are scattered across the landscape's 14 acres. Their blooms will sustain bees and butterflies, even as their leaves shelter birds and small mammals.

Some changes were made with specific species in mind. The underside of the Lester E. Fisher Bridge has been equipped with special vertical slats to anchor the mud-and-grass nests of barn swallows. By contrast, the island on the pond's south side was left largely untouched during construction to preserve it as a haven for the colony of endangered black-crowned night herons that live at the pond (see page 17).

These birds aren't the only ones expected to make their homes at Nature Boardwalk. Birdwatchers can expect to spot red-winged blackbirds, black-capped chickadees, mallards, wood ducks, ring-billed gulls, house sparrows, American crows, Canada geese, red-breasted mergansers, downy woodpeckers, Cooper's hawks and great horned owls. Many other birds will migrate through, using Nature Boardwalk as a stopping point to rest and refuel.

An Urban Oasis

By transforming the South Pond into a natural ecosystem, Lincoln Park Zoo has put out a welcome mat for native wildlife. Some of the residents are already known, but others will be welcome surprises, adding to the richness of this living ecosystem.

"With Nature Boardwalk, we've created a place where the wildlife experience can be integrated into our education programs as well as our ongoing work with urban wildlife and conservation," says Senior Vice President for Conservation Programs Steve Thompson, Ph.D. "It's everything we're trying to do, all in one natural setting."



Designing Nature

While the birds shaping their nests at Nature Boardwalk don't need plans for their work, the ecosystem that surrounds them was built from careful blueprints. Nature Boardwalk at Lincoln Park Zoo was designed by Chicago-based Studio Gang Architects. As founder Jeanne Gang explains, the architectural vision matched the zoo's desire to establish a natural ecosystem in the heart of the city. "Nature Boardwalk reconnects city dwellers to nature; the revitalized pond and its wetland environment dramatically juxtapose natural and urban surroundings," says the architect.

Elements of the natural ecosystem can be seen throughout Nature Boardwalk. The wood and fiberglass shell of the Peoples Gas Education Pavilion is designed to resemble a turtle's scutes. Vertical slats beneath the Lester E. Fisher Bridge provide an anchor for swallows to build their nests.

The green landscape was also enhanced by the sustainability embedded within its design. Every plank of the boardwalk path was crafted from recycled material. Fill from construction was re-used whenever possible, cutting down on the environmental footprint associated with transporting it. And of course, the self-sustaining ecosystem—shaped by Studio Gang collaborators Christopher B. Burke Engineering, Shaw Environmental & Infrastructure, WRD Environmental and Pepper Construction—reflects the ultimate green achievement.

The environmental benefits will be lasting. As Gang explains, "Overall, the design of the rehabilitated South Pond will require less maintenance than typical urban parks since the South Pond's renewed environment will naturally weather and change season to season. This reduces typical energy costs and consumption expended to water plants, cut grass and fertilize lawns."

As a living ecosystem, Nature Boardwalk will grow and change with the seasons. It will be exciting to see how nature builds on this careful foundation.

BY CHRIS MCNAMARA

Lessons at a Wet, Wild Classroom

IN ADDITION TO being home to a spectrum of native species, a destination for nature lovers and a spot for recreation that offers one of the best views of Chicago's skyline, Nature Boardwalk at Lincoln Park Zoo will also serve as a living classroom.

Each day along the boardwalk, pond naturalists will be on hand to engage visitors with a number of new, walk-up programs that require no registration.



Feathered Friends (daily at 9 a.m.) will focus on the winged residents at Nature Boardwalk, both the permanent species and those just stopping by. Exploring the Ecosystem (daily at 10 a.m. and 1 p.m.) will educate guests on the entire habitat—how plants, animals and water are interdependent. Fishy Fun (daily at 3 p.m.), of course, will look beneath the surface to shed light on the scaled residents of Nature Boardwalk. And Before & After (daily at 11 a.m. and 2 p.m.) will provide a brief history lesson on this area's storied past and exciting future.

In July, members of the Malott Family Zoo Intern Program will staff an interpretive station they've created that focuses on wildlife surveys and habitat usage. "The exciting thing is that, since this is all so new, these interns will have a hand in developing programming under the guidance of zoo educators," says Manager of Student and Teacher Programs Katie Murray.

Nature Boardwalk also hosts a number of public programs that invite everyone to participate. Sleep Under the Skyscrapers is a new initiative that enables attendees to experience Lincoln Park Zoo as a campsite. On July 16 and 17 and August 6 and 7, families will spend the early evening hiking around Nature Boardwalk and exploring the wildlife that inhabits it before bunking down to sleep in tents on the South Lawn. They will awaken to the sound of birds (and perhaps a lion's roar).

Also new this year is Yoga at the Zoo, which since early June has invited the limber-bodied to exercise on the zoo's Main Mall and (once the area can accommodate it) Nature Boardwalk. Then on September 18, Urban Wildlife Exploration will prompt pint-sized participants to find out what it takes to be a big-city biologist, highlighting Lincoln Park Zoo's efforts to protect wildlife native to this region.

Finally, Nature Boardwalk will host programs designed to enlighten educators, who will then pass this knowledge on to their pupils. On August 10 and 11, Chicagoland teachers will learn how to conduct standards-based science activities for their students and design field trips that best utilize this new habitat. In these two-day sessions, teachers will also conduct ecological surveys to prepare themselves to introduce Nature Boardwalk to their classes.

In addition to its other uses, Nature Boardwalk truly is a living classroom. And between the giggling students, the singing birds, the splashing fish and the buzzing bugs, it's sure to be one of the noisiest classrooms in the city.



Singing Back to the Birds

The students at Matteson, Illinois' Sieden Prairie Elementary School are so excited about Nature Boardwalk at Lincoln Park Zoo that they wrote a song about it. As part of their work with the Young Researchers Collaborative program, which introduces wee ones to the world of zoo science, these second graders wrote and recorded a tune titled "My Pond."

A sample of the lyrics:

*Stop! Take a listen to the sounds of the pond.
The frogs on the lily pads, singing their song!
The crickets are a-chirping in the grass so tall.
The ducks, they are quacking and having a ball.*

"Writing a song is another way to approach an educational experience," says Karen Meaney, who teaches this second grade class along with Sharice Johnson. "We can take all the things we do in science and make it fun."

The youngsters performed the song at the grand opening of Nature Boardwalk.

"We're thrilled these students sang at the grand opening," says Erika Kohler, senior director of guest services. "Their song highlighted the myriad ways that Nature Boardwalk can inspire visitors to learn about and love nature."





Today at the Zoo

PROGRAMMING at Nature Boardwalk is new and exciting. But other areas of the zoo continue to host educational programs that illuminate minds of all ages. Here's a peek at some of what's happening this summer:

***FEED THE COWS** provides visitors the opportunity to feed hay to the zoo's friendly Holsteins. Daily at 10:30 a.m. and 1:30 p.m. at the Farm-in-the-Zoo Presented by John Deere.

***SEAL TRAINING AND FEEDING** offers visitors the chance to witness how keepers invite the seals to take part in their daily care. Daily at 10:30 a.m. and 2 p.m. at the Kovler Sea Lion Pool.

***SAVING THE SERENGETI** welcomes visitors to learn about the role of African wild dogs in Africa's signature ecosystem. 10 a.m. daily at south end of Regenstein African Journey.

***MEET AN ANIMAL** encourages guests to get up-close to a zoo critter and connect with the natural world. 11 a.m. daily in Regenstein Small Mammal-Reptile House.

***RED WOLVES HOWLING BACK** invites wolf fans to discover how the zoo is bringing this species back from the brink of extinction. 1 p.m. daily at the Pritzker Family Children's Zoo.

***NEW DIGS FOR RHINOS** invites visitors to the newly rehabbed rhino exhibit on the north end of Regenstein African Journey to learn about Lincoln Park Zoo's role in rhino conservation. 2:30 p.m. daily.



field note

American Toad *Bufo americanus*

When approached by a predator, such as a snake or skunk, the American toad will employ a less-than-dignified form of defense. It will urinate on itself. Scientists believe this makes the toad a less-appealing meal, prompting the predators to search for a better bite.

American toads can also secrete a toxic, milky substance from their skin that thwarts would-be diners. And if all else fails—if the hunter is not dissuaded by the urine or the toxic ooze—and the toad finds itself in the choppers of a predator, it can inflate its body to prevent being swallowed.

These self-defense methods may not be heroic, but they're effective. American toads are ubiquitous across the eastern half of the United States and Canada, residing in farms, forests and backyards that contain enough moisture to keep their warty flesh wet.

Naturally, they'll be found at Nature Boardwalk at Lincoln Park Zoo, too, where they'll have to evade predatory birds and rodents.

But American toads aren't always the ones being hunted. These amphibians employ their long, sticky tongues like lassos to snare insects.

They also get nutrients by devouring the skin they occasionally shed, an act that—if viewed by potential predators—might be as off-putting as the urine or the toxic ooze.



wild file



Left-to-right: While the birthday party at Regenstein Center for African Apes was primarily for silverback JoJo's 30th, other gorillas enjoyed the cardboard treats stuffed with fruits and veggies. The four red wolf pups that stayed in Chicago began exploring their yard in May, though they rarely strayed far from mom and dad.

Birthday Bash

JoJo's gorilla group enjoyed a special celebration to mark some milestone birthdays at Regenstein Center for African Apes. To celebrate the silverback's 30th "golden" birthday (as well as female troopmate Tabibu turning 18), keepers stocked the outdoor area with fresh leaves, lettuce and other green goodies.

The healthful treats were presented in a vibrant collection of paper-mache presents, cupcakes and ice cream cones. Two three-tiered cardboard cakes were stuffed with snacks to mark the occasion: one announced, "Happy Birthday JoJo!" and the other extended birthday wishes to Tabibu. All the favors were created by the zoo's Volunteer Enrichment Group, supporters who lend their time to make specialized enrichment for the zoo's animals.

"Thirty is a nice milestone to celebrate," says Curator of Primates Maureen Leahy. Because of their hefty sizes, silverback western lowland gorillas can experience cardiac issues as they age. To help safeguard his health, JoJo has been on a diet and exercise regimen as part of his daily conditioning program. Animal care staff use positive reinforcement to encourage a range of movements, which have helped the silverback to shed more than 60 pounds from his now 484-pound frame. (Lincoln Park Zoo veterinary staff, with support from Chicago cardiologists, also monitor his heart health with cardiac ultrasounds during bi-annual physicals.)

Even at his lighter size, JoJo was still late for his own party. The females and youngsters of the group beat him outside, getting first crack at the tasty treats. As a sizable crowd watched, female Bahati made the most of the festivities, gathering up both "cakes" to hoard the snacks inside.

JoJo eventually made his own appearance, slowly exploring the scene and feeding on the fresh food. It was a worthy celebration. "Zoo animals are living longer, healthier lives thanks to expert veterinary care," says Vice President of Animal Care Megan Ross, Ph.D. "JoJo's birthday highlights these successes."

Reintroducing Red Wolves

The red wolf pair at the Pritzker Family Children's Zoo produced pups in mid-April, boosting the population of this critically endangered species. The female gave birth to six pups in her off-exhibit den. These tiny new arrivals brought the total number of red wolves born at Lincoln Park Zoo since 2007 to 17.

Beyond increasing the population managed by the Red Wolf Species Survival Plan®, these pups also expanded the wild red wolf population. Two of the new arrivals were "fostered" to wild dens in North Carolina as part of the Red Wolf Recovery Program, a joint effort with the U.S. Fish and Wildlife Service.

The recovery program places newly born pups into wild dens with litters of similar ages. The wild mothers care for the pups as their own, boosting this endangered population.

All wild red wolves descend from a recovery program established in 1973, shortly before the species was declared extinct in the wild due to habitat loss and overhunting. Reintroductions to North Carolina's Alligator River National Wildlife Refuge began in 1987, and there are now more than 100 red wolves roaming across five counties in the state.

The two pups fostered this year follow the paw prints of four siblings introduced to wild dens in 2009. "It was incredible,"



Left-to-right: Like all newborn Francois' langurs, this one born in March provided colorful contrast to mom's dark fur. The female rhino in the new exhibit at Regenstein African Journey is still too young (and too small) to be introduced to the males, but the trio still finds ways to get close.

says Assistant Lead Keeper Erin Hennessy, who transplanted the pups to their new home. “Waiting for them to be born, spending a few weeks with them and watching them go to the wild—it was a once-in-a-lifetime experience.”

A Splash of Color

The Francois' langur group in the Helen Brach Primate House was made livelier with a March birth. In addition to adding a seventh member to the primate group, the new arrival added a splash of color as well. Newly born Francois' langurs are bright orange, a contrast to the black-and-white markings of adults.

This bold coloration is thought to encourage alloparenting, or caregiving on the part of non-mothers. The two non-breeding females in the group have had plenty of practice lending a hand. This year's new arrival marked the third offspring in three years for the zoo's breeding pair.

Native to China, Vietnam and Laos, Francois' langurs are critically endangered due to habitat loss and medicinal poaching. At the zoo, Primate House Keeper Bonnie Jacobs aids the species' recovery by managing the studbook for the Francois' Langur Species Survival Plan®. This collaborative program works with zoos throughout the country to make the best breeding matches for the species' long-term health.

The gender of the newest arrival has yet to be determined, but animal care staff are hoping for a female. The population needs females to further its recovery—one that's looking brighter with each new arrival.

Rhino Ready

The zoo's black rhinos are enjoying their first season of full occupancy at the Harris Family Foundation Black Rhinoceros Exhibit. All three yards are now occupied by the massive mammals.

Rhinos are typically solitary in the wild, so the two males and one female are separated by barriers as they wallow in mud baths and munch sizable snacks of alfafa and hay. The new digs were built to encourage breeding, though. Two movable walls in the northern exhibit convert split housing to a shared space—all part of a breeding recommendation from the Black Rhinoceros Species Survival Plan®.

The breeding schedule is still tentative, as animal care staff want to ensure the 4-year-old female is fully mature before meeting her mate. They've teamed with the zoo's Davee Center for Epidemiology and Endocrinology to receive scientific assistance on that front. Fecal samples are regularly collected and analyzed in the zoo's endocrinology lab. The resulting data tracks reproductive hormone levels over time, pinpointing the perfect time for introduction.

In the meantime, though, the animal-care professionals are content to see the female pack on the pounds. Even tipping the scales at over a ton, she underweighs her potential partner by 500 pounds. But they seem compatible, which has Curator of Mammals Dave Bernier hopeful for the eventual introduction.

“They'll lay next to each other on each side of the wall,” he says. “We believe that's a good sign of compatibility.”

Taking Root in Chicago

BY CHRIS MCNAMARA

WHILE SOME NATIVES of southern California would bemoan Chicago's weather, Brian Houck views our climatological extremes as a professional challenge. That helps explain why the product of the San Fernando Valley transplanted to the Windy City in 2006 and signed on as Lincoln Park Zoo's director of horticulture in March of this year. Thumbs stay green, even underneath mittens.



He's contributing to the planning process at Nature Boardwalk, helping develop the horticulture roster that includes (among other native plants) plenty of switchgrass, a species that has the potential to be used as a bio-fuel.

"Brian brings incredible focus and energy to the garden of the zoo," says John Fornengo, a member of Lincoln Park Zoo's Board of Directors and the Board's Gardens Committee, in addition to being a green thumb himself. "He has practical ideas about what we need to do now, but he's also creative in his vision of what we could do in the future."

For now, Houck is deepening his roots at Lincoln Park Zoo while admiring the garden he's charged with overseeing. He likes the irises that flower in May near the east side of the Antelope & Zebra Area. And then there's the collection of blooming

"I came to Chicago to be around the seasons," explains Houck, who served three years as a floriculturist at the Garfield Park and Lincoln Park Conservatories before joining the zoo staff. "I am interested in working with the Board of Directors' Gardens Committee to redefine the vision for the grounds."

His vision entails managing the vegetation at the zoo with the same methods that animal-care staff use to manage the flesh-and-blood creatures—long-term plans, a scientific approach to the grounds as a whole entity. "This can be more than just a nice landscape," he says. "It can be a thoughtful, carefully planned garden."

Houck stresses that Lincoln Park Zoo currently serves as a public garden, offering a counterpoint to the urban life that surrounds the grounds. "This is a place for renewal. A place to remind people that nature exists or, in some cases, to introduce them to nature. We are the first garden that a lot of people experience, so we have the opportunity to shape their impression of what a garden can be. And that is very exciting."

In that respect, one of the director's first initiatives is labeling each species on zoo grounds, enabling curious visitors to be able to learn about the flowers and plants they're admiring.

red buds near the Foreman Pavilion.

But when asked to name his favorite plant at the zoo, Houck pauses for a few seconds before admitting that he can't play favorites. "It changes on a weekly basis," he says.

One of the things he's sure about is the potential for the grounds when they're blanketed by snow. "We have an opportunity to develop a winter garden," Houck enthuses. "We can use formal elements and elements left over from the fall. Winter is a time when you can see the structure of a garden very nicely."

Spoken like a true (if transplanted) Chicagoan.



field note

Black-crowned Night Heron *Nycticorax nycticorax*

If you look carefully at the island on the south side of Nature Boardwalk, you might spot a stocky gray-and-black form perched in the branches. Then another. And another. The silhouettes multiply as you scan the trees. They're sitting on nests, tending to young, with a population density that seems to mirror the lively city around them.

The birds are black-crowned night herons. They're endangered in Illinois. And to the delight of zoo conservationists, a colony of them have made their homes right here at Nature Boardwalk.

The flying predators were first spotted nesting at the South Pond in 2006. Since then, their numbers have increased every year—a welcome development for an endangered species conventionally thought to be wary of human presence.

“They don't seem to be bothered by the presence of people, loud noises such as sirens or any of the other ‘sounds of the city’ that residents might hear from an open window here in Lincoln Park,” says Senior Vice President for Conservation Programs Steve Thompson, Ph.D. “They weren't even disturbed when President Obama's helicopters landed on the nearby softball fields.”

Still, to avoid disturbing this rare refuge, Nature Boardwalk construction was planned around the herons' migratory season. All major construction was held in reserve until the new nestlings took to the air. The trees on the island were left untouched to ensure the birds' return.

And return they did, coming back to Nature Boardwalk in April. Males established breeding territories, attracting females with snapping bills and bobbing heads. Once wooed, each female helped build a nest with twigs gathered by the male.

Both genders trade off incubating the eggs, with the non-sitter searching for food at night. The species feeds primarily on fish, but they will also eat insects, amphibians, small birds and other animals they come across.

Eggs hatch after about 25 days, leaving three–five nestmates who mature for six–seven weeks before migrating away. Many will return the next spring, boosting the numbers of this endangered species and amazing more visitors to Nature Boardwalk at Lincoln Park Zoo.



An Urban Ecosystem?

BY JAMES SEIDLER

WHEN WE PONDER nature, we often picture settings far removed from human influence. The plains of the Serengeti. The lush canopies of the Brazilian rain forest. Preserves and sanctuaries, places free from buildings, roads and the other infrastructure of modern life.

It seems contradictory, then, to talk about urban ecosystems. But even as we think of nature as existing apart from people, urban areas are home to their own ecosystems. Plants, insects, birds and mammals make their homes in the midst of cities, establishing their own niches to survive.

Occasionally natural ecosystems and urban development come into conflict. New housing developments consume native habitat. Coyotes are accused of attacking pets. A cougar prowls a neighborhood's backyards. The results can be tragic for people and wildlife alike.

Lincoln Park Zoo scientists have embarked on an ambitious project to reduce conflict between people and wildlife. Scientists with the zoo's Urban Wildlife Institute, which was created with a generous gift from the Davee Foundation, are in the process of mapping the Chicago ecosystem. By studying how wildlife interacts with people and development, these urban ecologists hope to establish Chicago as a model for other fauna-friendly cities around the globe.

Mapping and Monitoring

If you want to minimize conflict between wildlife and urban development, a key first step is figuring out where wildlife is present. Which animals can be found in urban areas? What are their population sizes? When are they active? Where do they live?

To answer these questions—and provide a foundation for future urban conservation—zoo scientists are creating an ambitious monitoring network. Starting this summer, researchers will begin collecting data along three “transects” originating in downtown Chicago and extending more than 30 miles into the surrounding areas.

These pathways will be lined with camera traps—laser-triggered digital cameras designed to snap a photo of whatever wildlife passes in front of the sensor. Golf courses, forest preserves, parks and cemeteries will be primed. The resulting snapshots will begin to build a larger portrait of Chicago's wildlife.

“The camera traps are the backbone of our biodiversity-monitoring network,” says Urban Wildlife Director Eric Lonsdorf, Ph.D. “They'll let us determine which species we have.”

Wildlife Ecologist Seth Magle, Ph.D., and Urban Wildlife Research Coordinator Allison Willingham began installing the cameras in May. After using landscape data to identify potential camera sites, the scientists hit the road to see the reality on the ground. “We pack up our equipment and wander around, looking for a good spot as close as we can get to our randomized target,” says Magle.

When they find a location that meets their needs—well traveled by wildlife, with a tree to mount the camera and unobscured views of animals—they rig the camera trap to a tree. After ensuring it has a good angle on the action, they place bait in front of it (fatty-acid tablets or sweet scents) and leave the camera to snap away.

Next summer, the project will be expanded to include two more transects, bringing the total data collection network to five 30-mile paths. But that isn't all. The researchers will collaborate with local specialists—and citizen scientists—on bird monitoring. They'll also establish a scientific trap-and-release program, in which they'll equip animals with GPS devices to enable tracking and collect blood and fecal samples for information on population dynamics, wildlife health and diseases such as rabies and West Nile virus.

All this data will help Lonsdorf develop a wildlife-abundance map—a conservation tool that presents the desirability of a landscape from an animal's perspective. “Animals interact with the landscape in several key ways,” he says. “They need food, they need shelter, they need nesting spaces. Mapping these resources can help us better understand what drives biodiversity in the Chicago area. It can also help us weigh in on future land-use plans to avoid conflict with wildlife.”

Lincoln Park Zoo Laboratory

The wildlife monitoring that's being extended across the city reflects efforts already taking place on zoo grounds. Camera traps laid by zoo scientists have captured rabbits, squirrels and even the occasional coyote.

The underlying issues are familiar: Landscapers worry about the zoo's gardens serving as a free buffet. Curators want to protect the collection from wandering predators. “The issues we're dealing



with at the zoo are similar to those being dealt with in the city,” says Lonsdorf. “What’s learned here is applicable elsewhere.”

Nature Boardwalk at Lincoln Park Zoo will offer a unique opportunity for zoo scientists to learn about urban wildlife. Scientists will monitor it from its inception, keeping track of species as they come, go and establish homes.

Coordinator of Wildlife Management Vicky Hunt will oversee a range of monitoring efforts at Nature Boardwalk. Introduced painted turtles will be tracked via radio transmitters attached to their shells. Endangered black-crowned night herons will be tallied during daily binocular counts. Seine surveys will use special “catch and release” nets to keep tabs on the fish swimming through the pond. Camera traps will capture images, and regular surveys will provide additional data on Nature Boardwalk’s biodiversity.

Monitoring work at Nature Boardwalk will also introduce visitors to the importance of urban science. Fish seines, birdwatching

sessions and painted-turtle tracking will all be incorporated into pond education programs. “Nature Boardwalk is a laboratory for work being done in the wild,” says Hunt. “We want to share it with as many people as possible.”

A World of Conservation

The emphasis on urban conservation gives the zoo’s science programs a global scope, one that extends from Nature Boardwalk to Africa and South America. From local roots to far-flung branches, these efforts share the common interest of increasing understanding to better protect wild ecosystems.

“This is probably the most-comprehensive urban-monitoring program that’s been established,” says Lonsdorf. “The data we collect should provide long-term solutions that benefit animals and development alike.”

Above: Urban Wildlife Institute scientists Allison Willingham and Seth Magle, Ph.D., are installing camera traps to monitor wildlife in the Chicago region. Below: Raccoons and coyotes are among the animals spotted. Data from the project will help researchers develop standards to minimize conflict between local wildlife and urban development.



news of the zoo



Left-to-right: New Associate Veterinarian Kristi Delaski, D.V.M., poses with a patient. Safari scientists pose with pride at the Science Celebration, and older students display their study of chimpanzees.

New Associate Veterinarian

This summer Kristi Delaski, D.V.M., joined the zoo as the associate veterinarian. A graduate of Tufts University College of Veterinary Medicine, Delaski practiced for a year in small-animal medicine before joining the veterinary staff at the Cincinnati Zoo in their two-year internship program in zoo medicine.

“Dr. Delaski will be immediately busy as a clinical veterinarian” says Director of Veterinary Services Kathryn Gamble, D.V.M. “But we are pleased that she is already planning to actively participate in Lincoln Park Zoo’s research program to complete her specialization with the American College of Zoological Medicine.”

Eco-Expo and Science Fair

The sixth annual Science Celebration, hosted by the Women’s Board and zoo educators and sponsored by the University of Phoenix, welcomed more than 200 local students, teachers and family members to share original research projects conducted through a new zoo program titled Young Researchers Collaborative.

This program takes place over a full school year and includes a professional-development workshop for educators, several trips to the zoo and several visits from a zoo educator to students’ classrooms. “It’s an opportunity for students to learn more about the process of conservation research by participating in animal-observation studies of their own,” explains Director of Student and Teacher Programs Leah Melber, Ph.D., who notes that the program was made possible through support from the Institute for Museum and Library Services and UBS.

“Science Celebration was the culminating event for the program and served as a showcase for students’ hard work and a

chance to learn more about the work of zoo researchers,” explains Melber. Primatologist Elizabeth Lonsdorf, Ph.D., director of the Lester E. Fisher Center for the Study and Conservation of Apes, presented her own research and joined other zoo staff in visiting with students to learn more about their projects.

Flowers, Macy’s and Lincoln Park Zoo

Decorated windows were made famous at Marshall Field’s. The tradition continued when Macy’s took over in 2005. And in June, Nature Boardwalk at Lincoln Park Zoo was honored with window displays replicating the wildlife and foliage that adorn the new habitat. The Nature Boardwalk windows are scheduled to be in place through July.

To entice visitors to Nature Boardwalk, zoo educators introduced the destination at the Macy’s Flower Show a few months before those decorated windows went into place. In April, floral displays amid the grandeur of Macy’s State Street store provided an approximation of what Nature Boardwalk would be—a green oasis in the shadow of skyscrapers.

From Elephant Peppers to Chicago

Ever hear the one about the chili peppers and the elephants? That sounds like a joke to most, but not Evan Sorley, who in April joined Lincoln Park Zoo as the EcoHealth coordinator for the Davee Center for Epidemiology and Endocrinology.

Though most recently employed by National Wildlife Health in Madison, Wisconsin, where he worked in the Diagnostic Virology Lab assisting avian-influenza surveillance, Sorley has also worked at Kenya’s Mwaluganje Elephant Sanctuary, where he studied the



Left-to-right: EcoHealth Coordinator Evan Sorley. Couples dined and danced the night away at the Auxiliary Board's Mid-Winter Party. As part of the Wildlife Without Borders program, field conservationists from Tanzania received professional training at Lincoln Park Zoo.

ability of chili peppers to deter elephants from farmers' fields.

Here in Chicago, Sorley will serve as the conduit between the Davee Center and the Urban Wildlife Institute, assisting the integration of veterinary epidemiology and endocrinology with human public-health interests and urban-wildlife disease studies.

"I am very excited to join Lincoln Park Zoo and be part of its ongoing efforts to bring together conservation and human health," says Sorley.

Events Make the Season

The past few months have been wonderfully busy at Lincoln Park Zoo.

The Mid-Winter Party, hosted by the Auxiliary Board and held on February 26, was a resounding success, raising triple the 2009 total. The event was completely sold out—430 guests enjoyed food donated from area restaurants including Adobo Grill, Argo Tea, Café Ba Ba Reeba!, Mon Ami Gabi, RJ Grunts and Wow Bao.

Wine & Wildlife: Saving the Serengeti, held on April 22, gave 150 adults the chance to enjoy wine and hors d'oeuvres while hearing about scientists' work to conserve Africa's crown jewel, the awe-inspiring Serengeti National Park.

SuperZooPicnic was a blast once again, with more than 3,000 members enjoying the fun on June 18. Picnic-goers got a preview of Nature Boardwalk. They danced, sang, scampered, drew, laughed and reveled in all things animal and human. Special thanks to sponsors United and Lifeway for their continued support of this family-favorite event.

Spring Benefit transported guests back to 1985 (the year of the Auxiliary Board of Lincoln Park Zoo's first fundraiser) with

themed music, food, drinks and décor. This annual black-tie fundraiser—held in Regenstein Small Mammal-Reptile House and Foreman Pavilion on June 11—raised funds to support conservation work as well as the zoo's general operating costs.

Gombe Ecosystem Health Project

The Gombe Ecosystem Health Project continues to make excellent progress. Three academic papers are currently in preparation or submitted as the result of work in this amazing ecosystem.

Additionally, the zoo's collaboration with parasite expert Tom Gillespie, Ph.D., (Emory University) is progressing, supported by a grant from the Morris Animal Foundation. Zoo scientists and Gillespie have begun an intensive sampling regime of the chimpanzees, people and livestock around Gombe National Park. Their aim is to analyze and understand sources of the infection *Cryptosporidium*, a protozoan parasite that is a global concern for human and animal health.

This study represents the first time Lincoln Park Zoo has actively worked on new diagnostic technologies, as well as the first time sampling has been expanded to humans and livestock.

Finally, Tanzanian staff from this project—Veterinarian Iddi Lipende, D.V.M., and Field Officer Juma Baanyiqwa—and the Serengeti Health Initiative visited Lincoln Park Zoo in April. A large team of zoo scientists provided lectures and hands-on training in epidemiology, ecology, behavior, pathology, population biology and grant writing.

Serengeti Health Initiative

The Serengeti Health Initiative's 2010 mass-vaccination campaign kicked off in Tanzania's Loliondo District in March, with some 5,000 dogs and cats vaccinated against rabies, distemper and parvovirus. The African wild dog population has grown in recent years, meaning that the maintenance of an effective vaccination ring against deadly canine viruses is critical.

The Lincoln Park Zoo-funded campaign moved west in May, after Project Coordinator Imam Mzmbili, D.V.M., and Assistant Project Coordinator Machunde Bigambo returned from their professional-training trip to Chicago.

Kovler Sea Lion Pool Rehab

In April, the Kovler Sea Lion Pool was drained, and construction crews began repairing the gunite rock structures around which the animals swim. During this work, the resident seals splashed in an off-exhibit area. The job was completed in June and the aquatic mammals returned to the pool, much to the delight of the crowds who welcomed them back.

Goulougo Triangle Ape Project

Early 2010 was incredibly exciting for the zoo's Goulougo project, in which researchers are conducting groundbreaking research into how gorillas and chimpanzees live alongside one another in one of the most pristine landscapes on earth.

The project was featured in the February issue of National Geographic. To coincide with the article, the Lester E. Fisher Center for the Study and Conservation of Apes scheduled a week of awareness-raising and fundraising events, culminating in the inaugural Wine and Wildlife public lecture. Fisher Center research fellow and Goulougo Triangle Ape Project co-director Dave Morgan, Ph.D., along with colleague (and wife) Crickette Sanz, Ph.D., garnered a sold-out crowd on a cold January night and regaled them with tales of science and conservation.

Through several large and small gifts, the zoo has been able to bring Morgan on as a full-time Lincoln Park Zoo staff member (previously he was a part-time research fellow). His expertise with ape conservation in Central Africa is a major benefit to the Fisher Center and expands the zoo's reach in this important area.

Project ChimpCARE

In 2009, a new initiative, Project ChimpCARE, was launched by Lincoln Park Zoo Supervisor of Behavioral and Cognitive Research Steve Ross and Project ChimpCARE coordinator Vivian Vreeman to assess the status of these apes living in the United States. The project's goal is to develop a strategic vision for this population—sustainable housing with appropriate care for all U.S. chimpanzees.

Most recently, Ross and Vreeman visited more than 15 facilities, including unaccredited zoos, sanctuaries, entertainment compounds and several private residences where chimpanzees are kept as pets, to assess their care and housing and to start a dialogue on improving their short- and long-term management.



Project ChimpCARE, co-founded by Lincoln Park Zoo's Steve Ross, works to improve the living conditions for chimpanzees across the nation.

"It's been an eye-opening experience," says Ross. "We are continually reminded of the importance of this project in terms of providing information to those caring for chimpanzees and educating the public on the plight of this species."

Silver Trumpet Award

In early May, the Publicity Club of Chicago recognized Lincoln Park Zoo magazine for distinguished achievement during its annual Golden Trumpet Awards, the Midwest's most prestigious awards program honoring work in public relations and communications.

The Winter 2009 issue of Lincoln Park Zoo magazine—"Creating a New Urban Ecosystem: Nature Boardwalk at Lincoln Park Zoo"—was judged by a panel of communications professionals, who scored it in a number of fields and awarded it a Silver Trumpet trophy.



field note

Monarch Butterfly *Danaus plexippus*

It's a marvelous migration. Each fall, monarch butterflies leave their homes across North America and flutter thousands of miles to their breeding spot in Angangueo, Mexico. Upon arrival they mate, the females lay eggs and they all eventually die, leaving the flip trip to the next generation, which instinctively know where home is, though they've never been there.

"We expect—we hope—that they will come to Nature Boardwalk. They are native to this area," said Vicky Hunt back in May, before the weather had warmed. As coordinator of wildlife management for Lincoln Park Zoo, Hunt monitors everything that flies, splashes or crawls in or around the new habitat.

Hunt advises butterfly fans to seek monarch butterflies in summer months amid the tall grasses surrounding the water, where the winged beauties should feed on nectar-producing plants such as the logically named butterfly weed.

The insects' beauty serves a purpose beyond attracting human eyes. The bold orange and black patterns broadcast to potential predators like birds and rodents that monarch butterflies are toxic. Not a good meal. Nice to admire, but nasty to nibble.

And besides, they've traveled so far to be here.

Reptile Recovery

AS NATURE BOARDWALK at Lincoln Park Zoo becomes an urban ecosystem, a number of scaled species will find homes there. Painted turtles will be introduced as part of a balanced ecosystem. Snapping turtles have wandered over from neighboring bodies of water; red-eared sliders could be spotted slipping into the water.

As Lincoln Park Zoo welcomes native reptiles to Nature Boardwalk, zoo scientists are conserving their peers throughout northeastern Illinois. By lending expertise in animal husbandry and small-population biology, zoo scientists are helping smooth green snakes, eastern massasauga rattlesnakes and Blanding's turtles stride—or slither—toward a reptile recovery.

Building a Population, Snake by Snake

Eastern massasauga rattlesnakes aren't easy to find in northeastern Illinois. Sure, the species' shy nature and cryptic coloration help it to blend in. But the endangered snake's population has also plummeted due to habitat loss and poaching, prompting the Illinois Department of Natural Resources and U.S. Fish and Wildlife Service to form a recovery team for the species.

This recovery team decided that one way to help the species recover was to collect the last remaining wild snakes and breed them in zoos to boost their numbers. As a leader in small-population management with a history of working with the species, Lincoln Park Zoo was a natural candidate to help.

The zoo hosts the Eastern Massasauga Rattlesnake Species Survival Plan® (SSP). This collaborative effort has zoos throughout North America cooperate on breeding and transfer plans to ensure the species' long-term health. Joanne Earnhardt, Ph.D., director of the zoo's Alexander Center for Applied Population Biology, serves as the SSP coordinator. Wildlife Biologist Lisa Faust, Ph.D., is a field advisor while Curator Diane Mulkerin serves as studbook keeper, maintaining the breeding records and lineages necessary for population planning.



Snake conservationists, joined by the U.S. Fish and Wildlife Service, Lincoln Park Zoo, Brookfield Zoo and the Cook County and Lake County Forest Preserves, went into the field to look for the snakes in spring 2009. They located two eastern massasauga rattlesnakes—one male, one female—which they transported to Lincoln Park Zoo. The female promptly gave birth to four young, boosting this small founding population.

While researchers returned to the field this spring to look for any last remaining snakes, animal care staff at Lincoln Park Zoo are busy trying to encourage breeding by last year's pair. Since the snakes naturally spend the winter in cold-water hibernation, keepers cooled the zoo's pair throughout the season to stimulate reproductive hormones. No breeding has been observed yet, but keepers hope for some small snakes this summer.

"They're still getting familiar with one another," says Mulkerin. "We have time."

Surveying a Stable Population

While eastern massasauga rattlesnakes are endangered in Illinois, the species has more stable populations in Michigan. To study this bounty—and plan the species' future—the Eastern Massasauga Rattlesnake SSP has gathered for the past two springs at the Michigan headquarters of the Edward Lowe Foundation.

The headquarters is situated at Big Rock Valley, a 2,600-acre parcel of wilderness that is home to a five-year field study centered on the reclusive rattlesnakes. During their weeklong stay, SSP supporters—including Earnhardt, Faust, Mulkerin and Zoological Manager Dan Boehm—combine habitat assessments with catch-and-release round-ups. At completion, this survey will provide key data on how the snakes live, breed and interact with the landscape—valuable information for conserving the species in the wild.

At this year's round-up, conducted in May, researchers caught 21 eastern massasauga rattlesnakes—good news for the Michigan population. "It was diverse," says Earnhardt. "We had snakes of different sizes, different sexes, from different habitats. Two were recaptures from last year, meaning we have 39 uniquely identified snakes. That's a good number, and it will eventually give us a good idea of the population we have there."

Introducing the Smooth Green Snake

Lincoln Park Zoo's snake handling isn't limited to the eastern massasauga rattlesnake. Biologists are also partnering with the Lake County Forest Preserve District to boost wild populations of the smooth green snake.

The serpents share similar habitats but different circumstances. While the massasauga is brown and tan, the smooth green snake is, as expected, a vibrant green. The massasauga is endangered and venomous; the smooth green is neither. And while the massasauga provides an ecosystem service by keeping rodent populations in check, the smooth green snake makes its meals of insects and spiders.

But both species are underrepresented in their local ecosystems. For the smooth green snake, that's a bit of a puzzler. "Over the years, the forest preserve district has done lots of restoration," says Earnhardt. "They have places that look like prime habitat for smooth green snakes, but the species hasn't recolonized on its own."

To help restore smooth green snakes to the region's forests, zoo



Opposite: Zoo scientists are partnering with the Lake County Forest Preserve District to help the recovery of the native smooth green snake. Above: They may walk slowly, but Blanding's turtles like to roam, which poses a challenge to those working to conserve their wild populations.

scientists are evaluating the habitat as a prelude to reintroduction. By identifying the most-desirable combination of ground cover and insect prey, the researchers will be able to place the snakes where they'll thrive. New employee Allison Sacerdote has conducted amphibian recovery projects in Lake County and will lead the project as it helps the smooth green snake population to recover.

Where the Turtles Roam

A high-domed species with a yellow lower lip that resembles a smile, Blanding's turtles have a tendency to roam wide in search of mates. "A lot of turtles stay fairly restricted to their ponds, but Blanding's do not," says Mulkerin.

This tendency to roam can present a conservation challenge, especially as habitat grows scarce. To help protect the shelled species, which is endangered in Illinois, zoo scientists are embarking on a monitoring project with the DuPage County Forest Preserve District.

"We'll be creating abundance maps," says Eric Lonsdorf, Ph.D., director of the Urban Wildlife Institute. "We'll put transmitters on the turtles, conduct catch-and-release efforts and use the data to map where they live."

The resulting information will help identify prime real estate for future reintroductions. Zoo researchers will also conduct demographic studies of Blanding's turtles to determine the numbers needed for a healthy—and wide-ranging—long-term population.

A Scaled Recovery

Blanding's turtles, smooth green snakes and eastern massasauga rattlesnakes are very different, but their wild statuses show some striking similarities. Each species has been affected by habitat loss associated with human development. Each is being helped to recovery through a combination of habitat restoration, population planning and careful reintroduction.

"It's a multi-step process, but it takes us to our goal, which is healthy reptile populations" says Lonsdorf.

field note

Painted Turtle *Chrysemys picta*

A single glance at a painted turtle provides an easy explanation for its name. The reptile has bright yellow-and-red markings along its skin and shell, vibrant natural patterns that suggest the delicate lines of a paintbrush.

Painted turtles make their homes in quiet, shallow bodies of water, making Nature Boardwalk a natural destination. The individuals that end up living here will be introduced from the Lake County Forest Preserve District.

Why introduction? “We want to welcome painted turtles to the pond, but unlike birds or insects, who can fly, it’s a bit harder for them to get here by themselves,” says Coordinator of Wildlife Management Vicky Hunt.



At Nature Boardwalk, the shelled species will feed on plants and small animals, including fish and insects. A heavy horned jaw helps them grip prey, which they tear apart and consume in water. (As turtle tongues are relatively fixed, dining in the drink gives them the best chance to manipulate their meals.)

The re-designed pond landscape has plenty of welcoming features for these new arrivals, including logs and boulders for basking. Painted turtles can often be spotted soaking up the sun, using solar energy to fuel their reptilian metabolisms.

Paddle-like limbs help them move easily through the water, and the turtles are champion divers, able to hold their breath for hours at a time while seeking naps, food or shelter. Their winter dives are even more impressive. When the pond ices over, a painted turtle slows its metabolism and buries itself in the mud, where it remains until spring thaw.

Each individual at the pond will be fitted with a radio transmitter, which will let pond scientists follow the turtles as they adapt to their new home. The collected data will be shared at Nature Boardwalk education programs, giving visitors a better understanding of this new urban ecosystem—and one of its most-striking inhabitants.

Your Story—The Lester E. Fisher Bridge

THE CHANGES HAVE been drastic during the transformation from South Pond to Nature Boardwalk at Lincoln Park Zoo. But one element remains constant—the incredible view from the Lester E. Fisher Bridge, which offers a picturesque peek at Chicago’s skyline and a bird’s-eye view of the water below.

For generations, tourists and locals have posed for photos on the bridge or just paused there to soak in the scenery. Here are some of their stories:



Left: Jan Tisza poses in 2005 with her youngest son, Danny, “before teenage angst” set in, she jokes. “Lincoln Park Zoo was and still is one of our favorite places in Chicago.” Center: Zoo member Will Barrett celebrates his third birthday with “papa” at his favorite place. Right: “Since moving to Lincoln Park in 2006, this has become my favorite spot in the city and my favorite view of the skyline,” says Mark Burns. “I’ve taken a picture of this view every year since.” Below, right: Two-year-old Riley poses with kid sister Marisa (3 months) on her first trip to the zoo.



Below: In 2009, shutterbug and longtime zoo member Dave Clark (squatting) impressed family from Mississippi with a view they couldn’t get at home.

Above: In October 2008, the Morrises had just brought home their son Luke, a Russian boy they’d adopted after a long, 18-month process. Shortly thereafter, they hired a photographer to shoot their newly expanded family at spots around the city. “Our favorite was this one on the bridge, and this is the one we sent to friends and family,” says mom Tanya. Above, center: “We are big believers in the city, and we love Lincoln Park Zoo,” says Randi Ragins, who snapped this photo of husband Bob Markowski and their bundled kids Andy and Matt in 1990. The picture is framed in their Lincoln Park home—a constant reminder of the zoo they often visit.



Continue the Conversation

LINCOLN PARK ZOO MAGAZINE keeps you up to date on the latest in Lincoln Park Zoo conservation, education and care. Here are some other avenues for experiencing everything the zoo has to offer.

Come Visit!

Lincoln Park Zoo is free and open every day of the year. We invite you to stop by to experience the wonders of wildlife. Find hours, directions, restaurants, rides, shops and more at the Plan Your Visit link on www.lpzoo.org!

See Daily Activities

From Seal Feeding to Saving the Serengeti, the zoo offers plenty of exciting daily programs. See a list at www.lpzoo.org/activities or sign up for real-time updates at www.twitter.com/visitlpz.

Enjoy Exciting Events

Join us for Jammin' at the Zoo or Sleep Under the Skyscrapers. You can find a full listing of upcoming events at www.lpzoo.org/calendar.

Members Benefit

Being a Lincoln Park Zoo member brings benefits beyond receiving Lincoln Park Zoo magazine. Review member perks at www.lpzoo.org/membership.

Get The Latest Zoo News

Subscribe to the Lincoln Park Zoo blog to receive the latest animal updates, slideshows, videos and more! Sign up for ZooMail to receive regular zoo updates in your inbox. You can also like Lincoln Park Zoo on Facebook, follow the zoo on Twitter or find videos on YouTube. Visit www.lpzoo.org to learn more.

Engage in Education

Pick up pointers on Animal Photography or see the zoo after hours with Bedtime Buddies. Browse all of the zoo's engaging programs at www.lpzoo.org/education.

Protecting the World's Wild Places

Zoo scientists are learning about animals and helping to conserve wild populations from Tanzania to the zoo's backyard. Find out more at www.lpzoo.org/conservation.

Support the Zoo

Lincoln Park Zoo's mission of conservation and care depends on its dedicated donors. Keeping the zoo free and open to all costs roughly \$60,000 a day. Learn how you can support the Annual Fund or make a tribute gift at www.lpzoo.org/support.

Volunteer

From helping the zoo's gardens bloom to welcoming visitors from around the world, zoo volunteers help make the zoo amazing. Learn how you can contribute at www.lpzoo.org/volunteer.

Zoo Multimedia

Browse back issues of Lincoln Park Zoo magazine and see slideshows, interactives and more at www.lpzoo.org/multimedia.

Explore A World of Wildlife

Wonder what a gorilla eats or where polar bears can be found in the wild? Find fact sheets for every Lincoln Park Zoo animal at www.lpzoo.org/animals.



Save the date!

ADULT PROGRAMS

July–August

Yoga at the Zoo

We've taken yoga out of the studio and into the wildest setting in Chicago...Lincoln Park Zoo. Registration is required for yoga classes, which are sold in series of four.

Adult Hatha Yoga

Thursdays 6:30 p.m. OR

Saturdays 9 a.m. beginning the week of July 5

Learn or perfect yoga basics in this class targeting beginner and intermediate yoga participants. Please bring a mat.

Mom/Dad & Baby

Wednesdays 9 a.m. beginning the week of July 5

Stretch out your muscles while bonding with junior. This class is targeted to moms and dads and their infants. Bring a mat and blanket for your baby to stay comfy during class.

Each four-class session is \$56 for Lincoln Park Zoo members and \$64 for non-members.

FAMILY PROGRAMS

July 16–17 and August 6–7

Sleep Under the Skyscrapers

The new Nature Boardwalk at Lincoln Park Zoo provides the perfect setting for your family to explore an urban ecosystem at night. Take a hike, explore the wildlife that enlivens this area and enjoy a pizza dinner. Pitch your tent on the South Lawn and sleep under the skyscrapers, then wake to the morning songs of birds.

6 p.m.–9 a.m.

\$45 per zoo member, \$50 per non-member. Price applies for each attendee. All participants must be at least 5 years of age.

September 3

Bedtime Buddies in Regenstein African Journey

Ever wonder what Lincoln Park Zoo's aardvark and giraffes are up to at nighttime? Join us at Regenstein African Journey to find out. Parents and children ages 3–10 are invited to experience life in Africa and get to know some amazing African animals. Throw on your pajamas and join the fun! Snacks and drinks will be provided.

7–9 p.m.

\$35 per person (\$30 for members)

Suitable for families with children between the ages of 3–10

TEEN PROGRAMS

September 6

School's Out Scavenger Hunt

Enjoy exploring the zoo with your friends? Lincoln Park Zoo challenges pairs of teens to a scavenger hunt that will take them around the zoo, investigating animals, landmarks and mystery zoo experts. Pizza and soda for lunch is included, or feel free to bring a sack lunch.

10:30 a.m.–1:30 p.m.

Each teen must register with a partner

\$50 per team (\$40 for members)

Suitable for teens between the ages of 13–16



Establish a Lincoln Park Zoo Legacy

You can help preserve the zoo for future generations by including a planned gift as part of your estate or financial plan. To learn more, visit www.lpzoo.org/plannedgiving or contact Director of Planned Giving Marilyn Schaffer at 312-742-2167 or mschaffer@lpzoo.org.



PO Box 14903
Chicago, IL 60614
www.lpzoo.org

Your membership supports everything we do, from animal care to publishing *Lincoln Park Zoo* magazine. Thank you.

Non-profit
Organization
U.S. Postage
PAID
Lincoln Park
Zoo

membership matters

Lincoln Park Zoo on Facebook

One of the most engaging ways to experience the zoo (without actually strolling the grounds) is to follow us on Facebook. Nearly 10,000 people follow the zoo on this social media site, where we post videos, photos and animal announcements almost every day. Simply search “Lincoln Park Zoo” on Facebook to join the fun.

Wildlife in Your Inbox

You can register to receive all sorts of e-mails from Lincoln Park Zoo, from event invitations to birth announcements to member updates. To learn more, or to register, visit www.lpzoo.org/zoomail.

Learn at Lincoln Park Zoo

Want some wild expertise? Sign up for a zoo program today. Lincoln Park Zoo offers unique learning experiences for all ages. From the popular nighttime family series Bedtime Buddies to an autumn animal-photography workshop for adults, there’s an exotic educational opportunity for everyone! Visit www.lpzoo.org/education for information on new programs. Don’t forget—Lincoln Park Zoo members are always eligible for a discount on registration!

We’d Like to Hear from You!

Send your feedback on this issue of Lincoln Park Zoo magazine to magazine@lpzoo.org.

Nature Boardwalk ADOPT Package

Looking for a cool way to connect with Nature Boardwalk at Lincoln Park Zoo? ADOPT the species that will make this urban oasis their home. The Nature Boardwalk ADOPT package features dragonflies, grasshoppers and butterflies. Each package costs \$40, plus \$6 shipping and handling, and includes an animal plush, certificate of ADOPTION, animal fact sheet and animal photo. For more information, or to order a package, visit www.lpzoo.org or call 312-742-2322.

