



FALL/WINTER 2019

LINCOLN PARK ZOO

FOR WILDLIFE. FOR ALL.

New Year, New Life

Animal arrivals,
holiday happenings,
species-saving
science, and more



FALL/WINTER 2019

VOLUME 18, NUMBER 3

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The zoo celebrated arrivals of all shapes, sizes, and colors this spring and summer. Meet the zoo's newest residents.

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This year marks the 30th anniversary of Lincoln Park Zoo's Conservation and Science department. Beginning with only a single scientist, the program has transformed since 1989.

'Tis the Season / 16

There is 'snow' place like Lincoln Park Zoo during the holiday season. Enjoy enchanting evenings at special events, unique gift ideas sure to spread cheer, and luminous displays at the 25th celebration of ZooLights Presented by ComEd and Invesco QQQ.

Our Impact Depends on You

Who funds Lincoln Park Zoo? You do! Zoo members, donors, and visitors help cover around 80% of our annual operating costs to keep this non-profit, privately managed institution open and free every day and support its mission of wildlife conservation, animal care, and learning. Support the zoo at lpzoo.org/donate.



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Cover: Romeo, a critically endangered eastern black rhino calf, was born at Lincoln Park Zoo in May.

Learn about all the new arrivals on Pages 6-11.

Photo by Chris Bijalba.

LINCOLN PARK ZOO MAGAZINE

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ZOO DIRECTOR

Megan Ross, Ph.D.

VICE PRESIDENT OF

MARKETING AND COMMUNICATIONS

Beth Krauss

CREATIVE DIRECTOR

Lena McDonagh

DIRECTOR OF PUBLIC

RELATIONS AND COMMUNICATIONS

Jillian Braun

MAGAZINE STAFF

EDITORS

Jillian Braun

Chris Pullam

ART DIRECTOR

Joann Raia

CONTRIBUTORS

Ashley Bedore

Chris Bijalba

Sabrina Cynova

Michelle Falco

Julia Fuller

Hyson Gibbon



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Defending A Future For Wildlife

Thirty years ago, in 1989, Lincoln Park Zoo established our Conservation & Science department, expanding our mission to officially include saving species in the wild while connecting people to wildlife and nature here in Chicago.

Today, the zoo is home to more than 40 scientists—one of the largest scientific teams among all Association of Zoos and Aquariums (AZA)-accredited facilities. We study the behavior, health, and welfare of the animals at the zoo. Our population biologists study how demographic, genetic, and management strategies affect populations over time. And, in a rapidly urbanizing world, we research techniques that support coexistence between humans and nature, locally and globally.

Of course, we can't do this work alone. Our colleagues, especially at AZA and other accredited institutions, collaborate with us, challenge us, and help us reach new peaks of scientific excellence and wildlife advocacy.

It's not always easy. This year, there were several proposed changes to the Endangered Species Act, the nation's flagship conservation vehicle. We published an open letter on this in which we expressed concerns about changes that could threaten the recovery of the United States' imperiled wildlife (find the full letter on our blog). We also worked with the Chicago Zoological Society (Brookfield Zoo) and John G. Shedd Aquarium to amplify efforts across AZA institutions and encourage our guests to sign a petition resisting the changes. Together, we earned more than 800,000 signatures, but despite our best efforts, some changes were implemented. For example, now the cost of keeping a species protected under the act can be factored into the decision to list the species. While these issues are always nuanced, in general, we are concerned that the future will be less safe for animals.

So, we all must act. It's easy to do: By visiting, joining, or donating to Lincoln Park Zoo, you support a legacy of science-based conservation action on behalf of endangered wildlife. In our urbanizing environment, zoos are part of the coalition of boots on the ground protecting the planet's precious biodiversity—and you can join us.

As we head into the holiday season, we hope you'll consider a gift to Lincoln Park Zoo. When you give, you support not only a free place to visit and connect with nature, but also a bright future for wildlife.

For Wildlife. For All. ■

KEVIN J. BELL
PRESIDENT AND CEO

BY JILLIAN BRAUN

Free Through 2050

For 127 years, the zoo was managed by the Chicago Park District and operated under the City of Chicago's budget. Then, in 1995, the zoo privatized and has depended on the generosity of individual donors, members, and volunteers ever since.

As part of this new public-private partnership, the city provided a contract with fixed financial support, which accounted for approximately half the zoo's operating budget at the time. Today, Lincoln Park Zoo is proud to support more than 80 percent of its operating and capital costs thanks primarily to our generous supporters, event-goers, and guests.

In 2017, with the first contract nearing a close, the zoo began conversations with the City to discuss future support. We are happy to report the zoo and City have extended the terms through 2050, providing the zoo critical support for ongoing initiatives and zoo management.

Back in 1878, the Lincoln Park commissioners declared the zoo must always remain free, and that is a promise the zoo plans to keep for many years to come, thanks to all our supporters.



Photo by Lisa Miller



Photo by Chris Eijalba

Rae of Sunshine

And then there were three! 2-year-old Rae the giraffe joined the herd at Lincoln Park Zoo from Cheyenne Mountain Zoo in Colorado as recommended by the Giraffe Species Survival Plan®. Rae is a companion to resident giraffes Etana (age 21) and Finely (age 3).

Jamaican Iguana

Recently, Regenstein Small Mammal-Reptile House welcomed two critically endangered Jamaican iguanas. This fascinating species is slowly making a comeback from the brink of extinction with the help of Association of Zoos and Aquariums (AZA)-accredited institutions. As their name suggests, these iguanas are native to the forests of Jamaica. Once common throughout the island, the species was nearly wiped out by non-native predators introduced by humans. It was thought the species was extinct until a small population was discovered in 1990. The zoo welcomed a 6-year-old female and 2-year-old male, who have a breeding recommendation.



Photo by Chris Eijalba

Trees of Interest at the Zoo

Wildlife at the zoo doesn't just mean animals; it encapsulates all living things, including tiny seedlings and larger-than-life historic oaks. Since there are dozens of tree species spanning the zoo's 49 acres, the zoo created a handy-dandy map of 20 of the most iconic and interesting individuals for guests to visit. Do you know the difference between a cottonwood and redbud or a London plane and a tulip poplar? Check out the map on the zoo's blog and come for a stroll along zoo grounds. And don't worry: many of the trees, including multiple evergreens, are recognizable even covered in snow.

Trees of Interest at Lincoln Park Zoo

- American Elm**
Ulmus americana
Native to central and eastern North America
This large tree was once popular for landscaping parks and streets until Dutch elm disease nearly destroyed the North American population. Since the discovery of disease-resistant individuals, American residents, including many who have recently returned to the peninsula.
- Flowering Dogwood**
Cornus florida
Native to eastern North America
Subsiding branching leaves in early spring, the flowering dogwood is distinguishable by the white or pink bracts that form a circle around its small clusters of yellow flowers. This tree has very dense wood that has been used to make tool and golf clubs.
- Thornless Honey Locust**
Gleditsia inornata
Native to central North America
The thornless honey locust's leaves are partially compound, meaning that small leaves form trees on either side of the leaf stem. In the fall, its leaves turn golden yellow.
- Horse Chestnut**
Aesculus hippocastanum
Native to southeastern Europe
The horse chestnut's leaves are partially compound, meaning that small leaves form trees on either side of the leaf stem. In the fall, its leaves turn golden yellow.
- River Birch**
Betula nigra
Native to eastern North America
River birch grows well in moist locations, and its peeling, cinnamon-colored bark provides habitat for insects and foraging birds.
- White Fir**
Abies concolor
Native to western North America
This evergreen tree has bluish needles and is commonly used as a holiday tree.
- Redbud**
Cercis canadensis
Native to eastern North America
A popular landscaping tree, redbud blooms pink flowers in early spring before producing its iconic heart-shaped leaves.
- Golden Rain Tree**
Xanthoxylum peltatum
Native to eastern Asia
In July, small yellow flowers form clusters on the golden rain tree's branch tips, but in fall, they turn into brightly colored capsules that remain through winter. The tree's leaves appear lacy.
- London Plane Tree**
Platanus - acerifolia
Native to western Europe
This tree is a hybrid between the north American and Asian tree species were sharing a garden in London. Its cream and silver-colored bark starts to flake, but flake away as the tree ages.
- Eastern White Pine**
Pinus strobus
Native to eastern North America
This evergreen tree can grow to an enormous size and, as a useful source of lumber, which is easily logged by early European settlers. The eastern white pine is distinguishable by its large needles, which always grow in groups of five.
- Tulip Poplar**
Liriodendron tulipifera
Native to eastern North America
In May and June, this tree blooms yellow tulip-shaped flowers marked with an orange band in the fall, its leaves turn golden yellow.
- Katsura Tree**
Cerciphyllum japonicum
Native to eastern Asia
The katsura tree's heart-shaped, ascending leaves have a bluish tint through summer but turn yellow to apricot in the fall. Sometimes, it emits a sweet fragrance similar to cotton candy.
- Bar Oak**
Quercus macrocarpa
Native to central and northern North America
Its long-living and majestic oak, which thrives in prairies, its broad-spreading branches develop thick bark tolerant of drought and fire. Its large, acorns are a prized cup.
- Ginkgo**
Ginkgo biloba
Native to East Asia
So, distinguishable by their fan-shaped leaves that turn gold in the fall, ginkgos have changed in the past 270 million years, species covered North America, Europe, as well, until the last ice age.

Map of Trees of Interest at Lincoln Park Zoo

Map showing the locations of 20 trees of interest at Lincoln Park Zoo, numbered 1 through 20. The map includes landmarks like the Zoo Store, the Zoo Café, and the Zoo's main entrance.

A Home Fit for a King

With the setting of the summer sun also comes the closure of lion house. Since the lion pride left for Rolling Hills Zoo in Salina, Kansas, earlier this year, the space has remained a multi-use building with the Sea Explorer 5D, retail, event space, and additional restrooms. Now, the time has come for the building's doors to lock, the fences to go up, and the exciting work to begin! Over the course of the coming months, work will begin on the interior of the building to prepare it for major renovation once the warm weather returns in the spring. There isn't a set date for opening the new facility, but stay tuned! Those interested in helping to fund the new building can learn more and donate at lpzoo.org/pride.



Photo by Todd Rosenberg

Reaching New Summits

The Urban Wildlife Information Network (UWIN) is the first global collaboration collecting urban wildlife data with the aim of making cities part of a solution to the biodiversity crisis. UWIN will host a summit November 4-6 that brings together UWIN researchers, urban planners, and architects to discuss the network's broader impact, research capacity, potential cross-disciplinary alliances, and more. In the next issue, we hope to share some key insights and learnings from this first-of-its-kind conference.

Littlest Learners at the Farm

Early Childhood Learning Programs at the Farm Presented by Peoples Gas offer free activities for the littlest of learners at Farm-in-the-Zoo! Every day of the week offers a fresh and fun program, from Play Days at the Farm (Tuesdays and Saturdays, 10 a.m.-noon) to Sing Along with Mr. Singer (Wednesdays and Fridays, 9:15 and 10 a.m.). Throughout the week, there's also Greet the Goats, Feed the Chickens, and Feed the Cows at the Farm, enabling kiddos to help care for creatures big and small.



Photo by Chris Bijalba

A Bundle of New Arrivals



Lincoln Park Zoo is a magical place—an urban oasis full of life. This year, the zoo celebrated arrivals of all shapes, sizes, and colors. Meet the zoo's newest additions, from small to big, feathery to fuzzy.

BY SABRINA CYNOVA

There's never a dull moment at Lincoln Park Zoo, and this spring and summer were no exception. With an influx of babies, the zoo has been busy providing world-class care to its newest residents. From wolf pups to gorilla babies to a rhino calf, these recent arrivals, along with others, are serving as important ambassadors for their endangered counterparts in the wild. Lincoln Park Zoo is proud to participate in Species Survival Plans® (SSP), a collaborative effort among zoos accredited by the Association of Zoos and Aquariums (AZA) to oversee the population management of hundreds of species. From Regenstein African Journey to McCormick Bird House, here are the zoo's newest additions and their significant stories.

A Big Arrival

This March, the zoo shared some big news at Regenstein African Journey. Through fecal samples collected by Animal Care staff, the Davee Center for Epidemiology and Endocrinology determined that eastern black rhino Kapuki was pregnant. Rhino Watch began, and zoo supporters eagerly followed along, awaiting the birth of a critically endangered rhino calf. After 15 months, Kapuki gave birth to a healthy male calf on the evening of May 19. The calf stood on his own after only 53 minutes, quickly completing his first of many milestones.

“Although the calf is adorable, its birth means so much more than that,” says Curator of Mammals Mike Murray. “This new calf gives us hope for the sustainability of the species.”

The calf is currently nursing and will continue to do so for roughly two years. Eastern black rhinos sport two horns, and the newborn's second horn began growing in late August. Despite their



Photo by Chris Bijaiba



Photo by Julia Fuller

toughness, rhinoceros horns are made of the same protein as human hair and fingernails: keratin. Thanks to a generous longtime zoo supporter, the calf was named Romeo.

Although initially hesitant to explore, Romeo is now making quite the splash while wallowing in his outdoor yard at Regenstein African Journey.

Top: Romeo, a critically endangered eastern black rhino calf, follows his mom, Kapuki, around their outdoor habitat. **Bottom:** As he's grown, Romeo has begun running and exploring on his own. **Opposite page, clockwise from top-left:** Inca tern, western lowland gorilla (Djeke), snowy owl, western lowland gorilla (Mondika), domestic pig, klipspringer.



Photo by Cassandra Kutiliek

A Rock Hopper

Romeo is not the only ‘aww-some’ new arrival at Regenstein African Journey. The zoo welcomed female klipspringer calf Ayana on April 12. Although not every female subspecies of klipspringer has horns, her horns began growing in late August.

Klipspringers, a dwarf antelope species, measure 20 inches in height and weigh an average of 24 pounds. Their hooves have a rubbery texture that helps the species grip rock, which is fitting since klipspringer means “rock jumper” in Afrikaans.

A Playful Pack

Some lucky guests have been able to spot the elusive flashes of ‘red’ at Pritzker Family Children’s Zoo. On April 13, four critically endangered red wolf pups were born. The litter, comprised of two male and two female pups, is the first at the zoo since 2010. Lincoln Park Zoo has been involved in multiple reintroduction efforts since 2005, including the Red Wolf Recovery Program, to assist the wild population with cross-fostering of zoo-born pups into wild family groups. This recent litter, however, will remain in the zoo population.

According to Animal Care staff, the pups are very lively and enjoy romping around their habitat. To encourage species-specific behaviors, the red wolves are given daily food items that they would find in nature.

“With a whole chick or rabbit or quail, the pups must use their mental and physical capacities to determine how to deconstruct the item for consumption,” says keeper Amanda Barnes. “These items allow the pups to encounter prey that they would naturally interact with while hunting in the wild.”

The pups have been busy exploring their outdoor habitat and learning new things each day. They were especially interested in the black-crowned night heron colony nested in the treetops above their yard, according to Animal Care staff, until the birds left for their fall migration. It’s been quite ‘paw-some’ watching the pups grow, play, and become adventurous.



Photo by Chris Bijalba



Photo by Chris Bijalba



Photo by Chris Bijalba

Top-left: Ayana the klipspringer. **Right-hand column:** The red wolf pups at Pritzker Family Children’s Zoo have grown a lot since their birth on April 12. **Next page:** Rollie cradles her infant, Mondika, born on May 12.

Growing Gorillas

The baby boom continued on a very special Mother's Day this year at Regensteil Center for African Apes. On May 12, critically endangered western lowland gorilla Rollie received the perfect gift: a healthy male infant. The infant was welcomed into Kwan's family troop. Exactly one month later, on June 12, Bana gave birth to a healthy male infant, as well.

"Having two offspring born close together provides such an exciting time for guests and gorillas alike," says Curator of Primates Jill Moyses. "The infants will have the opportunity to grow, develop, and explore their surroundings together and learn from one another."

To pay homage to the zoo's work with the Goualougo Triangle Ape Project, the infants were named after two conservation sites in the Republic of Congo. The zoo named the first infant Mondika (mon-dee-ka), while Lincoln Park Zoo supporter and Life Trustee John Hart named the second infant Djeke (jek-ay).



Photo by Chris Bijalba



Photo by Kaycee Bridges



Photo by Chris Bijalba



Being so close in age, the infants appear similar, yet their unique noses set them apart. Mondika has a small dimple at the top of his nose between his nostrils, while Djeke's nose is very flat and smooth.

Kwan's troop is very inquisitive and can be seen watching both mothers care for their infants. Animal Care staff have even observed Kwan gently interact with Mondika by touching him with one outstretched finger.

It's been a milestone-filled few months at Regenstein Center for African Apes, as both Mondika and Djeke continue to grow in size and strength each day.

Oink, Oink

All the way at the south end of the zoo, Farm-in-the-Zoo welcomed two litters of piglets from two domestic pigs this spring and summer. The first litter, including two males and two females, was born on June 14. The second litter, including three males and six females, was born on September 7.

Summer Snow Sighting

Snow in the middle of June wasn't likely, but guests were still in for a 'cool' treat at Regenstein Birds of Prey. On June 17, the zoo's resident snowy owl pair, Stanley and Freya, welcomed a healthy female chick. This is the fourth consecutive year the pair has hatched chicks, making them experienced and attentive parents.

Egg-citing Times

Speaking of new chicks on the block, McCormick Bird House welcomed quite a few new arrivals this year. Known for their moustaches, two Inca tern chicks, hatched April 9 and July 15, joined the free-flight habitat. Additionally, for the first time in zoo history, two male snowy-headed robin chats joined the flock. This species of small perching birds can be identified by the single brush stroke of white extending from their forehead to the nape of their neck. Last, but certainly not least, one Nicobar pigeon hatched. A richly decorated



Top to bottom: A snowy owl, two Inca terns, and 13 domestic piglets were all born at Lincoln Park Zoo this spring and summer.

species, these pigeons are easily identified by their metallic coloring. All the chicks are doing well and growing stronger each day.

An Inside Look

As technology becomes more advanced, the zoo has been able to take wildlife enthusiasts on the journey of pregnancy, birth, and growing infants.

Zoo supporters were ‘there’ every step of the way with Kapuki, as fecal analysis indicated pregnancy, as Animal Care and veterinarians conducted an ultrasound, as video footage revealed the birth, and as the calf made his debut.

“From diet formulation to fecal analyses to behavioral monitoring, science is in every step of the process,” says Maureen Leahy, vice president of Animal Care and Horticulture. “These births are exciting for the sustainability of species, but also because they are a result of years of science and care in action.”

Support the Zoo’s New Arrivals with a Special ADOPT!

Each ADOPT purchase supports the zoo’s animal care efforts. Shop at lpzoo.org/ADOPT, 312-742-2322 (Monday-Friday, 9 a.m. – 5 p.m.), or in person at the Member Center or Gift Shop.



Take Action With Us

BY DANA MURPHY
VICE PRESIDENT OF LEARNING AND
COMMUNITY ENGAGEMENT



The zoo is a great place to connect with new arrivals and connect your actions to saving their wild counterparts! Here are a few things you can do to help species around the globe.

→ **Look for the Logo** Logging disrupts gorilla habitat. Make sure to look for the logo and purchase Forest Stewardship Council (FSC)-certified wood and paper products that represent sustainable logging practices to protect critical habitat for gorillas and other species.

→ **Observe Don’t Disturb** Each winter, lucky Chicagoans may see snowy owls soaring along the shores of Lake Michigan. For the health and safety of the owls, please keep your distance while observing their behavior—like hunting prey. This simple tip is applicable to all wildlife species.

→ **Wildlife-friendly Actions** Be a good neighbor to wildlife by incorporating wildlife-friendly actions into your routine. Decorating for fall festivities? While setting up decor, try covering your windows or lowering your blinds so as not to confuse migrating birds with clear glass. Those festive fall window decals can help too!

→ **Tap the App** Palm oil is in nearly everything we use, from shampoo to candy, but palm oil plantations often destroy native habitat for a multitude of species. Purchasing products made with certified sustainable palm oil is easy using the free Sustainable Palm Oil App, created by Cheyenne Mountain Zoo.

→ **Shop Smart** When traveling, be a diligent and savvy shopper. Just because something is for sale doesn’t mean it’s legal to take home. Avoid buying products made from wild animals or animal parts—such as skins, furs, or rhino horn. These purchases fuel poaching and the illegal wildlife trafficking trade and hurt wild populations.

Thirty and Thriving

Lincoln Park Zoo's Conservation & Science department began in 1989 with only a single scientist, but has become one of the largest zoo-based science programs in the country.

*Scientists at the zoo's Davee Center for Epidemiology and Endocrinology have guided the births of two critically endangered eastern black rhinos since 2013. **Right:** Zoo scientists weigh a baby Puerto Rican parrot as part of an effort to save the species.*

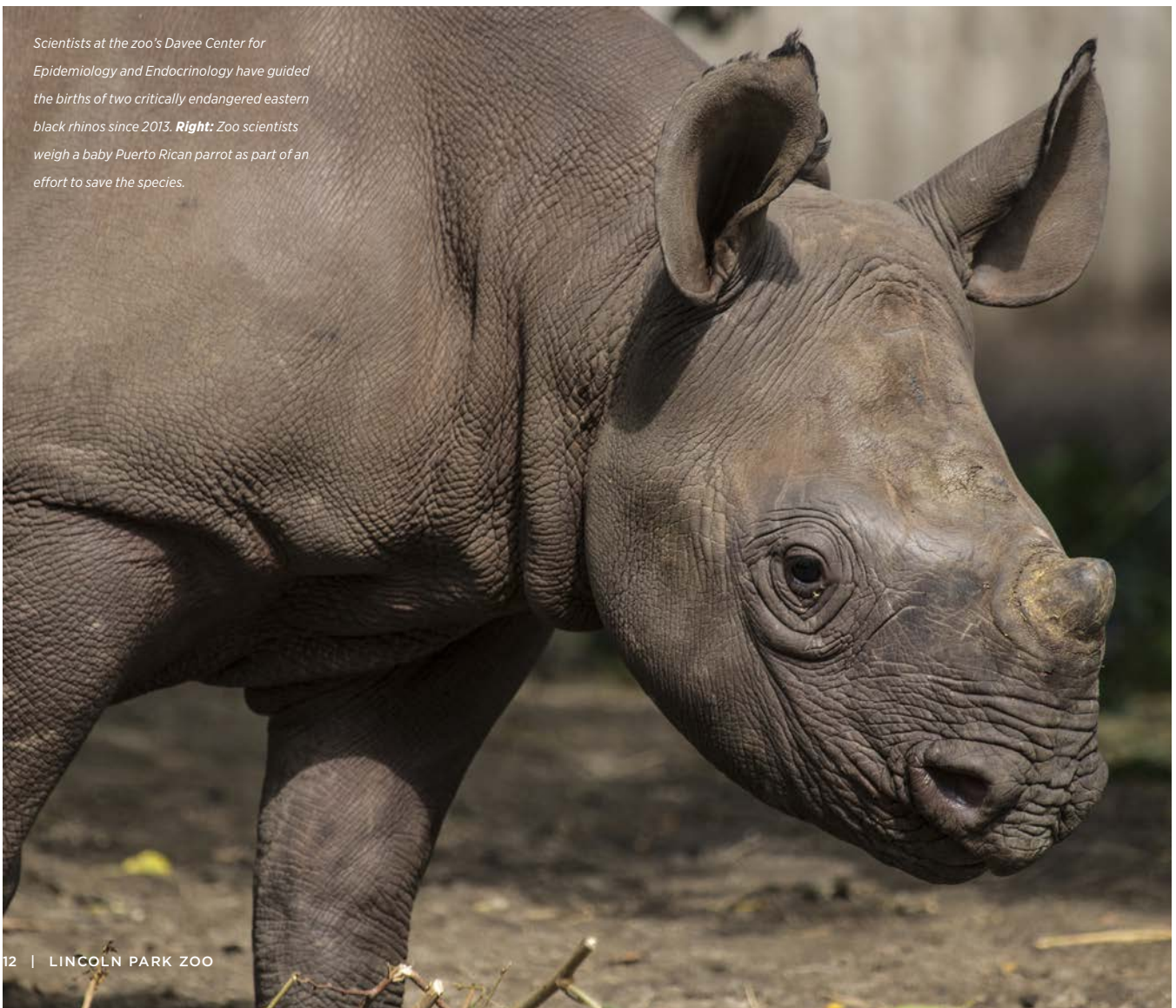


Photo by Chris Bijalba

BY CHRIS PULLAM

On any given day at Lincoln Park Zoo, animals explore their habitats, families criss-cross the Main Mall, and wild pollinators flit between native plant species. But that's only the tip of the iceberg, so to speak. There's much more happening beneath the surface—or, more appropriately, around the world.

Lincoln Park Zoo, the 49-acre urban oasis that takes 15 minutes to walk end to end, has been a global leader in understanding and protecting wildlife for three decades. Since its founding in 1989, the zoo's Conservation & Science department has blossomed into one of the largest zoo-based science programs in North America.

With more than 40 scientists pooling their diverse expertise, its research advances conservation initiatives and state-of-the-art animal care from Chicago to the Serengeti, and helps ecosystems thrive in our urbanizing world. It all started when the zoo hired Steve Thompson, Ph.D., as its first scientist in 1989, and it continues to this day with the near-constant development of new research techniques and new collaborations to save species.

"It's hard to even envision what Conservation & Science will look like in another 30 years considering how much we've grown in the past 30 years," says the department's vice president, Lisa Faust, Ph.D., who joined the zoo as a full-time employee in 1998. "I'm so proud of our successes in using science to improve the lives of animals in zoos, as well as impacting the conservation of species in the wild. Our program is somewhat unique in that we are very focused on developing

real-world solutions to problems facing wildlife. It's exciting to imagine where future opportunities will take us."

The department's science centers weren't formally established for a few more years, but zoo researchers were breaking ground from the very beginning. In fact, the Association of Zoos and Aquariums (AZA) partnered with Lincoln Park Zoo to open the Population Management Center (PMC), the zoo's very first center, in 2000 because of the staff's already established expertise in the field.

After the creation of the PMC in 2000, the department began looking for gaps where its scientists could lend their scientific expertise to important problems facing zoos. That, in turn, led to adding the first zoo epidemiologist to study disease, building a sophisticated program in primatology and primate welfare, and developing novel methods in endocrinology.

As its scientific staff grew, the department developed the expertise to look outside of zoos and apply its science to wild populations, collaborating with field biologists on the ground to support their conservation work. It also identified a unique niche, urban ecology, and is now recognized as a world leader in how wildlife use cities and promoting human-wildlife coexistence.

"Throughout it all, we've had a group of dedicated scientists strongly committed to solving problems faced by managers and conservationists on the ground," says Faust. "It's an approach that has meant that our work has relevance and impact as soon as the data is analyzed or the paper is published."



"Our program is somewhat unique in that we are very focused on developing real-world solutions to problems facing wildlife," says Lisa Faust, Ph.D.

As Conservation & Science has grown, it has achieved many significant accomplishments. Here, we highlight a key story for each.

Over the past 30 years, the department has:

Supported 500+ species in zoos through science-based management



Photo by Lincoln Park Zoo

The PMC collaborates with professionals around the country to guide the management of every Species Survival Plan® (SSP), but zoo staff have taken the lead on the Bali Myna SSP, managing the critically endangered birds at more than 45 zoos across the country to create and sustain a healthy population. Zoo Director Megan Ross, Ph.D.;

Hope B. McCormick Curator of Birds Sunny Nelson; and Thompson have worked with the PMC to carefully plan breeding and transfers for decades. They also collaborate with Indonesian partners on conservation strategies to ensure the SSP benefits the species in the wild.

Studied 250+ wildlife species from Chicago to the Republic of Congo

Deep in the forests of the Republic of Congo, zoo scientist Dave Morgan, Ph.D, has spent decades tracking, observing, and working to protect wildlife in one of the most pristine and unique ecosystems on earth. Through the Goulougo Triangle Ape Project (GTAP), his team collects detailed information on the area's wildlife, including endangered chimpanzees and western lowland gorillas, to find ways to reduce human impact on the region and conserve the natural world.



Photo by Ian Nichols

Photo by University of Washington Tacoma



Trained 450+ undergraduate interns, graduate students, and post-doctoral fellows

Christopher Schell, a new assistant professor at the University of Washington at Tacoma, began his science career at the Dave

Science Centers at Lincoln Park Zoo

AZA POPULATION MANAGEMENT CENTER (PMC)

Formally Established: 2000
Specialty: Population Biology (Genetics and Demography)
Purpose: Matchmaking and family planning for animals across all 200+ AZA-accredited zoos and aquariums ensures healthy populations.
Interesting Fact: The PMC has issued more than 350,000 breeding and transfer recommendations to individual animals at AZA insitutions since its founding.

LESTER E. FISHER CENTER FOR THE STUDY AND CONSERVATION OF APES

Formally Established: 2004
Specialty: Primatology
Purpose: Understanding primate behavior, biology, and cognition enhances their care at zoos and sanctuaries and conservation in the wild.
Interesting Fact: The zoo's gorillas, chimpanzees, and macaques complete voluntary cognition tests on touch-screen computers to help researchers better understand how they learn.

Center for Epidemiology and Endocrinology as a Ph.D. student. During that time, he broke ground on urban carnivore behavior, and even discovered the personality traits that increase a coyote's chances of surviving in urban areas.

Since leaving, he has founded two sites in the zoo's Urban Wildlife Information Network (UWIN), a growing web of urban research sites geared toward understanding how wildlife and people can coexist in cities.

"Chris is a rising wildlife biology star," says Faust, "and we are proud to have helped him launch his career."

Published 275+ scientific articles and book chapters

Rachel Santymire, Ph.D., director of the Davee Center, recently pioneered a non-invasive method for measuring amphibian stress hormones: skin swabs. The novel technique takes advantage of their naturally permeable skin, which secretes hormones, and is ideal for use in the field.

So far, the technique has been applied to more than 13 species, ranging from arboreal to fully aquatic amphibian species, and by sharing the procedure with her peers through the journal "Conservation Physiology," Santymire's scientific breakthrough may soon benefit even more animals.



Photo by Allison Sacerdote

Partnered with 100+ universities, NGOs, government agencies, zoos, and aquariums around the world

Lincoln Park Zoo works closely with the U.S. Fish and Wildlife Service, the federal agency charged with enforcing the Endangered Species Act. Through that partnership, zoo specialists support the recovery of many threatened species, including black-footed ferrets, trumpeter swans, ornate box turtles, piping plovers, Puerto Rican parrots, eastern massasauga rattlesnakes, red wolves, Louisiana pine snakes, Guam kingfishers, and Guam rails.

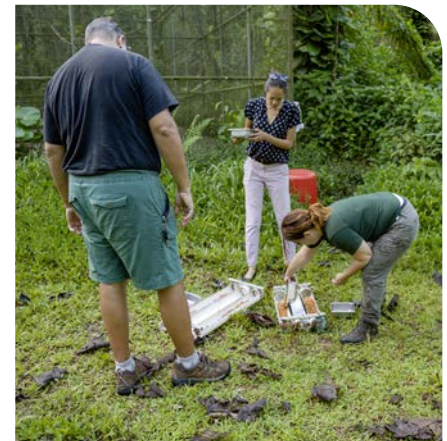


Photo by Lisa Faust

ALEXANDER CENTER FOR APPLIED POPULATION BIOLOGY

Formally Established: 2005

Specialty: Population Viability (Genetic and Demographic)

Purpose: Considering demographic, genetic, ecological, and evolutionary factors helps improve the management and conservation of small, at-risk animal populations.

Interesting Fact: The Alexander Center has built computer models to inform the recovery of dozens of critically endangered species, including Puerto Rican parrots and red wolves.

DAVEE CENTER FOR EPIDEMIOLOGY AND ENDOCRINOLOGY

Formally Established: 2005

Specialty: Physiology (Disease and Hormones)

Purpose: Non-invasively analyzing stress and reproductive hormones, as well as assessing diseases that may impact wildlife and people, helps enhance care at zoos and conservation in the wild.

Interesting Fact: Hair, blood, nail, semen, urine, and fecal samples are shipped to the Davee Center from zoos and field sites all over the world.

URBAN WILDLIFE INSTITUTE (UWI)

Formally Established: 2008

Specialty: Urban Wildlife Ecology

Purpose: Studying interactions between wildlife, urban development, and natural ecosystems minimizes human-wildlife conflict in cities.

Interesting Fact: Hundreds of motion-triggered camera traps dot Chicago's urban and suburban landscape, and UWI has expanded to collaborate with 22 other cities across North America to build a broader understanding of how wildlife use cities.

'Tis the Season

BY JILLIAN BRAUN

PHOTOS BY PHIL PARCELLANO

Every winter, Lincoln Park Zoo transforms into a tizzy of sparkling lights and tasty treats, kept warm by a loving layer of nostalgia. This year is no exception with the return of ZooLights Presented by ComEd and Invesco QQQ donning more than 2.5 million lights and hundreds of holiday displays. Check out the calendar on Page 19 to plan your upcoming visit, and don't forget your fill of stocking stuffers at the zoo's renovated Gift Shop!





Festive Fetes for the Whole Family

ZooLights is free and fun for the whole family with **Light Maze Presented by Invesco QQQ** (Foreman Pavilion; \$3 for single tickets), visits with Santa, ice carvers, carolers, and more!

ZooLights Family Nights return on Mondays with complimentary carousel and train rides and free parking for all membership levels. Stop in for a snack at Park Place Café, where kids eat free with a paid adult.

They say it's better to give than receive—prove them right at **Holiday Market** on Giving Tuesday, December 3, while browsing one-of-a-kind gifts from local artisans.

Santa will also make a special visit to Café Brauer on Sunday, December 15, for **Breakfast with Santa**. Nosh on some delicious food and ask Santa for the perfect present this holiday season.

Learn more about these special events at lpzoo.org/zoolights.



Season's Greetings

Lincoln Park Zoo's official holiday greeting card (pictured on Page 16) celebrates the 25th year of ZooLights. Illustration by the zoo's very own Ashley Bedore. Single card \$2.25, 12 for \$24, 24 for \$46, 48 for \$90. See Page 19 for purchasing details.

Glown-ups Only!

ZooLights isn't only for the young, but the young at heart! Get your fill of fun at **BrewLights Presented by Louis Glunz Beer, Inc.** on Thursday, December 12. Cheers to the zoo's Auxiliary Board, which hosts this craft beer festival under the brilliant backdrop of more than 2.5 million lights.

Adults Night Out: Holidayze on Thursday, December 5, is the perfect date night, evening on the town, or excuse to hang with friends. With zoo-themed chats, an ugly sweater contest, and live entertainment, there is something for everyone. Those of age can warm their hands and bellies with mulled wine and spiked hot chocolate available for purchase.

Ring in 2020 at **Zoo Year's Eve** from 9 p.m.–1 a.m. on Monday, December 31. Countdown to midnight surrounded by sloths, next to newts, or naked mole rats.

These after-hours ticketed events help keep the zoo free and open 365 days a year! *Learn more and buy tickets at lpzoo.org/zoolights.*



Holiday Ornaments

Hand-painted by Jan Heyn-Cubacub, this year's ornaments feature a rhino calf and a fennec fox. \$34.99



Members-only Merriment

Get a sneak peek of ZooLights Presented by ComEd and Invesco QQQ at **Members-Only Night at ZooLights** on Friday, November 22, from 4:30–9 p.m. Members get to kick off the holiday season early with exclusive access to the event, free train and carousel rides, and a 20% discount at the Gift Shop. *Learn more at lpzoo.org/zoolights.*





Members-Only Night:
Nov. 22



Shop the Zoo-venirs

Stop by the Gift Shop during your next visit for gifts for animal lovers of all ages. Get great gift ideas at lpzoo.org/shop.

Holiday Festivities

November

SUN	MON	TUE	WED	THU	FRI	SAT
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Open and FREE to all:

- ZooLights Evenings
- Family Nights

Special ZooLights events:

- Members-Only Night
No ticket required
- Holiday Market
Ticket required
- Adults Night Out: Holidayze!
Ticket required
- BrewLights Presented by Louis Glunz Beer, Inc.
Ticket required
- Zoo Year's Eve (ZooLights closes at 8 p.m.)
Ticket required

December

SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15*	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

January

SUN	MON	TUE	WED	THU	FRI	SAT
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

*December 15: Breakfast with Santa (Does not impact ZooLights)

*December 15: Chris White Trio Tribute to *A Charlie Brown Christmas* (Does not impact ZooLights)

For more details, visit lpzoo.org/zoolights.

Seeds of Life

BY CHRIS PULLAM

ILLUSTRATIONS BY
ASHLEY BEDORE

Flowering plants add a splash of color to the landscape from spring to fall, but they play a critical role in the ecosystem year-round. During the warmer months, they serve as a nutritious food source for a wide variety of species, and in the winter, they provide precious shelter for wildlife—but only if they're left in the garden.

Wait until spring to cut back old stems that won't bloom again, says Abby Lorenz, manager of plant records and horticulture programs at Lincoln Park Zoo. Hydrangea shrubs can add winter texture to your garden. To benefit the widest variety of wildlife, choose hydrangeas that have lace-cap or open-flower structures, which allow pollinators to more easily access pollen and nectar.

Learn more about different species of hydrangea below.

1 Big Leaf Hydrangea

Hydrangea macrophylla

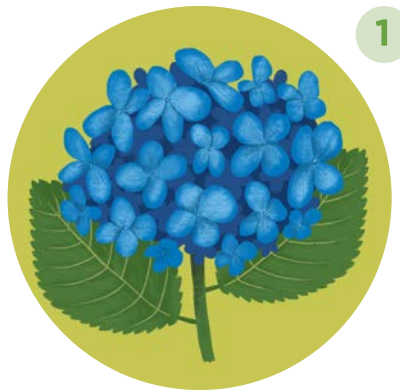
Big leaf hydrangeas are a little more difficult to grow in Chicago's climate, but their vivid blue or pink flowers add a unique pop to the landscape. This species often dies back during Chicago winters, but then blooms anew on second-year wood. Resist the urge to cut them back in the spring until their leaves begin to emerge, and then trim off the dead branches.

2 Oak Leaf Hydrangea

Hydrangea quercifolia

Some species, such as oak leaf hydrangeas, flower on old wood, so gardeners don't need to cut them back. Instead, a very light trim of the past year's flowers can keep them looking tidy.

Hydrangeas and other flowering plants provide animals with shelter during the colder months—if they aren't cut back before winter.



3 Smooth Hydrangea

Hydrangea arborescens

This easy-to-grow Illinois native can thrive in a variety of conditions, whether in the sun or shade. Historically, smooth hydrangeas are known for their white snowball-shaped flowers, but several lacecap and pink cultivars now exist.

"One of my favorite *hydrangea arborescens* is the 'Haas Halo' variety because of its abundance of small, fuzzy, fertile flowers, which are great for pollinators," says Lorenz.

This species should be cut back in spring once its new stems begin to sprout.



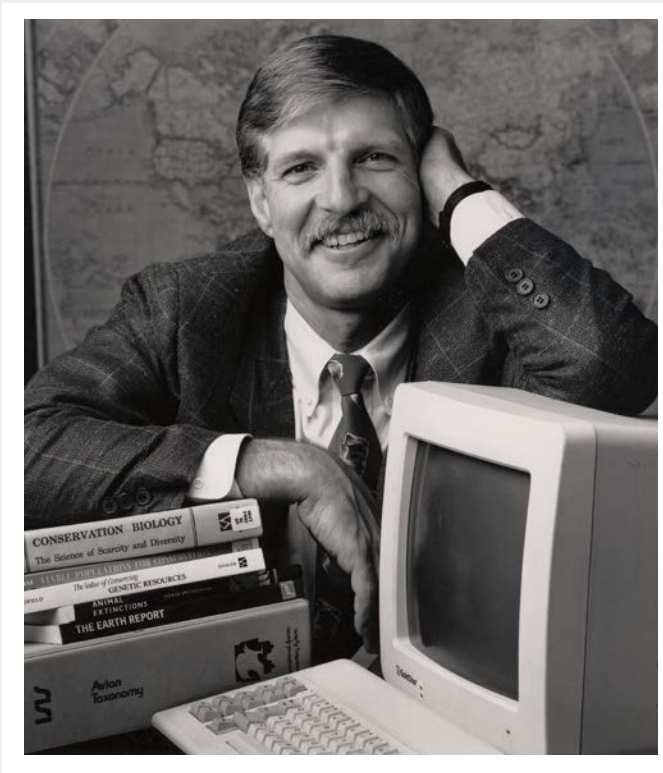
4 Panicle Hydrangea

Hydrangea paniculata

This hydrangea originally hails from Eastern Asia, but can thrive in Chicago's climate so long as it receives full sunlight. Its flowers form a cone shape, and different cultivars bloom green or white, while others change from white to pink with age.



BY CHRIS PULLAM



Steve Thompson, Ph.D.

First director and former vice president of Conservation & Science

The zoo's Conservation & Science department began when you were hired in 1989. Why did you choose Lincoln Park Zoo in the first place?

Basically, I wanted to know if science actually supported the animal care techniques common at the time. I had tried getting involved in conservation projects with other zoos, but none were interested in my interests. Then I applied at Lincoln Park Zoo and interviewed with (former zoo director) Dr. Lester Fisher, and it was clear he wanted to conduct research that helped the zoo take better care of the animals.

What was the department like in those early days?

In the beginning, it was just me and a half-time assistant. None of us ever imagined it would grow to 40 full-time scientists, not even as recently as 18 years ago, before we took on the Population Management Center. We thought it would be a small program, so we focused on interns and fellows. They were a

great way to teach future conservation biologists while doing some fantastic research and conservation. We didn't do as much fieldwork back then, but we provided grants to researchers, mostly grad students, all over the world to conduct their own projects.

What was your goal for building the department?

We always tried to do things we could excel at without directly competing with other zoos or academia. The questions the Alexander Center for Applied Population Biology answers, for example, aren't questions asked in mainstream academia. Joanne Earnhardt, one of the zoo's other early scientists, use to say we built a program that was the best of private research and development and the best of academia. We took the parts we liked from both to stay productive and give ourselves free reign.

What made you stay in various positions over the past 30 years (before retiring in Spring 2019)?

I found great satisfaction in being able to answer questions, to be able to help at all levels of the zoo and make decisions based on real information. We always struggled when our peers made decisions based on their experience without underlying, provable data. With very good research, and for a very long time, we were able to identify countless ways to improve animal care.

Are you leaving the department in good hands?

Oh yes. Lisa Faust was my intern in 1997, and now she's vice president of the department. I can't think of anything that's more of a credit to her and the institution; that something like that could happen is simply incredible. That's what sets Lincoln Park Zoo apart: the people.



Fabian Hernandez-Villa

6-year-old at Summer Camp

What's your favorite part of Lincoln Park Zoo and Day Camp?

We get to make new friends and enjoy the outside and see a lot of animals. My favorites are the chimpanzees. They're always climbing and swinging around.

Have you done anything fun this week?

Today we got to watch the seals. They were eating and we got to go downstairs and watch them swim from underwater. And I learned that gorillas eat lettuce and that female monkeys like to swing around.

What's your favorite part of free play?

Playing with my friends and playing by the fountain. When you go over by the fountain and stand by the water, you get wet and it helps you cool down. Today, I found a beetle that was alive in the fountain, so I saved it and put it back on the ground.

What about morning free play?

I play with a lot of other kids. Today we played this game where you had to tag everyone wearing an orange shirt, but sometimes some of them got away. Then we started a new round and then one of them tagged me. I was trying to escape but I kept getting tagged.

What other fun things do you do at camp?

I play with a lion teddy bear and jaguar teddy bear in the mornings. They're always fighting each other over who gets a cookie. It's pretend, though. Real lions and jaguars don't like cookies.

Ann and Tarek Fadel

Donor Club members

Tarek, you proposed to Ann at Lincoln Park Zoo. Why?

Tarek: Both of us are huge animal lovers. Conservation is very important to us. Educating the public is very important to us. And the zoo is somewhere we can go that always makes us happy.

Ann: The zoo is incredible. It's so beautiful. There are so many different flowers. Every time we go, it's like something else is blooming. And it's incredible that it's available to everyone, for free. It's a treasure.

How did you propose?

Tarek: Ann's favorite animals are the gorillas, so (Director of Annual Giving) Mariah Cunnick suggested Regenstein Center for African Apes. We tricked Ann into thinking it was another behind-the-scenes tour, but since no one else was there, Kwan the silverback was really interested in us. He even started playing with Ann through the glass.

Ann: He was playing hide and seek. He would look at me and then I'd look at him and he'd turn around and pretend he wasn't looking at me. Tarek was trying to propose. He said, "Ann, I love you," and I said it back but I wasn't looking at him, I was looking at Kwan.

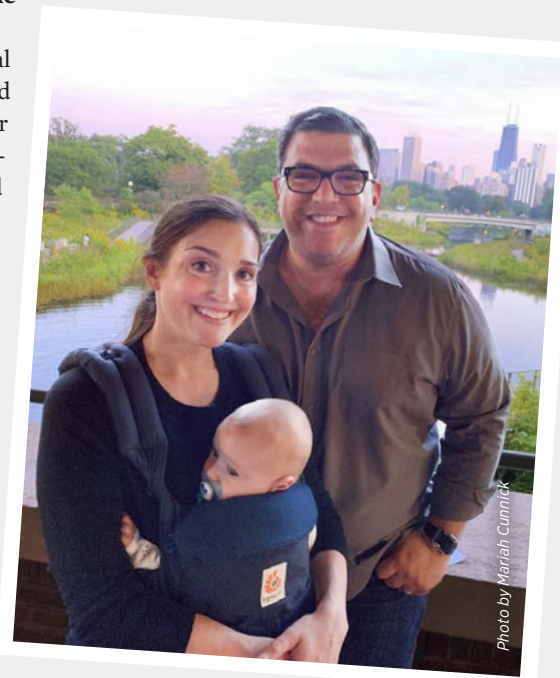
Tarek: I was competing with Kwan for my wife's affection, and I lost. It took a diamond ring to divert her.


I hear you have another unique connection to the gorillas.

Ann: Yes! Our baby boy, Hugo, was born on the same day as Mondika: May 12, 2019, on Mother's Day.

Why do you support the zoo as members?

Tarek: Beyond the animal care, conservation, and learning programs, your membership team is phenomenal. We've donated to a number of organizations, but Lincoln Park Zoo is just spectacular. We love Mariah and consider her a friend. Every event we go to has this loving and warm environment. They're always so inclusive. ■





Cinereous Vulture

Aegypius monachus

Although vultures receive a bad reputation for both their unique appearance and diet, these scavengers play a vital role in their ecosystem. By feeding on dead animals, they recycle nutrients and speed the process of decomposition.

This near threatened species can measure more than 3 feet in height and has a wingspan that can extend up to 10 feet. They are known for their appearance, which isn't complete without dark brown feathers and a dull blue head, neck, and bill.

Cinereous vultures are found in Northern Africa and Spain, and east through China and Thailand. A massive beak and impeccable eyesight make these large birds ideal scavengers, as they can easily spot carcasses from afar and tear through sinew, dry skin, and muscle.

The zoo's vultures, Bruno and Linda, reside at Regenstein Birds of Prey, where they are regularly given carcasses to feed upon. ■

—Sabrina Cynova



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By printing this issue on 100% post-consumer, recycled paper, we are saving:



48
trees



3,620
gallons of water



7,026
pounds of CO2

Upcoming Events

Go to lpzoo.org/calendar for details on upcoming events.

November

Saturday, 2
Family Nature Days

Friday, 22
Members-Only Night at ZooLights

Friday-Saturday, 29-30
ZooLights Presented by ComEd and Invesco QQQ

December

Sunday-Tuesday, 1, 6-8, 13-15, 16-23, & 26-31
ZooLights Presented by ComEd and Invesco QQQ

Tuesday, 3
Holiday Market

Thursday, 5
Adults Night Out: Holiday!

Thursday, 12
BrewLights Presented by Louis Glunz Beer, Inc.

Sunday, 15
Breakfast with Santa
The Chris White Trio Tribute to A Charlie Brown Christmas

Tuesday, 31
Zoo Year's Eve

January

Wednesday-Sunday, 1-5
ZooLights Presented by ComEd and Invesco QQQ

Thursday-Friday, 2-3
Winter Break Camp

Sunday, 5
GlowFlow Yoga

Monday, 20
School Holiday Camp