

Alive



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The mission of the Zoological Society is to take part in conserving wildlife and endangered species, to educate people about the importance of wildlife and the environment, and to support the Milwaukee County Zoo.

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Correction:
 Education photos in the January 2013 *Alive*, pages 4 and 5, were taken by Richard Taylor.



CEO's Letter



One of the Zoological Society of Milwaukee's (ZSM) three missions is to conserve wildlife and endangered species. We're proud that our conservation efforts span the globe, helping a wide variety of species, such as primates, reptiles, birds and more. In the Democratic Republic of Congo, our Bonobo & Congo Biodiversity Initiative (BCBI) helps protect endangered bonobos and forest elephants. Find out what it's like to trek through the tropical rainforest in the Salonga National Park with a BCBI member (page 10).

Closer to home, we recently helped a Milwaukee County Zoo veterinary technician travel to Grand Cayman Island to help protect blue iguanas, one of the most endangered lizards in the world. You can see one here at our Zoo in the Aquatic & Reptile Center. There were fewer than 20 of these beautiful animals left in the wild in 2002 (page 14). Thanks to the Zoo and ZSM's efforts, there are now more than 700. The Zoo also exhibits endangered whooping cranes (see cover photo), thanks to a partnership with Wisconsin's International Crane Foundation. Last summer an aviary zookeeper traveled to the Patuxent Wildlife Research Center in Maryland to help rear whooping-crane chicks (page 11). Tiki - one of the Zoo's two whooping cranes - came from Patuxent. You'll find a summary of Zoological Society conservation efforts every year in our annual report on our website. Thanks for helping us help our wild friends.

Robert Davis
 Dr. Robert (Bert) Davis
 Chief Executive Officer

Keeping Track of the Animals



When you chuckle at the antics of the Milwaukee County Zoo's bonobos, you probably don't think about what goes into bringing one of these endangered great apes here. Lots of technology is involved. And the technology just got better. Endangered animals are managed through Species Survival Plans (SSPs) used by zoos that are accredited by the Association of Zoos and Aquariums. "Their health and husbandry are closely monitored and recorded," says Linda Bachers, the Zoo's registrar who keeps

A bonobo at the Zoo

4 *Touching Slippery Sharks & Rays*

Touch sharks and sting rays at the Milwaukee County Zoo's special summer exhibit, String Ray & Shark Bay, sponsored by Sendik's Food Markets.

5 *Farming Back in the Day*

Walk through an outdoor museum to learn how people farmed 100 years ago. The display is at the remodeled entrance to the Zoo's Northwestern Mutual Family Farm.

6 *Education: Connecting Art & Nature*

Discover the world of art and animals in Zoological Society of Milwaukee (ZSM) education classes and summer camps.

7 *Amazing Health Care for Animals - Part 2*

From two injured tortoises to a mischievous penguin that ate too much, learn about challenging cases that Zoo veterinarians face daily.

10 *On the Job: Jungle Logistics - Part 2*

Venture 24 hours into the African Congo looking for endangered bonobos and elephants.

11 *Conservation: A Class in Crane 101*

Zookeeper Caty Poggenburg heads east to help rear endangered whooping-crane chicks.

12 *Kids Alive*

Solve a Wisconsin bird word search, make bird-nest treats and create window decals to help save birds' lives.

14 *Conservation: Betting on the Blue*

Grand Cayman's blue iguanas are among the world's most endangered iguanas. Joan Maurer, a veterinary technician at the Zoo, helps with a recovery program.

Web: More on the Zoo and iguana conservation: zoosociety.org/iguana

15 *What's Gnu*

New animals: jaguar cubs and a female spotted hyena

Contributors See the insert packaged with this *Alive* that includes a list of Platypus Circle, Serengeti Circle and Simba Circle members.

Annual Report The ZSM annual report will be available online in May at zoosociety.org/annualreport

track of all the Zoo's animals. Recently the Bonobo SSP recommended that our Zoo receive a female bonobo named Lola from the Columbus Zoo. She arrived on Feb. 5. The SSP showed she was a good genetic match for one of our Zoo's male bonobos.

Record-keeping seems straightforward, but until recently sharing the data between institutions was an onerous task. "Zoos and aquariums kept records on their computers in a database called the Animal Record Keeping System (ARKS)," says Bachers. "Each institution created its own records and forwarded information to the International Species Information System (ISIS)." When registrars needed information about an animal, they requested it from their counterparts, who then sent the data via the mail and, later, via e-mail. Each zoo or aquarium



Linda Bachers came to the Zoo in 2008.

periodically updated their records to ISIS. New information about animals could not be shared in real time. Now there's a new database in town: the Zoological Information Management System (ZIMS). "ISIS produced an online database that can be updated in real time and accessed by registrars and keepers," says Bachers. "So when Lola came here, I didn't have to enter all of her information into our database. I only needed to enter her ID accession number, which confirmed she was now at our Zoo. Any new information we add to Lola's specimen record in ZIMS will merge with previous data from the Columbus Zoo." ZIMS also can record more bits of data on animals than ARKS. Eventually ZIMS will have other databases, for medical information, for animal "family trees," etc. Welcome to the future.

By Zak Mazur

Reach out & Touch 'Em!

(Sting Rays & Sharks)

There are few creatures more graceful than a shimmering, silvery sting ray gliding and dipping through water. Then comes the shark. It weaves, it swivels, it stalks. What a pair! You can meet and touch both of these types of sea creatures this spring and summer at the Milwaukee County Zoo. Sting Ray & Shark Bay, sponsored by Sendik's Food Markets, opens May 25 and runs through Sept. 2. Zoological Society members will have a special showing of the exhibit for free during the nights of June 3-5. The exhibit's large pool will be housed in the Zoo's Otto Borchert Family Special Exhibits Building (blue building behind Macaque Island). The sting rays and sharks will, indeed, swim together. That's because the sting rays have had their stinging barbs removed, and the sharks are close to the size of the rays and are harmless. It's still pretty amazing to see them swim side by side.

You may remember the cownose sting rays from previous sting-ray exhibits the Zoo had in 2007 and 2008. These rays have an indentation in the front that looks a little like a cow's nose. Southern sting rays, on the other hand, have a more triangular front end (see photo). The types of sharks the Zoo expects to display are bamboo sharks (known for spots and bands) and bonnethead sharks with flat, spread-out heads that look a little like the Starship Enterprise. It's strange to see the eyes, really far apart, one on each side, like windows on the ship. Look also for large crabs in the exhibit. They make quite a contrast to the rays and sharks.

Living Exhibits, a San Diego-based corporation that provided this interactive seasonal exhibit, will help the Zoo manage the marine animals. Visitors are asked to wash their hands both before and after dipping their hands in the pool to touch the animals. This way the pool won't get contaminated with sunscreen or insect spray, which may harm the animals. The exhibit will have an entry fee of \$2 in addition to Zoo admission. So bring your curiosity to the Zoo and find out just what a sting ray or shark fin feels like.



A group of kids with hands in the water wait for the next shark to swim by at the Zoo in 2007.

Cownose sting ray



Special Exhibit

Southern sting ray



Celebrating Family Farms

Bringing farming to life has long been a big part of the Milwaukee County Zoo. Here you can view cows being milked on a working dairy farm. You also can visit hogs, cattle, ducks, chicks and other farm animals. Now you also can peek into the past. Thanks to a generous grant from the Northwestern Mutual Foundation, the entrance to the Zoo's Northwestern Mutual Family Farm opened last October as a celebration of farms from yesteryear. Visitors can travel back 100 years when farmers literally relied on horse power to produce and harvest food. "We wanted to teach people about days-gone-by-farming techniques using antique farming equipment," says Deputy Zoo Director Bruce Beehler, who obtained much of the equipment from the Richfield Historical Society. Visitors view antique farm equipment such as a sickle mower, horse-drawn shovel, a cultivator, dump-rake, plow, grain wagon and more. Using historical photographs and old-time advertisements for farm implements, Zoological Society artist Julie Radcliffe created interpretive graphics that give visitors the feel of farmers talking about how they used the equipment. "The area is now an open-air museum that tells an important story about Wisconsin's farming heritage," says Radcliffe. The grant also funded other upgrades, such as installation of a new pathway, a cedar fence, a cornfield and more green space. There's also a water pump and a 100-year-old wagon that's great for posed photos of children and families. The children here were photographed last fall, just after the display opened.

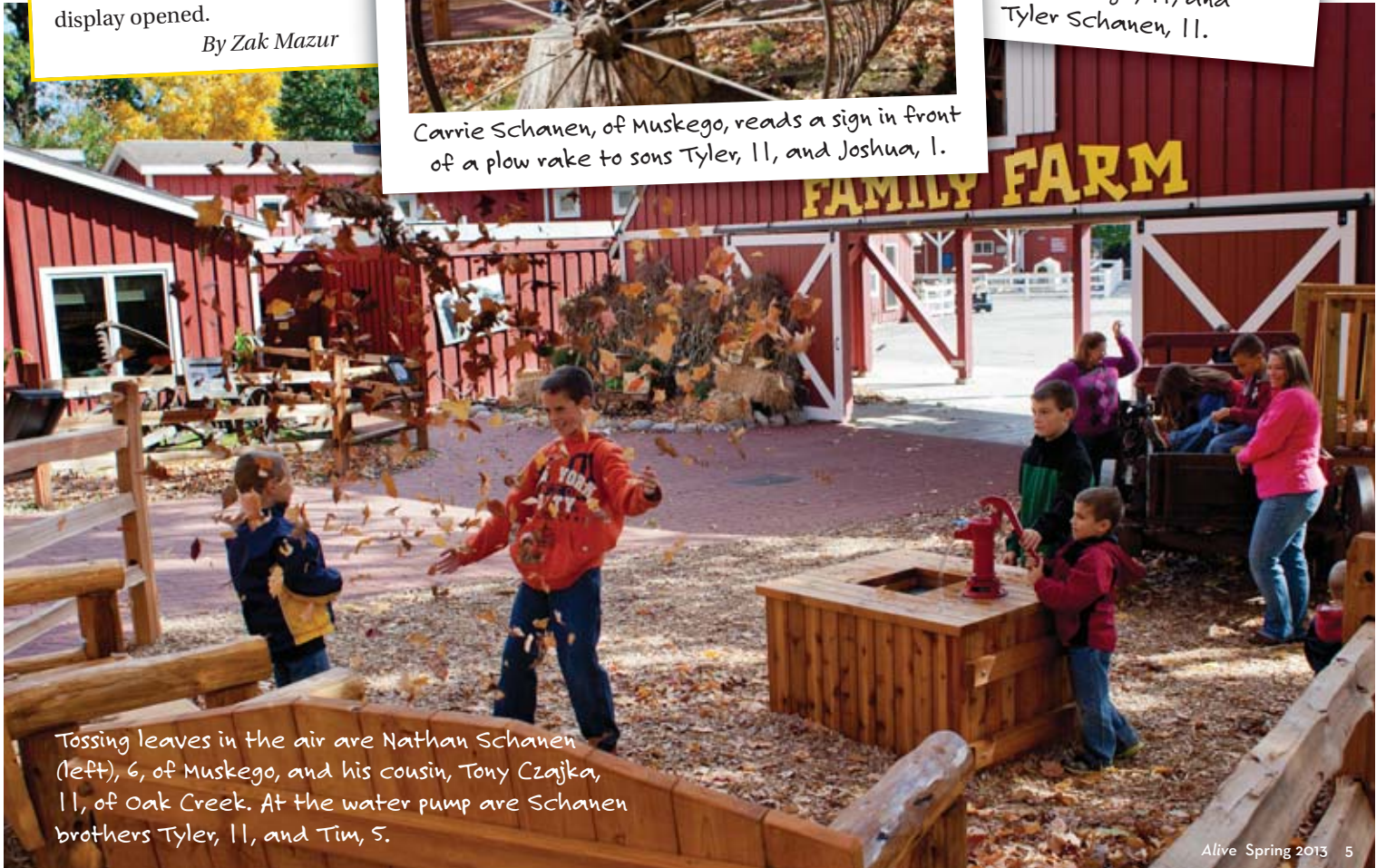
By Zak Mazur



Pretending to steer a farm wagon in the front are Lucas, 8, Nathan, 6, and Tim Schanen, 5. Passengers are Stephanie Czajka, 8, Tony Czajka, 11, and Tyler Schanen, 11.



Carrie Schanen, of Muskego, reads a sign in front of a plow rake to sons Tyler, 11, and Joshua, 1.



Tossing leaves in the air are Nathan Schanen (left), 6, of Muskego, and his cousin, Tony Czajka, 11, of Oak Creek. At the water pump are Schanen brothers Tyler, 11, and Tim, 5.



Connecting Art & Nature

Twice a year, the Zoological Society of Milwaukee's (ZSM's) education building becomes a lively art gallery. Excited children breathlessly explain their artwork displays to family and friends. On this gallery wall a peacock poses in front of paint cans. Another wall features a camel with ice cream cones for humps. Welcome to surrealist art! Curious adults ask lots of questions: "Why did you choose this animal?" "What was the hardest part about making your painting?" "What was the style of art you chose?" In an adjacent classroom, adolescent artists give directions to grandparents, siblings and friends on how to make an acrylic surrealist painting. This is Gallery Day, the final day of a ZSM Zoo Art Club class.

"Art Club offers the opportunity to experience science, art and history together," says Patty Trinko, the ZSM's assistant education director. Trinko created Zoo Art Club to teach children how nature and wildlife can influence art and how children can use art to create connections to other people and to animals. "It's challenging in our society to have time to connect to each other in real and meaningful ways," Trinko says.

Trinko teaches both the spring and fall semester Zoo Art Club classes, which take place one Saturday a month for three months. The first class focuses on a specific style of art, and how nature influenced artists of that style. One session featured John James Audubon, a naturalist artist most famous for intricate drawings of birds in their natural habitats. Audubon's work introduced people around the world to new animals and environments, helping them better understand nature. "Humans tend to take care of what they understand," Trinko says. "Art can lead to knowledge and understanding, especially about our impact in the world." Many materials used to create art also are part of nature, she notes. In a session on sculpture, Trinko told how Michelangelo took months to find the perfect piece of marble for a sculpture. Children in that class touched pieces of marble and discussed the work needed to chisel and file hard marble into art.

Student artists also tour the Milwaukee County Zoo for inspiration. They view animals, make rough sketches, and talk with volunteers about animal characteristics. Back in the classroom, children practice brainstorming artwork ideas to learn about the creative process. They're encouraged to work on their ideas at home to prepare for the next class. In the second class, each child's idea is reviewed by a teacher to make sure it fits the art style they've learned about. Then it's time to create.

The third class, Trinko's favorite, is Gallery Day. Children display their art as they would in a real gallery, and they can invite their family and friends to attend. While guests enjoy light refreshments, Trinko gives a short presentation about the session's chosen artist(s) and techniques. Then children show their art. Gallery Day also features an Art Studio where students can teach their guests the art concepts they've learned in Art Club.



Left: Critiquing each other's reptile artworks during Gallery Day are Gabriel Schemmel (left) of Whitewater and Kayla Francis of Menomonee Falls.



Instructor Patty Trinko explains to Ryan Beckley, 8, of New Berlin, how to make a mobile.

Guests are encouraged to create art of their own. "It's incredible how many people come in who have never drawn or painted before and discover an innate talent for art," says Trinko. For some, it's re-discovery. One grandfather who had been a watercolor artist in his younger days had not painted in more than 20 years. His wife revealed to Trinko that she hoped he would be inspired by his granddaughter to paint on this Gallery Day. To the family's delight, within a few minutes of his granddaughter's instructions, the grandfather began painting a beautiful watercolor butterfly.

"One of the goals, in all my classes, is to create moments of connection," says Trinko. "These moments can be between a person and an animal; a person and a staff member or volunteer; or, at Gallery Day, a connection among families, art and animals."

For more information about Zoo Art Club and other art-related ZSM classes and summer camps, visit zoosociety.org/education.

By Liz Mauritz

Creature Challenges



African spurred tortoises share a yard with impalas and, in past years, gazelles. This Speke's gazelle in 2007 prepared to head-butt a tortoise. There were no injuries.

Dr. Gretchen Cole, the primary veterinarian for a lame tortoise named Speedy, views an X-ray in 2009 as a vet resident, a position funded by the Zoological Society.



Zoo animals experience a host of unusual and even quirky medical conditions. From a newborn impala rejected by her mom to a plucky gentoo penguin who swallows all the wrong things, there's often a crisis challenging the veterinary staff at the Milwaukee County Zoo. They can handle it. Several staff members have worked at the Zoo for over 20 years. They and their consultants are adept at figuring out how to create everything from a tiny tamarin anesthesia mask to a one-of-a-kind bird-beak splint. They treat everything from broken bones to broken spirits. The level of care that the Zoo's animals receive is often amazing. Pet owners may appreciate some of these examples of animals in trouble:

A Tale of Two Tortoises

Fluffy doesn't really match her name. This 100-pound tortoise has a rock-hard shell, wrinkled skin and spurs on her thighs. A few years ago, Fluffy, a 25-year-old African spurred tortoise, went lame in her left back leg. A CT scan confirmed arthritis in her left rear knee but also showed a surprising condition. She had 21 eggs inside her. Plus, she had hundreds of follicles on her ovaries. Zoo staff didn't know how long the eggs had been there; so they waited a year to see if she would lay them. She didn't. Because abnormally retained eggs can cause health problems, the vet staff decided to remove them. In October 2011 Fluffy had two ground-breaking surgeries to remove eggs and spay her to prevent future problems.

Veterinarians* were reluctant to saw through Fluffy's shell to get to her ovaries and eggs. Instead, they tried a procedure that had been used for small tortoises but not for tortoises as large as Fluffy (at least it had not been described in medical literature). After anesthetizing Fluffy, they made an incision in a depression in the front of one back leg. They used a fiberoptic endoscope to help them see inside the body. In the first surgery, they took out the right ovary, follicles and eggs. Because it was a long surgery, they waited two weeks to do the left side. The eggs, which had calcified, and the follicles weighed a total of 15 pounds. These two less invasive procedures reduced her risk for infection, allowed her to heal faster and were considered less painful. They worked. Fluffy healed quickly. Now, nearly two years later, she's doing well.

The second dramatic tortoise surgery involved Speedy, 12, a South American yellow-footed tortoise. Speedy was lame in his left front leg. A CT scan showed a fracture at the top of his shoulder,

*Dr. Christoph Mans, Dr. Dominique Keller and a UW-Madison student, along with Zoo veterinary technicians, were involved. The Zoological Society of Milwaukee has provided long-term support to various veterinary residencies and student vet programs at the Zoo. Drs. Mans, Keller and intern Amelia Gessner (page 8) were recipients of that support.



African spurred tortoise

technically, in the head of the humerus, a bone that forms part of the shoulder joint. “The humeral head had died,” says Dr. Roberta Wallace, one of the Milwaukee County Zoo’s two full-time veterinarians. In January 2008, veterinary surgeons at the University of Wisconsin School of Veterinary Medicine removed the humeral head and reattached muscles to cover and protect the amputation site. Within a year Speedy’s body had created a new shoulder joint by putting down fibrous tissue to make what’s called a false joint, says Dr. Wallace. “It’s common in dogs and cats.” Today Speedy is walking normally and doing well.



South American yellow-footed tortoise

Marvin the Mischievous Penguin

“Marvin is a very curious, hyperactive penguin,” says Dr. Roberta Wallace. “Marvin will ingest almost anything. We have to child-proof everything.” One exploit that sent him to the Animal Health Center happened in 2010. Marvin the gentoo penguin was curious and dug out around a light in the exhibit he shares with other gentoo and rockhopper penguins. Then he swallowed the light’s rubber-band-style gasket. At the hospital, he was able to regurgitate it on his own, but it took a few weeks to fully recover his appetite. “A year earlier, he had grabbed a 9-inch-long toy that was made out of green tennis-ball material. Keepers thought it would be safe because it was so big and none of the other penguins tried to eat it,” says Dr. Wallace. “But Marvin swallowed it. That’s Marvin.” The X-ray of Marvin’s torso with the huge toy inside made news in a veterinary magazine in a piece titled “They Ate What?” He couldn’t regurgitate it on his own. Luckily, the vets were able to pull out the toy the same way it



Gentoo penguin



This X-ray of Marvin the gentoo penguin shows a 9-inch toy (in foreground) in his gullet, before vets pulled it out.

went in. “These days we can use an endoscope to take out what Marvin ingests. It’s so much easier than surgery.”

Marvin is also prone to fungal infections in his lungs and air sacs. When he has these, he requires expensive anti-fungal medication. He also needs to be treated with a nebulizer. “He’s our \$5,000 penguin,” says Dr. Wallace. “In 2010, he was quite sick. He was treated for 63 days. He got better and then had a relapse. Then he was treated for another 55 days. Fungal infections are notoriously difficult to treat. His therapy cost between \$5,000 and \$6,000.” Marvin did fine for a while. But in October 2012, he was back in the Animal Health Center for another bout with a fungal infection. He finally returned to his exhibit in the Herb & Nada Mahler Family Aviary Nov. 29 and was doing well as of February this year.



Dr. Roberta Wallace (left), intern Amelia Gessner* (in pink), Dr. Vickie Clyde and technician Bob Korman examine an anesthetized Sanura the lion.

Three First-time Feline Moms

Amba the Amur tiger has IBS (inflammatory bowel syndrome). “We’ve been treating her for it for years,” says Dr. Wallace. “Her problem is not as severe as the cheetah Damaras’ (see Part 1 of this story in the January 2013 *Alive* magazine). Her problem would flare up during estrus cycles, about every 21 days.” When Amba became pregnant, “remarkably her IBS subsided and she seemed to be better,” says Dr. Wallace. “You might even say that she never felt better in her life.” This first-time mom turned out to be a great mother. Amba and her two offspring, Tula and Nuri, are on exhibit in the Florence Mila Borchert Big Cat Country.

Sanura the African lion, another first-time mom, gave birth to three cubs in July 2011, and they quickly became the Zoo’s most popular animals. You could watch the cubs – two males and a female – chasing Mom, jumping on her and cuddling with her. She was very patient. By late 2012, the youngsters were nearly adult size. All three were sent to other zoos as part of a Species Survival Plan breeding program. Sanura and her mate, Themba, have been breeding again. Last July Sanura seemed fatter, and keepers thought she might be pregnant again. She went to the hospital for X-rays. She wasn’t pregnant. She just had been getting fat and was put on a diet. Sanura also has periodic digestive problems. But with the good care she is getting, the staff expect her to produce more cubs within a year or so.

Stella the jaguar became a first-time mom in November 2012. (See story on page 15.) But it took a few years to get pregnant. When they first started introductions to her mate, Pat, zookeepers put them together only for short periods, not wanting to risk any conflicts between the cats. Stella didn't get pregnant. The key was to give them more time, says Tim Wild, the Zoo's curator of large mammals. "We got them outside and together all day." Apparently they became more comfortable with each other. Voila! She got pregnant. Her two spotted cubs went on exhibit this spring, and Web cams have made them very popular.



MJ the orangutan brings baby Mahal up to an exhibit window.

Outgoing Orangutan

When MJ the orangutan came to the Zoo in April 2007, she was on a lot of medications: steroids for bowel problems, thyroid medications and an anti-depressant (Prozac, the same kind given to humans). "A big part of her health problems was the social grouping she had been in at her previous zoo," says Zoo veterinarian

Vickie Clyde. "She was housed with a male orangutan that was aggressive and sometimes hurt her. When she came here, much of her stress was relieved." She became more outgoing, often interacting with Zoo visitors. Dr. Clyde and Dr. Wallace took another look at her medications. "Sometimes good medical care is knowing when NOT to do something," says Dr. Clyde. "We've been able to wean her off of many of her drugs." For example, adds Dr. Wallace, "I reviewed her behavior and her old records and realized she was being over-medicated with thyroid medications. We've been decreasing it and now she's on a really low dose." MJ no longer takes steroids and has been switched to a more appropriate anti-depressant.

MJ became quite well-known when she adopted a baby orangutan named Mahal in 2008. She was patient and protective and instinctively knew how to provide a safe environment.

Their story – Mahal's flight to Milwaukee from another zoo, their first hug, their painting together and playing with iPads – was told in newspapers, in Zoological Society publications, on the Internet and in a book. At the end of 2012, disaster struck. Mahal became acutely ill and died within two days, before vets even got a chance to separate him from MJ and do an exam. "Sometimes things happen that you just can't prevent," says Dr. Wallace. Yet MJ has proved resilient. "She seemed a little depressed at first, but then she seemed to accept it." Now she has been re-introduced to the male orangutan, Tom, and they spend much of their time together. "Life goes on."

By Paula Brookmire

Icy Impala

Ginger the baby impala was shivering. A zookeeper held her, and the veterinary staff had covered her with a warm-air "comforter" that looked like a clear plastic, floatable swimming raft. A noisy heater continuously pushed in warm air. Barely a day old, the calf could stand, but her first-time mom, Doruba, would not let her suckle. Doruba even started head-butting Ginger to push her away. "They finally get so weak that they can't suckle and get the energy to their brain," says Dr. Wallace.

At about 4 p.m. on Jan. 21 this year, keepers took the newborn from the impala stall and brought her to the Zoo's Animal Health Center. Her blood sugar and body temperature were low, and her heart rhythm was abnormal. The staff gave her dextrose (a sterile, medical sugar solution) intravenously. Once Ginger was stronger, they bottle-fed her colostrum, or "mother's milk," previously collected from the Zoo's dairy cows. Colostrum is antibody-rich milk produced by hoofed animals mainly in the first two days after giving birth. "If animals don't get colostrum in the first 24 hours of life, they are subject to more infections," says Dr. Wallace. The hospital has a bank of colostrum it has used over the years to hand-rear animals ranging from antelope, such as impalas and elands, to Dall sheep. By 5:10 p.m. Ginger's temperature was normal, her blood sugar much improved and her arrhythmia gone. As of February, she was still doing well. Another success.



Celi Jeske, the Zoo's hospital supervisor, bottle-feeds Ginger, the newborn impala.



JUNGLE LOGISTICS

In the January 2013 *Alive* magazine we interviewed Patrick Guislain, field projects coordinator for the Zoological Society of Milwaukee's Bonobo & Congo Biodiversity Initiative (BCBI). The program works to conserve bonobos (great apes) and other endangered wildlife in Salonga National Park in the French-speaking Democratic Republic of Congo. He described the hardships of traveling to BCBI's remote research station at Etate in the Salonga. He discussed life at Etate, his role handling BCBI logistics, and his relationship with Congolese colleagues. In Part 2, Guislain describes what it's like to spend a day and night surveying a fragment of this vast park. The goal is to find out how many bonobos and elephants are present, what habitat they like, what they eat and whether there are poachers present.

GUISLAIN: When we go on a survey into the forest, every person is assigned a specific task. The first position is the *pisteur* (tracker). He reads the compass and chops a straight-line transect – a compass line we follow while checking for bonobo nests, elephant dung, food remains, poachers' snares and the like. Other team members record data, handle the GPS unit and use a topofil machine – a measuring device – to determine distances from the starting point to nests, dung piles and other signs that point to how many animals are in an area. We cross small brooks, plow through swamps, and slide down steep slopes. The work is fatiguing but very rewarding. We stumble on old poaching camps and discover huge termite mounds, one where over 10 bonobos have constructed ground nests. The most enjoyable thing is not knowing what's over the next hill, then going over that hill and hopefully discovering a place where nobody has ever been. We could encounter a secluded elephant bai (a clearing where they congregate), an enormous python, or a bonobo group. Coming to face with wild bonobos is an amazing experience!

Between 4 and 5 p.m. we look for a stream to set up camp. Work is far from over. Some clear the ground of little sticks that would puncture the tarp, which is placed on the ground to protect us from the moist forest floor. Others chop sticks to support another tarp over us for protection from the nightly rains. Some construct improvised benches. Meanwhile, others gather firewood and get fresh water for cooking. Some bathe while others cook rice and open the canned sardines. We all end up around the fire, talk about the day's findings and discuss the work that lies ahead. We joke and laugh, or have serious discussions about the solar system and life in the western world.

The next morning we're up at the crack of dawn – usually before that because bees invade our camp at first light looking for salt and sugar. Next to the camp fire an assortment of sticks is draped with socks, shoes, pants and shirts. We gather around the fire, slurp coffee and eat the remnants of yesterday's supper, mostly rice and *chikwangue* (a savory preparation made from cassava root). Two people do the dishes while others break down the camp and get backpacks ready to go. We then gather around maps and study the best way to tackle the day's work. For example, where do we split into two survey teams and where do we meet up again? We use the GPS to determine what heading we need to follow and set the compass accordingly. By the time we're done with logistics, the bees are swarming around us. We leave camp and hack our way to the first go-to point, which is normally where the next transect starts and our work begins.



Large photo: Patrick Guislain (right) installs a trail camera to photograph animals or poachers as they pass. With him are Bokitsi Bunda (center), Etate patrol post chief, and Guard First Class Isasi Bianga. Inset: Guislain (right) and research assistant Basele Michel calibrate a trail camera.



A CLASS IN Crane 101

Imagine working for days outside in 95-degree heat and high humidity, covered from head to toe in a white sheet. That's how Caty Poggenburg, an aviary zookeeper at the Milwaukee County Zoo, chose to spend some of her vacation days last summer. For nearly two weeks in June 2012, Poggenburg dressed as an adult whooping crane to help "costume-rear" crane chicks at Patuxent Wildlife Research Center in Maryland. "The heat was brutal," she says. But her volunteer work was worth the discomfort.



Clockwise from above: Caty Poggenburg cares for the Zoo's two whooping cranes, which cannot live in the wild due to early injuries. | Whooping crane | Chicks are fed by workers dressed as adult cranes.

Patuxent and the International Crane Foundation (ICF) in Baraboo, Wis., are partners in the Whooping Crane Eastern Partnership. Their goal is to prevent whooping-crane extinction and restore a wild population that can sustain itself. In the late 1940s, there were only 16 whooping cranes left on Earth. When a whooping crane arrived at Patuxent in 1966 with a broken

wing, researchers helped him recover and have been working with cranes ever since. Both Patuxent and the ICF (founded in the 1970s) rear chicks. They focus on every step of a crane's life, from selecting breeding pairs that will increase genetic diversity, to incubating eggs, to preparing young whooping cranes for migration.

Poggenburg's task was to teach chicks "how to be a crane." That included how to eat and socialize. Poggenburg has trained the Zoo's two adult whooping cranes, Torch and Tiki, to help in their health exams. So she has experience with the birds but had to get training to teach chicks. "They didn't want any of the cranes to be imprinted (bonded) on humans," she says. To survive, they need to act like cranes. Besides dressing in a white sheet, she used a crane puppet head attached to her sleeve to mimic an adult's head movements. She also used a vocalizer, a device that played adult crane and marsh sounds. "If you were anywhere near the crane chicks, you weren't allowed to speak at all." Chicks were

taught how to eat by workers poking a crane puppet beak (marked with red tape) into a food dish. Attracted to the red beak, chicks pecked at it and got food from the dish. As chicks grow older, a puppet head without tape is used. "If you tap the ground with the head, they know they should go over there to get something yummy."

When chicks are able, they are walked outside several times a day. Cranes are prone to leg problems. "Walking helps exercise



Photo provided by Caty Poggenburg

their legs," says Poggenburg. Outside, the chicks learn how to socialize and forage. Costumed workers drop mealworms on the ground, and chicks follow the puppet head's lead and peck at the ground to eat the worms. Walks also help chicks learn to follow the group; chicks that don't quickly realize it. "It's very funny," says Poggenburg.



Photo provided by Caty Poggenburg

"They get distracted and off by themselves, and all of a sudden they panic and run really fast to catch up with you."

A famous program at Patuxent teaches chicks how to migrate using ultralight aircraft. Chicks

ready for migration work exclusively with trainers who operate the plane. "The trainers introduce the plane to them, the sounds, the noise, the sight," Poggenburg says. "They spend most of the day with these birds." A wire screen separates the chicks from the plane, and one trainer sits at the back of the plane with an extra-long puppet head. The chicks learn to fly by following the puppet head and the plane. In the fall, the young cranes will migrate with the ultralight to a whooping-crane flock in Florida. (In Wisconsin, some crane chicks are released into a wildlife refuge and learn to migrate from adult cranes.) This time-intensive conservation work is paying off. Whooping-crane numbers have grown from the 16 original survivors to more than 580. "A lot of species wouldn't survive," says Poggenburg, "but the cranes did." She will return to Patuxent this June to continue costume-rearing. "The chicks are adorable. It's a lot of fun to watch them grow and learn."

By Liz Mauritz

Kids Alive

Blue jays live and breed in Wisconsin during warmer months and migrate to southern states in winter.

BIRD is the Word



Wisconsin's state bird, the robin, is a symbol of the start of spring. Have you seen your first robin this year? Did you know other birds are symbols, too? Doves symbolize peace and love. Owls symbolize wisdom. The bald eagle is the national bird of the United States and represents freedom to Americans. In the fall, many Wisconsin birds migrate to southern places where they can find food during winter. In April, these birds start to flock back to our state. While you wait for their return, try the bird-themed activities on these pages. Find the names of popular Wisconsin bird species in our Wisconsin bird word search. Stop birds from flying into windows with our easy, washable window paint. Then make yourself a tasty, chocolate bird-nest snack! Go to www.zoosociety.org/funstuff for word search answers. There, you can also learn why birds are important and ways you can help birds - such as adding native plants to your yard. Or check out a Zoological Society of Milwaukee (ZSM) book on bird conservation with tips on how you can help. If you go to www.zoosociety.org/bwb-asf, you can download the entire book* or just the part of it that gives tips on helping birds.



Wisconsin Bird Word Search

There are hundreds of bird species native to Wisconsin. You've probably seen hawks flying overhead, heard doves cooing, and watched robins hunt for worms. Here are names of some popular Wisconsin birds. Circle them in the word search below. Words can go up, down, across, diagonally, and backward.

BLACKBIRD	L B S L X H K T U X H Y E N K
BLUE JAY	O O L K N U W X W U G A L I R
CARDINAL	P Q O A G O A J M L W J O B A
CHICKADEE	C T D N C N H M M K U E I O L
DOVE	A H C S D K I O Q S U U R R W
EAGLE	W E I O U N B M Z C S L O Q O
FINCH	G O V C G A B I P A P B Z U D
HAWK	C E O B K X M Z R K A H N T A
HERON	A E I D Z A X W X D R H C W E
HUMMINGBIRD	G R Z L P S D S E P R C G C M
LOON	D Z D U I E I E O Q O N S G O
MEADOWLARK	H E R O N L C G E H W I U B Q
ORIOLE	Q O L S A X E K H J B F N Z B
ROBIN	C A R D I N A L E V W M J N X
SPARROW	A A D T Y C L R X R E L G A E
WOODPECKER	

Above: Ted Plewa, 2, of Waukesha, and his mom, Heather, meet a baby chick during a Zoological Society class called Watch the Birdie. In this and other bird-themed classes, children learn the importance of birds and how to protect them. Visit www.zoosociety.org/Education for details on April's Watch the Birdie class (for children age 2 with one adult) or the May Super-Cool Bird Sculpting art class (for children ages 6 and 7).

Dish Soap Bird Decals

Millions of birds are killed each year when they collide with windows. To prevent these collisions, many people add birds-of-prey decals to windows. Smaller migratory birds are scared away by birds of prey. You also can use hummingbird or other bird decals just to let birds know there is a window there. Instead of decals, you can use soap-based paint to create birds of prey on the insides of your windows. Clean-up is easy – just wipe off the soap with a damp dishcloth.*



Great horned owl

You will need:

- 1/2 cup clear liquid dish soap
- 3 tablespoons cornstarch
- Shallow dish or bowl
- 8 drops food colorings**
- Bird-of-prey stencil printed out from www.zoosociety.org/funstuff
- Tape & paintbrush



Directions:

1. Add dish soap and cornstarch to bowl; stir.
2. Add food colorings. To make a pretty purple, mix in 4 drops of red and 4 drops of blue. For a vibrant green, mix in 4 drops of blue and 4 drops of yellow.**
3. Cut out inside of bird outline on stencil. Tape cut-out stencil onto inside of window.
4. Dip tip of paintbrush into soap and “paint” fully inside bird stencil onto window. Do not use too much soap or it will drip.
5. When soap is dry (5-10 minutes), remove stencil; repeat on other windows.

*Soap is easy to clean off windows, but it might stain carpets, furniture and clothes. So put down newspaper or rags to protect furnishings and wear a smock or old T-shirt to protect your clothes.

**Food colorings: It's best to use only two colors. If you use more, the mixture may turn brown or black.

*The ZSM book on bird conservation in Wisconsin is called “How to Manage Your Land to Help Birds.” Select the chapter titled “What You Can Do to Help Birds.” Here, for example, you can learn about bird decals for windows to reduce bird collisions.

Hummingbird decal on a window



Chocolate-Coconut “Nests”

(Makes about 16 treats)

These tasty, chocolaty nests look similar to real nests you might see in bushes or trees near your home. They have jelly beans in the center to represent bird eggs.

You will need:

- 12-ounce bag of semisweet chocolate chips
- Microwave-safe bowl (glass or ceramic)
- 7-ounce bag of shredded coconut
- 1-3 tablespoons milk or water
- Baking sheet & wax paper
- 1 tablespoon (for indents in nests)
- 8-ounce bag of jellybeans



Photo by ZSM Creative Dept.

Directions:

1. Ask your parent if you can cook using the microwave oven. Melt chocolate chips in bowl in microwave 1 to 2 minutes, until smooth, stirring every 30 seconds.
2. Add coconut; stir in well. If mixture gets too stiff, add milk or water 1 tablespoon at a time until batter looks like thick brownie mix.
3. Drop 1 tablespoonful of mixture onto baking sheet lined with wax paper. Repeat till you've used up all the chocolate mixture. Use back of tablespoon to make an indent in each mound.
4. Add 3 jelly beans to each nest.
5. Chill baking sheet in refrigerator until firm, about 10 minutes.
6. Serve these treats at a party or for dessert.



Black-capped ▲ chickadees live in Wisconsin year-round.



Bald eagle



Hooded ► merganser with crest



BETTING ON THE BLUE

Joan Maurer held up a huge blue iguana. She made it herself. She hand-painted the color and the eyes onto the cloth. It's the size of a mature, 7-year-old, female blue iguana. Yes, they really get that blue. "I've seen them," she says. It looks a lot like the ones she helped protect in the Caribbean last summer. She uses this prop when she speaks to Zoological Society of Milwaukee classes at the Zoo or to kids at Milwaukee-area libraries. This was one of the most endangered lizard species in the world, she tells them. But many volunteers – including Maurer and two other Milwaukee County Zoo staff* – helped bring this iguana back from near extinction.

For a week in June 2012, Maurer volunteered with the Blue Iguana Recovery Program on Grand Cayman Island, the largest of three Caribbean islands that are a British Overseas Territory. Maurer is a veterinary technician at the Zoo. She brought her medical skills to the Queen Elizabeth II Botanical Park, where she worked from 8 a.m. to sometimes 9 p.m. doing iguana health exams and lab analyses. The 82 young iguanas had been hand-raised at the park to about age 2. This head start lets them grow big enough to avoid predators (snakes, cats, dogs) when they are released into the wild. Maurer was taking measurements and photos, placing transponders into the youngsters and threading colorful beads through their thorny crests so the iguanas could be identified from a distance. "One of the youngsters had a hernia; so we did a surgical repair on site," she says.



"What's most fascinating is the effort that goes into this recovery program," she adds. Iguanas dig underground, lay their eggs and then seal up and disguise the den entrance. Park wardens dig up the eggs, put them into humidity- and temperature-controlled incubators for 65 to 90 days, travel the island to collect natural foods for the hatchlings, and then care for the young for two years. They also build "hidey" boxes, or homes, for iguanas to retreat to when they're released into one of two wildlife preserves on the island. Maurer was part of the veterinary support coordinated since 2001 by the Wildlife Conservation Society (WCS), a national conservation group with headquarters in New York City. Her trip was supported by the Zoological Society of Milwaukee and our Zoo.

The blue iguana has made an amazing comeback. The species lives only on Grand Cayman, and the recovery program is run by the National Trust for the Cayman Islands. By 2002, there were fewer than 20 blue iguanas left in the wild! "As a result of the recovery effort...there are now more than 700 free-ranging Grand Cayman iguanas at three sites on Grand Cayman," reports a 2012 WCS update. The goal is to reach 1,000.

"This is one endangered species that *can* be saved," writes Frederic J. Burton, a key player in establishing the island's wildlife reserves and author of "The Little Blue Book: A Short History of the Grand Cayman Blue Iguana" (2010, International Reptile Conservation Foundation). Says Maurer: "Just being part of such a successful program, I feel honored."

By Paula Brookmire

*Stacy Whitaker is a Milwaukee zookeeper who has volunteered with the Blue Iguana Recovery Program since 2006 and assisted with the Little Cayman rock iguana project in 2012. Craig Pelke, a past zookeeper, volunteered on Grand Cayman for several years. And zookeeper Dawn Fleuchaus has been involved with conservation of the Jamaican iguana since 2002. For more details and photos on Joan Maurer's trip and on other iguana-conservation projects, go to www.zoosociety.org/iguana.

Joan Maurer holds a cloth iguana she made for conservation talks.

Photo by Richard Brodzeller

Spotted hyena

Arrived: Nov. 2, 2012

Florence Mila Borchert Big Cat Country

Nyota, the Milwaukee County Zoo's newest hyena, at age 4 is still young. Yet she already dominates her mate, Scruffy, 14. When the two were introduced, they quarreled – which was expected – and Nyota got the better of Scruffy, thus establishing her role. When food arrives, she eats first. That's not unusual since female hyenas tend to be 10-15 pounds heavier than males. Zookeeper Amanda Ista says describing Nyota as dominant may be too simplistic. In Africa, where hyenas live in clans of up to 80 animals, the social order is complex. "I like to say Nyota is in charge of the decision-making and Scruffy is there to support her when she needs it." Nyota came from the Buffalo Zoo in New York because she's a good genetic match for Scruffy, but any mating will be Nyota's decision. Nyota still displays cub-like behavior. "She makes what we think are 'baby' noises similar to the sounds of hyena pups when they're hungry," says Ista. Many people don't like hyenas and their vocalizations. "Their laugh and calls sound 'creepy' to some people, whereas a lion's roar is 'majestic.' Their body shape makes them look unappealing and not pretty like many other African carnivores. They're also considered unclean because they eat spoiled meat and old carcasses." A hyena's digestive system contains enzymes and stomach acids that can break down bacteria that would kill other animals. By eating carcasses that can harbor diseases, hyenas help keep the ecosystem clean. They're also smart, says Ista. "They communicate using at least 14 unique vocalizations. In large social structures, communication is important...and Nyota is very intelligent. We've already started training so she can help in her own health exams. It builds a trusting relationship. This is important for monitoring if she's pregnant and for general healthcare."



-ZM

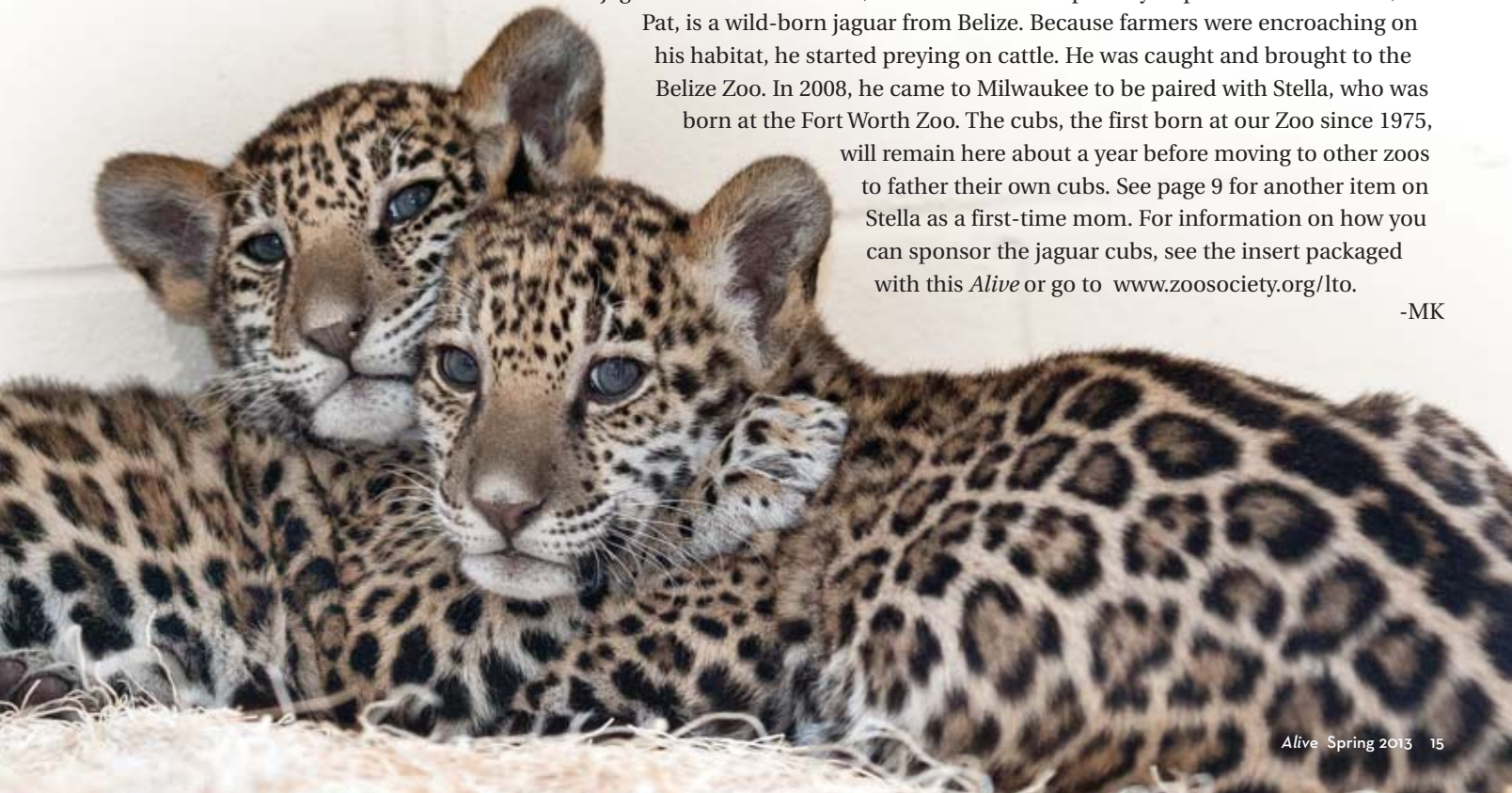
Jaguar Cubs

Born: November 13, 2012

Florence Mila Borchert Big Cat Country

Small black-and-gold bundles of energy running, jumping, chasing, tussling, and finally resting, watched over by their patient and protective mother. The two male cubs born to jaguars Stella and Pat are more than just adorable. They are valuable additions to the zoo world's captive jaguar population: only 140 in North America. It is rare for zoos to have wild-born jaguars. "The population of jaguars in zoos is so small that it's difficult to maintain genetic diversity. It is really significant to have genes from the wild," says Dawn Wicker, area supervisor of felines. Among zoos in the Association of Zoos and Aquariums' Jaguar Species Survival Plan, female jaguars outnumber males; so male cubs are especially important. Their father, Pat, is a wild-born jaguar from Belize. Because farmers were encroaching on his habitat, he started preying on cattle. He was caught and brought to the Belize Zoo. In 2008, he came to Milwaukee to be paired with Stella, who was born at the Fort Worth Zoo. The cubs, the first born at our Zoo since 1975, will remain here about a year before moving to other zoos to father their own cubs. See page 9 for another item on Stella as a first-time mom. For information on how you can sponsor the jaguar cubs, see the insert packaged with this *Alive* or go to www.zoosociety.org/lto.

-MK



New Zoo View for You! *(virtually, of course)*

Get a new view of the Milwaukee County Zoo. Wherever there's an Internet connection, you can tune in 24 hours a day. Watch the jaguar family with two frisky cubs. Or take a virtual splash with the polar bears. Through its Annual Appeals, the Zoological Society of Milwaukee is rolling out Web cams in more indoor and outdoor exhibits at the Zoo. We need your help.

Animals that already have Web cams:

- The Zoo's three species of penguins (gentoo, rockhopper and Humboldt)
- Lions and tigers
- Orangutans
- The fish of Lake Wisconsin
- Jaguar cubs (indoors)

Coming this year, with your help:

- Polar bears Snow Lilly and Willhelm
- Elephants Ruth and Brittany
- North American black bears Cinnamon and Dakota
- Jaguars' outdoor exhibit

Donors giving \$100 or more are able to access this year's Web cams as they become available, before they are released for public viewing.



*A polar bear
on your doorstep!*



*A jaguar in
the garage!*

Photos: Polar bears and a jaguar cub at the Zoo

Donate here

To give to the Zoological Society's 2013 Annual Appeal, please go online to zoosociety.org/appeal or call (414) 258-2333. All donations are tax-deductible.

- Donors of \$75-\$249 have their names listed on a sign.
- Donors of \$250-\$499 receive larger recognition on a sign.
- Donors of \$500-\$999 receive individualized recognition.
- Donors of \$1,000 or more receive larger individualized recognition.
- Donors of \$2,500 receive individualized recognition on a bench to be placed in the Zoo.