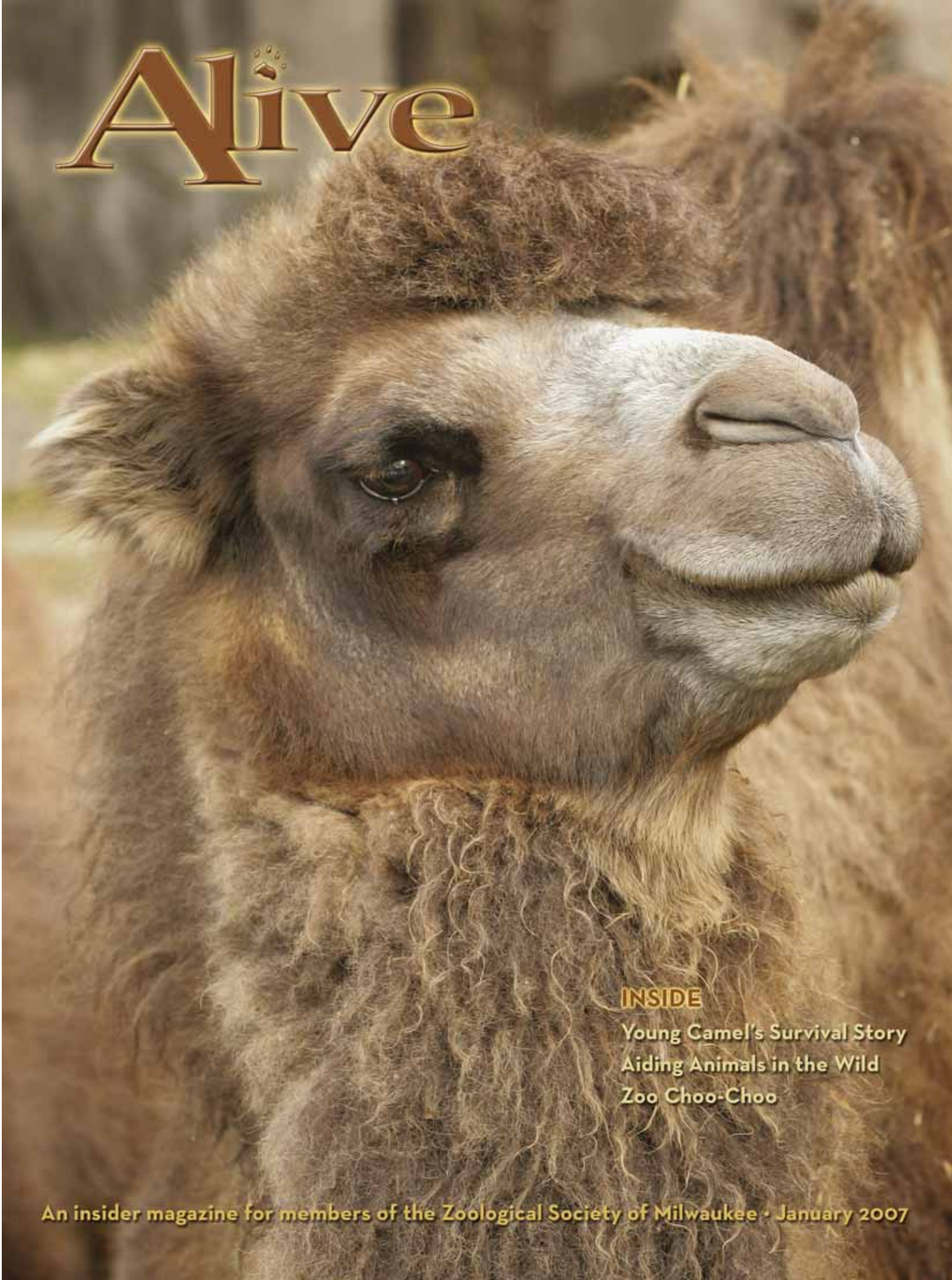
Alive



INSIDE

Young Camel's Survival Story

Aiding Animals in the Wild

Zoo Choo-Choo

An insider magazine for members of the Zoological Society of Milwaukee · January 2007

ZOOLOGICAL SOCIETY OF MILWAUKEE

CONSERVE • EDUCATE • SUPPORT

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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CEO's Letter

The Milwaukee County Zoo is a magnificent place anytime of year but especially in winter. On cold days, you can take the kids or grandkids to view their favorite tropical animals displayed in naturalistic settings in the warm indoors. On snowy days, the park is transformed into a winter landscape reminiscent of Wisconsin's North Woods. This is when it's a real advantage to be a Zoological Society member. Since you get free admission with your Zoo Pass, it's easy to visit the Zoo for just an hour or two. That means you can make more visits to see what you really want—or just to go for a walk. Zoo staff do a terrific job keeping the foliage manicured and the walkways clear and safe. You can catch a polar bear taking a brisk dip or admire a majestic elk strolling on a hill.

You could spend a few hours on a winter's day just walking through the Apes of Africa and Primates of the World buildings. The gorillas, bonobos and orangutans are intensely fascinating, and they often interact with visitors, drawing you into their world. Our Zoo Pride volunteers are on hand during winter weekends to give you lots of "inside information" about the animals. Without the crowds of summer, you'll find it easy to talk with volunteers and to spend time getting to know more about individual animals. Each animal has a distinct personality. If you want to transport yourself back into summer, visit the Herb and Nada Mahler Family Aviary. The shorebird exhibit makes you feel as if you're on the beach. The Free Flight Exhibit has the atmosphere of a tropical forest. But if you really prefer winter, visit the king penguins and their chilled exhibit. See pages 22 and 23 for new birds you can view at the Zoo.

The Aquatic & Reptile Center is another indoor marvel of constantly moving creatures. Choose your favorite continent, and you can get a sample of its animals. Africa? Enjoy the Lake Victoria fish. South America? Visit the Amazon River pacu. Asia? View the Chinese alligators. North America? Think of the ones that got away among all the fish in the Zoo's Lake Wisconsin. For a sampling of what you can see in the ARC, see Kids Alive pages 12 and 13.

This winter, for the first time, you can visit our giraffes indoors. The old giraffe exhibit left visitors exposed to the wind and cold. The new Miller Brewing Company Giraffe Experience opened last July. Its large indoor area allows you to view the gentle giants without any glass barrier—just some wide cables. Other buildings that provide indoor viewing include the Small Mammals Building (where it's fun to watch the river otters cavort in their pool) and the Australia Building with its "oo" animals: kangaroos and emus (pronounced e-moos).

It's quicker getting in and out of the Zoo in winter except on event days, such as the Zoo's Jan. 21 Samson Stomp & Romp sponsored by Gatorade and Pick 'n Save. So what are you waiting for? Spend your lunch hour at the Zoo. Hey, bring a friend. You'll discover a refreshing winter world full of warm-weather creatures indoors and cold-loving animals outdoors. Visiting the Zoo year-round gives you the opportunity to see how both the animals and the 200-plus acre park change with the four seasons.

Robert Davis

Dr. Bert Davis
Chief Executive Officer

Alive

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NEW INSERT

Look for an insert containing the Platypus Society and Serengeti Circle members lists with this *Alive* magazine. To bring more attention to our donors, sponsors, grantors and other contributors, we are now packaging these pages separately.

On the Cover
Rachel the camel (see page 8)

Summer Camps Brochure

Look for the Zoological Society's Summer Camps 2007 brochure packaged with this Alive. *Online registration for these camps at the Milwaukee County Zoo starts Feb. 7. Photo: Mashay Keefer of Milwaukee (left) got help with her microscope from teenager Stephanie Pushkash during the 2006 summer camp What's Up Doc?*

Learning to Act Like Animals

Spider monkey Ian Walls, 9, of Milwaukee (with bananas) discovers his powers in front of two astonished animals: a macaw, played by Jaida Green (standing in background), 8, of Brookfield, and a jaguar, played by Tecun Anderson (kneeling), 9, of New Berlin. The skit "Super Animals and the Great Flood" told the story of seven animals finding their superpowers.

For child actors, staying in character can be hard. Acting Wild, the Zoological Society's most popular summer camp, makes acting even more of a challenge when the character is an animal.

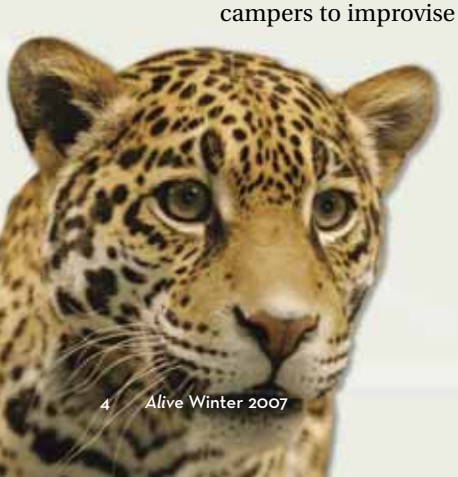
With someone crowing like a rooster or howling like a monkey six inches away from them, children bit their lips trying to keep a straight face and stay in character during last summer's Acting Wild camp. By the end of the week, however, campers like Michael Horner-Ibler, 10, of Brookfield were poker-faced pros. Playing a coyote trapped by poachers, he gnawed and gnawed on the "bars" of his cage during the skit "A Poacher's Tale: A Savanna Adventure." "Gnawing on bars is sure fun and delicious," he said with a growl. Choosing the character was natural for him because wolves and coyotes are his favorite animals. "I just really like animals," he said. "That's probably the most fun thing about acting – being an animal."

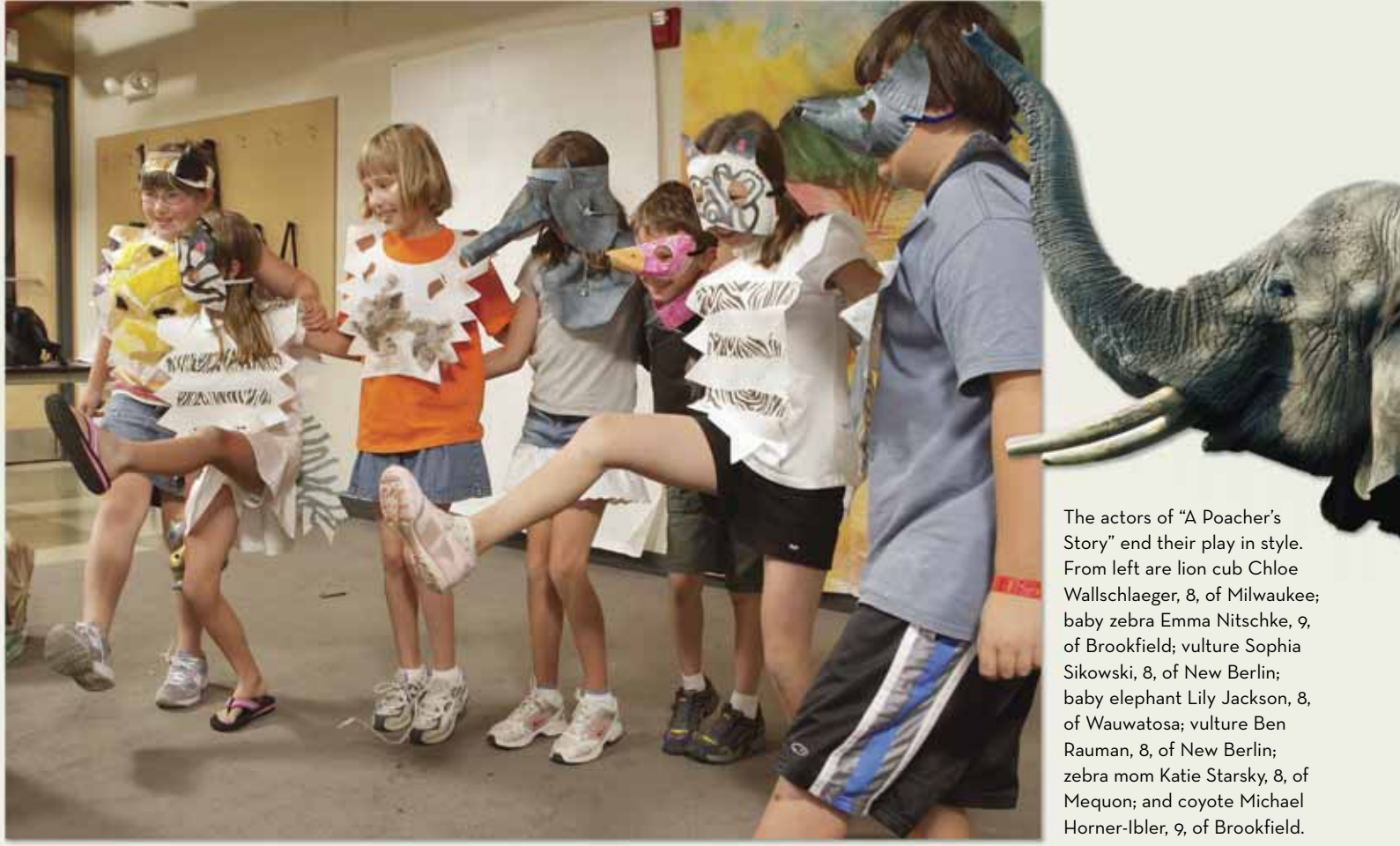
The five-day summer camp, while focusing primarily on acting, never lost its Zoo roots. Like professional actors who observe the people they're trying to be, campers went out into the Zoo every day to observe animals. They recorded animals' color and shape for costuming, movement and behavior for character building, and even imagined what that animal would say if it could talk. The 8- and- 9-year-old campers came up with myriad answers for the animals of the Aquatic & Reptile Center. Give children the chance, said Zoological Society instructor Patty Trinko, and "they express themselves in ways that are totally impressive."

One acting activity asked children to imagine themselves in unlikely situations. You're the local burger joint's newest employee. You stumble, and onto the floor tumbles a beautiful burger with ketchup everywhere. How would you convince a customer his burger hadn't done a belly flop? One girl knew exactly what she'd do. She looked her "customer" straight in the eye, and, with a swagger in her tone, said, "That's our special sauce."

Acting Wild camp is not just about learning to act, said Trinko, who taught the camp in 2006. "It's about learning to think creatively and having fun at the same time. It teaches campers self-confidence, strong communication skills, how to get along with peers, creativity and self-expression." It also helps campers to improvise and to think quickly. In a camp like this, where children write and perform their own skits, there's little creative downtime.

Children studied the program for a play they produced in the Zoological Society 2006 summer camp called Acting Wild. Their play was titled "A Poacher's Story: A Savanna Adventure." From left are Ruby Dietzel, 9, of Wauwatosa; ZSM publications intern Emilie Rusch; Kaitlyn Brayer, 8, of Brookfield; Kamrynn Lamontagne, 8, of Milwaukee; Allison Rowe, 8, of Mequon; and Kav Johnson, 8, of Shorewood.





The actors of "A Poacher's Story" end their play in style. From left are lion cub Chloe Wallschlaeger, 8, of Milwaukee; baby zebra Emma Nitschke, 9, of Brookfield; vulture Sophia Sikowski, 8, of New Berlin; baby elephant Lily Jackson, 8, of Wauwatosa; vulture Ben Rauman, 8, of New Berlin; zebra mom Katie Starsky, 8, of Mequon; and coyote Michael Horner-Ibler, 9, of Brookfield.

First-time camper Tecun Anderson, 9, of New Berlin admitted that he was usually a little shy. He didn't always volunteer for acting games, and said acting for the first time was scary. No one doubted his creativity, however. When campers decorated their reptile and amphibian Character Building Observation Journals, Tecun made an intricate three-dimensional snake out of construction paper. "The best part about acting is being creative," he said. By allowing campers to express their creativity differently, Acting Wild provides a positive learning environment for all children, Trinko said. "It's also a phenomenal class for a child who's shy. They all can work at their own level." One camper came up to Trinko, admitting that acting embarrassed her. It was a brave step for a shy girl, she said. "The sillier you feel, the better you are as an actor. She was challenged to break through her own personal fears."

Ian Walls, 9, of Milwaukee, who played a spider monkey with superpowers in the skit "Super Animals and the Great Flood," took the first day's lessons to heart. To create a character, change your voice's volume and inflection. He spoke from his throat to sound different. Change your facial expressions and body movement. He pushed back his shoulders. Change your personality traits. He hammed it up.

At Acting Wild camp, learning to act and working together was really fun, campers agreed. "The most fun thing about acting is probably just being someone else," Michael Horner-Ibler said. "I'm not the greatest at it, but I'm trying to work on it. Performing in front of people is fun but not as fun as just doing your part."

It's that determination that made Acting Wild work. Kaitlyn Brayer, 8, of Brookfield was all smiles after playing a seal in the skit "The Arctic Adventure." "I was pretty excited," Kaitlyn said. "I knew my lines after one go-over. I was really proud of myself." And that can't be a bad thing to learn.

-By Emilie Rusch

Summer Camps Brochure

Does your child want to act like an animal in Acting Wild camp? Packaged with this issue of *Alive* is the Zoological Society's Summer Camps brochure. You'll find out the summer camps available and how to register for them.

Conservation Chronicles

Aiding Animals in the Wild

Many zookeepers at the Milwaukee County Zoo travel to other states and other countries to study and help animals in their native habitats. The Zoological Society and the Zoo help fund some of these conservation efforts. Here are the stories of three zookeepers who are making a difference.

Photo by Richard Brodzeller

Heather Neldner stands at the Milwaukee County Zoo's Shoreline Exhibit.

Helping Hatch Chicks

Heather Neldner has worked with birds for years, but she had never helped a newborn chick make its way out of an egg. Never, that is, until Neldner took part in a Michigan-based project that rehabilitates abandoned piping plover eggs and chicks. Piping plovers are small shorebirds that are native to the Great Lakes, Great Plains and Atlantic Coast areas. The Great Lakes population is endangered because the birds' nesting habitats are being destroyed by vehicles, hikers and beach development. Predators such as crows, ravens, domestic cats and dogs eat chicks and eggs. The project is called the Great Lakes Piping Plover Rescue and Recovery Program. Zoo staff from across the country help biologists rescue abandoned eggs and artificially incubate and hatch the eggs. Chicks are reared on site and eventually released into the wild. The Milwaukee County Zoo has been involved with the project since 1996, and the Zoological Society has supported the project for years by donating funds.

Piping plovers play an important part in the ecosystem because they are a "barometer species," says Neldner. "Birds can alert scientists that something in the environment is not quite right. If a common bird suddenly stops visiting an area, scientists know that there might be a problem." These birds are also an "umbrella species," which means that when we protect piping plovers and their homes, we are also protecting all the other plants and animals that depend on the beaches.

Photos provided by Heather Neldner

Above: Neldner uses tweezers to help a chick hatch over 12 hours. *Left:* Neldner holds a 4-day-old plover chick next to a warming unit that holds a 1-day-old chick.

For the last two summers, Neldner, a zookeeper in the Herb & Nada Mahler Family Aviary, has traveled to the project site in Pellston, Mich. Last summer, she learned how to help hatch abandoned eggs. This is a tricky procedure that requires tools such as surgical tweezers. "When the chick breaks through the air cell and starts to pip, we give them about 24 hours. If they have not made any progress after 24 hours, we help them," she says. "We work on the egg only for a few minutes (so as not to stress out the chick), then come back in an hour, and if the chick needs more help, we work a little more. If you open up an egg too quickly, you can rupture blood vessels that need to dry out and can cause the chick to die from blood loss and/or stress. I learned a lot that will help me here at the Zoo."

When a bird is ready to go into the wild, biologists place a series of color-coded bands on the bird's legs. A metal U.S. Fish and Wildlife Service band has a number on it that is individual to the bird. Other colored bands indicate where a bird was raised, reared and released. In 2005, the project staff released 15 piping plovers; last summer, they released 30 birds. Great Lakes piping plovers then migrate to the Gulf Coast and Florida, where they spend the winter. They return to Michigan in the spring to nest. One of the birds that Neldner raised in 2005 came back to Michigan in 2006; it was spotted by field biologists with binoculars. Says Neldner: "It's really exciting when one of the birds you helped raise comes back after successfully migrating."

Saving Jamaican Iguanas

Photo provided by Dawn Fleuchaus

Dawn Fleuchaus holds up a Jamaican iguana.

Dawn Fleuchaus had always liked to vacation in Jamaica. Six years ago she found a way to combine vacation with conservation research in that country. The Jamaican Iguana Project, a study that began as a collaborative effort of the University of West Indies and the Hope Zoo in Kingston, Jamaica, offered Fleuchaus the opportunity to study the endangered rock iguana in the wild. "I wanted to get involved in field conservation and I love Jamaica," says Fleuchaus, area supervisor of the Milwaukee County Zoo's Australia and North America areas. With $3,500 in funding from the Zoological Society over six years, Fleuchaus has participated in the Jamaican study for one to two weeks every summer since 2000, including last summer.

In June 2000 Fleuchaus found herself capturing rock iguanas in a forest outside of Kingston. She then collected data such as the weight and length of each reptile and released them back into the wild. Other researchers placed bands and transmitters on the iguanas for easy tracking. The goal of the study was to ensure that iguanas survive and reproduce from year to year. "The wild population of rock iguanas is one of the few sources of information on these animals," says Fleuchaus. There are only 18 Jamaican rock iguanas in zoos worldwide. More than 100 Jamaican iguana offspring have been taken from the wild to the Hope Zoo to be tagged and recorded by zookeepers before being re-released into the wild once they are large enough to thrive four or five years later. About 50 rock iguanas already have been released. Rock iguanas are threatened by human-introduced predators such as mongooses, cats, dogs and wild pigs. Loggers, too, destroy the iguanas' habitat when they cut down trees for charcoal. Fleuchaus and other researchers try to save iguanas by destroying predators. "If we stopped monitoring the area, it would be overrun by introduced predators," says Fleuchaus.

Why is this research valuable? Iguanas help keep the Jamaican ecosystem in balance because they are responsible for seed dispersal. Iguanas eat fruit and plants, then travel a wide area and replant the seeds that pass through their digestive system. Seeds scattered over a wide area result in healthier foliage because there is little competition for food and sun from other plants. When iguanas began to disappear from Jamaica, some of the local vegetation and forests began to disappear as well. "Iguanas are no longer the dominant herbivore in Jamaica, and the natural flora of the islands is paying the price," says Craig Berg, curator of the Zoo's Aquatic & Reptile Center. Researchers like Fleuchaus, however, are helping to restore the balance of nature.

Studying a Damaged Coral Reef

Zookeeper Earl Conteh-Morgan has dreamed of a career in marine biology since he was captivated by an underwater nature show on television. Last April, Conteh-Morgan found a way to sample that dream career, taking a leave of absence from his job at the Zoo and packing his bags for the Seychelles, islands in the Indian Ocean, northeast of Madagascar. Conteh-Morgan spent 10 weeks there documenting the recovery of the coral reef. Global Vision International and the Seychelles government are conducting ongoing marine research together, including the study of its damaged coral reefs. The volunteer-funded research was an opportunity of a lifetime for Conteh-Morgan, who paid for his own trip there.

Photo provided by Earl Conteh-Morgan

Earl Conteh-Morgan examines a coral reef in the Seychelles.

"The coral reef is just one small part, but one important part, of the ocean," he says. "If the coral reef goes, a huge chunk of diversity is gone that people depend on in a number of ways." The reefs Conteh-Morgan studied have suffered much in the last few years. About 90 percent of the reefs had died in what biologists call a bleaching incident. When the water temperature around the coral gets too high, coral expel algae living inside of them. There's a symbiotic relationship between coral and the algae. Coral provides nutrition and safety for algae; algae provide coral with 85 percent of its food through photosynthesis. Without the constant food source, the coral will turn white and die. Add the devastating effects of the tsunami that hit the Indian Ocean in December 2004, and things didn't look good for the thousands-of-years-old reefs.

During his daily scuba dive, Conteh-Morgan was surprised by the diversity of marine life still living in the reef. He focused on 42 kinds of coral, and found representatives of almost all of them still alive and present. He also saw numerous fish, lobsters, octopus, sea cucumbers, shrimp and other invertebrates that had returned to the reef. "Coral reefs are the canary of the ocean, alerting us when the ocean itself is in danger," he says. Without healthy marine environments, "it makes it much harder for marine life to survive, for people to make a living off the ocean, and for people to enjoy the ocean."

-By Julia Kolker & Emilie Rusch

The Camel with Nine Lives

These are some of the Zoo staff who made Rachel the camel a main part of their lives for the six months that Rachel fought for her life. Back row (left to right): Ned Warner, Dean Roepke, Dawn Wicker (supervisor of the area that includes the camels), Collette Konkel, Danielle Faucett (holding the reins), Craig Pavlik, Dr. Roberta Wallace (senior veterinarian), Tammy Paterson (behind Wallace). Front row (left to right): Dr. Vickie Clyde (veterinarian), Kim Pankonien, Carol Homan, Betsy Gilgenbach, Patty Hessen, Earl Conteh-Morgan, Celi Jeske, Margaret Michaels. Not pictured are Dr. John Scheels, Dr. Travis Henry (equine veterinarian), Noah Huber (horticulturalist) and other staff who cared for Rachel the camel.

"This is not good," said the zookeepers.

Rachel the camel was frothing at the mouth. The Zoo staff suspected a problem, but she was eating and drinking normally. It was Nov. 28, 2005. By the next day she was not eating.

Within three days the Milwaukee County Zoo vets and dentist had discovered the problem. Rachel had a broken tooth. Dr. John Scheels, the Zoo's dentist, took out the tooth and took radiographs (X-rays). When the X-rays came back, the vets discovered another problem, a broken jaw, and said, "This is not good."

There was a third problem. Rachel had an infection in the broken jaw bone. It began to spread. Then a fourth problem: The antibiotics Rachel got weren't working. Before long, Rachel was fighting for her life. Why weren't the drugs working? Could this 7-year-old Bactrian camel be saved? How much would it take?

It would take a lot. "If we didn't try something," zookeeper Craig Pavlik said, "we were going to lose her." In the course of six months, more than 25 Zoo staff would spend countless hours to save this charming camel with a great personality. Rachel may even have made history. She was kept on intravenous fluids for nearly four months—almost unheard of in the Zoo world because most animals won't tolerate the I.V. tubes. But Rachel was lucky enough to live at a Zoo where animals are trained to help in their own health care.

Her story is a testament to:

- the dedication Milwaukee County Zoo staff have to the animals here
- the success of a training program used with the camels, and
- the new Animal Health Center that opened in 2003.

Now, more than a year later, Rachel is alive and healthy, with an amazing story to tell. It started with that broken tooth and jaw. Dental problems in animals can be lethal. If an animal can't eat, it will starve. Animals in the wild with tooth or jaw problems often die. If the veterinarians had not been there to help her, Rachel would have had only a slight chance of surviving. Weighing all of their options, the vets knew it would be difficult, but they decided to fight for her life.

Rachel's fight was made easier because she had been trained to tolerate health exams, needles to draw blood, and other procedures needed to care for her. Dr. Roberta Wallace, the Zoo's senior veterinarian, said that the training program was crucial in helping

Rachel survive. Medical staff needed to go into her stall two, three, four times a day to change I.V. bags and check on her. Animals without training would not have been able to tolerate all the handling and procedures unless they were anesthetized first, which is always risky for animals.

The vets wasted no time. They moved Rachel to the Animal Health Center, limited her movement and placed a catheter in her neck so they could give her I.V. solutions and antibiotics. They discovered a second tooth was infected, and took it out. They raised her dose of antibiotics.

The day after Christmas 2005, laboratory tests—donated to the Zoo by Aurora Consolidated Laboratories— showed that Rachel's kidneys were not functioning well and thus not clearing the antibiotics from her system. The levels were rising and that wasn't good. She now also had a bacterial infection in her kidneys. "We were taking blood samples from her twice a day, which we could do only because she was trained to accept having blood draws," said Dr. Wallace.

She and the staff went back over Rachel's history to figure out why certain antibiotics would not work. When Rachel was 11 days old, records showed, she had become gravely ill and couldn't stand because of an infection in one of her bones. The vets thought she had a systemic infection, and gave her the proper antibiotics to fight the infection. She recovered. Now, however, the vets speculated that Rachel might have had some kidney damage from the original infection or antibiotics. They consulted experts at the University of Wisconsin School of Veterinary Medicine in Madison. Vets there said that they had never seen an animal recover with such severe kidney damage. Despite the bad news, the Zoo vets did not plan to give up.

"We thought it was worth it to fight for Rachel's life because she was young, and her problem was not cancer or some chronic condition," Dr. Wallace said. "It was potentially curable and she would be functioning once healed. Camels that live in captivity can live to be 21 or 22 years old."

On Jan. 8, 2006, vets took Rachel off the antibiotics that clear through the kidneys and substituted antibiotics that clear through the liver. They started giving her large amounts of I.V. fluids to flush her system. "A few days later, the kidney values dropped and the deterioration of the kidneys stopped. She was on I.V. fluids for about 3 ½ months and on two types of antibiotics, very high doses, for four months," said Dr. Wallace. "It's very rare for non-domestic animals to be on I.V. fluids more than a few days," she noted. "There is no animal at this Zoo that I can think of that has been on I.V. fluids for months."

Then it was time to deal with the next problem. It was almost as if Rachel were a cat with nine lives—going through life-threatening problems and surviving each one. Rachel was not eating well because she had persistent abscesses where the two teeth had been removed. Dr. Scheels, who has provided dental care to the Zoo's animals since 1981, said that this was not good. Skull X-rays showed that Rachel had quarter-size, decaying, jagged bone shards in the tooth sockets. An equine dental expert said that the bone shards could work their own way out. By March, the edges of the shards could be felt in the tooth sockets and Dr. Scheels was able to pull them out completely. Soon after that, the sockets healed, the abscesses went away, and Rachel got better.

In early May Rachel was outdoors with the other camels again but a cold snap hit and a shivering Rachel went back to the hospital. She had shed her winter coat because she had spent the winter in the warm indoors. By May 26 the weather had warmed. Zoo staff sighed with relief when they heard that Rachel was going "home" to the camel yard for good. It had been a full six months since Rachel's ordeal had begun. She had been a big focus of the staff. Schedules were based on having a camel-trained zookeeper present when Rachel was hooked up to I.V. lines during the day. Zookeepers also were needed to clean her stall and help with daily treatments. By the end, Rachel had lost nearly 200 pounds—probably a good thing since she was a bit overweight, said Dr. Wallace. Looking at Rachel now, you might never know anything had been wrong.

Among the keys to her survival was the new Animal Health Center, opened in late 2003. In the old hospital there were no indoor stalls big enough for Rachel—only outdoor stalls. She could not have been treated with I.V. fluids. "The I.V. bags would have frozen," Dr. Wallace said. "Rachel needed 50 liters a day, which is really heavy. At the new Animal Health Center, we built big rings in the ceilings to hang I.V. bags. Rachel was the first big hoof-stock animal to test out the new rings. And they worked perfectly."

When the new Animal Health Center was under construction, vets had to decide how big to make hoof-stock stalls, given their limited space and budget. Ironically, they chose to make the stalls large enough to hold an adult female camel. The stall doors are 7 feet 2 inches high. Rachel's humps cleared them by 1½ inches.

Dr. Wallace said Rachel's survival came down to good monitoring, good facilities, and "everyone pitching in." Veterinarians, vet technicians, zookeepers who walked her every day or sat with her to get her to eat, dentists, horticulturists (who brought in branches of trees for Rachel to eat), and others who kept watch on Rachel so she wouldn't chew her I.V. lines—all helped to save Rachel's life. So, when you visit Rachel in the camel yard, think about the six months of unprecedented medical care that she received. Her story of survival is not good. It is great.

-By Eric Stelpflug & Paula Brookmire

LAB FULL OF FUN

Zoological Society instructor Heather Reiman shows children a bobcat study mount at a Wisconsin Safari class. Willa Rodencal (left), 6, of Waukesha, touches the furry creature.

There's a special place at the Zoo where school classes come to have fun while learning about science. Fish "swim" on the walls, an imposing rhino head peers down at you and an 8-foot-tall polar bear mount towers over you in the middle of the room. Computers, microscopes and animal skeletons beckon children to explore. This place is called the Animal Adaptations Lab, and in 2006 it got even more exciting.

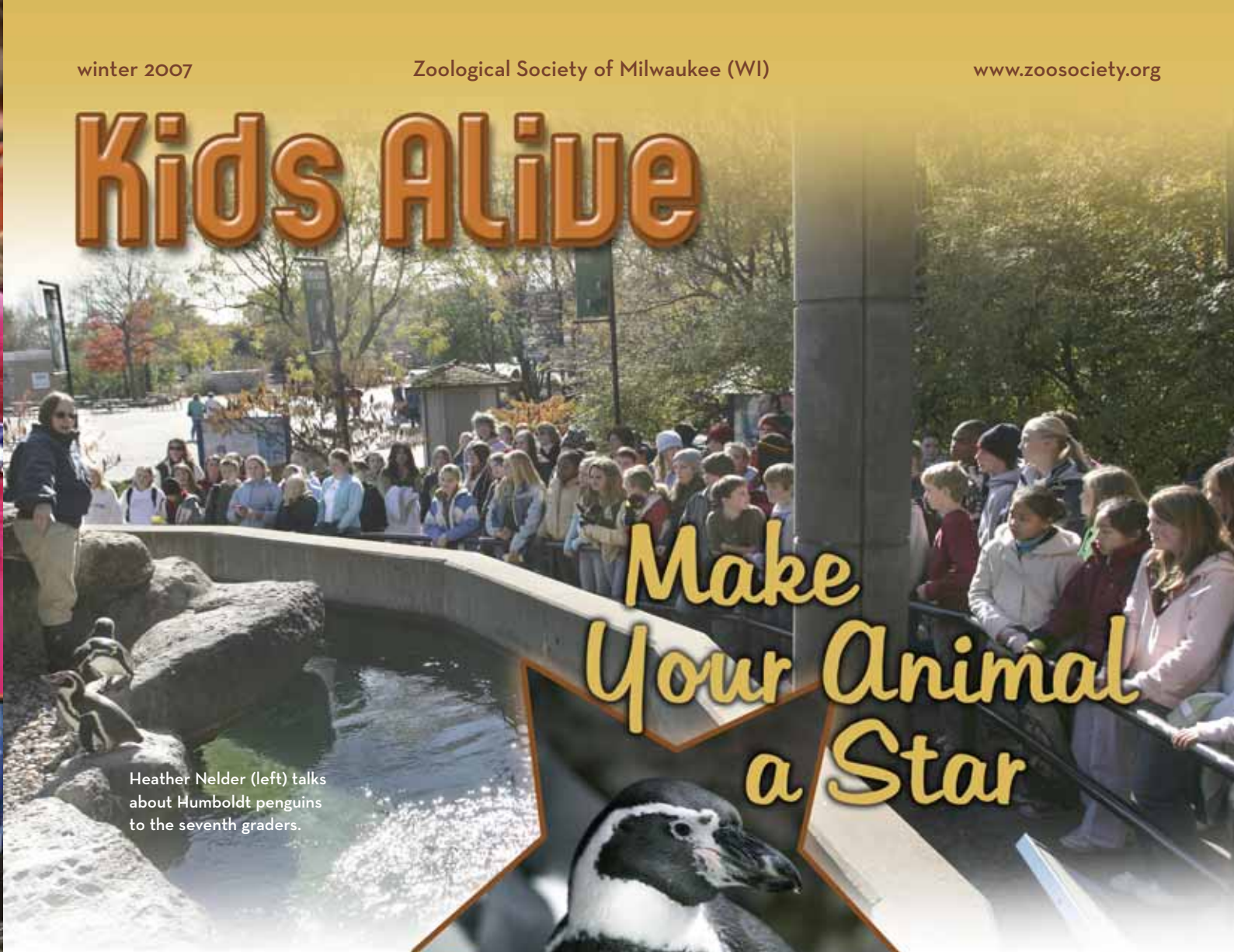
Thanks to a $30,000 grant from U.S. Cellular to the Zoological Society, the lab, which is in the Karen Peck Katz Conservation Education Center on Zoo grounds, got several upgrades. Some were designed to make the lab more accessible to students with disabilities, such as adjustable tables that can accommodate wheelchairs or digital microscopes that are easier to use for students who are wheelchair-bound. Other additions included more computers and new computer software that allows children to explore how a variety of animals survive in different habitats.

The grant also provided funds to start a program called Wisconsin Safari, which introduces children in second and third grades to some of Wisconsin's native animals. The grant allowed the Zoological Society to buy several study mounts* of Wisconsin animals such as a badger, barn owl, bobcat, opossum, snapping turtle, fox, coyote and woodchuck. Thus children can see animals that they might not see in the wild and, in some cases, even touch the fur or hair on the mounts. Sometimes the children get to meet a live Wisconsin animal such as a snake, woodchuck, turtle or toad from the Zoo's collection. Wisconsin Safari classes use many of the animal artifacts from the Animal Adaptations Lab even though the classes are not always held in the lab. The hour-long classes help children discover why our Wisconsin animals are important to the environment and to our lives.

Kendall Kartaly, 10, of Altoona, Wis., tries out one of the digital microscopes in the Zoological Society's Animal Adaptations Lab during summer camps 2006.

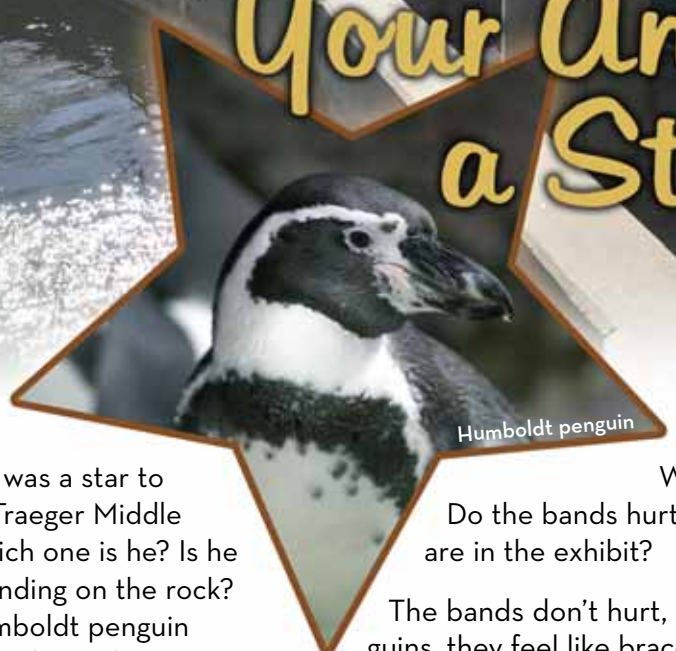
*Study mounts typically are animals that died by accident or natural causes.

Kids Alive



Heather Nelder (left) talks about Humboldt penguins to the seventh graders.

Make Your Animal a Star



Humboldt penguin

Estar the Humboldt penguin was a star for a day at the Zoo. At least he was a star to students who visited him from Carl Traeger Middle School in Oshkosh last October. Which one is he? Is he the one swimming? Is he the one standing on the rock? As 45 seventh graders circle the Humboldt penguin exhibit at the Milwaukee County Zoo, they ask a zookeeper how to find "their penguin."

Why is he their penguin? Because their school sponsors Estar. If a group of children sponsors an animal at the $100 level or higher, the group can get a special talk from the animal's keeper. The children come to the Zoo for the talk.

So how do they find Estar? It's simple, says Heather Neldner, a zookeeper who cares for birds. Estar is the one with the brown band on his RIGHT wing. *Huh?* Suddenly the students notice that each penguin has a color band on its wing. Males have bands on the right wing, females on the left, says Heather. Now she gets lots of questions. What do the colors mean? Do the bands hurt? How many penguins are in the exhibit?

The bands don't hurt, she says. To the penguins, they feel like bracelets. The colors identify each penguin or each penguin pair. Estar has a partner, Arisco, a female. She has a brown band, too, but it's on her LEFT wing. The students quickly look through the penguin pool and rock mountain to find Arisco. There are 15 Humboldt penguins at the Zoo, Heather says. Now go to the Herb & Nada Mahler Family Aviary and find out what other types of penguins live at the Zoo, she suggests. The students are off to explore and to meet the other animals that they sponsor.

If you or your group would like to sponsor an animal, call Julie B. at the Zoological Society of Milwaukee, (414) 258-2333.

-By Eric Stelpflug

Watery Worlds &

Do you ever wish that you could see what fish look like from around the world? You can! Come to the Aquatic & Reptile Center at the Milwaukee County Zoo this winter. You'll keep warm and see amazing aquariums with fish of African lakes, Wisconsin lakes, the Amazon River, the U.S. Pacific Coast, and Southeast Asia. Plus, you can see iguanas from the Caribbean, poison frogs from South America, and alligators from China. Have fun answering these questions.

- What are the differences between fish that live in Wisconsin lakes and ones that live in the Amazon River?
- Which lizard is one of only two venomous lizards in the world?
- Which snake can grow up to 6 times the height of an average man?
- Can you find Onassis, the Amazon River turtle? It is the oldest animal at the Zoo and is more than 65 years old!

make your own jelly

They used to be called jellyfish, but they're not fish. So now they're just called jellies. You can see beautiful moon jellies like the ones pictured here in the Zoo's Aquatic & Reptile Center. Now try making your own jelly.

You will need:
- 7-inch-diameter paper bowl
- Red marking pen
- Orange and red colored pencils or crayons
- Scissors
- Tape
- 5 feet of red, pink, or yellow ribbon
- 1 sheet (4 by 10 inches) of dark blue construction paper
- 1 foot of string

Photos by Creative Department

Step 1: Turn bowl upside down. Draw 4 circles in middle of bowl and color them in with a red pencil.

Step 2: With red marking pen, create a wavy square around the 4 circles (see photo). Draw 4 red dots as shown in photo. With red pencil, color space in between square and circles. With orange pencil, color rest of bowl. Poke tiny hole through center of bowl. Pull string through hole, so that most of string is on top. Knot string on underside of bowl so that you can hang the bowl with string.

Step 3: Cut 14 strips of ribbon, each about 2 inches long. Have an adult show you how to curl each piece of ribbon with scissors. Tape each strip of ribbon to bottom edge of bowl; keep ribbon pieces 1 inch apart.

Step 4: Cut 3 pieces of ribbon about 1 foot long and curl them just like you did with the short pieces of ribbon. Tape them to center of underside of bowl.

Step 5: To form the mouth, cut waves along one side of construction paper. Fold 2 shorter edges together to make a circle (see photo). Tape straight edge of circle to underside of bowl, around the foot-long ribbons. Now hang your jelly in the house.

Curious Creatures

Jokes

1. How many octopuses does it take to change a light bulb?
2. What school subject are snakes good at?

Joke Answers:

No. 1: 1/8 of one octopus because it can use just one arm.

No. 2: Hiss-tory

octopus crossword

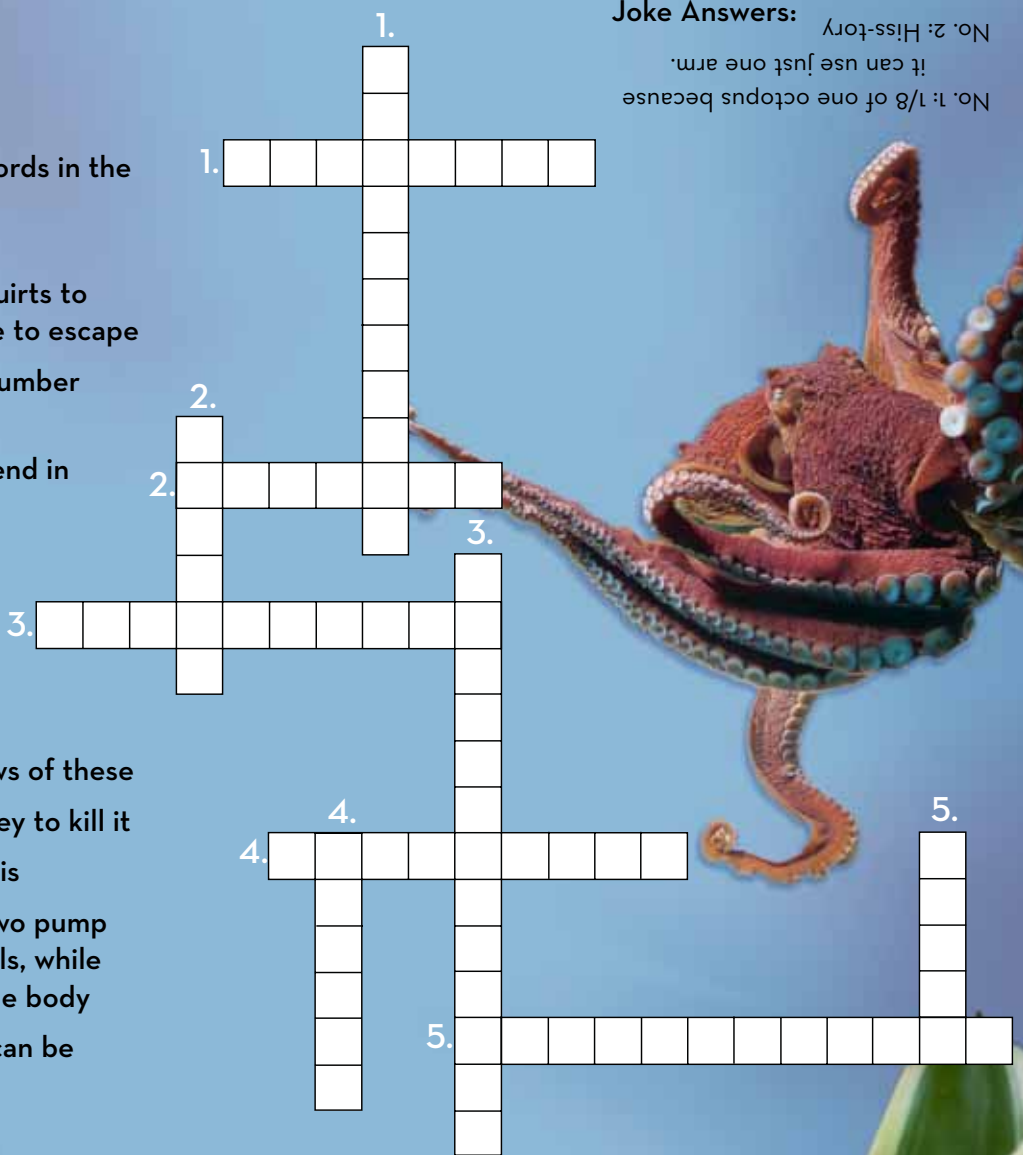
Kids, use these clues to fill in the words in the crossword puzzle.

ACROSS

1. A dark, inky liquid the octopus squirts to confuse predators and give it time to escape
2. An ocean animal named for the number of its arms/legs
3. An animal's special coloring to blend in with its surroundings
4. The octopus uses this to break though the shell of its prey
5. Octopuses have no backbone and are classified as this

DOWN:

1. Each octopus arm/leg has two rows of these
2. An octopus injects this into its prey to kill it
3. An octopus swims by means of this
4. An octopus has three of these. Two pump blood through each of the two gills, while the third pumps blood through the body
5. The number of arms (which also can be called legs) an octopus has



Crossword Answers

ACROSS: 1. ink cloud, 2. octopus, 3. camouflage, 4. sharp beak, 5. invertebrate

DOWN: 1. suction cups, 2. poison, 3. jet propulsion, 4. hearts, 5. eight

Rain-forest maze

Kids, can you help this poison frog go through a maze on a bromeliad leaf? He wants to get to the ant, his favorite food. A bromeliad is a rain-forest plant. You can view poison frogs in the Aquatic & Reptile Center.

Activities by Eric Stelpflug

Stock Photography

A Nature-Themed Summer Vacation

Dana Benson shows a red-feathered Cochin chicken last summer at the Zoo.

Last fall, high school teacher Dana Benson had no trouble sharing stories about what she did on her summer vacation. She took care of a cow that loved having her chin rubbed. She explored Maya ruins in the Central American country of Belize. And she showed live hissing cockroaches to visitors at the Milwaukee County Zoo.

Benson teaches ecology and biology at Oak Creek High School. Last summer she worked as a seasonal zookeeper in the Milwaukee County Zoo's Northwestern Mutual Family Farm. She did everything from feeding the animals and cleaning exhibits to rubbing Helga the cow's chin. She also gave Animal Encounter talks. During these talks, zookeepers show visitors animals found in Wisconsin such as a cat, a chicken, a turtle, and a snake. They also show a few that don't live in Wisconsin such as the hissing cockroach. "These talks gave me a chance to tell the public about endangered species in our own backyards," says Benson. For example, the ornate box turtles that Benson displayed are endangered in Wisconsin.

Photo provided by Dana Benson

Benson in Belize last August

Animals, conservation and ecology have always fascinated Benson. In fact, when she went to college she planned to become a zookeeper. In 2004, she got an internship in the Zoological Society's Conservation Education Department, where she enjoyed helping with summer camps. "I like that I can be a teacher and a zookeeper," she says. "Hearing stories about animals and conservation is much more interesting to students than listening to a lecture."

Benson got even more stories to share with her students when she went to Belize last August as part of the Belize & Beyond program. The program, which ended a successful three-year run in 2006, was a joint effort of We Energies and the Zoological Society. It offered high school students the chance to learn about the environment and rain forests through classes and field trips. In each of the last three years, six high school students and a teacher from participating schools were selected to take a field trip to Belize.

After teaching the Zoological Society's Belize & Beyond curriculum in her classroom for a year, Benson applied to travel to Belize. She wanted to see the Central American country firsthand. In Belize, Benson hiked, went bird-watching and took in the sights and sounds of everyday life. Her trip has helped her plan topics to study for her classes. "I'm sharing my stories about global conservation in the classroom and encouraging my students to take similar trips in the future," she says. Benson is also applying for grants so that her students can create educational signs for a new reptile and amphibian zoo in Belize. She plans to encourage her classes to create signs that can be displayed throughout the zoo. "I hope to inspire my students to appreciate the world around them," says Benson. "Students who appreciate ecosystems are more likely to help save them."

-By Julia Kolker

Animal Family Matters

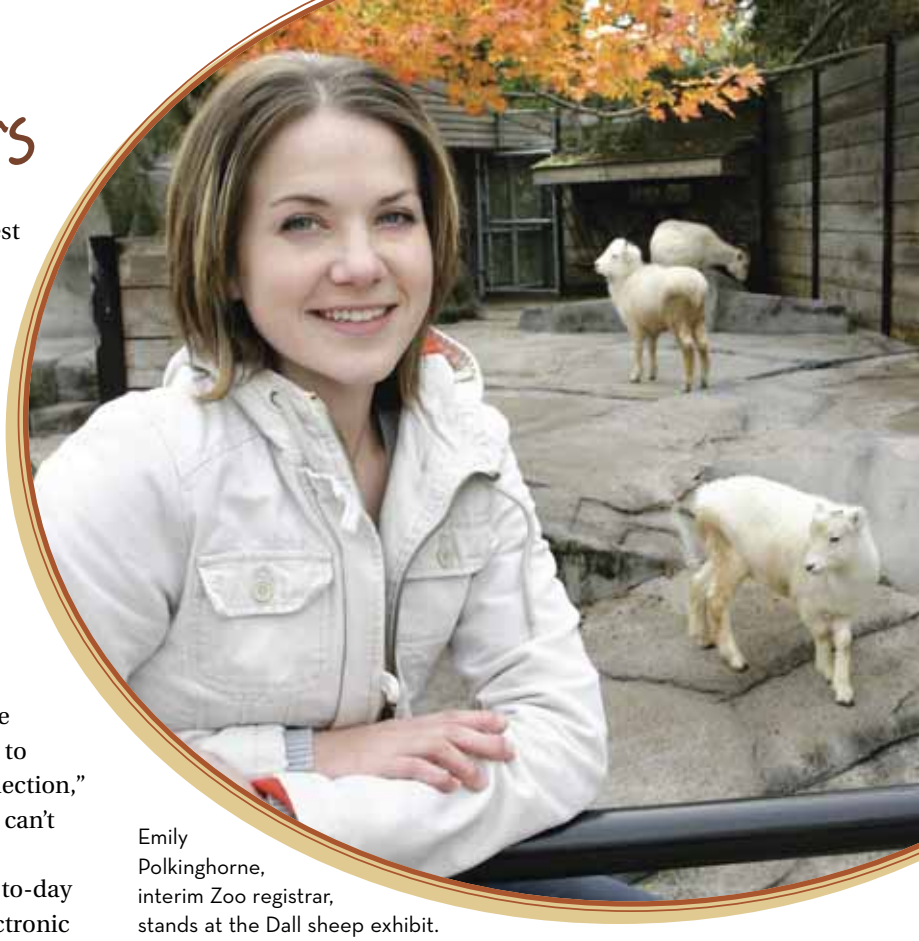
Raine and Thunder, Milwaukee County Zoo's youngest Dall sheep, have family trees as long and complex as those of any royal family. When Raine and Thunder were born last spring, zookeepers weren't sure which males of the Zoo's six-member Dall sheep herd had sired them. Could it be the late alpha-male Mr. Toronto or his son, Denali? The two had been alternated in their outdoor exhibit to avoid sparring and competition for females. "It would be impossible at this point to know who Raine's or Thunder's father is," says interim Zoo registrar Emily Polkinghorne. "We never assume anything unless we can be absolutely certain."

Gathering information about animals is one of Polkinghorne's jobs. As registrar, she keeps records on everything from birth dates to ancestors of the Zoo's more than 1,800 inhabitants. "Good record keeping is essential to maintaining a healthy and genetically diverse animal collection," says Polkinghorne. "You shouldn't breed an animal if you can't trace its history."

Polkinghorne pores over zookeepers' reports on day-to-day happenings at the Zoo and puts information into the electronic Animal Records Keeping System (ARKS). This database keeps records of each animal's life, from its "personality" to its feeding habits to identifying marks. If a zookeeper noticed that a lion made an unusual noise one day, Polkinghorne would add that fact to the database. "All this information can be used by our Zoo and other institutions to learn more about animals in captivity and in the wild," she says. Once a month, she sends her reports to the International Species Information System (ISIS), which collects animal data on about two million animals from 500 zoos. This information is then used by zoos and conservation programs that the Association of Zoos & Aquariums (AZA) has developed, such as Species Survival Plans (SSPs). SSPs outline conservation plans for endangered animals and give zoos breeding recommendations.

A zoo registrar's job can be like a treasure hunt. "We can't always get everything we'd like," says Polkinghorne. She works closely with zookeepers and curators to track an animal's history when possible. "Zookeepers are my eyes to each animal's life." Still, it's hard to trace lineage because some animals live in large groups and are not monogamous. "Bats can mate with several different bats each day. So chances are we will know who a bat's mother is, but not the father." Even calculating when some animals are born is tricky. Red kangaroos, for example, don't stick their heads out of mom's pouch till 150 days after birth.

Polkinghorne sees the benefits of her data-gathering whenever the Zoo is looking for a good breeding match for an animal. Thanks to data from registrars, ISIS creates highly detailed animal family trees that look very much like human ones. These family trees show everything from when and where an animal was born to whether there is any inbreeding in its lineage. Just like humans, animals that are close relatives are not a good match. "Zoos avoid inbreeding because it has many harmful side effects and doesn't genetically represent the species," says Polkinghorne. "In the wild, animals have strategies to guard against inbreeding, but with declining populations there is a chance that it can happen." Lack of genetic diversity could result in animals that cannot adapt to changes in the environment. "If animals can't adapt, they may become extinct." Animals that come from a large population in the wild are a far better match because they bring fresh genetic material to zoo collections. Zoos, however, try not to take animals out of their natural habitats. Adds Polkinghorne: "This is why management of captive populations is so important."



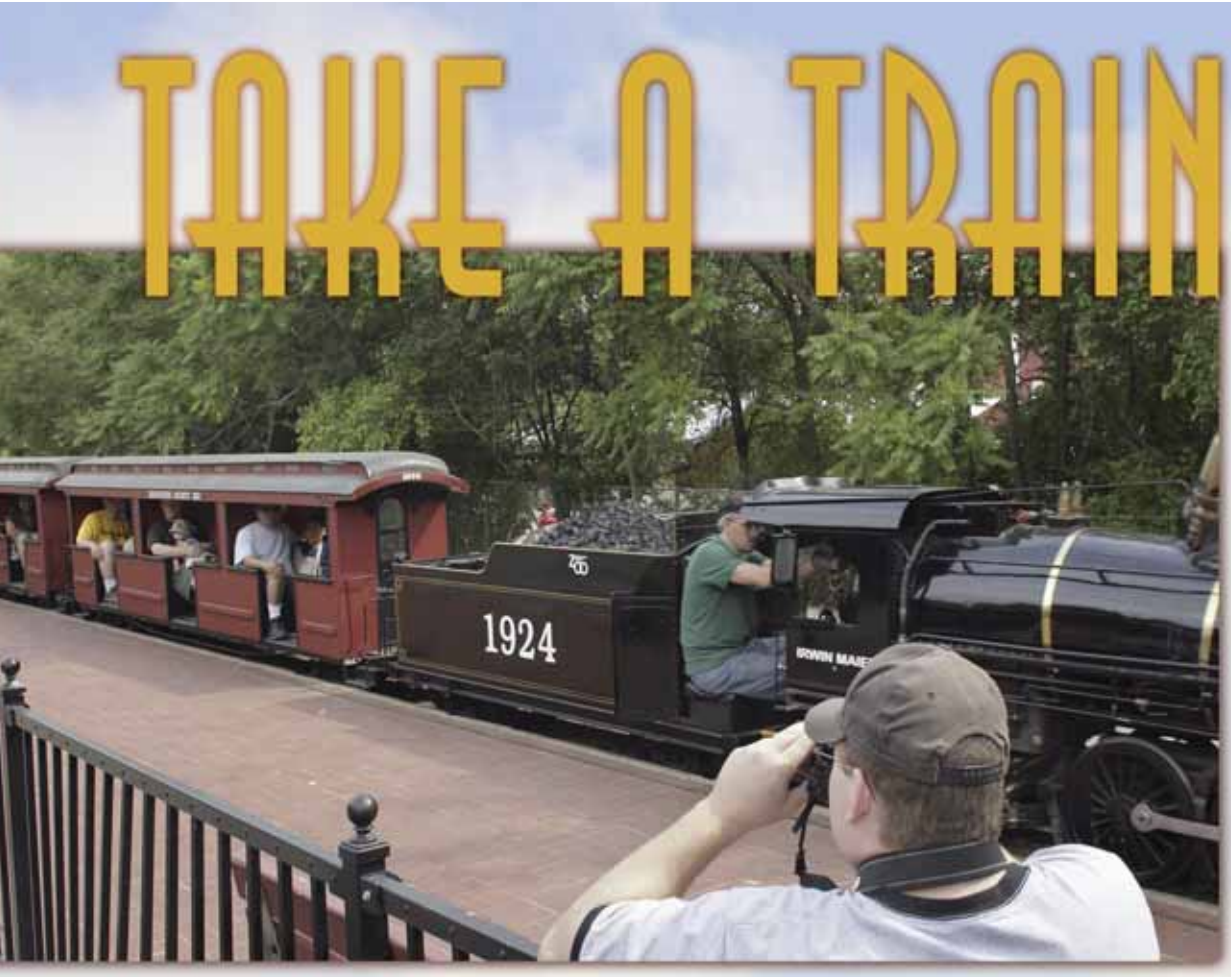
Emily Polkinghorne, interim Zoo registrar, stands at the Dall sheep exhibit.

Modern record-keeping methods and computer programs have added a wealth of knowledge about animal breeding, she says. Until the electronic ISIS system was established in 1975, records were kept in logbooks by hand and were often spotty. The Zoo has kept track of its animals since 1893, but record keeping was not computerized until 1987, says Bess Frank, curator of large mammals. Even now, not all zoos have registrars, although many have unofficial record keepers. Polkinghorne is one of 130 members of the Zoological Registrars Association (ZRA), a group promoting standards in zoological record keeping.

Polkinghorne, a former zookeeper and registrar at the Racine Zoo, took over the job for a year when the Zoo's longtime registrar, Karin Schwartz, went on leave in August 2006. Polkinghorne appreciates the importance of records. Keeping good records not only helps zoologists manage current animals better, but it also helps future generations, she says. "In the future, information will be easier to find because zoos are joining together to standardize their data."

-By Julia Kolker

TAKE A TRAIN Back



Ken Ristow drives one of the Zoo's two steam engines, which are among only a handful still running in Wisconsin.

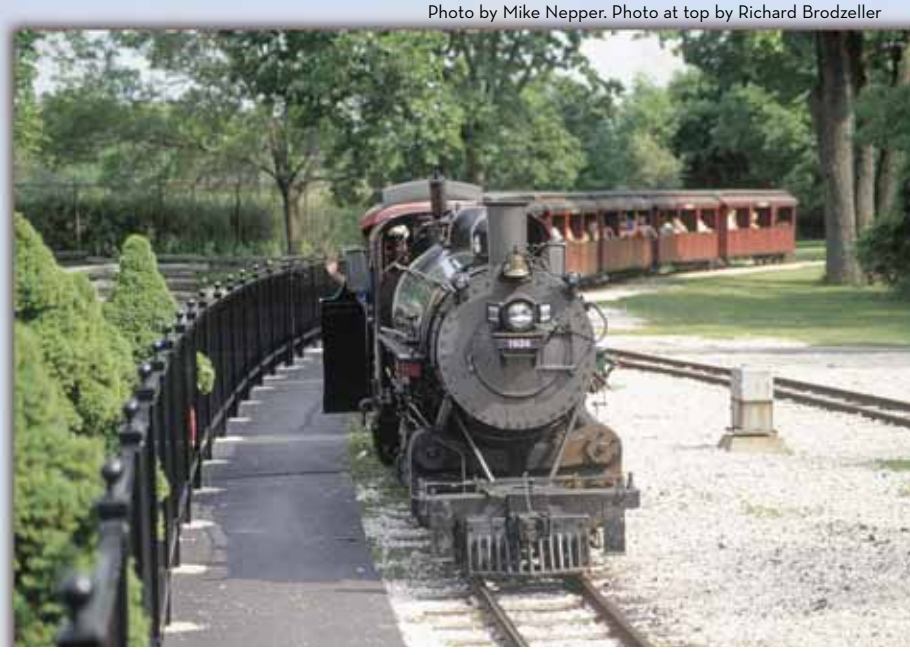
Train engineer Ken Ristow is always taken aback when visitors to the Milwaukee County Zoo ask him if the small steam locomotives he drives are fake. "Because the North Shore Bank Safari Train is miniature-sized, some people don't believe that the coal and steam are real. I've been asked if the coal is actually dark colored Styrofoam," says Ristow. "Well, it's all real."

It's not surprising that a steam engine train would look out of place in a 21st century zoo. Steam engines, essential for transportation in the 19th century, went out of use by the 1950s, says Ristow, who has been driving the nearly 50-year-old train for almost seven years. Only a handful of steam engine trains, including the Zoo train, are left today in southeastern Wisconsin. This train is not only a fascinating blast from the past, but also a part of Zoo history.

"A train and tracks were part of this Zoo's plan from the very beginning," says Mike Garcia, admissions and transportation supervisor. The train was custom-made and donated to the Zoo in 1958 by the publishers of The Milwaukee Journal. Although the Zoo was moving from Washington Park to its current Blue Mound Road location at that time, the train and six coaches were up and running during construction. Today, the train's 1.25-mile route, four locomotives and 19 coaches take 400,000 riders a year across two bridges, past Lake Evinrude and past many animal buildings and exhibits, including the Australia Building, the North America area and the Northwestern Mutual Family Farm.

It's up to Ken Ristow and his colleague, Don Patton, to keep the train ticking throughout its mid-March to mid-December season. They alternate the two diesel and two steam engines based on weather and Zoo attendance. It takes more skill to operate the steam locomotives, but they "make the attraction even more interesting," says Ristow. Driving a steam engine is tough and potentially risky. Ever try boiling water in a 280-gallon tea kettle? Train engineers load coal into a firebox. Hot gases produced by the burning coal heat water to 370 degrees in the boiler. Hot water then produces steam that moves the engine. Steam engines in the 19th and early 20th centuries sometimes caused accidents and explosions. Steam locomotives such as the Zoo's have many safety features and are inspected annually both by local and federal government authorities. "We maintain a high degree of safety," says Karl Hackbarth, Zoo operations coordinator. Both train engineers are also licensed and highly trained: Ristow is a certified engineer and mechanic, while Patton has a steam engine operating license.

Photo by Mike Nepper. Photo at top by Richard Brodzeller



in Time

During a train run, Patton and Ristow are responsible for adding coal and water to the engine as necessary, checking on the engine to make sure it's working properly and driving the train. The 8-ton locomotive is capable of surprisingly fast speeds—up to 35 miles per hour—but usually runs at only about 5 to 6 miles per hour. Ristow estimates that a steam engine goes through 8 to 10 pounds of coal and 10 to 15 gallons of water on each 10-minute trip. Says Ristow: "When you're driving a steam engine, you're always doing something— adding fuel or water, or making sure the nuts and bolts aren't loose." (In contrast, driving a diesel engine, similar to a car engine, is pretty easy, says Patton. "You just push buttons and make sure that the train stays on the tracks.")

Keeping the train spic and span is also challenging. "Engines weren't necessarily designed to make them easy to work on," says Hackbarth. During the operating season, the engineers clean, grease and oil engines daily. The real work starts in the winter, when the train and its cars are stored in a heated garage. Ristow and Patton paint and refurbish the coaches and take apart the engines to make sure they work well. Although train-repair companies sometimes provide specially made parts, "we do most of the maintenance here at the Zoo," says Ristow. Finding parts for custom-made, intricate steam engines is sometimes akin to a treasure hunt. For example, in 2005 an old boiler on one of the steam engines no longer met Wisconsin regulations. An outside company made a new boiler, but it was not compatible with the Zoo's standards. It took about 18 months to make a boiler that fit properly.

Working on a train can be exhausting, but Ristow and Patton aren't complaining. They like their job, they say, because it is unique. There aren't too many places where you can do this," says Patton. Adds Ristow, a longtime train hobbyist: "I like the smell of the coal and smoke and steam." After riding the train, most zoogoers have no trouble believing that the coal and smoke and steam are indeed real. "The kids just love it," Patton says. "After a train a ride, a 4-year-old girl once ran up to me and gave me a hug."

-By Julia Kolker

There's more than one way to see the Milwaukee County Zoo.

More than 230,000 visitors each year take in the sights and sounds of the park from the Zoo's moving attractions: the Penzeys Spices Carousel, the MidAmerica Bank Zoomobile, and the Kalahari Waterpark Resort Sky Safari. So it's no surprise that it takes a team of Zoo employees to keep the attractions spinning, gliding and rolling smoothly throughout the year. Here's the behind-the-scenes scoop.

Penzeys Spices Carousel

The Penzeys Spices Carousel at the Zoo features our own Zoo animals, such as the ostrich.

Don't be surprised if you see a seat on the carousel that looks a lot like a real Zoo animal. The carousel's seats were custom-made to resemble the Zoo's inhabitants, including the tigers, lions and horses, says Mike Garcia, transportation supervisor. The carousel, installed in 1995, was purchased for $300,000 because there was a demand for this type of attraction, adds Garcia. The Zoo's visitor services staff operate the ride and inspect its moving parts daily. The carousel runs from April through mid-December, weather permitting.

The current Zoomobiles, sponsored by MidAmerica Bank, have been running since 1962.

MidAmerica Bank Zoomobile

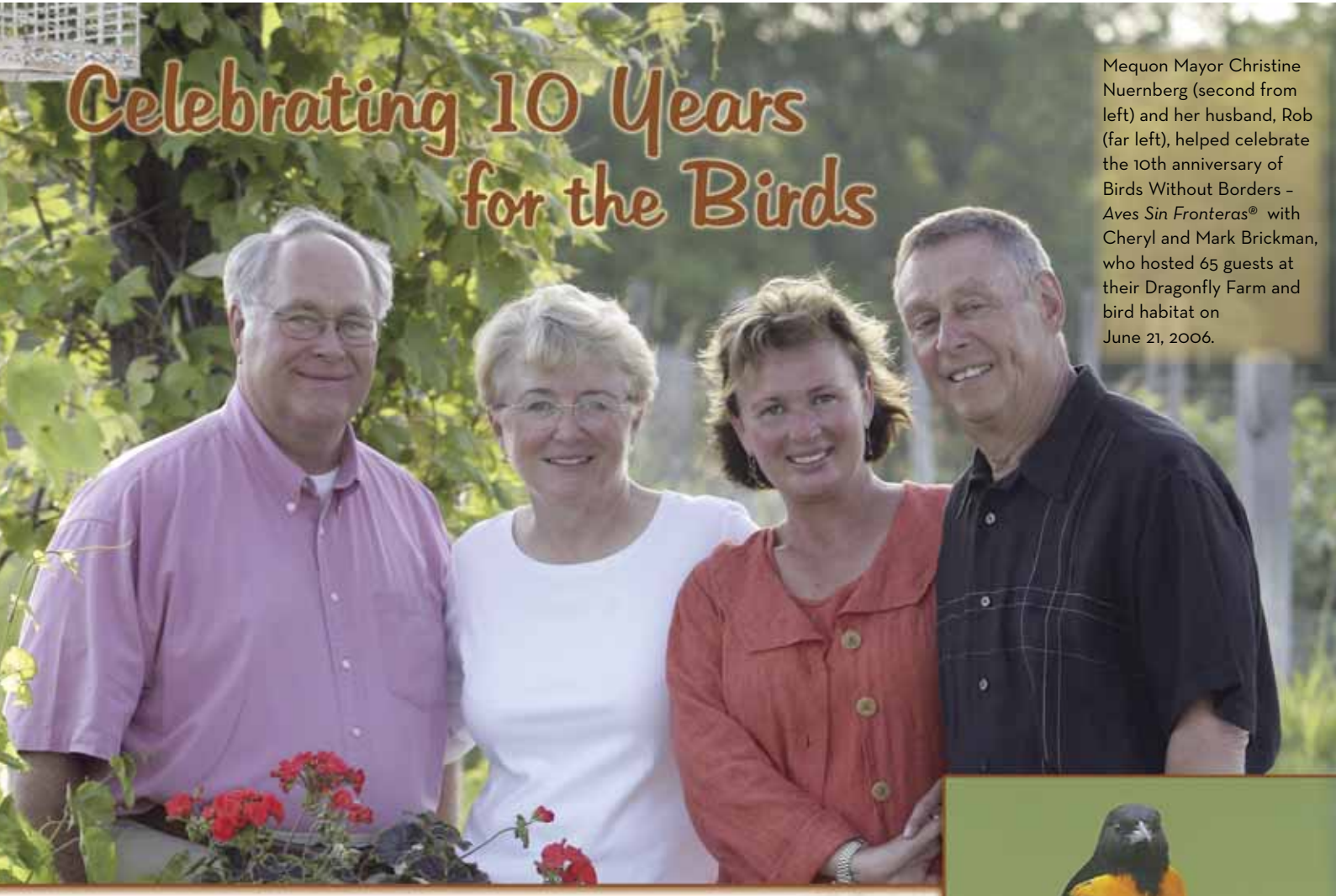
Zoomobiles have been around almost as long as the Zoo itself: since 1962. The open-air trams, which operate from mid-April to October, take Zoo visitors on a guided, 25-minute, round-trip tour of the Zoo. Maintaining a zoomobile is a lot like caring for a car, says Garcia: Engines, tires, breaks and sound systems are checked monthly and yearly. In the winter, Zoomobiles are stored on State Fair Park grounds.

Kalahari Waterpark Resort Sky Safari

Kat Mazang of Milwaukee and daughters Sara (left), 5, and Kat, 8, enjoyed the Sky Safari, sponsored by Kalahari Waterpark Resort, during a warm April day in 2006.

It's no coincidence that Sky Safari chairs are green. "All other sky rides in Wisconsin are bright carnival colors," says Cyrill Owens of SkyFair Inc., which operates the ride at the Zoo. "This one had to be green to blend in with the camouflage of the Zoo." The sky ride, which opened in August 2005, gives zoogoers a panoramic view of the exhibits from 45 feet in the air. The 12-to-15-minute round trip includes sights of the camels, alpacas, tigers, rhinos and polar bears in their outdoor exhibits. Owens, who operates the sky ride at the Zoo, checks the equipment daily and greases the moving parts. The ride is open on Memorial Day Weekend through Labor Day and on weekends in May, weather permitting.

Celebrating 10 Years for the Birds



Mequon Mayor Christine Nuernberg (second from left) and her husband, Rob (far left), helped celebrate the 10th anniversary of Birds Without Borders – *Aves Sin Fronteras*® with Cheryl and Mark Brickman, who hosted 65 guests at their Dragonfly Farm and bird habitat on June 21, 2006.

When you hear that bright Baltimore oriole singing in your yard this spring, know that you have had a hand in keeping it alive. As a Zoological Society member, you have contributed to a bird conservation-education-research project that reaches 1,400 miles across two countries.

That project—called Birds Without Borders- *Aves Sin Fronteras*®—celebrated its 10th anniversary in 2006. Its success has gone far beyond what we originally expected, and now the project is branching out to help other wildlife—and to help humans, too.

The original impetus for the project was the decline in songbirds. These lovely birds are an important part of our ecosystem. Their decline could be a warning sign for the human species. So in 1996 Dr. Gil Boese, then president of the Zoological Society of Milwaukee (ZSM), founded BWB-ASF as a joint project of the non-profit ZSM and its conservation partner, the Foundation for Wildlife Conservation, Inc. (FWC). Dr. Boese hired researcher Vicki Piaskowski to be international coordinator of the project.

Last June BWB-ASF celebrated its anniversary by noting its success with each of its four goals. At a party held at Dragonfly Farm and bird habitat in Mequon, hosted by farm owners and BWB-ASF supporters Cheryl and Mark Brickman, Piaskowski and Dr. Boese summarized their success:

Goal No. 1: to do research on migratory and resident birds in Wisconsin and Belize in hopes of discovering what habitats are important to birds during all stages of their life cycle and how we can help them. Since 1997, 10,140 birds have been banded at three Wisconsin study sites (Pewaukee, Rosendale and Land O' Lakes). This number is similar to the numbers of birds banded at large bird observatories, Piaskowski said. In Belize, since 1999 more than 4,500 birds have been banded at our three Belize study sites. The research has resulted in eight research papers published (or accepted for publication) in scientific journals, and more in preparation.

Goal No. 2: to apply the research results to conservation by compiling recommendations for landowners on how land can be managed to benefit birds. A 106-page guide for Belize landowners will be published by BWB-ASF in Belize this year, and a PDF of that report is now available on the ZSM's Web site: http://www.zoosociety.org/bzlandowner. Piaskowski said that a second guide, for Wisconsin, is in the works.

Goal No. 3: to educate children and adults about birds. "Since 1997, we have given more than 100 educational outreach talks and bird-banding demonstrations to the general public and schoolchildren in both Wisconsin and Belize," said Piaskowski. In addition, the ZSM presented bird-science classes to children in grades six through nine in 14 schools in Wisconsin, Michigan and

Belize. The Zoological Society's Education Department ran these classes, which included children doing field observation of birds at study sites near their schools. The ZSM and FWC also created a colorful, educational bird poster called Let's Protect Our Belizean Birds and distributed more than 2,500 copies in Belize.

Goal No. 4: to train Belizeans so that they could design and conduct further research independently. "In Wisconsin, we have had 18 college students or recent graduates work with us as interns," said Piaskowski. "Many have gone on to graduate school or continued in the research/conservation field. In Belize, 22 Belizeans have been trained while working with BWB-ASF, many of whom remain in the conservation field. We hired only Belizeans, and the expertise they acquired far surpassed our initial expectations. We now have a full-time, year-round staff of five Belizeans. Our Belize staff is proud to be the first Belizean nationals who have given scientific presentations and authored or co-authored scientific papers."

Producing so many scientific papers as well as a lay-person's guide while also being involved in extensive conservation and education programs is a significant achievement, said Dr. Boese. "The research went on for seven years. Not only were Vicki and the co-authors doing work in the field, but they also were publishing papers, giving presentations at meetings, and giving public talks. While the staff was doing bird banding, population censuses, and trying to determine the birds' breeding success and survival rates, other things would come up. One exciting find in Belize was the discovery of a mangrove vireo nest with eggs, which was previously undescribed by scientists. It was important to follow up on such a sighting, and so the staff made observations of the nest, sketches, photos, etc., and then published a paper on it. They would complete such shorter-term projects and get papers written while continuing on the longer term projects. It was a credit to Vicki and the entire team, even though they are spread out between two countries, that they used their time so efficiently. It was a goal of BWB-ASF to get information out as quickly as possible, and they are doing that."

Shawn Graff and Cheryl White of Slinger observed birds during the 10th anniversary party for Birds Without Borders – *Aves Sin Fronteras®*, a project they have supported.

Vicki Piaskowski (right), international coordinator of Birds Without Borders – *Aves Sin Fronteras®*, met with donors to the project: Arlene Hansen and Fred Ott. Ott donated land near Rosendale, Wis.

Now that the main goals are done or nearly done, BWB-ASF has expanded its mission, said Dr. Boese. BWB-ASF, under the auspices of the Foundation for Wildlife Conservation and in partnership with the ZSM, is now managing Runaway Creek Nature Preserve, which is owned by the FWC, and using the preserve as a field-study area. "We will continue to collect data on migratory and resident birds to help conserve them, but we also will study other wildlife. We are launching a series of action groups in partnership with other organizations that will focus on various species or orders of animals and plants." Already begun are field studies of endangered jaguars and rare jabiru storks. In early January Dr. Boese met with representatives of two universities and the Belize Zoo to launch a study of spider monkeys. And three other projects are in the works, including one to study a possible new plant species in the genus Zamia and two projects to help the people in Belize.

Through BWB-ASF Dr. Boese also is helping other groups to secure private land next to Runaway Creek Nature Preserve that can be turned into preserves. "The goal is to have multiple owners joining together under a philosophy of wisely managed, privately protected areas and then partnering with governments to better manage public areas. I see a need for a global movement to protect larger land areas. I think this will be critical to the future of the human race. These land areas are the oxygen sources." Boese also is on the boards of other groups that are working to create large wildlife preserves in Africa.

-By Paula Brookmire

Birds Without Borders – *Aves Sin Fronteras®* donors Scott Haag of Pewaukee and Susan Barbiere of Mequon (left) joined Lillian and Gil Boese of Pewaukee at the BWB-ASF anniversary party. Dr. Gil Boese is founder of the BWB-ASF project and is president of the Foundation for Wildlife Conservation, Inc.

On the Heels of a Moose

Let's be frank. Bess Frank gets excited about moose. That's one of the reasons she came to the Milwaukee County Zoo in February 1987. We have moose on exhibit here. Not many zoos do. "I think they're beautiful animals," she says. You have to really like moose – as well as snow and cold weather—if you start work at the Zoo in the middle of winter. Animal caretakers spend a lot of time outdoors. The moose are outdoors. So are the elk, caribou, Dall sheep, polar bears, sea lions, and wolves.

All of these animals have been under the purview of Bess Frank, the Zoo's curator of large mammals. Still, the moose brought her here, and a moose may have helped keep her here. Of course, it was a Boston moose. But let Frank tell the story.

"It was in 1995. When I went to my cousin's wedding in Boston, I saw a news report that they had captured a female moose in a Boston suburb called Melrose. I was ironing my blouse when I saw it on TV." Not one to pass up a chance to get a moose, Frank contacted one of the zoos in Boston and said, "We'd like to take that moose to Milwaukee."

Now, of course, Frank knew that Milwaukee had been searching for three years for a female to mate with the Zoo's 9-year-old male moose, Bullwinkle. And, of course, she called her boss here before offering to bring back an 880-pound animal. Still, as a result of her quick action, Milwaukee ended up with Melrose, the 1-year-old moose from Melrose, Mass. "She was the base for our new moose population," said Frank. Melrose twice gave birth to twins.

Melrose wasn't the only prize. In 1996, a dentist in Vermont offered Milwaukee a baby male moose she found after its mom had been hit by a car. (She must have heard about Frank and Melrose.) "He was less than 1 month old when we got him," said Frank. "The zookeepers bottle-fed him." The moose was named Clifford and went on to eclipse Bullwinkle. As of last November, Clifford was reigning supreme at the Zoo (see photo on page 2), sharing the moose yard with his mate, Linda. Melrose, unfortunately, died in 2005.

Moose are not the only reason Frank has stayed at the Zoo for 20 years. "I love the variety of the work," she said. "There's so much that we do here: research, on grounds and internationally; animal management; animal training; education. The staff is good, and the physical environment is great." Not every zoo has the lovely gardens that Milwaukee boasts. Plus, there are the eight new buildings or exhibits that have gone up in five years, thanks to a capital campaign run by the Zoological Society and Milwaukee County.

Frank likes variety. She has a bachelor of science degree in animal science from the University of Maryland (1972), a master's in museum studies from George Washington University (1984) and a master's in history from Marquette University

Bess Frank cuts through the Zoo's woods during one of her many trips between large-mammal areas that she oversees, on walkie-talkie all the while.

(1996). History, in fact, has been one of her pet projects at the Zoo. She has gathered bits of Zoo history (including animal records dating to 1893) and created a Zoo archive, becoming the official Zoo historian. She had help from professional archivists, a University of Wisconsin-Milwaukee graduate student, and a Zoo Pride volunteer. She is proud of the fact that the Zoo launched a permanent historical timeline, included as part of its general Web site, last October (see box).

One of the Zoo's Dall sheep was heading out to become the new herd male at the Chahinkapa Zoo in Walpeton, N.D. Bess Frank and Tom Schmaltz, a curator at Chahinkapa, gently helped it into a shipping container.

A typical day as curator (she's one of four) offers Frank lots of variety. Take last Oct. 6. She started the day by bringing in raspberry stalks from her house (where she lives with husband and entrepreneur Dennis Frank) to feed the great apes, bears and red pandas. She read the daily reports from zookeepers, checked 108 e-mails, talked with the Zoo's two veterinarians, visited every one of the large-mammals areas she's in charge of and talked with the keepers, found a home at the Metro Richmond Zoo in Virginia for a young male impala born at our Zoo in November 2005, dealt with a staff scheduling problem, and answered questions from a caller in Minnesota about deer sterilization.

Deer sterilization? Yes, well, Bess Frank is somewhat of an expert on that subject. "This is my main research," she said. It all came about when they were trying to reduce the wild white-tailed deer population on Zoo grounds to avoid heavy plant damage. Frank investigated contraceptives and sterilization and presented research papers on the topic. A city in Illinois has used some of the research to deal with its deer problem. Actually the Zoo was deer-free for 10 years, said Frank, but wild deer came back in 2005. "Our perimeter fence is not deer-proof," she noted.

While the Zoo would like to keep wild deer out, it sometimes has challenges keeping the exhibit animals in. There was the case of the bolting Dall sheep. "We were getting ready to ship a male Dall sheep," said Frank. "He was in the back of Sheep Mountain and he jumped out of the yard, ran across the Zoo (with several zookeepers giving chase) and almost made it to Blue Mound Rd. He was darted with a tranquilizer and never got off Zoo grounds." The Dall sheep exhibit was changed so that can't happen again.

A more dramatic escape occurred during the Zoo's first Behind the Scenes Weekend, Nov. 14, 1993. "A visitor who happened to be a Milwaukee Journal photographer looked up and saw a cheetah looking down at him—with no barrier in between. Apparently the cheetah had shimmied up between a tree and the exhibit's gunite rock work to reach the roof. We had trees growing very close to the gunite then. The trees are no longer there." It took three women to get the young cheetah down. Because the cheetah had been hand-raised by women, he was not threatened when Bess Frank, zookeeper Valerie Werner, and Dr. Roberta Wallace (senior veterinarian) climbed up on the roof to calm him and give him a tranquilizer. "He fell sleep and we got him down through a hatch on the roof," said Frank.

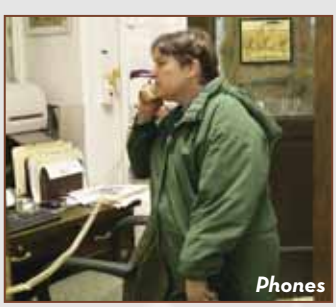
What is Frank's most poignant memory of her years at the Zoo? "We had to hand-raise two baby giraffes [at different times] whose mothers couldn't care for them. One of them, Jigsaw, who had pneumonia, we could see wasn't going to make it. The other, Skye, lived." She became somewhat of a star in the Milwaukee media, and then she eventually went to the Sacramento Zoo.

Clipping Sasha the lion's toenails is one of many health-care procedures the staff does when an animal is anesthetized. Here Frank works with veterinary resident Dr. Gretchen Cole.

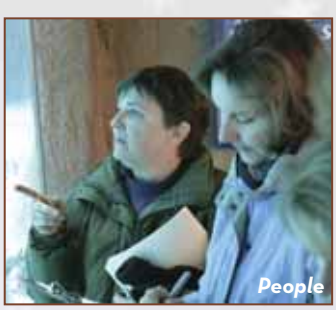
Stars rise and stars fall. Bess Frank, who turned 55 Nov. 21, was planning her retirement for this February as the autumn leaves were falling and the winter constellations were taking over the night sky. Ah, if only there were a moose among the constellations, we might know where Bess Frank will go next.

-By Paula Brookmire

Paperwork



Phones



People

Paperwork: Frank handles loads of paperwork on a day when she and Dr. Vickie Clyde (in back), a Zoo veterinarian, were the only managers there to handle the animal staff.

Phones: Wherever she goes, Frank usually ends up on the phone. Here's it's in Winter Quarters, the underground area below the feline facility and home to zebras, eland and other warm-climate animals.

People: On her way across the Zoo she stops to answer some questions from a group of visitors.

Share Your Memories

Have a favorite experience or picture at the Milwaukee County Zoo that you'd like to share? Or perhaps you just want to find out what was the highlight of the Zoo the year you were born. Visit the Zoo's Web site, www.milwaukeezoo.org/timeline, and you can view of timeline of Zoo highlights over the years. Or, you can share your memories and photos. Submissions may become part of the Zoo's permanent archives.

Fairy bluebird

Hatched: August 7, 2006
Herb & Nada Mahler Family Aviary

Baby Blue

Radiant blue is one way to describe the fairy bluebird. Both males and females have brilliant but different shades of iridescent blue. Last August the fairy bluebird couple at the Milwaukee County Zoo added a blue chick to the fold. "Usually the chicks hatch the same color as the females," says Kim Smith, curator of birds. "They won't show their adult colors until they are about 6 months old." Males have bright blue feathers on the top of their head, with black and blue feathers on their back (see photo at left). Females have a dusky blue breast (see photo at right) with dark blue wings. Both males and females have intense black eyes with red circles. Chicks are born blind, without feathers and without mobility. So they rely solely on their parents for survival. Yet within two weeks they are able to fly out of the nest. As of November, zookeepers had not named the chick because they did not yet know whether it was male or female. The chick will go to another zoo for breeding. Fairy bluebirds live in the lower trees of rain forests, and are usually found traveling to and from fruit trees. In their natural habitat – in southern Asia, northern India and the Philippines – they feed mostly on fruit and insects as well as wild figs and flower nectar. They are active, social birds that live in flocks, and are common in the wild. If you cannot spot the fairy bluebirds in the trees in the aviary's tropical rain-forest exhibit, you will certainly hear their loud, clear calls that sound like a series of short whistles. Their exhibit is between the Free Flight area and the African Savanna Exhibit in the Herb & Nada Mahler Family Aviary.

Great-horned Owl

Arrived: September 21, 2006
Off exhibit till 2007

Who's Got a Genie?

Genie, a great-horned owl, arrived at the Milwaukee County Zoo last fall with a partially amputated wing. The owl injured its wing when it collided with an electric power line. Great-horned owls are top predators among birds, but an injured owl could easily become prey in the wild, says Dawn Fleuchaus, area supervisor of the Australia and North America areas. So Genie, a former resident of a wildlife rehabilitation center in Arizona, came to our Zoo to educate visitors about Wisconsin's native raptors. Although zookeepers do not know Genie's age or sex, they're guessing that Genie is a male because of its small size—about 1½ feet from head to tailfeathers. Male owls are often smaller than females. Genie is a calm bird that likes shredding straw, paper and cardboard tubes for entertainment, says Fleuchaus. Once it gets used to its environment at the Zoo, Genie will be trained to sit on a zookeeper's gloved hand and will be part of Animals in Action talks during the summer. Great-horned owls, a species named for feathers sticking out of the owl's ears that look like horns, are found all across North America. Zookeepers have even spotted wild great-horned owls on Zoo grounds. It's not uncommon for suburbanites to hear the great horned owl's hoot at night and at dawn. This owl's call ranges from shrieks to barks to coos that can be heard from miles away. Great-horned owls are silent hunters, however, and capable of stalking animals as big as porcupines and skunks. Genie is spending this winter off exhibit. When the owl adapts to chilly Wisconsin weather, it will stay in an outdoor exhibit next to the Alaskan brown bears year-round.

Baird's tapir

Born: July 21, 2006
South American yard

A Pushy Nose

Can you use your nose to push around food or to help pick leaves off trees? Javier, the first male Baird's tapir born at the Milwaukee County Zoo, can. Javier has a flexible upper lip that turns into a long "nose" that looks and acts like an elephant's trunk. Besides having a small trunk, tapirs are known for their color change from a calf to an adult. They are born with a reddish brown coat with striking white spots and stripes. By the time tapirs turn 9 months old, the white has disappeared and they have bristly, short dark brown hair, with the only white being on the tips of their ears. In addition to their color change, Baird's tapirs have a rare trait in the animal world. Females are larger than males. When he was born on July 21, Javier weighed almost 24 pounds and was about 31 inches long. When grown, he will be about 4 feet tall, 6 feet long, and weigh up to 550 pounds. Adult females can weigh up to 800 pounds. Despite their bulky frame and having three toes on their back legs and four toes on their front, Baird's tapirs can run fast, climb hills, and swim. An endangered species, Baird's tapirs, also known as Central American tapirs, are the largest land mammals found in Mexico and Central America. They can live in a variety of environments from marshes to forests. To avoid predators, Baird's tapirs have excellent smell and hearing and can be active day or night. So they are rarely seen in the wild. The Zoo's Baird's tapirs go indoors off exhibit in the fall until mid-April, or when the temperature gets above 50 degrees. Javier will be on exhibit with his mother, Eve. Javier's father is named Harley.

Ringed Teal

Hatched: July 25, 2006
Herb & Nada Mahler Family Aviary

Hey, Look up!

If you think that all ducks can be found paddling in the water, think again. The Zoo's five ringed teal ducklings may be sitting above your head! Ringed teals, also known as perching ducks, nest in trees or high up in rocks or cliffs. These 1-foot-tall birds have fairly long toes with strong, sharp toenails that help them sit in trees. Their webbed feet let these birds walk on mud and swim.

Five ringed teals were hatched at the Milwaukee County Zoo in July 2006. The two male and three female ducklings stayed together as a group, diving and playing. The females are all brown, with a white spot on the head and a speckled, brown-and-white breast. The more colorful males have a black-spotted pink breast and dark maroon wings (see photo). The ringed teal's Latin name is *Callonetta leucophrys*, which roughly translates to "the beautiful duck with the spot on the wing." You may see this spot when the birds open their 28-inch-long wings. In 2007 the Zoo plans to bring in more ringed teals for breeding. They are not endangered. "It's nice that the ducklings were hatched here at the Zoo," says Kim Smith, curator of birds. "They have been in the same area since they were born; so they won't run and hide from viewers of the aviary like some of the other birds." Native to South America, these ducks live in tropical, swampy forests and marshy, well-wooded lowlands. They use nature-made nests such as a hole in a tree or nests abandoned by other birds. You can see the ringed teals in the Free Flight Area of the aviary. Remember, don't just look in the water.

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