

# Alive

A De Brazza's monkey is the central focus of the image, perched on a large, weathered log. The monkey has a dark grey-green body, a black face, and a prominent white beard. Its eyes are dark and focused forward. The background is dark and out of focus, suggesting a natural habitat.

## Inside

- A Stunning De Brazza's Monkey
- Fun at Summer Camp
- Amazing Health Care for Animals
- On the Job in Congo
- Observing Penguins in Peru

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When Malinde the giraffe passed away last June, we were all sad. She was a popular animal at the Milwaukee County Zoo. She was a great mom. And, at age 28, she was one of the oldest giraffes in captivity in North America. One thing the Zoo staff can be proud of is that Malinde got great medical care as she aged. For her chronic arthritis, she received pain medications in her food treats, extra bedding, and special attention by the staff. As one of the Zoo veterinarians, Dr. Roberta Wallace said, "We try to be good stewards to our animal collection."



As a veterinarian who has worked in more than one zoo (although I'm no longer in practice), I can attest to the challenges of treating wild animals. In this issue of *Alive*, you can read about animal medical cases in Part 1 of a two-part story describing some of the amazing animal care our Zoo provides (page 7). Part 2 will appear in the Zoological Society's April *Alive*. Also in this issue, in dedication to Malinde, we present a Kids *Alive* section of activities with a giraffe theme (page 10). The photo here shows Malinde and me about six years ago. We look forward to the arrival of at least one new giraffe this year. Things are definitely looking up.

*Robert Davis*

Dr. Robert (Bert) Davis  
 Chief Executive Officer

# Mixing It Up

Last fall, a Goeldi's monkey family at the Milwaukee County Zoo entered their exhibit to find a new roommate strutting about – Little Richard! It wasn't the musical icon, but a similarly curly crested large bird called a wattled curassow. After nearly a year on his own, Little Richard was added to the Goeldi's exhibit to create a new mixed-species exhibit in the Primates of the World building. "Suddenly he found himself in this glass exhibit with people outside and activity," says Primates area supervisor Trish Khan. Yet Little Richard had no problem with his new digs. The tiny monkeys, however, were suspicious of their 7-pound, nearly 30-inch-long guest. "They made panicked whistles and chirped to each other," says Khan. But they soon realized Little Richard wasn't a threat, and now "they have no fear of him whatsoever." Khan was excited to introduce the animals to each other. "I've wanted to do a mixed-species exhibit for years. It's good for the public to see, and it's how the animals naturally are; they don't live alone in the wild."

Goeldi's monkeys and wattled curassows naturally live alongside each other in the Amazon rain-forest's understory.

# Alive



## 4 Fun at Summer Camp

The Zoological Society of Milwaukee (ZSM) offers more than 30 camps each summer. Follow campers through a day of falconry and raptor fun. The brochure for **ZSM Summer Camps 2013**, sponsored by Penzeys Spices, is packaged with this *Alive*.

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Check out cool photos of the Zoo's snow-loving animals.

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From a cheetah with bowel disease to a horse with arthritis, discover the challenges Zoo veterinarians face daily.

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Fun, giraffe-themed activities challenge your mind, keep your neck warm and turn your tongue purple.

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Peruvians harvested valuable guano - and zookeeper Heather Neldner helped make sure penguins weren't harmed in the process.

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A De Brazza's monkey and a pair of bush babies



Goeldi's monkey

Little Richard, the wattled curassow

Both have black coloration. The monkeys' soft blackish-brown fur provides camouflage as they leap through the shadowy forest, and each tiny face is framed by a silky mane. The wattled curassow has inky black plumage with a crest of curly black feathers. Females are identified by a cinnamon-colored belly, while males have a white stomach. The bird is named for the male's two bright red wattles, which match a red knob on top of its beak. Both species rest and sleep in trees.

To eat, however, Goeldi's monkeys stay in the trees to snack on fungi, tree gum and bugs. The curassows forage on the ground for seeds and insects or eat small fish and crustaceans from the rain-forest's rivers. Khan is happy to see Little Richard and the monkeys getting along. "He looks fabulous in there. It's improved his life and it's enriched the lives of the primates."



-Liz Mauritz

# Action-Packed Summer Camps



Giggles erupt as children create a habitat of hiding places for a tiny paper mouse to escape from its flying predator. What started as a plain white sheet of paper is now covered in flip-up leaves, construction paper grass and logs, and taped-on twigs. The children trace a path for their mouse with an ink that's invisible—for now. Then, each child in the Zoological Society of Milwaukee's (ZSM's) Falcons, Eagles, Hawks & Owls summer camp sees through the eyes of the mouse's predator: an American kestrel. With a tiny ultraviolet light, the children light up the path they've just drawn. Their faces light up as science comes to life. They know how the kestrel catches its prey! It uses its ultraviolet vision to follow trails of mouse urine. Gross... yet engrossing.

Hands-on science is a hallmark of the ZSM's education classes and summer camps.\* "When you combine auditory, visual and tactile (or hands-on) learning, children are able to make deeper connections with the subject material," explains ZSM educator Christopher Uitz. Multiple activities help "meet the educational needs of all types of learners," says Uitz, because some children learn best by hearing, some by seeing, and some by getting their hands on things. The Falcons camp on raptors is one of more than 30 ZSM camps offered June 1 through Aug. 14 at the Milwaukee County Zoo. Follow us through this six-hour camp, held in July 2012, to see how science, crafts, games, discussions, Zoo tours and a bird show make a memorable day.

Immediately after check-in, before any group activities, each Falcons' camper gets a Wisconsin Birds of Prey book. They learn that birds of prey and raptors mean the same thing. "Match bird pictures in the book to posters on the wall," the instructor says. The posters contain answers to questions in the book. Is a turkey vulture active at night or during the day (nocturnal or diurnal)? What does a red-tailed hawk eat? As the kids scrawl answers in their books, they chatter excitedly, working together to complete each page and sharing their experiences seeing birds in their neighborhoods.

Each camp activity reinforces learning. The instructor brings out a live Eastern screech owl named Demouser;

## \*2013 Summer Camps

Zoological Society of Milwaukee (ZSM) Summer Camps, sponsored by Penzeys Spices, start in June. Your summer camps brochure is packaged with this *Alive*. For more information, go to [www.zoosociety.org/education](http://www.zoosociety.org/education), where you also can find information on spring and fall education classes. ZSM education classes are held February through May and September through December.

Yarelis Rodriguez, 9, of Milwaukee, shows her arm span is just slightly longer than a red-tailed hawk's wingspan.



Dominik Stankowski, 8, of Waukesha, discovers an eagle's foot is bigger than his hand.

American bald eagle Norbert



Zoological Society instructor Ryanne Lee introduces Demouser, an Eastern screech owl, to children in the Falcons, Eagles, Hawks & Owls summer camp on July 24, 2012.

he was named for his mouse-hunting skills. The instructor asks the children to look at Demouser's body: "What does he have that would help him catch and kill his food?" The children point out the raptor's beak, sharp talons, and incredibly large eyes. These features all work together to make him a successful hunter. How? Why are talons, for example, important to the owl's survival? Campers know some of the answers because their birds of prey book has a page about screech owls. Other questions challenge them to think. Talons help owls grab their prey, one child offers. Large eyes help owls hunt at night, says another. Later, on a Zoo tour, campers search for signs of raptors. They check the ground for feathers and owl pellets. They use binoculars to look up into trees for nests. There! A red-tailed hawk circles overhead. What is he hunting for? The kids know: mice! The American kestrel activity helps campers understand how birds of prey can see ultraviolet wavelengths, but humans can't; without an ultraviolet light, campers can't see the trail they drew for their mouse. An earlier video clip explains the kestrel's ultraviolet vision, but doesn't provide the hands-on understanding that the project does. Each camp mixes outdoor action learning with a variety of other activities. So each child will learn in his or her own way.

One memorable activity for Falcons' campers is the Birds of Prey Show. This free show in the Zoo's farm is open to all zoogoers, and the campers join the audience. American bald eagle Norbert swoops across the stage. African pied crows Cherry and Einstein snatch up and recycle soda cans planted in the audience. European barn owl Marshmallow flies silently overhead with his special fringed wing feathers. A tawny eagle, a red-tailed hawk, and some non-raptors such as Cochin chicken hens and macaws make appearances in the 20-minute show. As the birds fly over the audience, two presenters reveal interesting facts. Did you know king vultures practice urohydrolysis? That's a fancy word for urinating on oneself to keep cool. *Giggle. Giggle.* While campers may giggle, they are having fun, and they'll remember what they learned about that vulture's biological adaptation. Did you know that the Zoo's vivid red-and-green macaws don't actually have any pigment in those beautiful feathers? The feathers are gray; the bold colors we see come from the sunlight

reflecting off the feathers. How can children help conserve endangered birds, the presenters ask? The pied crows already have taught them: Recycle cans! After the show, campers are eager to ask questions of the bird handlers.

Back in the classroom, the day's final segment revolves around falconry. The Birds of Prey Show handlers were trained in this art so they could properly handle raptors and other birds. The campers learn about different pieces of falconry equipment, and how to securely hold onto a bird using a leather glove, anklets, jesses (leather straps to tether birds), and a leash. They create their own falconry pouch and jess, and use metal stamps to imprint their initials on their crafts. Then it's time to see if they are strong enough to be a falconer. Picking up milk jugs filled with sand allows children to feel the weight of a red-tailed hawk: about 2.5 pounds. Each child tests how long he or she can hold that weight. To end the day, campers play a game to imitate how falconers train their raptors. The children train a "hawk," played by a college-age intern assisting with the camp, to fly to various points in the room using food treats.

As campers leave for the day, they tell their families about all the things they did and learned: *Mom, I saw a hawk hunting for mice at the Zoo! Dad, did you know that thousands of years ago, kings used eagles to hunt, and regular people used kestrels? Grandpa, a tawny eagle can read a newspaper from across a football field! Look, Grandma, I made a book about raptors!* Through the day's activities, the Falcons, Eagles, Hawks & Owls camp taught kids a wealth of knowledge about birds of prey – and they will happily share that knowledge with others until their next Zoo class.

–Liz Mauritz

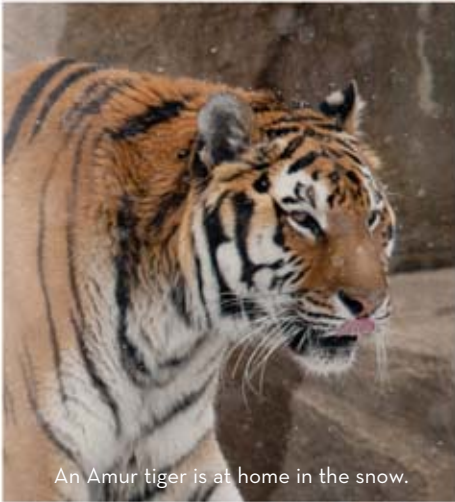


Abigail O'Neill, 9, of New Berlin, meets Cherry, an African pied crow held by bird expert Erica Fenske.



# Action in the Snow

A grizzly bear surveys the snowfall.



An Amur tiger is at home in the snow.

A Japanese macaque watches the snowflakes from his rock perch.



Winter brings more than flurries of snow to the Milwaukee County Zoo. Zoogoers can spot a flurry of activity among animals that are native to cooler climates. Polar bears Willie and Snow Lilly happily pad through the snow and ice, keeping warm with their thick hair and insulating fat. The Zoo's caribou-reindeer and elk love to frolic in the frosty drifts. Male elk Comanche sometimes chases his female companions. You might be surprised to see the orange of an Amur tiger out in the bright white snow, but this big cat is also known as a Siberian tiger, native to the frigid, northern regions of Russia and China. Japanese macaques, commonly called snow monkeys, are also right at home when snow blankets their Zoo island. In the wild, they live in the mountains of three of the Japanese islands, sometimes in places where it snows for four months a year. Last year's unseasonably warm winter even confused our grizzly bears' hibernation cycles. Zoogoers could see the grizzlies ambling through snow in their exhibit after an early March storm, even though they usually sleep until spring. Other active winter animals include the Zoo's Bactrian camels, alpacas, snow leopard and Dall sheep. So bundle up and brave the chill to see these and other animals enjoying their winter wonderland at the Zoo.

-Liz Mauritz



Male elk Comanche chases a female companion.

# When *Animals* Get Sick



Cheetah brothers Damara and Nama rest their heads on each other.

“Cheetahs in some ways aren’t typical cats. Their claws don’t retract. Their body isn’t shaped like other cats. They’re almost more dog-like, even in their diseases.” *Dr. Vickie Clyde*



**A**n endangered cheetah with severe bowel disease and pressure sores requires anesthesia for 26 medical procedures. A pinto horse gets acupuncture treatments for advanced arthritis and foot problems. A young gorilla from Canada faces a full-fledged, federally mandated quarantine in Milwaukee. A golden-headed lion tamarin needs chemotherapy for failed pregnancies. From apes with heart disease to penguins with lung infections, animals get sick. Veterinarians at the Milwaukee County Zoo need to be persistent and sometimes creative to treat medical problems. The level of care that the Zoo’s animals receive is often amazing. If you have a pet cat (or dog), you may relate to this first example:

## Cheetah Challenge

“Damara the cheetah came to us in June 2006 from the National Zoo with his brother, Nama,” says Dr. Vickie Clyde, one of the Zoo’s two veterinarians. When they first got here at age 2, the brothers periodically would have blood in their stool. They were diagnosed with Clostridial colitis, a chronic bacterial infection of the large intestine. Fiber was added to the cheetahs’ diet. That worked well for Nama, who didn’t have further medical problems. Damara was another story.

In 2009 Damara developed liquid diarrhea that didn’t respond to fiber or antibiotics. “So we put him under anesthesia for a complete exam, including taking radiographs (X-rays),” says Dr. Clyde. “He had a softball-size mass in his abdomen that definitely was abnormal.” Was it cancer? A veterinary surgeon, Dr. Jeffrey Meinen of the Wisconsin Veterinary Referral Center, was called in to assist with the case. “He has helped us with a number of surgeries. He’s highly skilled, quick and gentle.” Halfway down the small intestine, he found a 1½-foot loop of bowel that was distended, fluid-filled, thick-walled and much too large in diameter. Dr. Meinen removed 30 centimeters of bowel and sewed the remaining ends together. The distended piece of bowel and nearby enlarged lymph nodes were sent to Dr. Maggie Highland, the Zoo’s pathology fellow at that time. The fellowship program is funded by the Zoological Society of Milwaukee. No cancer, she said. Instead, she found a type of inflammatory bowel disease that is suspected to be caused by a food allergy. “It’s a lifelong disease that’s never eliminated, only controlled,” says Dr. Clyde. It’s usually treated with diet changes. Damara was switched to a chicken diet and given oral steroid medications.

“Over time...we could see things were going in the right direction.”

*Dr. Roberta Wallace*



Richard Brodzeller photo

Humans have a lot of side effects from steroids. Most cats do not. Dogs fall somewhere in between. “However, cheetahs in some ways aren’t typical cats,” says Dr. Clyde. “Their claws don’t retract. Their body isn’t shaped like other cats. They’re almost more dog-like, even in their diseases. Damara developed the kinds of steroid side effects that a dog might.” That included thin skin and open pressure sores on his elbows, shoulders and hips. When vets lowered the prednisolone (steroid) dose, the bowel disease would come back. So they switched to a new steroid, budesonide, that’s supposed to affect fewer body systems – “but since it’s a newer drug, it’s much more expensive than prednisolone.” Meanwhile, Damara spent winter-spring 2011 in the hospital as the staff tried to heal his skin ulcers. They’d bandage his sores. He’d eat off the bandages, sometimes swallowing them. They’d X-ray his stomach. If they saw bandages, they’d use an endoscope to pull them out. He also needed several surgeries. They had to remove excess scar tissue so remaining tissue could heal more normally. All procedures required anesthesia – 26 times in four months. “Over time, however, we could see things were going in the right direction,” says Dr. Roberta Wallace, the Zoo’s other veterinarian. By June 15, 2011, Damara’s wounds were healed. He went back to his exhibit.

End of story? Not quite. A year later, in July 2012, Damara developed skin ulcers again. This time vets knew he had to come off the steroid altogether. At an American Animal Hospital Association meeting, Dr. Clyde heard about a new, prescription-only medical food probiotic (a large dose of live, “good” bacteria for the gut). Of course, it was expensive. Fortunately, it has been donated to the Zoo so far. The probiotic, VSL#3, was part of a new treatment that included pancreatic enzymes and the continuation of the antibiotic metronidazole – all put in his food. As of November 2012, says Dr. Clyde, “Damara’s bowel is back to functioning normally. He has normal appetite, stools and skin. He’s back to being a typical cheetah.”



Mike Nepper photo

A cheetah gets treatment at the Zoo’s Animal Health Center.



Richard Brodzeller photo

Bandit, the Zoo’s pinto horse, gets groomed in his yard in 2004.

## Helping Hands for a Hurting Horse

Bandit, a friendly Pinto horse, has been a familiar sight in his barnyard exhibit for 16 summers. He was donated to the Zoo in 1996 because his owners knew that his foot problems would no longer allow him to run or have anyone ride him. “But he was a horse with multiple problems,” says Dr. Wallace, “including an allergy to fly bites!” Imagine! Horses usually are surrounded by flies. “So we put fly guards on all his legs and put a big mesh blanket on him and gave him antihistamines all summer.” Bandit’s foot problems were due to both arthritis and navicular (foot-joint) disease. “Starting in 2007, he would get these flare-ups with his feet, and at first he responded to pain medications. Later, as his condition worsened, we started joint supplements and standard horse arthritis treatment. We increased the painkillers and supplements until it got to the point where they weren’t working effectively.” In 2010 the veterinarians switched Bandit to a new painkiller, which worked well for almost two years. “Then in July 2012, he found it hard to walk. We’d been struggling to maintain a good quality of life for him. As a last resort, we decided to try acupuncture and Chinese herbal medicine.”

Last August Dr. Dana Burns, a veterinarian and acupuncturist, began treating Bandit two to three times a week. “Chinese herbs were slowly added to help improve blood flow, and he started to feel better for a while,” says

Lisa Guglielmi, supervisor of the Zoo’s Northwestern Mutual Family Farm. “After about six treatments we noticed him outside a lot more and moving much better.” He also was given electrical muscle stimulation to preserve muscle strength and to help his pain. This 25-year-old horse got the most loving and expert care an animal could want. Bandit had good days last fall, but they did not last. His underlying condition was progressive and incurable. As the effectiveness of treatments began to fade and he did not want to stand, the animal-care team knew that Bandit’s quality of life was deteriorating. There was nothing else they could do to help. Bandit was humanely euthanized on Nov. 26, 2012.



## Tamarin Troubles

CT is a golden-headed lion tamarin, a tiny primate with a beautiful head of hair. She came to Milwaukee in 2006 to breed with a male named Tito. She and the male made a wonderful pair, and she became pregnant several times. The first time, keepers noticed a splatter of blood on the floor, as if CT had had a miscarriage. Then she gave birth to twins, but both were found dead on the floor. Another pregnancy ended in miscarriage. Yet another baby was found dead on exhibit. Then another. After that, keepers started finding little blobs of tissue. Exams showed them to be fetal tissue. It was a mystery. Did CT have fibroids? Was it cancer? Some other problem?

Finally, a pathologist made a diagnosis: molar (abnormal) pregnancy. Explains Dr. Wallace: "In a molar pregnancy, the egg is fertilized but is non-viable. It implants into the uterine wall, but an abnormal pregnancy results. It develops into a blob, or tissue mass. If it becomes invasive, or metastatic, it is considered cancer and needs chemotherapy. In humans we would do a D&C (dilation and curettage) to evacuate the uterus. We could not do that

with a tamarin. At 1½ pounds, she's too little. So we went directly to the chemotherapy drug (methotrexate)." With chemotherapy, many humans have side effects. But CT never lost her appetite, her hair didn't fall out and she didn't have mouth ulcers. But she didn't like being restrained for the injections. "In the meantime, we also gave her contraceptive drugs to keep her from getting pregnant and to let the uterus quiet down," says Dr. Wallace. The staff didn't want to break the bond between the male and female by separating them. So far, so good. By May 2013 CT will be off contraception and could get pregnant soon after. "We hope to know by midsummer if this treatment has worked."



Allen Davies photo

A golden-headed lion tamarin

## Gorilla Gauntlet

Getting Shalia, a 10-year-old female gorilla, to Milwaukee from Toronto required going through a government gauntlet of regulations. Even though she was coming from an accredited zoo (where she had been born), Shalia was subject to the same rules that apply to wild primates entering the United States from other countries. The rules were designed mainly for primates coming from the wild in Africa and Asia – not for apes and monkeys being transferred from zoo to zoo. "Our Zoo had to submit a 23-page safety protocol to the U.S. Centers for Disease Control (CDC) and then re-submit it several times until the federal agency approved every part," says Dr. Clyde. Then a CDC inspector had to review the Zoo's specially designed quarantine area and also check that all staff knew and could follow the safety protocol. Shalia had to be tested for disease both in Toronto and in Milwaukee. The night that Shalia finally arrived in Milwaukee, about 8 p.m., a CDC inspector was on hand to oversee the whole unloading and disinfection of the truck that transported her. Dr. Clyde says she was impressed by the dedication of the CDC staff.

"We had gowns, boots, hoods, face masks and eye protection. You had to put everything on in the right sequence and take it off in the right sequence. Then you had to treat it all (including the gorilla's feces) as biohazardous waste and dispose of it safely. It was quite a procedure to do two or three times a day, which is what was required when staff worked with Shalia," says Dr. Clyde. Surprisingly, Shalia wasn't spooked by staff in quarantine gear. "She was very calm. In fact, I think she handled it better than the staff."

This was the first time the specially built ape-quarantine quarters in the nearly 10-year-old Animal Health Center had been used for a full CDC-designated quarantine. By the way, adds Dr. Clyde, "At no time did Shalia ever have disease, but we still had to prove to the CDC that she was disease-free." Today Shalia is doing well at the Zoo with a gorilla group of three females and a male. You can see her in the Stearns Family Apes of Africa building.

*By Paula Brookmire*



Shalia the gorilla faced a gauntlet of government regulations.

Richard Brodzeller photo

## Kids Alive

# Getting Spotty

How do giraffes stay warm in winter? At the Milwaukee County Zoo, reticulated giraffes Bahatika and Rahna have a heated barn. They also have warm, spotted coats. You can see those spots up close if you visit the Zoo's indoor MillerCoors Giraffe Experience. While there, you can watch videos of a giraffe being born, a giraffe getting its hoof trimmed, and giraffes in the wild. At home, have some giraffe fun with friends. Turn your tongue blue-purple like a giraffe's when you make your own ice pops. Challenge yourself with giraffe word puzzles. Then make a fleece giraffe-spotted scarf to warm your neck. Visit our website, [zoosociety.org/funstuff](http://zoosociety.org/funstuff), for word-puzzle answers and costs of the scarf materials.

## Grape Giraffe Pops

(makes 24 ice pops)

Giraffes use their purple-blue tongues to grip and tear leaves from trees. Make these yummy grape ice pops and you can turn your tongue **grape blue!**

### You will need:

- 2-quart pitcher
- 12-ounce can frozen 100% grape juice
- 24 wax-paper cups (3-ounce size)
- 24 popsicle sticks
- Non-toxic brown marker pen

### Directions:

1. Prepare juice in pitcher following directions on can. Fill each cup two-thirds with juice; place cups on flat surface in freezer 2 hours.
2. With marker, decorate half of each popsicle stick, on both sides, with giraffe spots. When grape juice in freezer is thick enough, put undecorated side of popsicle stick into center of each cup.
3. Freeze juice cups at least another 2 hours. When ready to eat, remove an ice pop from freezer, let sit 2 minutes, pull out of cup by stick, and enjoy!

## Giraffe Jumble

Untangle these jumbled giraffe-related words:

SOREWB

OFHO

UNGOTE

CARFAI

VANSAAN

Turn your tongue  
blue-purple!



# Giraffe-agram

See how many words you can make using the seven letters in "giraffe." Start with one-letter words, and work up to longer words. Can you come up with at least 10? Compare your list with the answers online at [zoosociety.org/funstuff](http://zoosociety.org/funstuff). We've given you a start.

far

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## Giraffe-Spot Scarf

The Milwaukee County Zoo's giraffes have hair to keep their long necks warm in cold weather. Keep your own neck warm this winter with a fun, giraffe-spotted scarf!

### Materials for 1 scarf:

- Length of tan fleece - 9 inches (¼ yard) by 58-60 inches\*
- 4 sheets (9 by 12 inches each) brown felt\*
- Black non-toxic marker pen
- 2-ounce bottle fabric glue
- Safety scissors
- Giraffe-spot template printed out from  [zoosociety.org/funstuff](http://zoosociety.org/funstuff)



### Directions:

1. Trim any rough edges from fleece with scissors. Carefully cut out the 6 giraffe spots from template with scissors.
2. Place all 6 spots so they fit onto 1 piece of felt. Use marker to trace around each spot onto felt. (Or, be creative and trace your own combination of spots.)
3. Cut out felt spots and flip them over so marker lines don't show.
4. Arrange spots in desired pattern on the outer thirds of tan fleece. Leave center section that curves around your neck free of spots. Make sure spots are 1/2 to 1 inch away from each other.
5. Glue spots into place. Let glue dry 24 hours before wearing.

\*To find where you can buy fleece and felt (and costs), see [zoosociety.org/funstuff](http://zoosociety.org/funstuff).

Show off your giraffe style!



# JUNGLE LOGISTICS

PART 1

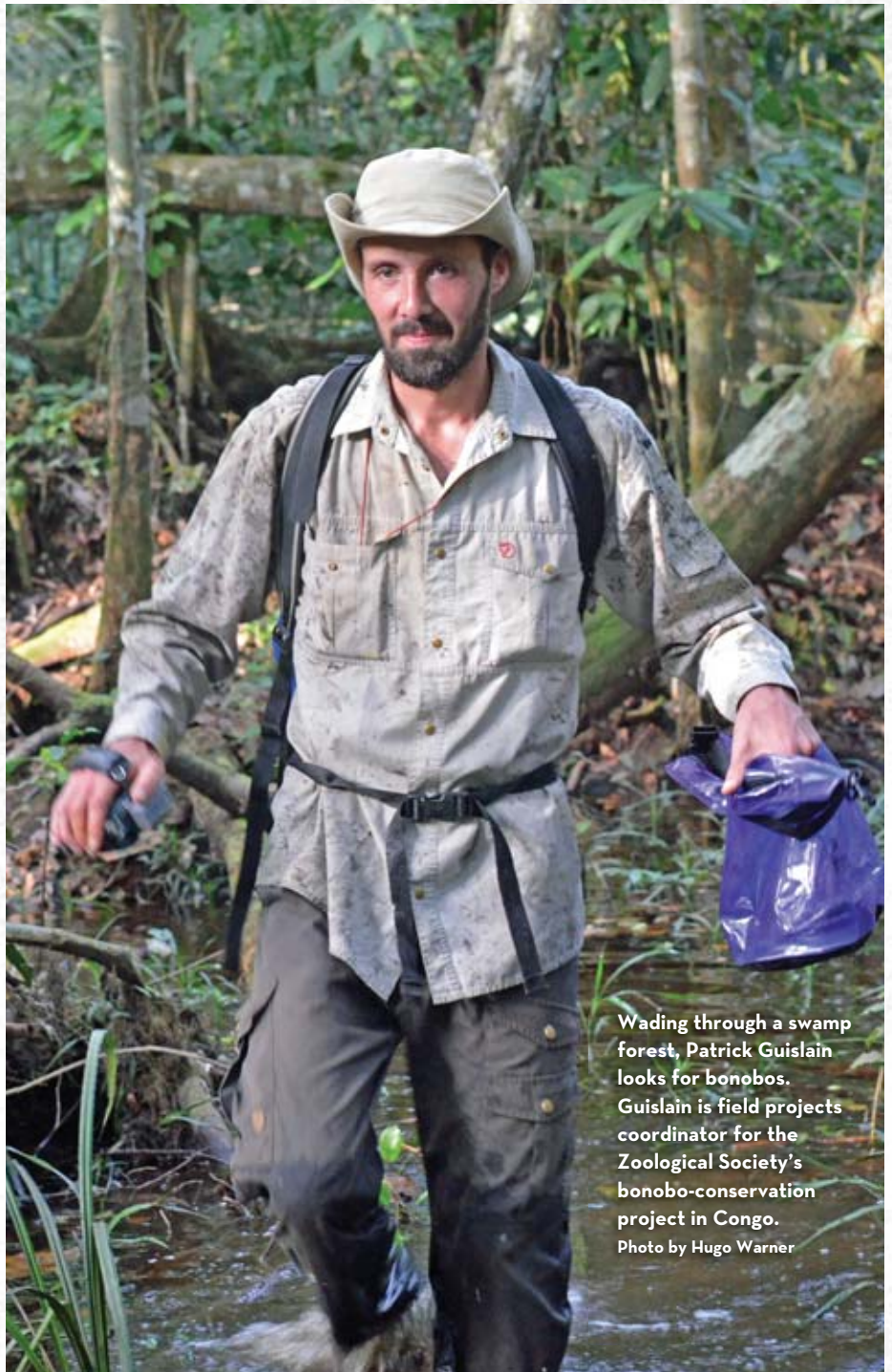
It's not easy to travel in the Democratic Republic of Congo (DRC). It's even harder in a narrow pirogue (dugout canoe) passing through a dense forest in central Africa. Torrential downpours chill to the bone. The searing equatorial sun desiccates and burns. The growl of the outboard motor rumbles relentlessly. And there are dangers. Patrick Guislain discovered one of them on his fourth trip to Etate, a patrol post in Salonga National Park where the Zoological Society of Milwaukee (ZSM) has a research station.\* Guislain is field projects coordinator for the ZSM's Bonobo and Congo Biodiversity Initiative (BCBI). The program surveys bonobo populations, trains park guards, and works to protect endangered wildlife. As Guislain and three others began their trip on the Congo River, launching from the port at Mbandaka, their pirogue loaded with essential supplies capsized. Guislain found himself in the river. Instead of swimming to shore, he swam after the supplies, saving a significant amount. Dr. Gay Reinartz, BCBI director and ZSM conservation coordinator, described Guislain as tough, capable and adaptable. "One couldn't ask for a better person." Guislain is modest: "I'm no Rambo, but when I set my mind to something, I see it through." Guislain manages preparation and logistics for trips to Etate. He also helps manage staff in the DRC – both on the ground and via Skype from his home in Leuven, Belgium. His job is to ensure each mission is successful. Zak Mazur of the ZSM interviewed Guislain to find out what it's like to work in one of the most remote places on Earth. Part 2 will appear in the April 2013 *Alive*.

**ZSM:** It takes 72 hours of travel along four rivers in a pirogue to reach Etate. Describe your impressions upon arriving there for the first time.

**PG:** It's totally opposite of chaotic Kinshasa, capital of the DRC, and boiling hot, crowded Mbandaka. My first impressions were of green, calmness and safety. In 2005, when I began working for the ZSM, Etate was really pretty and it's become more beautiful since! There are five guard houses, a kitchen, and a central ZSM office/dormitory that has a radio transmitter. There are also two smaller ZSM buildings that serve as depots and a dormitory. Finally, there is a beautiful, round *paillote*, a circular covered veranda next to the water's edge. We eat and have meetings there.

**ZSM:** What goes on at Etate and why is it in such a remote place?

**PG:** It's no coincidence that Etate is far away from everything because bonobos prefer to be away from people. Bonobos live only in remote areas of the DRC, and Etate is in one of those areas. At Etate, we research and survey bonobos and large mammals such as forest elephants. We're trying to find out where they are in the park and why. Is it because of forest composition, soil types, or differences in canopy cover? We also help park authorities protect the park from poachers. And we help local people improve living standards through better nutrition, primary education and adult literacy.



Wading through a swamp forest, Patrick Guislain looks for bonobos. Guislain is field projects coordinator for the Zoological Society's bonobo-conservation project in Congo. Photo by Hugo Warner



**ZSM:** What's a typical day at Etate like for you?

**PG:** I get up as early as 6:00 a.m. I get dressed and make sure my trouser legs are tucked inside my thick socks so that the *marangue* (a tiny biting insect) can't get at me too much. I go over to Bobo's kitchen - he's our cook. Gay and I have fried sweet potatoes and coffee for breakfast, with fresh fruit if available. We plan for the day and might call a meeting with the guards or staff to discuss who does what. The work at Etate is varied. It includes entering data, replying to urgent e-mails via a satellite phone and e-mail hookup, and planning the execution of a survey. We might train guards, repair pirogues, meet with school representatives and pack backpacks. By 5:30 p.m. it gets dark. I put on swimming trunks and plunge into the Salonga River for a bath.



Guislain uses a GPS device to determine his location in the forest. Photo by ZSM staff



Patrol Post Chief Bokitsi Bunda, Dr. Reinartz and Guislain study a map before a forest mission. Photo by Hugo Warner



Dr. Gay Reinartz (far left) and Guislain (far right) pose with Congolese research colleagues and park guards at Etate research station and patrol post.

Photo by ZSM staff

Guislain places animal droppings in sample tubes for genetic analysis. Photo by Hugo Warner

**ZSM:** What are your specific responsibilities?

**PG:** I do logistics for our trips and for research missions into the forest. This includes securing inland flights; purchasing equipment, food, and GPS devices; and selecting research teams and routes. For forays into the forest, everything we need is hauled on peoples' backs. We must make sure we have everything we need and no more. We consider how many kilometers of surveying we'll do. Then we determine how many batteries we need for the GPS devices, how many kilos of rice, how many cans of sardines, and how many smoked fish. Do we have flashlights, datasheets, machetes, ponchos, tarps and rope? I also help train guards to patrol efficiently, collect information while patrolling and read maps, a compass and GPS. They do this in addition to their anti-poaching work. Then I analyze their data.

**ZSM:** Describe cultural differences between you and your Congolese colleagues.

**PG:** The Congolese believe sorcery is a part of everyday life and can dramatically affect it. Most get insulted if I challenge them on the reality of bewitching spells. This belief makes for a simple solution to any problem: if things didn't work out, it's because of sorcery - nothing I could do about it. But it can also help. Somebody stole parts from a broken outboard motor owned by the ZSM. A colleague threatened to

go to a sorcerer to cast a spell on the thief. In minutes the perpetrator confessed and asked our colleague to

please not see the sorcerer. Then there's linguistic confusion. Once I tried to confirm a bonobo nest in French. I asked one of the guards, "That's not a nest, is it?" He replied: "Yes," upon which I replied, "Really? It's a nest?" He said, "No, it's NOT a nest," while he looked at me as if I needed a new brain.

**ZSM:** What's most impressive about your Congolese colleagues?

**PG:** When it comes to finding a quick solution, there's none better than a Congolese. They can construct a leaf shelter over a fire at night when a storm kicks in. They can set up a camp with a blazing fire in minutes before total darkness. It's awesome.

**ZSM:** What do you find special about bonobos?

**PG:** Their gentleness and curiosity. Our encounters with them are mostly accidental; we don't want to habituate them to humans. But when we do meet them, they can be really curious, trying to get a good look at us. They even climbed over one of our forest camps when the camp fire was blazing! When they see us, it's like they're thinking, 'What the heck are you doing here?'

# Aiding Penguins<sup>in</sup> Peru

Conservation  
Chronicles



“Walking into Punta San Juan Reserve in southern Peru is like being dumped on the cratered surface of the moon,” says Heather Neldner, an aviary keeper at the Milwaukee County Zoo. The landscape is barren. No vegetation. Then you notice the wind. And the birds. You realize the craters are old guanay (sea bird) nests. Once you approach the cliffs facing the Pacific Ocean and look down onto the beaches, you can see wildlife. Depending on the cliff and the beach, it could be fur seals, sea lions, Humboldt penguins, Inca terns or Peruvian boobies. You’re here to help protect them, especially the penguins. In a few days you will be observing the guano harvest. Workers will arrive to collect and bag up dried bird droppings called guano, which is a nutrient-rich fertilizer used in farming.

At the end of July 2012, Neldner flew to Peru to spend two weeks as an international observer during the guano harvest at the 133-acre Punta San Juan Reserve. “This reserve has the largest Humboldt penguin colony in Peru (estimated at 5,000) and has among the highest rates of reproduction recorded in Peru for this threatened species,” says Neldner. She and other observers were there to ensure workers didn’t disturb the penguin nesting area, a project started after many Humboldts were found dead after the 1987 harvest. Guano harvests happen only once every four to six years and are monitored by conservationists under the supervision of the Peruvian government. Neldner’s trip was partially supported by \$2,500 from the Zoological Society of Milwaukee and by time-off days provided by the Zoo.

Neldner was one of 27 foreign volunteers, each paired with a Peruvian volunteer. They did daily census counts of penguins, seals and sea lions. Counts ranged from a few animals to thousands, depending on the beach. “This was to serve as baseline data before the harvest, to see if populations changed when the harvest started,” she says. There was plenty to do. “We replaced a fence, cleaned a large stretch of beach, helped set up perimeters to protect the animals from harvest activities, helped set up signs for the beaches, and once the harvest started, monitored the harvest work and took GPS measurements of the harvested area at the end of each day.”

The harvest of guano occurs next to a large colony of penguins. The birds need to pass behind the workers to get from their nesting areas down to the beach to fish. “Our biggest success was a movable penguin blind made out of a huge piece of fabric that we sewed together and attached to poles to create a wall for the birds to cross behind. They could still see the workers, but this seemingly solid wall gave them a sense of security,” she says. “To our surprise the penguins took to it and started crossing behind it as soon as it was put up.”

Neldner says it was interesting living with no electricity, refrigeration or flushing toilets on the reserve. She missed hot showers the most. By mid-September more than 4,000 tons of guano had been harvested. Volunteers helped to make sure that animals living and breeding within the reserve were not disturbed during the harvest. For photos and more information about the harvest-observation project and Neldner’s experience, go to [www.zoosociety.org/guano](http://www.zoosociety.org/guano).

Neldner at a sea-lion beach in Peru. ▼



Photo provided by Heather Neldner.

A fabric wall, or blind, separated penguins from workers. ▼



Photo provided by Heather Neldner.

Heather Neldner cares for Humboldt penguins at the Zoo. She went to Peru last summer to protect them in the wild.



Photo by Richard Brodzeller

# Mohol galagos (Mohol bush baby)

Arrived: Female, April 26; male, May 9, 2012  
Small Mammals Building

Though it weighs less than a half-pound, the mohol galago makes up for its small size with large features, loud calls, and big movements. The Milwaukee County Zoo's new mohol galago pair, female J.J. and male Neville, are settling in by leaps and bounds – literally. “They’re like bouncy balls,” says Small Mammals area supervisor Rhonda Crenshaw with a laugh. “They disappear in a second!” The South African primates, also called bush babies, are known for their quick, long-distance leaps, jumping as much as 6 feet vertically or 12 feet horizontally in a split second. They can jump so far because their back legs are about twice as long as their front limbs. Other oversize features give the bush baby an adorably cartoonish look. Wide orange eyes for better night vision are ringed with dark fur. Large, concave ears move independently of each other, furling and unfurling along many creases for sharper hearing. Its brownish-gray fur extends to the very tip of a long, thin tail that is longer than its body, which ranges from 5 to 7 inches tall. J.J. and Neville share exhibit space with a pair of springhaas (kangaroo-like rodents) and have access to the Zoo’s female potto (another small primate) exhibit. While J.J. is a bit shy, Neville loves to visit the potto. “He’s over there every day,” says Crenshaw. “He hops around and they get within inches of each other.” Crenshaw says the friendly potto welcomes Neville’s visits. The Small Mammals staff also are on the lookout for baby bush babies. “It’s hard to tell if she’s pregnant,” says Crenshaw, because mohol galagos tend to fold their long legs alongside their stomachs, hiding their bellies. “We have to constantly watch for babies.” You can visit these nocturnal creatures on the night side of the Small Mammals Building.



# De Brazza’s monkey

Arrived: June 27, 2012  
Primates of the World

Harry, the Milwaukee County Zoo's new De Brazza's monkey, is just plain stunning. De Brazza's monkeys belong to the guenon family of African primates, and many of the species are known for bold markings. The De Brazza's monkey's well-groomed appearance contrasts sharply with the murky, dark swamps in Central Africa where it lives. “His fur is very colorful, particularly on his head and face,” says Mark Scheuber, a primate zookeeper. “He has an amazingly long white beard and an orange crest above his eyes. He’s a very good-looking guy.”

The Zoo exhibited its first De Brazza's monkey almost 90 years ago, but Harry is the first De Brazza's the Zoo has had in 31 years. The Zoo has housed seven De Brazza's monkeys, the first arriving in 1923. “Another came in 1925, and in 1965 a male and two females arrived,” says Jan Rafert, curator of primates and small mammals. “A male arrived in 1968 and was sent to another facility in 1981. So we didn’t have any again until Harry.” Harry alternates being on exhibit with Lauren, a Diana monkey that’s also a guenon. The monkeys are switched between 11 a.m. and 1 p.m., and there’s no way to know beforehand which will be on exhibit in the morning or afternoon. Seeing Harry takes a little bit of luck. In the wild, De Brazza's monkeys are not endangered, partly because swampy forests are hard to chop down. “And bush-meat hunters usually avoid swamps,” says Scheuber, who adds, however, that the Association of Zoos and Aquariums is worried enough about threats to the monkeys that it has created a Species Survival Plan for the De Brazza's. Harry, who hails from the Potawatomi Zoo in South Bend, Ind., will stay in Milwaukee probably through spring. Rafert says Harry will move to another zoo when a suitable female mate is identified. So catch sight of him when you can.



# Snow Scenes at the Zoo

Wisconsin's winters create a frosty playground for many Milwaukee County Zoo animals, like caribou and polar bears (below).



Caribou-reindeer live in snow-filled areas.

See page 6 for more animals playing in the powder at the Zoo.

Frost and ice cover the polar bear exhibit.

