

Alive

Zoological Society of Milwaukee County Winter 1994



PRESIDENT'S LETTER



A MESSAGE ON MOOLA.

Over the past several years, the Asian elephants at the Milwaukee County Zoo have claimed an extraordinary level of attention from everybody in our community who cares about animals, including the Zoological Society.

Though the Society neither manages animals at the Zoo nor makes decisions about their welfare, we do have an obligation to assist the Zoo in carrying out its plans for the collection. For us, that means stepping in to help the Zoo implement its decision to relocate Asian elephants Moola, 12; Tamara, 43; and Annie, 34, from the Zoo so the Zoo can pursue new conservation programs involving other endangered species.

To assure our elephants will continue to receive high-quality care in their new homes, the Zoological Society will pay for at least three elephant experts from the zoo world and animal-welfare organizations to review all "retirement homes" being considered and report whether any is appropriate. Based on these reports, a home for Tamara and Annie will be chosen.

A home for Moola, who is of breeding age and part of the American Association of Zoological Parks and Aquariums' Asian Elephant Species Survival Plan (SSP), has been chosen by the SSP and County government.

When homes are found for all three elephants, the Society will work with the Zoo to assure that each transfer is smooth.

We hope that by offering our assistance to the Zoo, the Zoological Society is helping the Zoo reach its conservation goals for endangered species at our Zoo and realize its plan to place the Zoo's Asian elephants in homes that are at least as good as the one they have here.

Gil Boese, President
Zoological Society of Milwaukee County



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

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ON THE COVER
Along the Spirit Trail:
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Alive

VOLUME 14, ISSUE 1

FEATURES

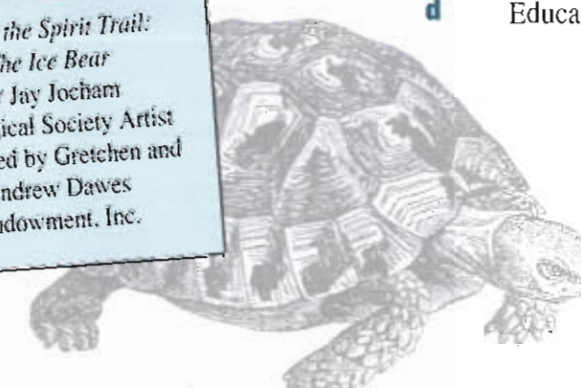
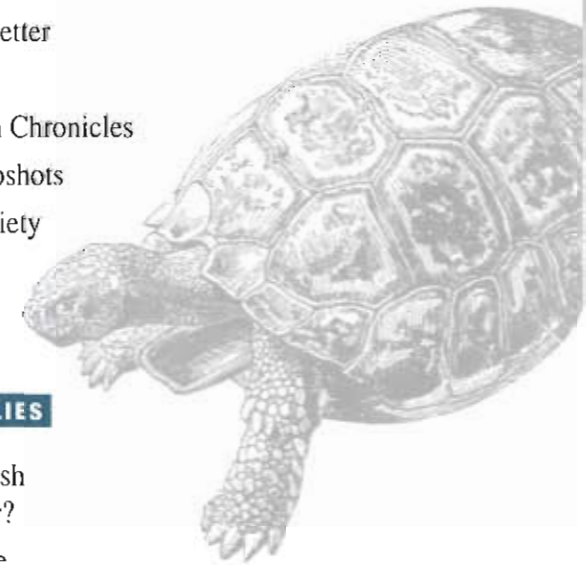
- 4** PUTTING ON ITS WINTER COAT
On this spirited trip through the Zoo in winter you'll discover where outdoor birds, North American mammals and African animals pass the coldest months of the year.
- 8** SEE YA LATER...ALLIGATOR
A farewell salute to the 3,500 animals in the Aquarium/Reptile Building until 1995, when most will return to updated exhibits and even some new neighbors.
- 12** DEFENDING TORTOISE TURF
Threatened by urban sprawl and other human-generated hazards, the future of the endangered desert tortoise could be in the hands of UW-Madison doctoral candidate Susan Bulova.

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PUTTING ON ITS WINTER COAT

IT happens every year.

The days grow short. The last flowers fade. And animals everywhere either head for cover or make their own. Including animals at the Zoo.

Join us on this spirited journey through our Zoo to find out where our large birds and African hoofed animals retire for the winter and how our North American animals prepare to brave the cold outdoors.

BIRDS from South America & Africa

If you're looking for the flamingos, vultures, storks, macaws or any other bird that spends the warm-weather months outside, stop right now. You won't find them.

The Military Macaws, Cinereous and Ruppell's Griffon Vultures, flamingos and Maguari Storks are spending the winter in enclosures in the Zoo hospital; and the African Ground Hornbills, Helmeted Guinea Fowl, King Vultures, Common Rheas and Marabou Storks have migrated to winter quarters underneath the Feline Building for the season.

It's not that all of them would prefer it inside. Take the flamingos and Cinereous Vulture. Both have the cold tolerance of an elk, but a combination of circumstances have kept them from spending winter outdoors.



Cinereous Vulture (endangered)

With part of its range in Mongolia's Gobi High Desert, this vulture is equipped to withstand extreme temperatures. Its thick, downy feathers trap warm air close to its body and its evolved metabolism controls heat loss by restricting blood flow to bare areas on the bird's face and feet.



Bear

To put on fat for insulation, bears eat greedily in late summer and early fall and grow heavy winter coats for winter. After fall, they go to sleep in dens and their metabolism slows, but they do not hibernate.

readily." Bird Curator Ed Diebold said. "It's less disruptive, gives the birds more time to court, form pair bonds and nest." If the vultures have chicks, they won't return to their outdoor exhibit until the chicks fledge. The only birds that are spending this winter outdoors are the European White Storks, and you can find them in the African Savannah Yard.

Other birds, like the Ruppell's Griffon Vulture, African Ground Hornbill, Helmeted Guinea Fowl, Marabou Storks and Military Macaws, can't tolerate extreme temperatures. So they won't be seeing their South American or African Savannah Zoo habitats before spring. Until then, they're comfortably situated in the hospital's winter

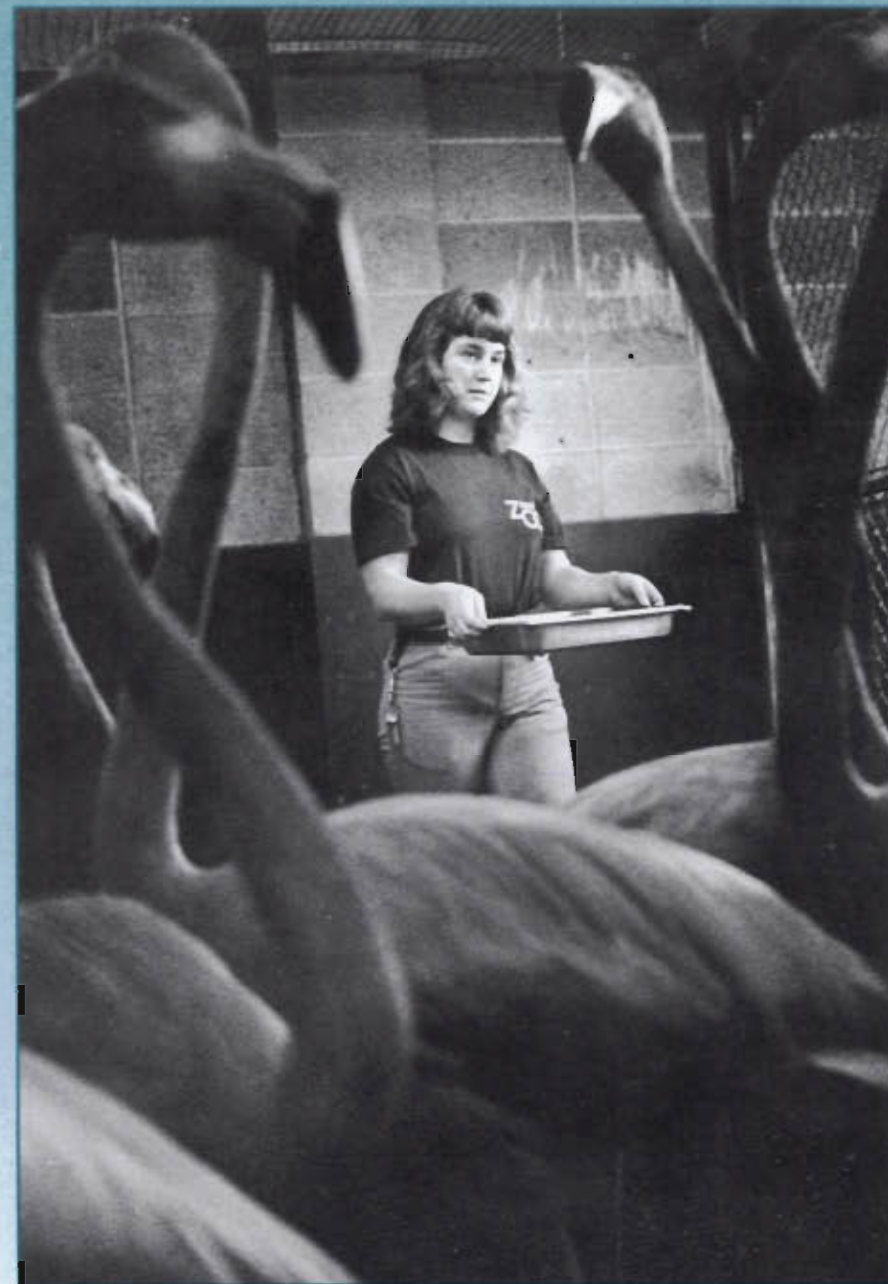
quarters, outfitted with nest platforms and other environmental-enrichment materials.

Though these birds literally are out of sight for Zoo visitors, they're not out of mind for keeper Karen Grzybowski, who's primarily responsible for their care—from preparing meals to hand-raising endangered Cinereous Vulture chicks... if the Zoo is lucky enough to have them.

HOOLED ANIMALS from Africa & South America

Can't find the impalas, gazelles, waterbuck, tapirs, kudu or capybaras? They have a new Zoo address, too—right next to the hornbills, guinea fowl and Marabou Storks that migrated to the 40-stall, temperature-controlled Winter Quarters complex under the Feline Building. Connected to the African Savannah, African

continued on next page



ON THE JOB

Long-necked flamingos frame Milwaukee County Zoo bird keeper Karen Grzybowski as she delivers lunch to their winter enclosure.

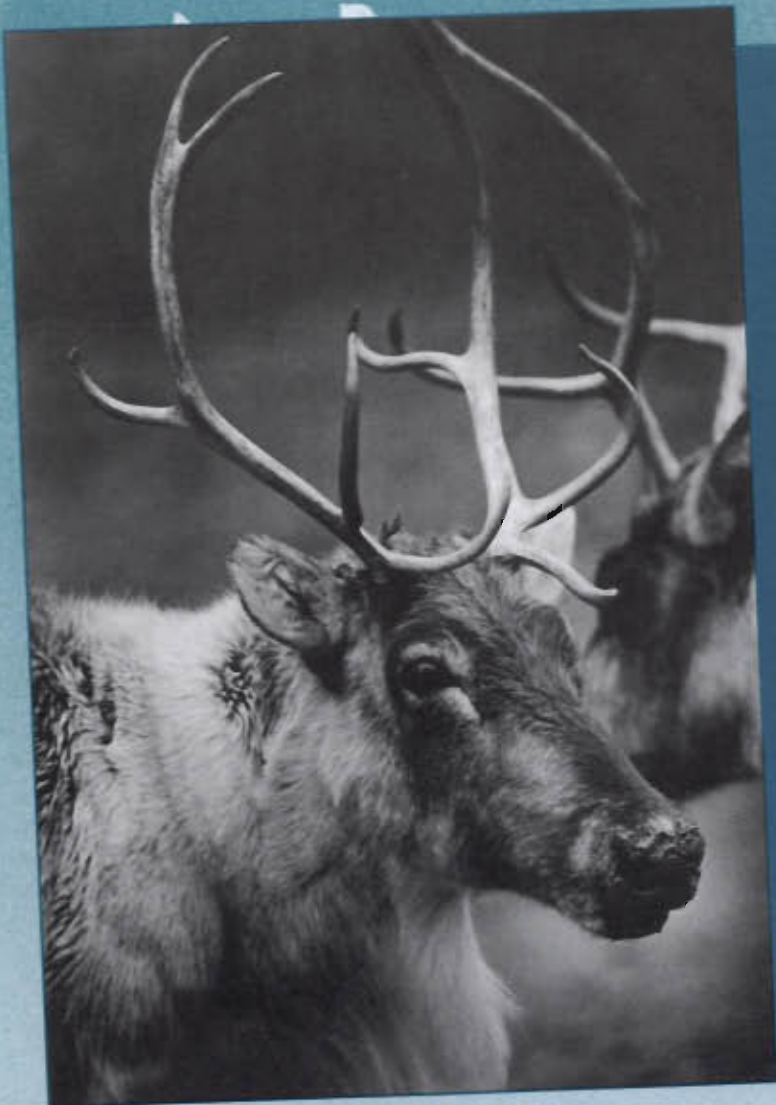
Zookeeper Karen Grzybowski cares so deeply about the future of endangered species like the Cinereous Vulture, Humboldt Penguin and Trumpeter Swan that she's willing to give up every Wednesday night to do her part in saving them from extinction.

Since she started working at the Zoo three years ago with a bachelor's in zoology and master's in biology/animal behavior, Grzybowski has teamed up with different combinations of Zoo veterinary, curatorial and keeper staffs to study the ecology of Humboldt Penguins; hand-rear and release Wisconsin's Trumpeter Swans; and determine whether the reproductive cycle of female Cinereous Vultures can be tracked for future use in artificial insemination.

A heavy load for a keeper whose days already are stretched caring for the flamingos, vultures, penguins, storks, macaws and piping guans in her charge? Maybe. But she does most of the "science" end of her work—literature searches, reading, putting together project proposals and writing grant requests—at home and on her own time.

"I like the day-to-day work of being a keeper," Grzybowski said. "But I love being able to know I can do even more to have an effect on a species and make a difference."

All she needs are more hours in a day.



Caribou

Besides growing a thicker coat for winter, male and female caribou finish growing antlers and strip the velvet from them. In the wild, caribou migrate in winter to places where they can find food. At the Zoo, keepers dramatically increase the caribou's diet.

Waterhole, South American Yard and Bactrian Camel Yard, the subterranean complex houses most of the Zoo's fragile hoofed mammals for the winter. The animals don't seem to mind being on short-term leave from their outdoor enclosures. But who would with Area Supervisor Bob Hoffmann and his staff going out of their way to make sure animal stalls are cleaned, straw beds are made and food pans are full?

Though the animals in Winter Quarters still have a few months to wait before they see their outdoor yards, zebras, alpacas and camels don't have to wait that long. Their bodies, coats and characters help them stand up to Wisconsin's wind and cold and stay outdoors year-round.

 **MAMMALS**
from North America

Outside also is the place to see moose, elk, caribou, bears—even the much-heralded badger—year-round.

Shielded from the cold by longer hair or thicker fur and stuffed with food, these animals are well equipped to survive the season, but not without a helping hand.

Winter living for North American mammals is made a little easier at the Zoo by keepers, who often spend the coldest months of the year in overdrive...checking on animals and helping them get food and water in a season when prey in the wild is rare and the ground and ponds are frozen.



Woodchuck

Preparing for winter, woodchucks eat until they double their body weight and grow a thicker coat. Then, the woodchuck digs a burrow, goes to sleep and hibernates until spring. To hibernate, the woodchuck drops its body temperature to about 50 degrees.



Camel

During winter, camels gain a lot of weight and grow thick coats. When they are in rut (breeding season), males are very aggressive and often foam at the mouth. Keepers don't exercise camels in winter because of the animals' unpredictable behavior.

Swathed in layers of seasonal attire, keepers sweep snow drifts from feeders, torch frozen locks to open animal gates, chip away ice from feeding platforms, douse slick exhibit surfaces with heated water, and aerate ponds—all to give animals easy access to food and water and to protect them from injuring themselves.

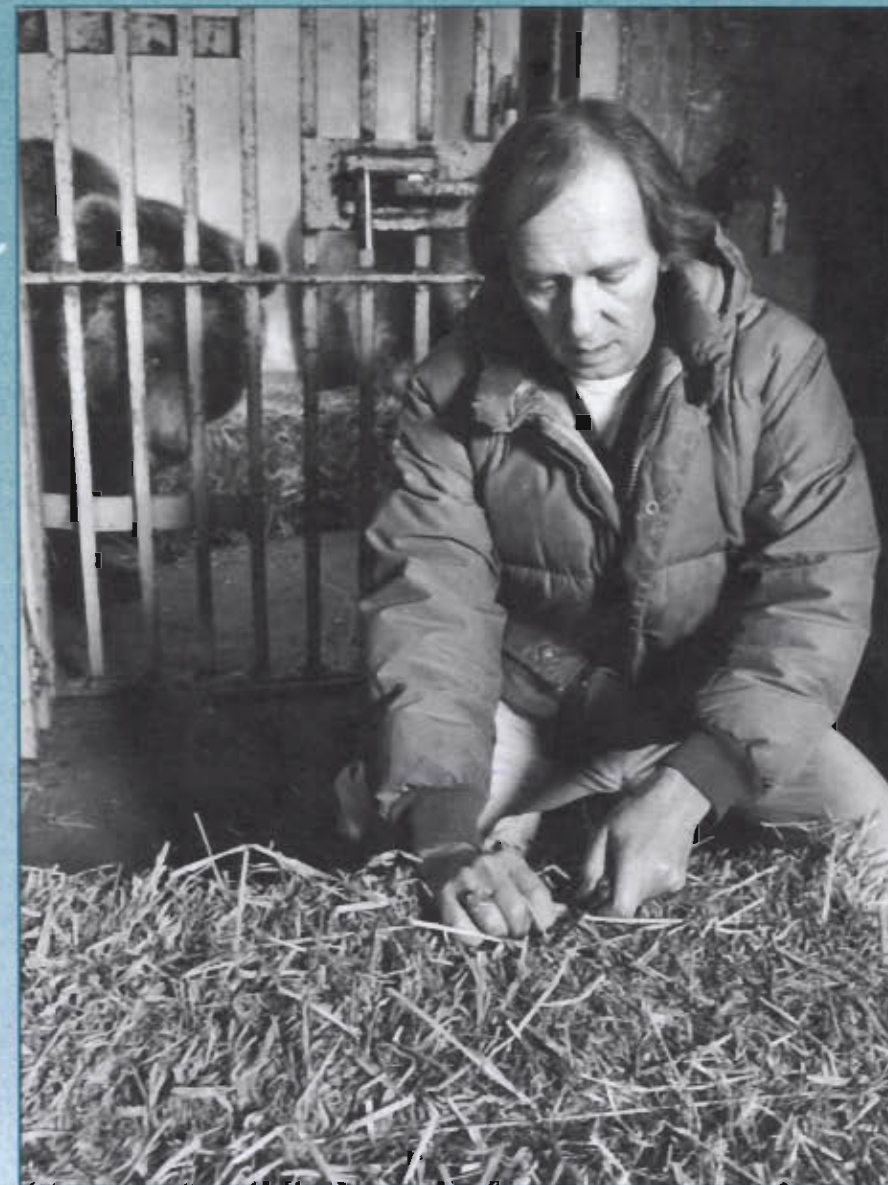
"In winter, more can go wrong, especially in a snowstorm when temperatures are low, winds are strong, and the ground can freeze as quickly as the snow falls," said Large Mammal Curator Elizabeth Frank.

But in a few short months, a brilliant sun will warm the ground, air and water. The warm-climate hoofed mammals and birds will return to their familiar outdoor exhibits. And keepers will trade their corduroys for khakis.

We look forward to it.



The Zoo is open all winter. Visit the animal buildings. Watch educational nature films, learn about and touch animal artifacts, and pet live animals in the Peck Welcome Center. Or, go on a behind-the-scenes Zoo tour. To arrange a behind-the-scenes tour, call Zoo Pride, (414) 258-5667. For more information on winter events and programs at the Zoo, call (414) 256-5412.



ON THE JOB

Longtime Milwaukee County Zoo keeper Chuck Mecha cuts twine from straw bales that will double as winter bedding for the Alaskan Brown Bears.

When Chuck Mecha left his job in 1967 as packer/crater with Perflex, a thermostat manufacturer on Milwaukee's south side, for a job as a keeper at the Milwaukee County Zoo, he knew he did the right thing. "It's what I wanted to do since I was a kid," Mecha said.

Twenty-six years later, he's still doing it.

He speaks fondly of the days when every keeper knew almost every animal by name and got personally, even emotionally, involved in their care...like grizzlies Lenny The Dunker (so named because he dipped his food in water before eating it) and Squiggy; and kangaroos Tootsie and Squeaky.

"I still try to maintain special relationships with the animals—especially koalas Dajarra and Quilpie—because when you get to know them, you can more quickly know when things aren't quite right and you can more easily get 'em to do what you want 'em to do," Mecha said. "The animals always give you a challenge."

To discover what the future holds for Mecha, we'd need a crystal ball. But if ever there was a zookeeper with access to one....

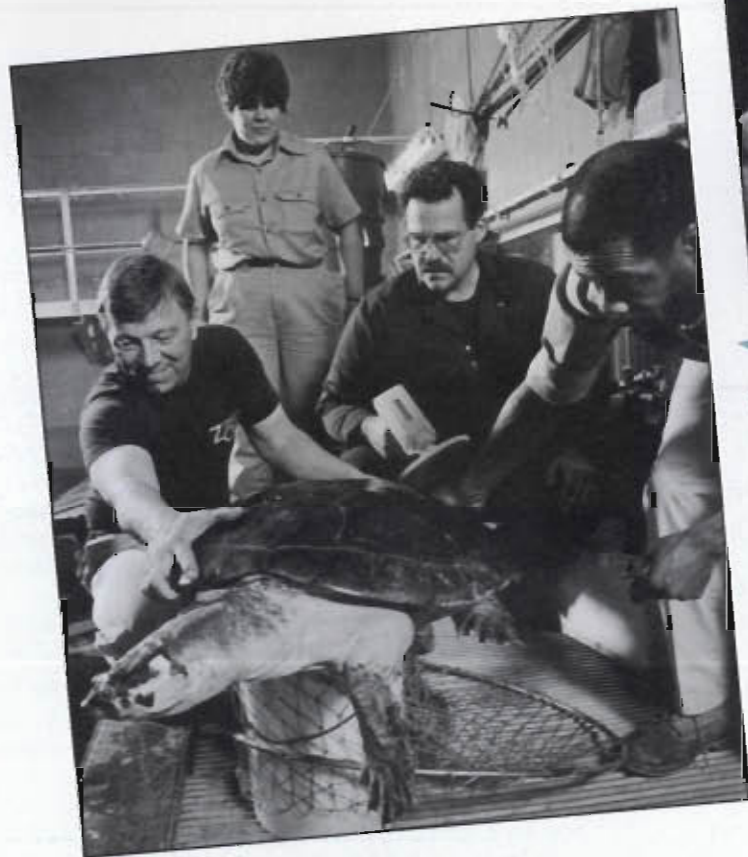
When he's not at the Zoo, Mecha runs a wholesale gem business, selling stones and minerals to jewelry stores across the country and exhibiting gems at area craft shows. As our crystal ball fades, is that Mecha we see in retirement trading in sheep for sapphires?

See Ya Later...Alligator

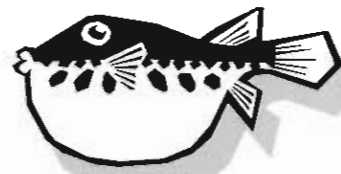
ooos in places as far away as Port of Spain, Trinidad, and facilities as close as the Milwaukee County House of Corrections and Milwaukee Public Museum are helping the Milwaukee County Zoo house the 3,000 fish, 120 reptiles and 12 amphibians that left the Zoo last fall as part of a renovation plan to update the 25-year-old Aquarium/Reptile (A & R) Building.

Work on the \$3 million A & R renovation, equally funded by the Zoological Society and Milwaukee County, starts this month with improvements to some visitor favorites—Lake Wisconsin, the Amazon River exhibit and the venomous snake exhibits—and several additions, including endangered Chinese alligators and Caribbean iguanas, in exhibits that resemble their natural habitats; three marine invertebrate exhibits, featuring a six-foot giant octopus and jellyfish; an anaconda display; an amphibian exhibit; and a 25,000-gallon Pacific Coast exhibit, featuring small sharks and rays.

Relocating the Zoo's fish, reptiles and amphibians to other holding facilities as part of the renovation gave zookeepers their first chance to weigh, measure and count the animals, some of which have been A & R residents since the building opened in 1968. When they return to a renovated home next summer, most will find an open door.



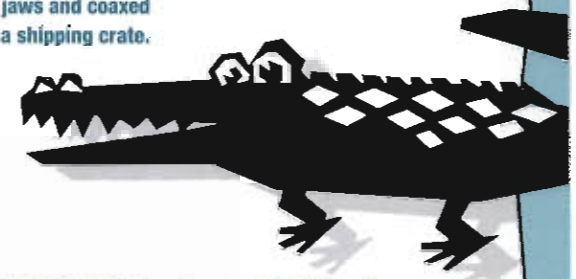
After netting turtle Onassis from the Amazon River exhibit, keepers inspect her before putting her in a wooden shipping crate. As part of the inspection, keeper John Kowalsky uses a scanner to find Onassis' identification tag and works with (left to right) keepers Jack Uphill, Beth Roszak and John Durrell to record the turtle's length, weight and other measures. Onassis is one of the largest freshwater turtles in the world and has lived in the A & R building since it opened in 1968. She will spend the next 18 months at the Omaha Zoo.



This 30-pound pacu couldn't escape the net of A & R Curator Richard Sajdak. After its capture, the fish was anesthetized and transferred from its Amazon River home to one of two above-ground swimming pools in the Zoofari Conference Center, just one address east of the Zoo. Swimming at the bottom of the Amazon River exhibit pictured here are tilapia, fish native to Africa but found throughout the tropics. The swimming pools and all life-support systems used as part of the relocation were donated by the Zoological Society.



Returning alligator Victor/Victoria to her original Florida game-farm home would have been an easy assignment if she didn't weigh 395 pounds and have the strength of three or four humans. Instead of anesthetizing the alligator, a potentially risky procedure, (left to right) Cliff Van Beek, Richard Sajdak, John Kowalsky, Jack Uphill and Tim Tews - all zoo staff - wrapped the alligator in ropes, temporarily taped its jaws and coaxed it out of the exhibit and into a shipping crate. The transport technique is standard and safe, according to A & R Curator Richard Sajdak.



If you took a trip to South Dakota last November, you didn't have to worry about sharing your window seat with this venomous Asian cobra. He travelled air freight...in a double bag...inside a reinforced wooden box. To prepare the snake for the trip, keeper Tim Tews (left) holds a stick-bag while A & R Curator Richard Sajdak lets the snake slip off a hook and into a pillowcase-like bag. This snake, now at South Dakota's Black Hills Reptile Garden, will return to Milwaukee County Zoo in 1995.

Learning Lab

Lincoln Avenue School student Trina Markosen has never been to Africa, but she definitely wants to make the trip. And when she does, she'll know exactly how to get there, what animals she can expect to see, and how to tell whether those animals are healthy or sick.



Angela Price (left) and Tierra Greer, third-graders from Milwaukee's Lincoln Avenue School, pair up to match pictures of animals with their native continents as part of a Zoological Society-sponsored program on animal adaptation, geography and veterinary medicine. The program will serve about 4,000 third-graders in Milwaukee Public Schools by the end of the school year.

Last semester, Trina was one of 28 children from her school who visited the Zoo as part of a Zoological Society-sponsored program on animal adaptation, geography and veterinary medicine that will reach about 4,000 third-graders in Milwaukee Public Schools by the end of the school year.

After filing into a trailer-lab full of things waiting to be discovered, the class divided itself in thirds and scrambled for seats behind microscopes, before maps of the world and close to cages holding live fish, reptiles and mammals.

Peering through microscopes at blood samples, animal tissue, tapeworms and dog ticks, one-third of the class learned the important work of veterinarians—how they determine an animal's illness and decide how to treat it.

In another part of the trailer, students paired up for a geography game, "Where In The World?" They learned where animals are from by matching pictures of animals as diverse as the Ring-tailed lemur and Bengal tiger with their native continents (lemurs are from Madagascar and Bengal tigers are from India, just in case you're wondering).

And sitting side-by-side on bleacher-like seats, the rest of the class tried to grasp why a bird is a bird; a mammal, a mammal; a reptile, a reptile; and a fish, a fish while touching an ambassador of each sort.

Then the students, who were having too much fun to know they were learning, switched assignments, as if all 28 kids were playing musical chairs, except without the music.

"My favorite thing was using the microscope," said student Stephanie Noggle. "You learn about different animals and things you didn't know before." Gently competing for a chance to tell what they liked best, Stephanie's friends, Trina and Charles Gaines—both cat and fish lovers—mentioned touching the

turtle, snake and guinea pig.

"Many of our students don't get opportunities like this to get outside of their neighborhoods," said Lincoln Avenue School teacher Hazel Barnett. Barnett has worked hard inside the classroom to teach kids respect for wildlife and the environment and has promoted their involvement in conservation groups like Kids In Nature's Defense (KIND) and Ranger Rick. "In our science class, we're studying endangered animals and where they're from," she said. "This program just reinforces what we're learning in class and sparks the students' curiosity: they want to learn more about the animals."

This comes as happy news to program coordinators Chuck Matoush and Mary Thiry. The goal of the lab program, as they designed it, is to give children an early and

broad introduction to scientific concepts. "We want to introduce kids to animals through several media and different approaches—microscopes, maps and live animals," Matoush said. "We want them to be able to answer basic questions about animals like, 'Where do they belong?', 'What are they?', and 'How do you treat them?'"

"We don't expect kids to say, 'I saw blood,' or 'I know all the continents of the world,'" Matoush said. "If the children leave our lab realizing there's a way to magnify things, knowing how to use a map and understanding that animals are part of different categories, then we've accomplished our goal."

The animal adaptation lab is offered every day of the week, November through March. If you are a third-grade teacher in a Milwaukee-area public or private school and want more information on the lab, call (414) 256-5421.

4-H Fun



Robina Reddie, a fifth-grader at West Allis' Good Shepherd Lutheran School, shows off a project on koala habitat she did as part of her membership in the Zoological Society's 4-H Zoo Club. Reddie, elected president of the club this year, exhibited her project at a 4-H fair at the Zoo in December. She is one of 25 members in the club. For more information on 4-H Zoo Club membership, see page D of the "Kids & Families" section of this magazine or call the Zoological Society at (414) 256-5421.

Kids! When you're finished reading about fish on this page, get out your crayons and color the animals, just like in your coloring books.

Alive

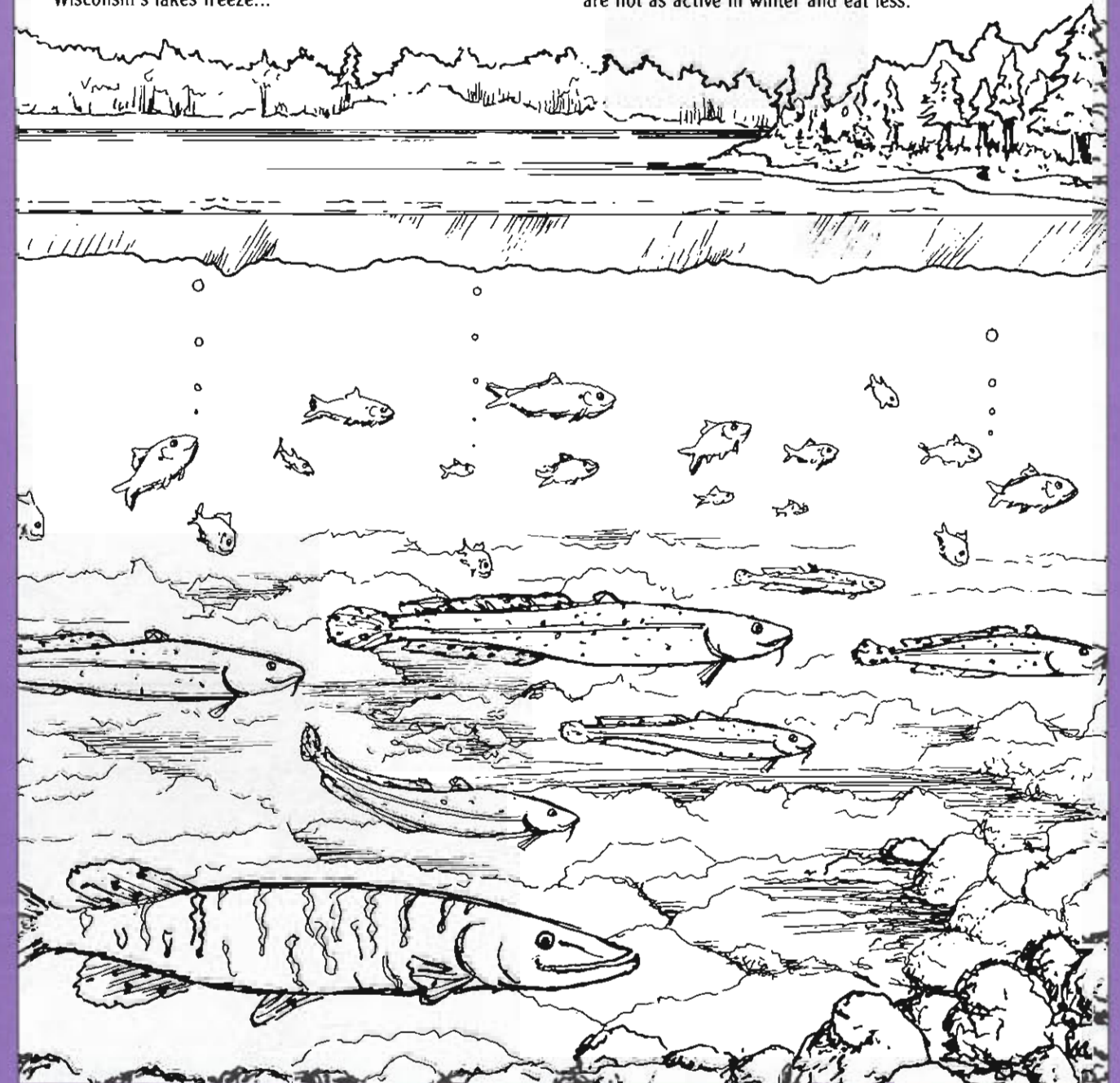
For KIDS and Families

WHAT DO FISH DO TO SURVIVE WINTER?

Fish are cold-blooded animals. This means that their body temperature is controlled by the water temperature around them. During summer, there are some fish, especially minnows, that live in the warmer surface waters of lakes around Wisconsin. Other fish live in deeper areas of the lake, where the water is cooler. But, as Wisconsin's lakes freeze...

Fish move to deeper water. Deeper water doesn't freeze. Depending on the depth of a lake, usually only the top layer of water freezes.

Fish slow down. Because of the layer of ice above them and the decrease in aquatic vegetation, fish have less oxygen to breathe. To conserve energy and oxygen, fish are not as active in winter and eat less.



Wisconsin winter wildlife wizardry

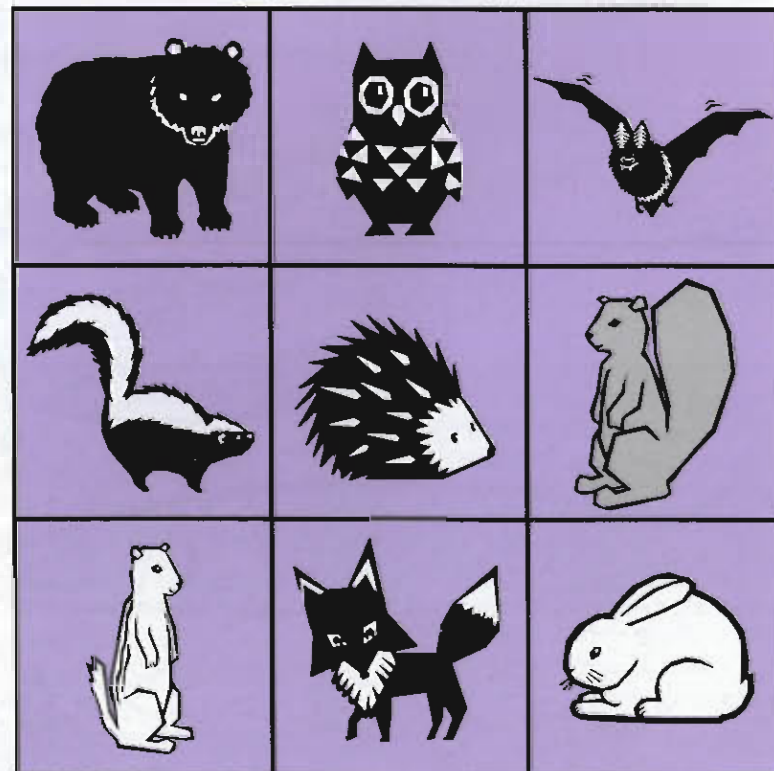
How many names of Wisconsin animals can you make out of this phrase?

WISCONSIN WINTER WILDLIFE WIZARDRY

Here's one example to get you started: *Falcon*



WILDLIFE TIC-TAC-TOE



Three of the Wisconsin animals in this tic-tac-toe are true hibernators. Hibernating animals spend the cold winter in their homes. These animals don't eat or drink, and they hardly even move. Their body temperature drops and their heart beat slows.

Circle the three animals you know hibernate. This will form your tic-tac-toe.

If you circled the bat, woodchuck and 13-line ground squirrel to form your tic-tac-toe, you are correct! These are true hibernators. You may have colored in the bear, but bears are not true hibernators.

ANSWER



WE WANT TO HEAR FROM YOU!

If you'd like us to answer your animal question and you're 12 years old or younger, then write to us:

Curious Corner—
Alive
Zoological Society
of Milwaukee
County
10005 W.
Bluemound Rd.
Milwaukee, WI
53226

If we answer your question here, you'll receive a 3-foot-tall inflatable Jungle Giraffe. The giraffe comes with fun facts.

DO GIRAFFES TALK?

Although giraffes are generally quiet animals, they will occasionally moo like a cow and bellow like a bull. They also can make a variety of other sounds, including grunts, snorts, coughs, whistles and growls.

Did you know that within an hour after it is born, a baby giraffe is able to stand and take milk from its mother? The baby may stand as tall as six feet and weigh up to 150 pounds when it is born. Communication between the mother giraffe and her young is very important and frequently includes a specific bleating sound, particularly in times of distress. If the baby giraffe is in danger, the mother will vigorously defend it from predators by kicking.

Submitted by Mara Kubisiak, Age 3, Milwaukee, WI



HOW DOES A SKUNK SPRAY ITS SMELL?

Skunks are well known for their distinctive odor. This odor comes from a fine spray of the foul-smelling liquid that is produced in a special gland. Young skunks already are capable of producing this liquid at less than one month of age. Did you know that skunks are able to spray this liquid up to 13 to 23 feet (although they usually are only accurate for up to about six feet)? The spray is usually aimed at the face and can cause intense irritation, and even temporary blindness if it reaches the eyes. The odor of a skunk can remain in the area for days.

Skunks, however, always give some sort of warning before spraying, like stamping its front feet, raising its tail or standing upright on its front feet with its tail raised upward as a bluff.

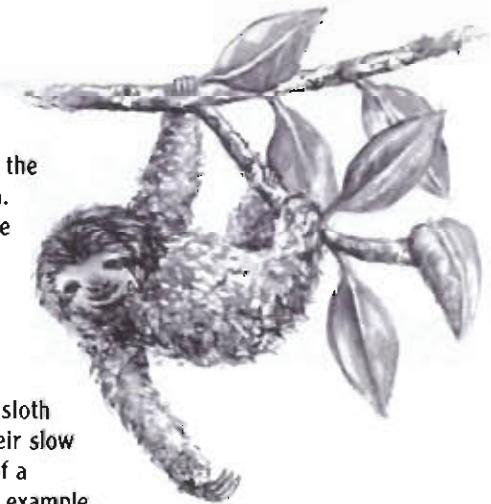
Submitted by Marc Claus, Age 6-1/2, Waukesha, WI



WHY IS A SLOTH CALLED LAZY?

Sloths are called lazy because they move very, very slowly. Sloths live in the tropical rain forests of South America. Interestingly, because of their extreme sluggishness and their warm, wet habitat, algae actually grow on the sloth's fur. This algae growth makes the sloth appear green and camouflages it in the treetops. This natural camouflage helps protect the sloth from potential predators. Besides their slow movement, other biological aspects of a sloth's life are very slow as well. For example, food can digest in a sloth's stomach for up to a month before it passes completely into the small intestine. In addition, urine and feces are passed by the sloth only once a week.

Submitted by: Ryan Hurab, Age 11, Brookfield, WI



EDUCATION PROGRAMS

The following education programs are coordinated by the Zoological Society of Milwaukee County and the University of Wisconsin Cooperative Extension.

Registration has started for programs held January through May. To receive registration materials, please send a self-addressed, stamped (\$.52) envelope (one per family) to: Winter/Spring Programs; Zoological Society; 10005 W. Bluemound Rd.; Milwaukee, WI 53226.

If you prefer to receive all three program brochures (spring, summer, fall) send a \$3 check payable to the Zoological Society at the above address. We will add your name to our mailing list for one year.



JANUARY-MAY PROGRAMS

TINY TOT WORKSHOPS

AGE 3 WITH PARENT

Jan. 21-29: Farmyard Fun!
Feb. 16-25: Down By the Ocean
March 22-31: Elephants Are Great
April 18-28: Baby Animals
May 17-27: Dinosaurs & Dinamation
Each session lasts 1-1/2 hours.

Cost per single session: \$12 members, \$14 non-members (includes parking).

PRESCHOOL WORKSHOPS

AGES 4-5 (AND 6-YEAR-OLDS IN KINDERGARTEN)

Jan. 18-28: Wolves & Other Wisconsin Animals
Feb. 15-24: Animal Rock & Roll
March 22-31: Fun By the Tons!
April 18-28: Animal Families
May 17-27: Dinamation Is Here!
Each session lasts 2-1/2 hours.

Cost per single session: \$10 members, \$12 non-members. Or join your child in one of our parent/child sessions! Cost: \$14 members, \$16 non-members (includes parking).

OLDER YOUTH WORKSHOPS

AGES 6-8

Jan. 22: Going Batty
Feb. 19: Tropical Rain Forest Magic
March 26: Hidden Treasure
Each session last 2 hours.
Cost per session: \$10 members, \$15 non-members.

SPECIALTY WORKSHOPS

4-H ZOO CLUB

AGES 9-13

Meets Jan. 15, Feb. 5, Feb. 26, March 19 AND April 9
9:30 a.m.-noon.

Do you want to be a scientist, work in a zoo, or do you just love animals? Our 4-H Zoo Club will give you the opportunity to learn more about zoo animals. Cost of club membership: \$25 members, \$35 non-members.

DRAWING WORKSHOP

AGES 8-13

Workshop meets Feb. 26; March 5, 12, 19 AND 26
9:15-10:45 a.m.

If you think drawing is dandy and animals are amazing, then this is the class for you. Cost: \$30 members, \$40 non-members (includes all art supplies).

KIDS!

DON'T MISS SPRING BREAK CAMP!

AGES 4-5 (6-YEAR-OLDS IN KINDERGARTEN)

April 6 or 7

9:30 a.m.-noon or 1-3 p.m.

Cost: \$10 for members and \$13 for non-members.

AGES 6 (IN FIRST GRADE) THROUGH 12

April 5, 6, 7 or 8

9:30-3:30 p.m.

Cost: \$12 for members and \$15 for non-members.

During this year's spring break, go to camp and learn about Animal Families.

ADULT PROGRAMS!

ANIMAL PHOTOGRAPHY IN WINTER WORKSHOP

Jan. 8

9:30-3 p.m.

Jan. 15

9:30-noon

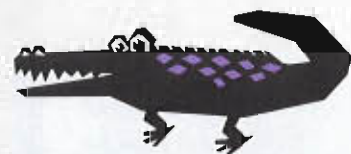
This is a two-part class. Cost: \$25 members, \$35 non-members. Call (414) 256-5424 to register.

DRAWING WORKSHOP

Feb. 5 AND Feb. 12

9:15 a.m.-noon

This is a two-part class. Cost: \$25 members, \$35 non-members (includes all art supplies and parking).



MARK YOUR CALENDARS NOW!

SUMMER CAMPS

Summer Camp in-person registration will be held Saturday, April 30. Watch your next *Alive* for details. Summer Camp brochures will be available starting April 11. Send a stamped (\$.52), self-addressed, business-sized envelope (one per brochure) to Camps, Zoological Society, 10005 W. Bluemound Rd., Milwaukee, WI 53226, or join our mailing list (see introductory paragraph 3 on this page).

CONSERVATION CHRONICLES

Deer, DNR and the Zoo

When Milwaukee County Zoo officials join representatives from some 30 municipalities and conservation groups for a DNR-sponsored discussion on what to do about the burgeoning deer population in



Photo courtesy of Mike Nerper, Milwaukee County Zoo

Radio-collared study deer at the Zoo

southeastern Wisconsin, they will bring to the table a possible solution that doesn't include bow hunters, sharpshooters or traps. They will propose sterilization, a population control method that seems to have worked at the Zoo.

Like most other urban parks, the Zoo had seen a steady increase in the number of wild white-tailed deer on the grounds—from three in 1987 to seven in 1988 to ten in 1989—and a consequent increase in damage to the Zoo's hedges, flowers and other plantings.

Responding to requests from the Zoo's horticulture staff to control the in-park deer population, Large Mammal Curator Elizabeth Frank and Veterinarian Andrew Teare in 1990 started work on a three-year project, funded by the Zoological Society, to determine the practicality, cost and effectiveness of surgical sterilization as a method of population control. Culling and

translocation (trapping and moving) weren't viable options for the Zoo, Frank said.

As part of the study, Teare surgically sterilized and tagged 14 deer (eight males, six females) and radio-collared two of the females to monitor their movements. Males were vasectomized, taking 1.1 to 2.1 hours

at a cost of \$46.11 to \$68.41. Females received tubal ligations, taking 2.4 to 6.6 hours and costing \$94.41 to \$209.76. Neither procedure requires a sterile surgery room.

Though the vasectomies were relatively quick and easy to perform, a high turnover in the male deer population in the park negated their value. "So many

males were coming into the Zoo we couldn't get them all," Frank said. "We found it's better to surgically sterilize the females—they typically stay in one place and the procedure seems to have worked on them."

Over the three-year study period, researcher Linn Sajdak found the deer population at the Zoo had dropped from a high of 12 to only two regularly seen last March. Whether the drop can largely be tied to sterilization is a definite maybe.

"The first phase of our research just raised more questions," Frank said, hoping to find answers in the next phase of the team's research, also being funded by the Zoological Society. During Phase 2, the study team plans to continue sterilizing two or three deer per year at the Zoo and eventually hopes to expand their population-control research to include other urban parks like Wehr Nature Center and Whitnall Park.

Building a Turtle Family Tree

Threatened by habitat destruction and commercial exploitation in the wild, the South American River Turtle at least can hope for a viable future in captivity, thanks to a \$22,000 grant from the Institute of Museum Services.

Awarded to Milwaukee County Zoo Aquarium/Reptile Curator Richard Sajdak, the money will help zoos across the country find out the birthplace, parents and relatives of all the river turtles in their collection.

Sajdak's research begins early this year with a request for participating zoos to tag and take a blood sample from each river turtle in their collection. "By knowing unequivocally which animal the sample came from, we can gather important genealogical information and make more informed decisions about how to build self-sustaining populations in captivity," said Sajdak. Sajdak is the project's principal investigator and keeper of the turtle's regional studbook, or relatedness record of captive river turtles.

Eventually, Sajdak hopes to work with researchers in South America to get blood



Amazon River Turtle

samples from turtles there to discover if there is a significant genetic difference between a turtle from, say, Brazil and another from Peru or a North American zoo.

The Milwaukee County Zoo, which has exhibited Giant Amazon River Turtles since 1968, has five adult turtles on breeding loan and recently imported six juveniles from the Goeldi Museum in Belem, Brazil.



Defending Tortoise Turf

They are whales among reptiles, unattractive anomalies in their native glamorous Las Vegas.

Yet, since the desert tortoise made it to the list of threatened species in 1990, the curious turtles have captivated the attention of turtle owners, animal preservationists and anyone who can relate to an underdog.

Like so many species across the country, desert tortoises have been living on borrowed time amid urban sprawl and all the human-generated hazards that come with it.

For decades, off-road driving, land clearing, vandalism and road construction have systematically collapsed the roadside burrow homes of countless desert tortoises living in the Mohave Desert, causing a 50-percent population decline in some areas.

But a few of these tortoises are luckier than most. For one thing, 30 of them are spending time in the Desert Tortoise Conservation Center (DTCC) outside of Las Vegas. For another, Susan Bulova, a Zoological Society-funded conservation research grant recipient, has some ideas on how they and their relatives eventually can live outside the center in areas safe from the bulldozer and errant ORVs (off-road vehicles), ATVs (all-terrain vehicles) and motorcycles.

Bulova, a zoology doctoral candidate at the University of Wisconsin-Madison, has made the future of the desert tortoise the focus of her summers—very hot summers—for the past three years.

Like a good real estate agent, Bulova has been trying to get at why desert tortoises pick certain burrows to call home, hoping her research will help animal preservationists know how to better relocate tortoises from developing areas to new areas protected from humans.

“Researchers that have tried to relocate tortoises from areas destined for development have had limited success,” Bulova said, explaining that “taking a tortoise and

plopping it down in the middle of the desert” doesn’t guarantee it will dig a burrow. More likely, the tortoise would turn around and try to head for “home,” risking death from exposure to the desert’s extreme temperatures or predation.

So, if desert tortoises so depend on burrows as their refuge and as an important site of social interaction, then why don’t relocated tortoises stick around their new neighborhood?

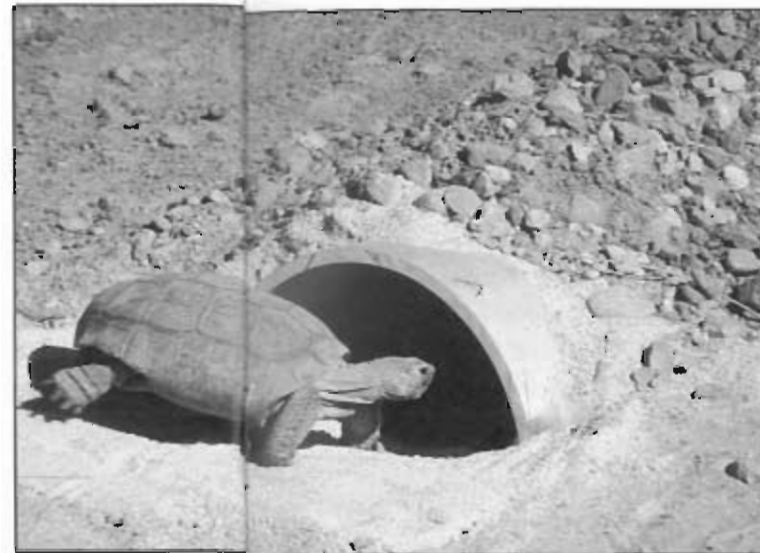
Bulova’s recently completed field research went a long way toward answering this question. She found that instead of digging a new burrow every time it’s time to head for cover, a tortoise prefers to inhabit pre-existing burrows and might even move in with other tortoises. But what happens if in the area of relocation there are no pre-existing tortoise burrows that aren’t half-collapsed or otherwise uninhabitable?

That’s easy. You make burrows for them, Bulova says.

But there’s more to it than just burying PVC pipes in the ground and watching the tortoises step right in and “park.”

Something has to be done to the artificial burrows to make them as attractive to tortoises as burrows they would build themselves if they chose to. Figuring the animals would be attracted to a scent, Bulova did an experiment with tortoises in captivity to discover if chemicals left by tortoises in or around their burrow had any influence over whether another tortoise chose to live there.

Trying to woo tortoises into experimental burrows with feces and chin-gland secretions, she noted that most females in her study used burrows without



A desert tortoise enters an artificial burrow, a buried PVC pipe, during a behavior trial.

female feces or burrows treated with the female’s own feces—a finding consistent with her field observation that females typically avoid sharing their burrows with other females. Most captive males preferred



Researcher Susan Bulova records the behavior of a tortoise inside a natural burrow near the DTCC.

burrows treated with chin-gland secretions, which corresponds to observations that free-ranging males will share their burrows with other males.

“It’s gratifying to watch our experiment work...to watch a tortoise walk right into an experimental burrow or to watch the dirt fly when they dig their own burrows,” Bulova said. “We gained a huge appreciation for what a tortoise has to go through to build a home.”

If treated artificial burrows at the DTCC can influence 22 of 30 tortoises to take up permanent residence, then is there a reason the same artificial-burrow technique

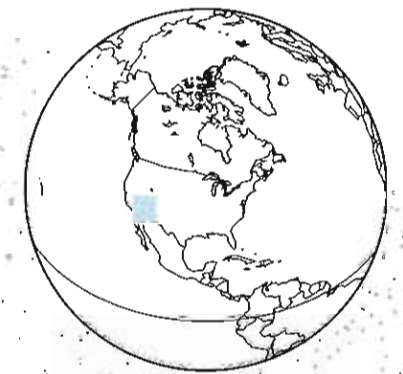
can’t work for tortoises relocated to an unfamiliar place?

Bulova says no, hoping her study gets a fair hearing by the composers of the desert tortoise recovery plan at the Desert Tortoise Council Symposium this May.

Students like Susan Bulova are making a difference in preserving endangered species around the world through the Zoological Society of Milwaukee County’s Wisconsin Student Grant Program. Through the program, the Society awards about \$18,000 in research grants every year to Wisconsin-based students pursuing advanced degrees in wildlife conservation. Bulova and other student grant recipients will present their discoveries about endangered species as diverse as

Wisconsin’s Northern Blue Butterfly and Venezuela’s forest birds at a free Conservation Symposium to be held Saturday, February 26, at the University of Wisconsin-Milwaukee’s Wisconsin Room, 2200 E. Kenwood Blvd. For more information on the symposium, see the calendar section of this magazine or call Mary Ellen Wesley at (414) 258-2333.

GEOGRAPHY



The Mohave Desert, located in the southeast corner of Nevada, is home to the endangered desert tortoise. The desert environment is one of extremes, with summer temperatures peaking at 120 degrees and winter temperatures dropping to near freezing. The tortoise’s burrow-digging behavior and water-conserving physiology help the tortoise adapt to the desert’s dry compact soil, intense sunlight, little rainfall and sparse vegetation. The desert tortoise depends on burrows to survive.



Research assistant Vanessa Quinn observes tortoise behavior inside an enclosure, or pen, at the DTCC. Each pen contains natural vegetation, burrows, two artificial burrows, alfalfa hay, Bermuda grass, a water bowl and moistened food pellets.

Habitat '94: Blue Bayou

7 p.m., Saturday, January 22

This January, escape Wisconsin's winter and head for New Orleans! The Zoological Society and Federal Plaza invite you to Habitat '94: Blue Bayou, our winter fund-raiser that promises guests a multi-level celebration of the Louisiana Bayou's rich wildlife and cultural diversity. The event, in downtown Milwaukee's Federal Plaza, will feature gambling (just for fun, of course) aboard a Mississippi Riverboat, hunting for a pirate's treasure, and three floors of dining, dancing and Bayou fun! \$45 per person. Call (414) 258-2333 for reservations.

Butterflied jumbo shrimp, Louisiana beef on molasses black muffins and made-to-order dessert crepes will have you tastin' cajun at Blue Bayou, catered by Black Tie & Company.



Party With the Animals

Give your child a birthday present he or she will never forget—a party with 10 friends and 5,600 animals at the Milwaukee County Zoo! Birthday girls and boys ages five and older receive a t-shirt and personalized cake, and guests take home a special gift, too. Party-goers also will take home fond memories of a mini-tour through the Zoo. Coordinated and hosted by the Zoological Society's Zoo Pride volunteers, parties are offered weekends, September through mid-June (weekdays in summer). Parties are \$75 for Zoological Society members; \$100 for non-members. Space is limited. Reserve your date early by calling (414) 258-5667 for details.

Brookfield's David Groose, who celebrated his sixth birthday at the Zoo last November, gets help unwrapping presents from his brother, Jeff.



Sponsor Spotlight

The Zoological Society thanks...

HOWARD HUGHES MEDICAL FOUNDATION FOR ITS SUPPORT OF THE EDUCATION OPPORTUNITIES PROJECT.

BEN AND LEE KORDUS FOR HOSTING THE PLATYPUS SOCIETY HOLIDAY OPEN HOUSE, DEC. 15.

MILLER BREWING COMPANY FOR UNDERWRITING THE "DON'T BECOME EXTINCT" RECYCLED ZOO EDUCATION PROGRAM.

NORTHWESTERN MUTUAL LIFE FOUNDATION FOR ITS FALL SPONSORSHIP OF AN ANIMAL AMBASSADOR SCHOOL.

UNICARE FOUNDATION FOR ITS SUPPORT OF THE INTERGENERATIONAL ANIMAL QUILT PROJECT.

GEORGE WATTS & SON, INC. FOR HOSTING THE STEUBEN CRYSTAL EVENT.

WISCONSIN ENVIRONMENTAL EDUCATION BOARD AND UNISTRUT, INC. FOR THEIR SUPPORT OF THE ENVIRONMENTAL RESOURCES, READING AND RESPONSIBILITY LIBRARY OUTREACH PROGRAM.

Care For Critters

Who will feed the animals at the Milwaukee County Zoo in 1994? The Zoological Society again will pick up the \$325,000 tab, but this time with major help from Pick 'n Save stores and the *Milwaukee Journal*. As part of a new program called Care for Critters, the *Milwaukee Journal* has donated a 16-page special Sunday section to help spread the word on the Society's need for funds to feed the animals. The *Journal* also is donating all advertising revenue from the section, due out in February. Pick 'n Save and the *Milwaukee Journal* also are presenting sponsors of a Care for Critters program on urban wildlife education expected to reach Milwaukee-area schools this semester.



Who's Who In the Zoo?

Last fall, the Zoological Society launched its 1993-94 annual appeal, asking for donations to help purchase new animal identification signs for the Zoo. Replacing the signs is part of a five-year master plan to update all signage and interpretive graphics in the park. Gifts of \$20 or more permanently place the donor's name on a recognition board to be displayed at the Zoo in fall. Gifts of \$500 or more underwrite an entire sign and give the donor permanent recognition on that sign. To make a contribution, call (414) 258-2333.



Z Double Circle

With help from friends of the Zoological Society dressed in cowboy boots and blue jeans, the Zoo turned into the Z Double Circle Ranch during a country-western party hosted by the Zoological Society, September 18. The fund-raiser, sponsored by WMIL-FM 106, raised funds for the Zoological Society's education and conservation programs. Mary Shanahan and Jim Szymanski co-chaired the event, featuring old western games of chance, chili tasting, country music and a hearty western-style dinner.

Cowpokes kick up their heels at the Z Double Circle country-western fund-raiser at the Zoo, September 18.



◀ Siamang

(Primates of the World—off exhibit)
Arrived November 7, 1993

If Suzy the siamang's past success in raising monkeys and apes that don't belong to her is any indication, she will make a fine foster parent of this baby siamang, JoAnne, and her exhibitmate, Goblin. Rejected by their natural mothers at Chicago's Brookfield Zoo and New Orleans' Audubon Park and hand-raised at Brookfield Zoo, these youngsters will be learning what it means to be a siamang from Suzy, a 40-year-old veteran...but not for a few more weeks. Ahead of them in line is another mother-rejected siamang baby, Jocama, from the Houston Zoo. Though Jocama, born in September, will be sharing an off-exhibit holding area with Suzy, Goblin and JoAnne will be right next door taking lessons on proper primate protocol. Eventually, "mom" and all three foster siblings may share one exhibit... if all of them behave.

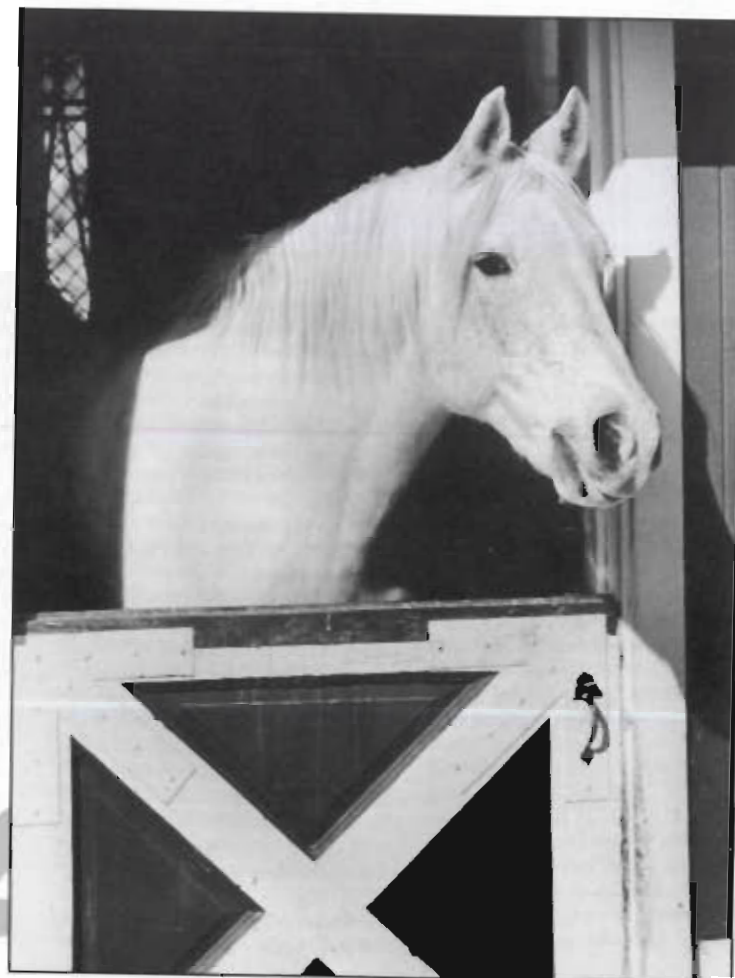
Source: Jan Rafert, Curator, Primates/Small Mammals

Horse ▶

(Stackner Heritage Farm)
Arrived November 3 from
Tumbleweed Ranch, Germantown

Having put in 28 years of his career as a dependable work horse, mostly training children how to ride and jump, this good-looking horse can look forward to enjoying retirement at the Milwaukee County Zoo. Beau, a "curious gentleman," is a cross between an Arabian and standard-bred horse and an apt emblem of the old Wisconsin farm. He belonged to Susan O'Toole, a volunteer with Zoo Pride, the volunteer auxiliary of the Zoological Society of Milwaukee County. Beau joins 15-year-old miniature horse Cody in the southeast part of the Stackner Heritage Farm. For Beau, retirement not only means good company but also all the timothy hay he cares to eat and two scoops of horse chow a day. With a package like that, who wouldn't want to retire?

Source: Randy Deer, Area Supervisor, Stackner Heritage Farm



▶ Mexican Tree Porcupine

(Small Mammal Building)
Arrived July 7, 1993 from
Houston Zoo

If you put a mirror in front of this porcupine, she might think—for just a moment—that W.C. Fields was staring back. The Mexican tree porcupine's distinctive bulbous nose, plus its furless soles, give the animal a keen sense of touch and smell, helping to compensate for its extreme nearsightedness. Like its relative, the prehensile-tailed (a tail that can be coiled around branches) porcupine, the Mexican tree porcupine lives in the upper layers of Central and South American forests and feeds mostly on leaves. The Mexican tree porcupine, however, is about half the

size of a prehensile-tailed porcupine and not all of its quills show. Layers of guard hairs on the back half of the Mexican tree porcupine extend past the quills and hide them, making half of the animal look furry. But you still wouldn't want to pet it!

Source: John Wightman, Area Supervisor, Small Mammals



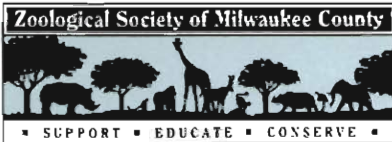
◀ Pygmy Marmoset

(Primates of the World Mixed Species Exhibit)
Arrived May 12, 1993 from Lincoln Park Zoo

When zookeeper Linda Cieslik went to the airport to pick up a Pygmy marmoset, she was expecting to bring back something a bit bigger than a chipmunk. This full-grown Pygmy marmoset, weighing in at about four ounces, represents the smallest of all monkeys. The diminutive primate, like all New World monkeys from tropical American forests, is arboreal. Spending her early days at our Zoo with three other primate species—Cotton-Top tamarins, Golden Lion tamarins and Goeldi monkeys—in exhibit treetops and out of sight, she challenged keepers to coax her down, far enough so Zoo visitors could find her. Keepers started putting her food and water dishes at window-level, and Voila! Now, whether you can see her is up to you...and your good vision.

Source: Linda Cieslik, Keeper, Primates





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FUJI PHOTO CONTEST

This photo of the Zoo's hippopotamus, taken by Milwaukee's David Schneck, took second place in the Zoo's 1993 Fuji Photo Contest. The top three contest winners received cash prizes and film.

