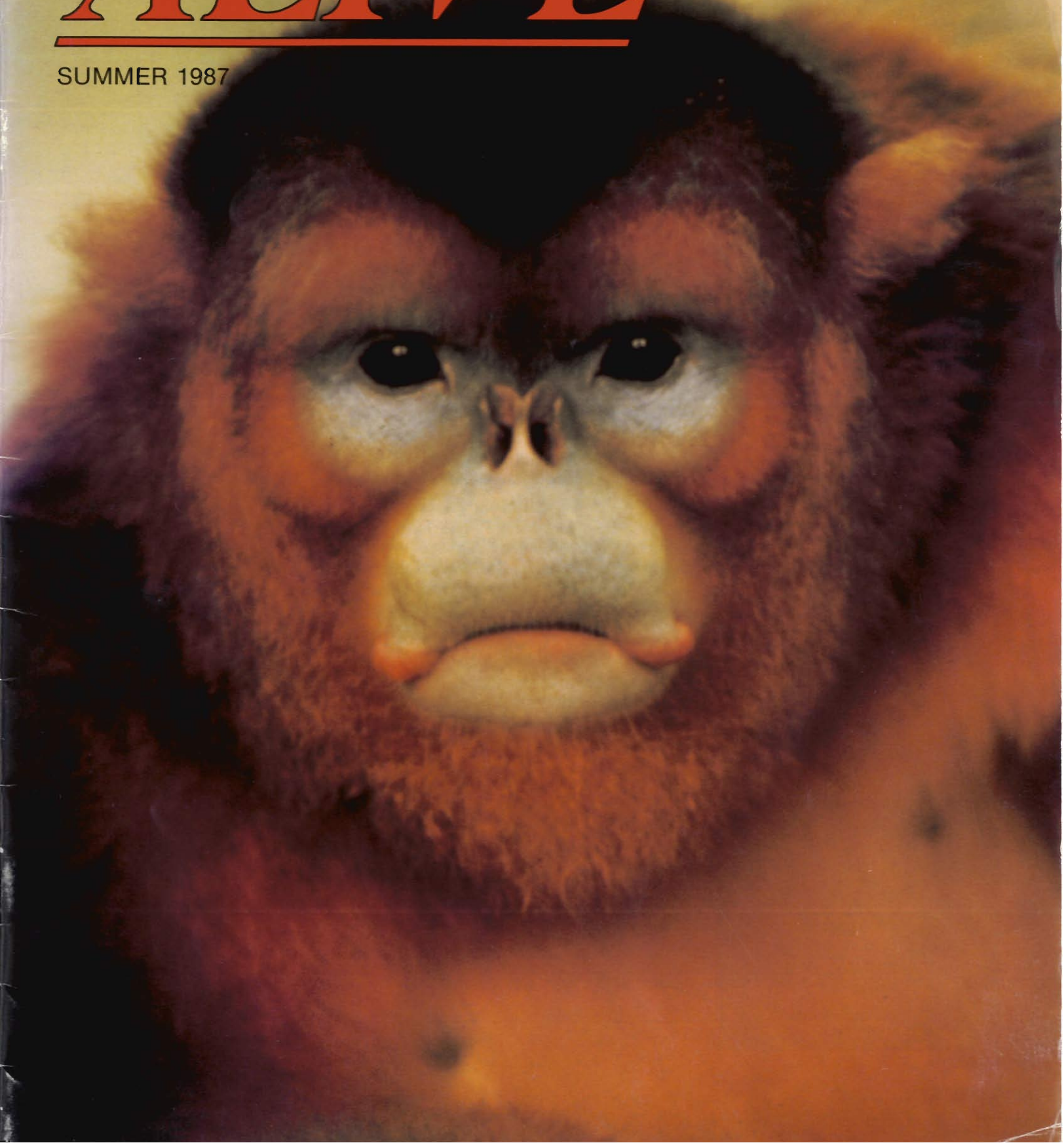


# *ALIVE*

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SUMMER 1987



# Planning ahead

by Dr. Gilbert K. Boese



**I**t's budget time. Every year the Zoo and the Society go through the annual rites of preparing a budget for the coming year.

It's a challenge to prepare the 1988 budget when we're still in the midst of 1987. But it's an exciting challenge. The support from all of you as Society members has made it possible for the Zoo to keep on the leading edge of exhibit technology and conservation efforts.

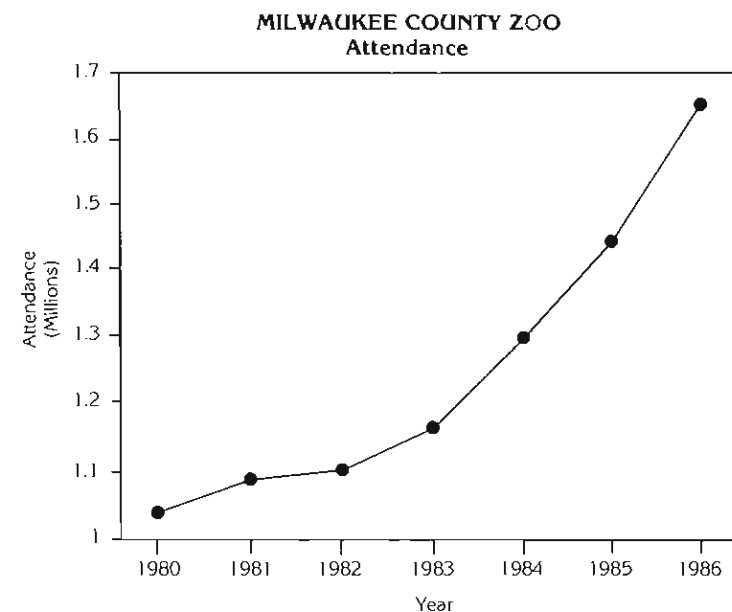
The support from Milwaukee County has made it possible to maintain this beautiful park at its peak. The County has also provided support during emergency situations like the Zoo's power outage when we were dependent on our visitors, our community and our government to help us.

We hope this outpouring of support continues in 1988. We face a critical year. We must continue to increase our attendance and revenue so we can in turn improve the Zoo and its amenities.

We want to wrap up our \$25 million capital campaign. Next year we will see the completion of the Peck Welcome Center and new Taylor Humboldt's penguin exhibit. We will also be in the throes of the aviary renovation and beginning excavation of the Valley of the Apes in 1988.

As you can see, we have a challenging year ahead. With tax support limited to \$1.9 million, our continued growth and progress will depend on the Zoo's ability to increase revenue and private sector support.

We are confident of continued success.



# ALIVE MAGAZINE

Published quarterly by the Zoological Society of Milwaukee County

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**Contributors:**  
Christine Baar, Membership  
Richard A. Bartz, Photographer  
Cynthia DuPas, Animal Department  
Bey Greenberg, Development  
Chris Javins, Zoo Pride  
Cheryl Lee, Special Events  
Mary Thiry, Education

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# Summer 1987

VOLUME 7, ISSUE 3

## FOCUS

**Golden Monkeys** from China make an exclusive visit to Milwaukee July 10 through September 19. Their visit isn't monkey business! 4



**Trumpeter Swans** grace the Zoo's Lake Evinrude. This beautiful pair is just the beginning of restoration of Wisconsin's trumpeter swan population. 10



The **Dairy Complex**, a \$1 million high tech center, was the first building completed in the Zoo's Master Plan. 16

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# 金 絲 猴



## Serious monkey business: Golden Monkeys from China

by Kerry J. Bublitz and Elizabeth Frank

While the new Marcus Amphitheater on Summerfest grounds steals headlines and Milwaukee residents sit in rapt suspense over the impending mayoral race, the Milwaukee County Zoo has unassumingly opened international relations with China.

This summer two beautiful monkeys, rarely seen outside of China, will make an exclusive visit to the Zoo.

These golden monkeys, *Rhinopithecus roxellanae*, seen less than Giant pandas, will go on public exhibit July 10 through September 19. Zoo Director, Dr. Gilbert K. Boese worked cooperatively with the Minnesota Zoo in negotiating with Chinese officials to bring the golden monkeys to the United States.

Huang Huang, an 8-year-old male, and San San, a 7-year-old female, are on loan from the Xi'an Zoo, Shaanxi Province, Peoples Republic of China (PRC). After their May through June visit in Minnesota, the pair comes to Milwaukee. Three Chinese officials — an interpreter, a veterinarian and a zookeeper — will stay with the monkeys during their visit.

This serious monkey business that has the Zoo community buzzing brings international attention to Milwaukee and opens a cultural exchange between the PRC and Milwaukee. Their presence in Wisconsin underscores the importance of international cooperation in conservation efforts.

"This is a once-in-a-lifetime opportunity for our zookeeper staff to work with these rare primates," said Boese. "We can learn new veterinary techniques and explore zookeeper practices with our Chinese colleagues. It will be an exciting two months in light of this international exchange."

In addition, the Chinese staff will have a chance to learn more about North American animals such as the caribou, polar bear and moose.

Wisconsinites should take special note of this golden monkey visit. They are regarded as a national treasure in China. These monkeys with their light blue faces and golden hair live in the snowy mountains of southwest and central China. Because they live in remote high elevations (6,000 to 10,000 feet) little is known about them.

They are China's rarest primate. Population estimates range anywhere from 10,000 to 13,000 individuals among the three subspecies. The subspecies *roxellanae* exhibited at the Zoo is the most numerous. The population of *brelichii* is thought to be about 500 individuals and *avunculus* numbers only 200.

Although it is illegal to kill golden monkeys, villagers in remote regions of China have often shot them because they are believed to be "hairy wild men" and yeti-like abominable snowmen. These killings are of major concern to Chinese officials.

The legends and mystique surrounding golden monkeys had their beginnings in 2200 B.C. when golden monkeys are first evidenced on Chinese silk paintings and vases.

In the mid-1500s, a golden monkey was the hero of an epic folk-novel. According to the story, *The Western Pilgrimage*, the monkey brought Buddhism from India to China. "Monkey" could change his shape 72 different ways and use his supernatural powers to help Hsuan Tsang in his search for Buddhist scriptures. The story is a Chinese equivalent to Homer's *Odyssey*.

Golden monkey meat was once considered a source of strength and its bones were used as treatment for arthritis and heart trouble.

The golden monkey was first described scientifically in 1869 when French zoologist Alphonse Milne-Edwards coined the name *Rhinopithecus roxellanae* in reference to Roxellane, a Russian-born slave. She was the courtesan and later the wife of the great Turkish sultan Sulieman the Magnificent who ruled the Ottoman Empire from 1520 to 1566.

Roxellane was a woman of legendary beauty and charm whose pug nose and strawberry-blond hair struck Milne-Edwards as sufficiently similar to features of the golden monkey.

Sulieman grew to favor Roxellane for her irresistible smile. She convinced Sulieman to have all his sons by other women put to death to ensure royal succession of her own son.

Roxellane's appearance is indeed characteristic of the golden monkey. They have long golden-brown hair which becomes longer and thicker with age. Their upturned snub nose and down-turned mouth give the appearance of pouting.

Golden monkeys are the world's largest monkey. The males are three to five feet in height and weigh 30 to 40 pounds. Females are much smaller, two to four feet in height, 20 to 25 pounds. They have a 25-inch tail.

They live in troops of up to 600 individuals, depending on the season and available food sources. Adult males and females are organized into subgroups of one adult male and five adult females with their young. Mating generally takes place from August to October. Gestation is six months.

Infants are born with a golden natal coat which is retained for two years. Youngsters are

*continued on next page*



*These Golden Monkey stamps were issued in September, 1963 in China. They were part of a series which celebrated Chinese native animals (Siberian tigers, Giant pandas). They have become a favorite issue among collectors.*



Summer has come to the Milwaukee County Zoo and all is alive! The dolphins are back giving joy to all who watch these beautiful marine mammals. The rare bonobos are entertaining frequent visitors. The Burmese elephant, Moola, now fully settled in, consumes 95 pounds of food a day plus a few apples and carrots.

The new Dairy Complex with its octagonal barn centerpiece is full of activity. Along with the birth of a red and white Holstein and a short horned calf, several other cows have joined the new Dairy Complex. The variety includes a Guernsey, a Holstein, a Brown Swiss, an Ayrshire and two Jerseys.

New to the Heritage Farm are two dogs, five cats, a white tail fawn, plus an American badger; a new species for the Zoo.

The Aviary has had several interesting additions. The most exciting addition to the Aviary was the hatching of a Griffon vulture named Lillian who is the first of its species ever to be hatched in captivity in North America. Two other hatchings produced a Kookaburra and a Humboldt penguin. A Marabou stork was also recently purchased.

Rick Sajdak, curator of reptiles, is presently doing a research project on the rare



Saban Racers which arrived at the Zoo in February.

Tired from a long day's visit? Then relax and sit on the grass and watch the rare

trumpeter swans glide over Lake Evinrude where they were released in early Spring. The addition of the swans helps to create a tranquil scene.

### Golden Monkeys

protected by both males and females.


Because of the extreme cold, golden monkeys spend hours hugging each other. They bury their faces in each other's fur and wrap their tails around each other.

Golden monkeys are arboreal folivore/frugivore (leaf and fruit eater). Their diet consists of leaves, sprouts, petioles, fruit, flowers, bird eggs, lichens, insects, seeds, tree bark and worms. Their diet varies seasonally.

The golden monkey's legs are longer

than its arms. Often they stand upright giving them a human-like appearance which in the past contributed to the "hairy wild men" myth.

The golden monkey has as many as nine different vocalizations ranging from a screech to a sound similar to a baby crying. Often times the female's and male's vocal repertoire differ. Some of the monkey's vocalizations are emitted without movement of its lips, making it difficult to distinguish which animal is vocalizing.

Huang Huang (yellow) and San San (beautiful) will be exhibited in the Australasian building during their two and a half month stay in Milwaukee. They are the beginning of international dialogue between Milwaukee and China. 

*Elizabeth Frank is the Zoo's Assistant General Curator.*

## SHARE WITH A FRIEND!

Do you know a family that could benefit from becoming a Zoo member? We'd like to tell them about our free admission, picnics and special events, and how they can take advantage of them.

Becoming a Zoo Member is one of the best family bargains in Milwaukee. Please send information to:

Name \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

What is a volunteer? By definition, a volunteer is "one who enters service by one's own free will." However, volunteering at the Zoo goes beyond this definition. Education is of primary importance to your volunteer organization at the Zoo. Zoo Pride "prides" itself on the training that each member receives in preparation to serve on its many committees. Zoo Pride also provides education to the public through the animal talks and Remains Carts that are presented throughout the park.

The general public can take an informal tour of an outdoor area by simply seeking out a volunteer designated by their khaki uniform and red patch. Volunteers also staff the Information Booth providing visitors with information not only about events at

the Zoo, but also information about events in and around Milwaukee.

And who are those characters running around in bear costumes, ghoulish faces, and rabbit outfits? These, too, are Zoo Pride volunteers helping to make the Zoo special events truly special events. Zoo Pride volunteers do everything from stuffing envelopes, to giving birthday parties, to giving tours to groups of school children. There is a place in Zoo Pride for anyone interested in providing this valuable service to the Zoo. If you are interested in joining us, or would like some further information, please call the Zoo Pride office at 258-5667, and we will be more than happy to send you information about the organization.

Zoo Pride is sponsoring a day field trip to the Brookfield Zoo, Saturday, July 25, 1987. The cost of this trip is \$20 and includes bus transportation, a continental breakfast, a box lunch and admission to the Zoo, Tropic World, Children's Zoo and the motor safari.

The continental breakfast will be served at our Zoo starting at 7:15 p.m. The buses will leave at 8 a.m. and return at 7 p.m. For reservations, please return the coupon below with your money by July 15, 1987.

#### BROOKFIELD ZOO RESERVATION FORM

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_

\_\_\_\_\_ seats @ \$20 = \$ \_\_\_\_\_

Please make check payable to Zoo Pride. Mail to: Zoo Pride  
Brookfield Zoo Field Trip  
10001 W. Bluemound Rd.  
Milwaukee, WI 53226

Reservations by July 15, please!

## MEET ME IN ST. LOUIS

Sept. 25, 26, 27, 1987

Please join us Friday morning, September 25 through Sunday evening, September 27 for an exciting weekend in St. Louis, home of the gateway arch, Anheuser-Busch brewery, Grants Farm, and of course, the St. Louis Zoo. The cost of this trip is \$340 based on double occupancy and includes a round trip airfare via TWA, two nights lodging at the Embassy Suites in downtown St. Louis, a made-to-order breakfast each morning plus two hours of cocktails each night at the hotel, airport transfers, transportation to Grants Farm on Friday and to the Zoo on Saturday.

Please make \_\_\_\_\_ reservations for me  
single occupancy \_\_\_\_\_ @ \$410 per person  
double occupancy \_\_\_\_\_ @ \$340 per person  
triple occupancy \_\_\_\_\_ @ \$325 per person

Name(s) \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_

I would like to share a room with \_\_\_\_\_

To reserve your place, please send this coupon along with a \$50 deposit per person to:  
**ZOO PRIDE**

St. Louis Field Trip  
10001 W. Bluemound Rd.  
Milwaukee, WI 53226

Please make checks payable to  
Zoo Pride

\*Balance due by August 1, 1987

# Special events to heat up the summer

Toss the winter blahs aside and get ready for some summertime fun during the next few months. It all begins on July 2 with the opening of the Milwaukee Symphony Orchestra Concert Series. Come with some good friends or alone and enjoy special times, fine food and performances by the following exciting entertainers:

- July 2 Classical music with Stephen Swedish, pianist
- July 3, 5 "Salute to America; It's a Grand Old Flag" Paul Verona, pianist Lee Henning, tenor
- July 10 Classical music with Charles Rex, violinist
- July 11, 12 "Country-Western Jamboree," Richard Hayman, guest conductor
- July 13 The six piece Dukes of Dixieland, without orchestra
- July 17, 18 "Show stoppers! From Broadway to Hollywood" with singer Shirley Jones Tom T. Hall and Kathy Mattea, without orchestra
- July 20 Tom T. Hall and Kathy Mattea, without orchestra
- July 23 Joan Baez, without orchestra
- July 24 Classical music with Andreas Diaz, cellist

July 25, 26 "Down the Mississippi" with trumpeter Al Hirt

Society members wishing to order tickets at a 20 percent discount should send their request and checks along with a self-addressed stamped envelope to:

Symphony Tickets  
c/o Zoological Society of Milwaukee County  
10001 W. Bluemound Road  
Milwaukee, WI 53226  
Discount prices are:  
\$10.40 Tent seating  
\$ 6.40 Lawn seating  
\$ 4.00 Lawn seating for children

For any further information, please call 258-2333.

On Wednesday, July 8, with their hoofs pounding and feathered legs flying, the magnificent Budweiser Clydesdale Eight Horse Hitch will be at the Zoo. Don't miss this spectacular sight as they trot along the Zoo grounds pulling their bright red Budweiser Wagon as their mascot dalmatian goes along for the ride.

Moola will be the focus Saturday and Sunday, July 18 and 19, for the 1987 Pre-school Vision Screening Weekend sponsored by the National Society to Prevent Blindness and the Milwaukee County Zoo.

Free vision screening will be offered to pre-school children in addition to a variety of activities all centered on Moola, our 5-year-old baby Asian elephant.

Youth can participate in the summer library reading program which culminates on August 8 with "Cruise the Zoo" Reading Crew. Call your local library for details.

Toss your diets to the wind on August 20, 21, 22 and 23 because it's Milwaukee A La Carte and there's food to be had. Lots of it! Thirty of Milwaukee's finest restaurants will participate and don't hesitate to taste a treat from each one. Entertainment also abounds. Just to wet your appetite, the Drifters will be appearing Thursday and Friday nights with appearances also by Java, Mickey and the Memories and more throughout the weekend. Stay tuned for more musical insight. This zoolicious event begins Thursday evening at 6:00 p.m. ending at 10:00 p.m. with hours Friday, Saturday and Sunday from 9:00 a.m. to 10:00 p.m.

September is the month of special days, the first being Senior Citizen's Day Friday, September 4 and following that will be County Resident's Day on Saturday, September 26.

Coming up in October: Harvest Zoobilee and the Halloween Spooktacular — stay tuned for more ghostly details.

## Zoo announces photo winners

The 1987 3rd Annual Milwaukee County Zoo Photo Contest, sponsored by Fotomat and WBGK Radio, was a tremendous success. This year the Zoo received 705 entries from 309 contestants. "We received great photos of our Zoo residents. . . . The judges had a difficult time making the final selections," said Zoo Director Dr. Gilbert K. Boese. The winners were announced on April 12 by Boese and Ann Whisler and Fred Brennan of WBGK Radio. The top three winning photos will appear in the 1988 Zoo Calendar.

Congratulations to the winners:  
1st Place—Joel Thielen



2nd Place—  
Cy White



3rd Place—  
Rev. Rick Petty

Additional photos from the contest were selected for use in the Zooper card series, sponsored by Marshall and Ilsley Bank.

These collectible cards, which feature different animals, will be given out all summer at the "Remains to Be Seen Carts" on Zoo grounds. The Zoological Society of Milwaukee County would like to thank the following photographers:

William Berry — Arctic Wolf  
Donald Coss — Cheetah  
Kenneth Duckert — Tiger  
Carl Soerens — Lowland Gorilla  
Georgine Stika — Rhinoceros

Special thanks to the following for sponsoring the contest and judging the entries:

Fotomat Corporation  
WBGK Radio  
Carole Gendlin — Wisconsin Photographer  
Dave Denmark — Photogenics Communications  
Jay Jocham — Graphic Designer/  
Milwaukee County Zoo  
Richard Sajdak — Curator of Reptiles/  
Milwaukee County Zoo

## PACK YOUR BAGS

### ZIMBABWE

Zimbabwe is one of Africa's best kept secrets. It is also home to some of Africa's greatest herds of wild animals. Share the magic of Zimbabwe with Milwaukee County Zoo director, Dr. Gilbert K. Boese and Lillian Boese, executive director of the Zoological Society of Milwaukee County, on a 19-day safari to southern Africa.

The journey begins at Mana Pools National Park. Vast stands of acacia and mahogany shelter roaming herds of elephant, buffalo, impala, zebra, kudu, sable, waterbuck and eland. At Bumi Hills, the safari-goers board houseboats to explore the famous Lake Kariba. Surrounded by mountains and petrified trees, this is an ornithologist's paradise. Fish eagle, cormorant, lily trotter, bee-eater and lilac breasted roller all frequent the shores of this magnificent lake.

The adventure is not complete without a visit to Victoria Falls. Stand at the edge and hear the great roar as the cool mist rises from below.

Discover the secrets of Zimbabwe. Departure date is Friday, October 30, 1987. The cost is \$3,975.

For additional information, please contact the Zoological Society, 258-2333.

### KENYA/RWANDA

There is no better way to experience wildlife than on a safari to East Africa. Embark on an unforgettable, 20-day journey to the wilds of Kenya and Rwanda, led by Dr. Gilbert K. Boese, Milwaukee County Zoo director, and Lillian Boese, executive director of the Zoological Society of Milwaukee County.

Explore the vast savannahs of Kenya, home to lions, cheetahs, zebras, giraffes and herds of buffalo. Discover the primeval forests, mountain streams, waterfalls and giant "afro-alpine" flora of the Aberdare National Park. Relax on the palm-lined beaches of Kenya's coastal resort, Mombasa, and enjoy an afternoon snorkling in the Indian Ocean.

Rwanda, "country of a thousand hills," is a naturalist's paradise. Penetrate the rugged terrain and bamboo forests of Volcanoes National Park, home to the world's only remaining mountain gorillas. View at close range these gentle creatures, studied extensively by Dian Fossey. This is an experience no safari-goer will ever forget.

Departure date is Saturday, January 9, 1988. The cost is \$4,465.

Contact the Zoological Society for details, 258-2333.

Boston Store celebrates the opening of our new store at Mayfair Mall

The celebration starts with a gala Preview Party Friday, July 31 7 p.m. - 11 p.m. Enjoy cocktails and gourmet appetizers, plus dancing to the music of the Bill Sargent Big Band.

Boston Store, Mayfair Mall  
2400 North Mayfair Road  
Milwaukee, Wisconsin  
\$15 per person (tax deductible)

Proceeds will benefit the Zoological Society of Milwaukee County

Those in attendance will have the opportunity to register for a chance to win a safari for two, accompanying Dr. Gilbert and Mrs. Lillian Boese.

Limited seating, RSVP is necessary by July 24. For more information, call 258-2333



# Zoo commits to trumpeter swan recovery program

by Edward N. Diebold

In 1987 the Milwaukee County Zoo and the Wisconsin Department of Natural Resources (WDNR) entered into a cooperative program for the Trumpeter Swan (*Cygnus buccinator*) with the stated goal of restoring a self-sustaining, migratory population of at least 20 breeding pairs of Trumpeter Swans to the state of Wisconsin by the year 2000.

The recovery plan lists eight primary objectives as outlined by Matteson, et al. (1986):

- 1) To identify and maintain suitable Trumpeter Swan breeding habitat.
- 2) To cross-foster Trumpeter Swan eggs using selected pairs of feral nesting Mute Swans.
- 3) To document hatching, development, behavior, health and survivorship of cross-fostered Trumpeter Swan cygnets.
- 4) To raise Trumpeter Swans in captivity and release as subadults (23 months of age) at selected sites.
- 5) To purchase and place single adult Trumpeter Swans of the appropriate sex in marshes that are used by single adult Trumpeter Swans of known sex that have dispersed from the Minnesota Hennepin County Trumpeter Swan restoration flock.
- 6) To establish a Wisconsin Mute Swan-Trumpeter Swan Committee to address control of Wisconsin's feral Mute Swan population and to evaluate Trumpeter Swan reintroduction strategies and recovery programs.
- 7) To develop public support for a Trumpeter Swan reintroduction program and provide public opportunities to observe the species.
- 8) To determine nesting locations and nesting success of Trumpeter Swan pairs constituting the restored Wisconsin flock.

The Wisconsin recovery plan has received the endorsement of the Trumpeter Swan Society and the Technical Section of the Mississippi Flyway Council. It will join with other restoration programs already underway in South Dakota, Nebraska, Minnesota, Missouri, Michigan and Ontario in attempting to reestablish the Interior Population of Trumpeter Swans. The Wisconsin plan was formulated in general conformity with the North American Management Plan for Trumpeter Swans (USEWS and CWS, 1984), which has set the objective for the Interior Population of at least 10,000 free-ranging birds.

## The Trumpeter Swan: Natural History and Distribution

With the male of the species regularly weighing over 30 pounds, the Trumpeter Swan has the distinction of being the heaviest of all the world's flighted birds. In flight it measures five feet from the tip of the bill to the top of the tail and has an impressive eight foot wingspan. Its massive proportions along with its snowy white plumage and resonant trumpeting call combine to make the Trumpeter Swan one of the most magnificent of all the living birds.

Formerly the Trumpeter Swan bred from northern Alaska and Canada east to Hudson and James Bays, and south to southern British Columbia, Nebraska, Iowa, Missouri and Indiana. Its wintering range included along the Atlantic seaboard to the Carolinas, in the Mississippi valley, along the Gulf coast, and westward to the Pacific (Banko, 1960). Sadly, the species is neither as widespread nor as plentiful as it used to be.

From the time of its earliest mention, the Trumpeter Swan has been exploited for food. The species was first mentioned by name in 1709 when John Lawson, the Surveyor General of North Carolina, reported

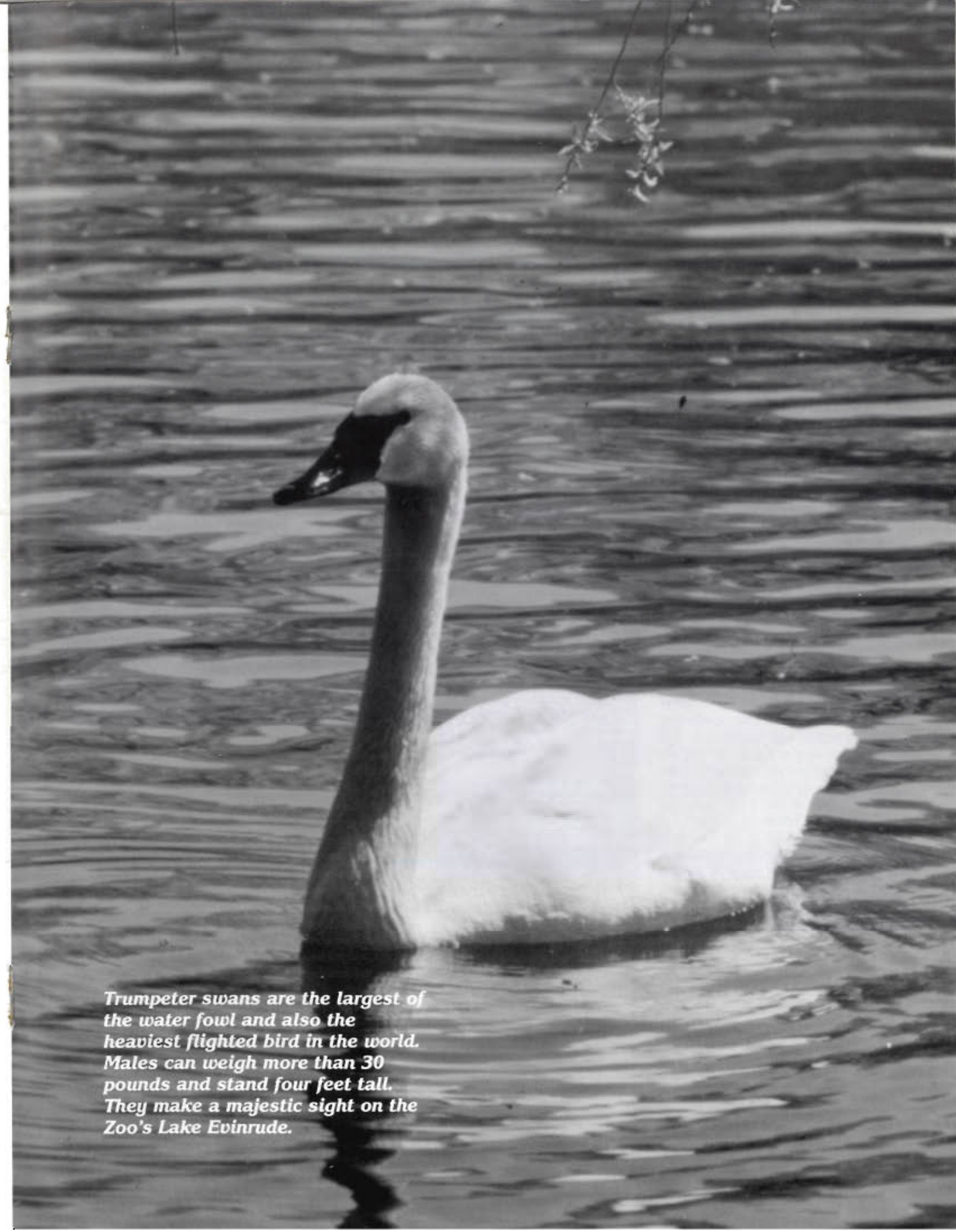
on two species of swan that occurred in his part of the country, one of which he wrote, "the one we call trompeters because of a sort of Trompeting Noise they make. These are the largest sort we have; which come in great Flocks in the Winter, and stay, commonly in the fresh Rivers, until February, when the Spring comes on, when they go to the Lakes to breed. A Cygnet, that is a last year's Swan, is accounted as a delicate dish, as indeed it is" (from Banko, 1960).

As the extensive settlement of the North American wilderness began to take place, the Trumpeter Swan paid dearly for its great size and beauty. The birds were hunted extensively for food and for their highly prized skins. The skins were used as swansdown for the manufacture of powder-puffs and for the adorning of women's clothes (Wilmore, 1974). The feathers made excellent quill pens. Indeed, John Audubon preferred Trumpeter quills above all others for doing the fine detail in his drawings. Of the quills he wrote, "... were so hard, and yet so elastic, that the best steel pen of the present day might have blushed, if it could, to be compared to them" (Wetmore, 1973).

As early as 1769, the Hudson Bay Company traded in swan skins, and the skins rapidly became a sought after item of commerce for over the next 100 years. Skins by the thousands were exported to the London fur market. In 1806, the Hudson Bay Company exported 396 swan skins. By the year 1828 that number had grown to 5,072 and the following year another 4,263 skins were shipped (Wilmore, 1974). In the period of 1823 to 1877, some 108,000 swan skins were marketed in the London trade markets. Most of these were believed to be Trumpeter Swan skins.

By the time the skin trade died out around 1890, the species had already been dealt a blow from which it has yet to fully re-

*continued on page 12*



*Trumpeter swans are the largest of the water fowl and also the heaviest flighted bird in the world. Males can weigh more than 30 pounds and stand four feet tall. They make a majestic sight on the Zoo's Lake Evinrude.*

cover. The extensive hunting, combined with human encroachment and destruction of habitat led to the extirpation of the species throughout much of its historical range. The year 1838 marked the disappearance of the last of the Trumpeter Swans from the eastern seaboard. By the late 1800's the species no longer occurred as a breeding bird in much of its historical breeding range in the United States, and by the turn of the twentieth century it had become an exceedingly rare bird throughout the rest of its remaining range.

Full protection for the species came in the form of the Migratory Bird Treaty Act of 1918 which, for the first time, provided protection from hunting for both of the native species of swan. In 1929, another milestone for the protection of the Trumpeter Swan occurred when the Migratory Bird Conservation Act was passed. This act, which authorized the purchase of land for waterfowl refuges, led to the establishment of the Red Rock Lakes Migratory Waterfowl Refuge in southeastern Montana by Executive Order in 1935 (Banko, 1960). Consisting of over 40,000 acres of historical Trumpeter Swan breeding habitat, the refuge was committed solely to the preservation of the species.

The known population of Trumpeter Swans reached its lowest level in 1932 when a horseback survey, conducted mostly in the tri-state region of Wyoming, Montana and Idaho revealed a total of only 69 Trumpeter Swans. At that time, these were believed to be the only ones remaining in the United States (Bergman, 1985).

Fortunately, as a result of a combination of range-wide protection, from exploitation, habitat protection and enrichment, and strict management of this small remnant population, the species has staged a remarkable comeback. Thriving on their newfound protection at Red Rock Lakes, the species rapidly occupied all suitable habitat within a 100 mile radius. By the early 1970's, this remnant tri-state population of Trumpeter Swans had grown to around 500 birds. Their success here led to the implementation of a transplanting program using Trumpeters from the Red Rock Lakes Refuge to repopulate suitable habitat in other states.

The first such transplant of Trumpeter Swans took place in 1938 when four cygnets were transferred to the National Elk Refuge in Jackson, Wyoming. Six more cygnets were transferred over the next three years, leading to the first successful breeding of transplanted stock in 1944, when a pair at National Elk Refuge produced one cygnet (Matteson, et al., 1986). Other transplant populations were established at the Malheur National Wildlife Refuge in southeastern Oregon, at the Ruby Lake National



Wildlife Refuge in northeastern Nevada, at the Tumbull National Wildlife Refuge in eastern Washington, at the Lacreek National Wildlife Refuge in south-central South Dakota, and at the Hennepin County Park Reserve District in eastern Minnesota, all using swans from the remnant population at Red Rock Lakes.

In 1954, independent of the restoration efforts taking place in the lower 48 states, wildlife biologists in the state of Alaska discovered a previously unknown breeding population of Trumpeter Swans in the state. This discovery came at a time when

aerial surveys were beginning to be used to accurately assess the size of such remote populations. In 1959, the surveys revealed a population of 1,124 Trumpeter Swans. In 1968, 2,847 birds were observed and by 1980, the number had grown to 7,696 (Bergman, 1985). After the 1968 Alaskan survey, the Trumpeter Swan was removed from the list of species being considered for federal endangered species status. Its current federal status is listed as "rare."

For management purposes, the North American Management Plan for Trumpeter Swans recognizes three distinct Trumpeter

Swan Populations (from Matteson, et al., 1986):

1) **The Pacific Coast Population** This population includes swans that breed mainly within Alaska and winter mainly in coastal British Columbia. This population also includes the restoration flocks at Malheur, Ruby Lake and Tumbull National Wildlife Refuges.

2) **The Rocky Mountain Population** This population includes a non-migratory tri-state (Wyoming, Montana, Idaho) subpopulation and a migratory interior Canadian subpopulation that winters in the tri-state region.

3) **The Interior Population** This population consists of restoration flocks east of the Rocky Mountains made up of transplanted swans from Red Rock Lakes and from the Peace River region of Alberta. As of 1985 the Interior Population numbered 209 birds.

In 1984, the total North American population of Trumpeter Swans was over 10,000, with over 8,000 of these found in Alaska. While it is now believed that the Alaskan population of Trumpeter Swans was probably never really endangered, the success of transplant programs in rebuilding the small remnant population in the lower 48 states has served as an inspiration for further transplants to attempt to reestablish populations that have been completely extirpated. The Wisconsin program will be part of the overall plan to reestablish the Interior Population of Trumpeter Swans.

#### Transplant Technique

The transplant technique that has proved to be the most successful in the western restoration programs has involved the translocation of cygnets to potential release sites just prior to their achieving the power of flight (at around three months of age). Here they are wing trimmed to preclude flight during the winter and held until the next summer when, after the moult, they again achieve the power of flight. At this time, having become accustomed to their immediate surroundings, they can gradually explore a wider area, and in this way develop a traditional attachment to the area.

#### The Wisconsin Plan

Using this technique as a model, three major strategies will be employed to begin the reintroduction of Trumpeter Swans into the state of Wisconsin:

- 1) *The introduction of captive-raised, parent-reared cygnets into suitable habitat within the state.* These parent-reared cygnets will be provided from breeding pairs located at the Milwaukee County Zoo and other institutions participating in the program. Cygnets raised from these captive pairs will be donated to the

WDNR at about three months of age, at which time they will be wing-trimmed and transported to wintering over sites. The birds will be caught again the next summer and wing-trimmed to preclude flight until the following Spring, when, at 23 months, they will be released. Since Trumpeter Swans begin to form pair bonds at as early as 20 months of age (although they don't reproduce until they are at least 3-4 years old), it is hoped that by holding the birds until 23 months that natural pairing will take place and it will be possible to release them as bonded pairs at selected sites.

- 2) *The cross-fostering of Trumpeter Swan eggs under selected pairs of feral nesting Mute Swans.* The eggs to be used for this part of the program will come from both the captive stock at the Milwaukee County Zoo as well as from eggs collected in Alaska from wild nesting Trumpeter Swans.
- 3) *The artificial incubation of Trumpeter Swan eggs and brooder rearing of the cygnets.* As with the parent-reared cygnets, the brooder-reared cygnets would be placed at wintering over sites at around three months of age, held until 23 months, and then released. Eggs for artificial incubation will also come from both captive and wild Alaskan stock.

A minimum of 50 eggs and/or cygnets will be obtained annually for the program from 1987 through 1996. The WDNR will annually obtain at least 30 eggs from the state of Alaska from wild nesting birds. The remaining 20 eggs and/or cygnets will come from captive stock. (Note: The 30 eggs annually from Alaska will not be available until 1989, so, for 1987 and 1988 only the eggs and cygnets from captive stock will be available.)

#### Limiting Factors


As with any program of this sort, there will be a number of limiting factors to be dealt with, including the amount of suitable habitat available within the state, illegal harvest of the reintroduced birds, lead poisoning resulting from the ingestion of lead shot and fishing sinkers, deaths due to collisions with power lines, snapping turtle predation of the cross-fostered cygnets, and the presence of exotic Mute Swans in suitable breeding territories. However, none of these factors are insurmountable.

The Milwaukee County Zoo has committed to maintain two pairs of Trumpeter Swans at the Zoo and to donate all eggs and/or cygnets produced from these pairs to the recovery plan for the next 10 years. In February, 1987, an adult pair of Trumpeter Swans was purchased from a private

individual in Michigan, and after a brief quarantine period, was placed on the Zoo's Lake Evinrude. A second pair will be purchased later this year and established in the Zoo's North American Yard. It is the Zoo's objective to produce a minimum of 10 eggs and/or cygnets annually from these two pairs to contribute to the program.

The Wisconsin Trumpeter Swan Recovery Plan is a detailed, well conceived program, formulated by biologists of the WDNR. The Milwaukee County Zoo has committed itself to fully support the program for ten years.

The number of Trumpeter Swan eggs available to the program from wild Alaskan stock will likely be limited to 30 a year for some time to come. The balance of 20 eggs and/or cygnets needed to fulfill the recovery plan's objective of a minimum of 50 eggs and/or cygnets annually, must come from captive stock. The two pairs at the Milwaukee County Zoo are not capable of fulfilling this need, nor is it desirable to produce too many offspring from these two pair and have them over represented in the restored population. Therefore, I urge any institution or private individual interested in the restoration of the Interior Population of Trumpeter Swans to contact the Milwaukee County Zoo.

With the continued diligent efforts of those involved with restoration programs already in progress, and the added support of new programs such as the Wisconsin Trumpeter Swan Recovery Plan, it is hoped that everyone will once again thrill to the flight of the Trumpeter Swan in the skies of the Mississippi Flyway. 

*Ed Diebold is the Zoo's Curator of Birds. He joined the Zoo staff in May, 1986.*

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## You'll **FLIP** over the Zoo's Surfing Safari Show

Adopt Nugget, a bottle-nosed dolphin who stars in the show.

Each adoption package includes: a personalized certificate of adoption, species information, an invitation to our annual family reunion picnic, a nameplate which is displayed for a full year and more.

Call 258-2223 for more information or stop by the Society office after you see Surfing Safari. (The \$30 adoption price is utilized in animal exhibits.)



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- MILWAUKEE SYMPHONY ORCHESTRA 20 percent ticket discount when purchased through the Society for performances on the Zoo grounds.

## Capital campaign climbs to \$10 million

"Our New, New Zoo" campaign has reached a milestone with over \$10 million in donations received from the private sector. This is more than 80 percent of the \$12.5 million goal. We are grateful for the generosity of individuals, corporations and foundations and the dedication and hard work of our many volunteers which have allowed us to reach this new plateau.

Donations to "Our New, New Zoo" have already allowed us to create new and exciting exhibits.

The Dairy Complex in the Stackner Heritage Farm opened to the public in May.

"Surfing Safari," an exhibit featuring two dolphins and a California sea lion in an educational show, thrills visitors daily between May and October. This exhibit was made possible by a gift from Journal Communications, Inc. and McDonalds.

The renovated polar bear exhibit opened last summer. The pool size was doubled and an underwater viewing area created.

Groundbreaking for the Peck Welcome Center, made possible by a donation from the Milton and Lillian Peck Foundation, was held on April 9, 1987. This building will be a fully equipped center for orientation at the very start of every Zoo visit. It will boast a sophisticated multimedia theater, an exhibit hall and several multi-purpose rooms to accommodate up to 240 persons at a time. Moveable walls will permit as many as 1,000 people to gather for special events year round.

The Zoological Society and Milwaukee County Zoo have planned many activities throughout the year to offer the general public the opportunity to help fund the "Zoo for All Seasons." We still need your help to reach the campaign goal of \$25 million. We invite you to participate in the Golden Monkey Premiere, July 9, the Boston Store Premiere, July 31, and Milwaukee A La Carte, August 20-23.

### THE HIGHLANDER HOSTS BONOBO BENEFIT

The weekend of May 1 found tennis pros and local celebrities serving and lobbying for the Zoo's \$25 million capital campaign.

The activities took place at the Highlander Racquet Club beginning with Friday's pro-am matches. The winners in the five divisions of pro-am doubles were: Kent and Chuck Smith, Herm Fredrich and Scott

Precor, Don Davidson and Dave Pelisek, Nancy Grambow and Jim Jankowski, and Ted Sprinkman and Bob Gressen.

Final activities took place on Sunday, May 3, with a Highlander Tennis Classic. The Classic found Kevin Cahill and Jim Woyahan defeating Rick Vetter and Gary Taxman with scores of 3-6, 6-4, 7-6. The highlight of the Classic was the Bonobo Challenge featuring a Celebrity Match. Our local Zoo celeb, Dr. Gilbert Boese, Director, teamed with pro, Randy Stolpe vs. the team of Rick Vetter and Royal Taxman. Unfortunately, the Boese/Stolpe team was defeated.

The Zoo and the bonobos benefitted from the Highlander Classic. Over \$2,000 was donated to the Valley of the Apes, future new home of the rare and endangered bonobos.

Our thanks and appreciation to the Highlander Racquet Club, tennis pros, celebrities and enthusiastic Zoo fans.

## Embery to visit Milwaukee

Boston Store is proud to host Joan Embery, nationally-known animal goodwill ambassador, at its grand opening festivities at Mayfair Mall.

Ms. Embery will appear at the Mayfair Boston Store on Friday, August 7 at 3:30

p.m. She will speak on animal conservation, as well as visiting with the audience afterwards.

Her appearance is in conjunction with Boston Store's support of the Milwaukee County Zoo's \$25 million capital campaign.

Ms. Embery will be in Milwaukee also to address the Zoological Society's Platypus Society members at their annual meeting on Friday, August 7, 6 p.m. at the Zoo.

Boston Store is proud to bring Joan Embery to Milwaukee in support of the Milwaukee County Zoo.



## Introducing 2 NEW additions to Zoo membership.

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# Zoo's \$1 million exhibit showcases dairy industry

by Mark D. Cartland

Everyone knows that Wisconsin is the Dairy State. But few people know just how important the dairy industry really is to Wisconsin. During 1986 Wisconsin dairy farmers produced 25.2 billion pounds of milk, 1.8 billion pounds of cheese and 274 million pounds of butter. Each year Wisconsin produces 35 percent of all cheese, 23 percent of all butter and 18 percent of all milk sold in the United States.

Out of Wisconsin's 4.8 million residents only an estimated 150,000, or 3 percent, are involved directly in dairy farming according to Marvin Heiser, a dairy statistician for the Wisconsin Department of Agriculture. That means that the vast majority of Wisconsin's residents have no direct contact with this \$3 billion industry.

Recognizing Wisconsin's contribution to the dairy industry, the Milwaukee County Zoo created the Dairy Complex, a new exhibit designed to educate Zoo visitors about the dairy industry.

The idea for the Dairy Complex was conceived in August, 1984 by Zoo Director Dr. Gilbert K. Boese and board members of the Zoological Society of Milwaukee County. From its inception, the Dairy Complex was unique. It was the first exhibit in the Zoo where donors contributed expertise as well as dollars. It was also the first area to incorporate high-tech, interactive exhibits for the purpose of public education.

The Dairy Complex opened to the general public on May 9, 1987. It was the first building completed in the \$25 million Capital Campaign of the Milwaukee County Zoo and the Zoological Society. The \$1 million complex is located in the Stackner Heritage Farm (formerly the Children's Zoo). The exhibit consists of three components: the cow barn, the educational center and the dairy store.

Visitors enter the Dairy Complex through the cow barn. There, visitors can enjoy a close look at how cows are cared for as zookeepers follow their daily animal care routines. Wisconsin dairy farmers donated seven varieties of dairy cows: black and white Holstein, red and white Holstein, Jersey, Guernsey, milking shorthorn, Ayrshire and Brown Swiss.

From the cow barn, visitors enter an historic, octagonal barn. This edifice, originally constructed in 1896, is the central structure in the new Dairy Complex. Built from hand-hewn timber beams, the red barn rests on a white-washed cement and rock foundation. The construction of this barn is unusual. No nails were used in the assembly of the main timber frame. The frame is joined together only with wooden pins and steel reinforcements.

Octagonal barns were used by farmers in the late 1800's and early 1900's because of several structural advantages. More cows could be housed in an octagonal structure than in a rectangular barn. Octagonal barns were 20 to 30 percent less expensive to build than conventional barns. Animals were easier to feed because of a centrally located feed chute. Because no support posts were necessary to construct an octagonal barn the handling and storage of hay was not obstructed.

The barn was dismantled in 1983 at its original location in Ozaukee County, Wisconsin, located just north of Milwaukee. It was reassembled piece-by-piece by Ronald Stocks, an expert in property renovation, at its present site on the Zoo grounds. Reassembly began during the summer of 1986 and was completed in December, 1986.

Within the barn, an integration of the past and the present has taken place with the installment of ten high-tech, educational ex-

hibits. This series of interactive exhibits allows visitors to learn about nutrition, the food chain and other aspects of the dairy industry. Each exhibit encompasses a specific theme.

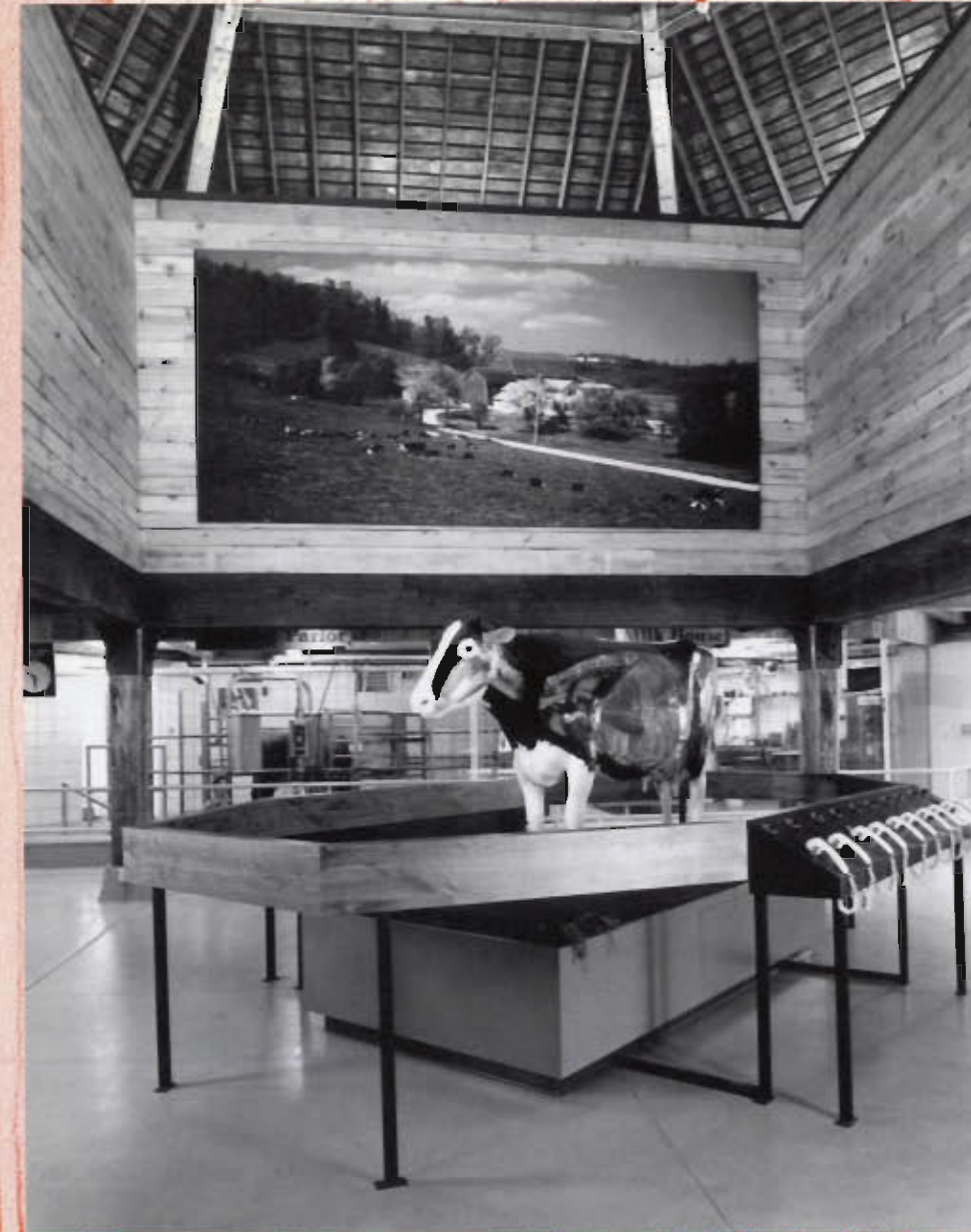
A life-size fiberglass cow stands in the center of the barn. A transparent side reveals the cow's internal organs. Visitors can pick up a phone, press a button and learn how milk is produced. This process is highlighted by the sequential illumination of the internal organs showing the entire process from the time food enters the mouth until milk leaves the udder.

The hand-milking cow is a life-size replica of a Holstein cow. Equipped with a functional, artificial udder, the cow allows children to actually pull rubber teats which squirt a milk-like substance into a stainless steel pail.

The Munchkin Milk Factory is a miniature milk processing plant designed specifically for pre-schoolers. In this area, children, accompanied by an adult, can sit in a miniature milk truck, operate a dairy conveyor belt and pretend they are making a dairy delivery.

The highlight of the educational center is the milking parlor. At this state-of-the-art facility, zookeepers milk cows several times daily. Visitors can view the entire milking process from the time the cow is positioned in the stanchion to the time milk enters the storage tank. Computers record a wide range of information including the time of day each cow is milked, the number of pounds of milk produced and the reproductive status of each animal. The milk produced at the Milwaukee County Zoo is grade A quality and is used commercially.

The Dairy Olympics, a computerized video game, is housed in an oversized milk carton. Visitors are presented with a choice




An integration of old and new takes place in the Zoo's Dairy Complex. In the foreground is a fiberglass cow which teaches visitors how milk is produced. The educational center is housed in an 1896 octagonal barn.

The University Quiz Game generates multiple choice questions on a variety of agricultural topics. By moving a computerized joy stick, visitors can test their knowledge of environmental studies, home economics and farming trivia.

Additional dairy concepts are presented in the Dairy Sculpture Tree. Utilizing flip charts and touch and feel boxes, visitors can learn about the life of a dairy farmer, causes of financial stress in the farm community and different types of farming machinery.

The final stop in the Dairy Complex is the Dairy Store. The Dairy Store brings the goodness of a country farm home to the Zoo with lots of good food and country keepsakes. Visitors can enjoy the finest ice cream and milk for sale in the store. Eventually, additional dairy products including milk shakes may be offered. Visitors also can purchase cow t-shirts, cow stuffed animals, cow postcards and other dairy novelties.

The construction of the Dairy Complex emphasizes the Milwaukee County Zoo's commitment to public education about the dairy industry. The Complex celebrates Wisconsin's dairy heritage in a way that all Zoo visitors can appreciate. A visit to the Zoo is not complete without a trip to the Dairy Complex. 

Mark Cartland is the Assistant Public Relations Coordinator for the Zoo.

of meals and asked to select the most nutritious. This game-strategy exhibit, where visitors run a race against the computer, makes learning hard facts about nutrition fun and easy.

The dynamics of the food chain are taught in the Foods That Milk Built exhibit. By pressing buttons, one can graphically see how much sun, rain, pasture, hay and milk it takes to make yogurt, butter, ice cream and other dairy products.

The Calcium Quiz game teaches visitors about the calcium content of various foods. Two foods are flashed up on a video screen and the visitor is asked to select the one with the highest calcium content. By answering correctly, the visitor builds a miniature skeleton on the video screen.

The Hologram exhibit displays a three-dimensional image, created by a laser, demonstrating the bacterial growth that occurs when milk is improperly stored or handled.



## Photo Sessions

### Twilight to Dark Photography Workshop

August 13, 6 p.m. to 9 p.m.

Explore time exposures, lighting and using flash at night.  
Cost: \$12.00 General Public, \$10.00 Society Members  
Class size limited to 20 participants.

### Animals: Through the Camera's Eye

Learn special techniques for photographing animals in a Zoo setting. This two part class is held on  
**September 26, from 9:30 a.m. to 3:00 p.m. and  
October 10, 9:30 a.m. to noon.**  
Cost: \$20.00 General Public, \$15.00 Society Members  
Class size limited to 24 participants.

## Preschool Workshops

On August 1, 1987, the Education Department will begin PRE-REGISTRATION for the popular fall workshops for four and five year old children.

Each month, children will be given special guided walking tours through selected areas of the Zoo. Crafts, songs and games highlight these 2½ hour classes.

To receive pre-registration information, use the form below and send to: Milwaukee County Zoo, Education Department, 10001 W. Bluemound Rd., Milwaukee, WI 53226.

### Preschool Workshop Registration Form

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
Phone \_\_\_\_\_

There is always something new at your Zoo. During the summer months, the Marshall & Ilsley Bank has funded a collectible card series for youth. Each month youth visiting the Zoo can collect four Zooper Cards. June was North American Month and featured the wolf, trumpeter swan, polar bear and massasauga. July is African month and the featured animals are gorilla, cheetah, Ruppell's Griffin Vulture and white rhino. August is Australasian month with the animal stars being the golden monkey, Bactrian camel, tiger and Victoria crowned pigeon. Along with the four monthly cards, the Ambassador of the card series, "Moola — the Asian Elephant" card, will be distributed.

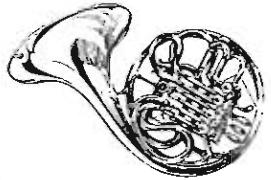



The card distribution sites are the information booth, the "Remains To Be Seen Carts" and the elephant presentation area. These cards are limited editions so they will be distributed, one per youth, until all 75,000 are gone.

The cards feature a photo of the animal plus information about what that animal eats, its size and its status in the wild.

Don't miss out — be the first on your block to collect all 13 cards. The "Zooper Card" project is made possible through the efforts of Marshall & Ilsley Bank, the Zoological Society, Zoo Pride and the Zoo's Education Department.

## At the Zoo

<p><b>July 8</b></p> <p>Clydesdales visit the Zoo.</p>	<p><b>July 9</b></p> <p>Golden Monkey Premiere. A members' only evening to view the rare golden monkeys from China.</p>	<p><b>July 10-September 19</b></p> <p>Golden Monkeys on exhibit. See Huang Huang and San San during their exclusive two-month visit.</p>		<p><b>July 11, 12</b></p> <p>Milwaukee Symphony Orchestra with guest conductor Richard Hayman featuring a Country-Western Jamboree.</p>
<p><b>July 17, 18</b></p> <p>Milwaukee Symphony Orchestra with Shirley Jones perform show stoppers!</p>		<p><b>July 18, 19</b></p> <p>Preschool Vision Screening. Both days are sponsored by the National Society to Prevent Blindness and the Zoo.</p>		<p><b>July 20</b></p> <p>Tom T. Hall and Kathy Mattea perform under the Milwaukee Symphony Orchestra tent.</p>
<p><b>July 23</b></p> <p>Joan Baez performance under the Milwaukee Symphony Orchestra tent is sure to delight concert-goers.</p>	<p><b>July 25, 26</b></p> <p>Milwaukee Symphony Orchestra features "Down the Mississippi" with Al Hirt.</p>		<p><b>July 31</b></p> <p>Boston Store Premiere. Support your Zoo by attending this exclusive first look at Boston Store's new Mayfair store.</p>	
	<p><b>August 7</b></p> <p>Joan Embery, animal goodwill ambassador, will speak at Boston Store, Mayfair. For more information, call 258-2333.</p>			<p><b>August 20-23</b></p> <p>Sentinel's Milwaukee A La Carte. Take in 30 of Milwaukee's finest restaurants plus a variety of entertainment. It all begins Thursday evening. Call 771-3040 for details.</p>
	<p><b>September 4</b></p> <p>Senior Citizen's Day. Free admission for seniors plus additional special activities.</p>	<p><b>September 12</b></p> <p>Up, Up and Away with Arthritis. See thousands of balloons released from the Zoo, symbolic of the fight against arthritis.</p>	<p><b>September 26</b></p> <p>Milwaukee County President's Day. All Milwaukee County residents are admitted free.</p>	



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