

ALIVE

ZOOLOGICAL SOCIETY
OF MILWAUKEE COUNTY
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Greg Anton Photo

Species Survival Plan and Surplus

By Gilbert K. Boese, Ph.D.,
Milwaukee County Zoo Director

At the 1980 Annual Conference of the American Association of Zoological Parks and Aquariums, the SSP program concept was presented to the membership at large. The SSP, or Species Survival Plan, was designed as a national effort of coordination by zoos of the United States to join in a program of saving selected species.

The strategy was to select various species for SSP attention. A zoo holding any of the selected species in their facility could elect to commit their collection for a five-year program of SSP involvement. From the participating institutions, a coordinating committee would be voted upon and a species coordinator elected.

Although the organizations did dedicate to support the SSP, they were in no way obligated to carry out the direction of the program. They did, however, agree to consider the directions set forth in the particular species preservation program.

Most of the zoos embraced the SSP concept. Finally, rather than individual zoos working in isolation, we are now going to have a

nationally-unified direction as to how we were going to approach the preservation of selected species.

At the present time, there are 26 species receiving the attention of the SSP, ranging from the Golden Lion Tamarin, Chettah, Snow Leopard, Siberian Tiger, Humboldt's Penguin to such species as Otters, Chinese Alligators and Radiated Tortoises.

Each of these committees is now, through the efforts of the SSP Conservation Coordinator hired by AAZPA, developing the strategy for the selected species in captivity. In many cases, the results of the committees' activities can put a very definite hardship on the zoos participating in the program. The hardship is underscored by the discussions that came from the Siberian Tiger SSP Committee.

The SSP propagation group for the Siberian Tiger has stated that, in the management scheme of this particular species, surplus animals will result. By surplus, it is meant that animals will be genetically or demographically inappropriate to the program because (1) they have over-represented lineages, or (2) they have produced their share of living offspring, or (3) they have

reached the oldest age class for a stable population to perpetuate itself.

If the management results in surplus animals, the surplus animals will be viewed as distinct and separate from the SSP population for the species. If the animals do not now fit into the strategy for preserving the species, and all institutions that have committed to the species survival program are urged to seek alternatives in placing these surplus animals, the commitment to perpetuating the SSP population will not be compromised. Now the question is: How does an individual zoo deal with its species' surplus?

The AAZPA has animal surplus guidelines, supported by the AAZPA Code of Ethics, which state that to find an alternative use for surplus animals, 1) A zoo could negotiate a sale, trade or donate to a North American facility not participating in the SSP for the given species. 2) A zoo could enter into a sale, trade or donation to a reputable zoo overseas. 3) A zoo could enter into a sale or loan of the animals to an appropriate research facility for humane research which would benefit the species. 4) A zoo can maintain the surplus in their own institution if it does not become a deterrent to the goals of the SSP program. 5) Or, that a zoo could consider euthanasia.

At present, most zoos do not have trouble with euthanasia for humane reasons. But, as a means of dealing with surplus animals, it becomes a very difficult question.

The Milwaukee County Zoo has a euthanasia policy in operation and the policy reads as follows:

ANIMAL EUTHANASIA POLICY

The Milwaukee County Zoological Gardens has been operating under the following euthanasia policy:

We have felt that all animals under our charge should receive maximum care and medical attention. Euthanasia has been and will be employed under the following conditions:

- 1. An animal has received all the medical attention for the specific affliction that we can provide and still does not respond to treatment. To avoid long-term suffering and eventual death, the animal will be euthanized.*
- 2. Aged animals that have deteriorated to the point they cannot carry out minimal biological functions, such as renal failure, acute arthritis, etc.*
- 3. Congenital defects which will not provide for normal growth and development.*
- 4. Animals with contagious diseases which could jeopardize the lives of the other animals in the collection.*
- 5. Animals used for food are humanely euthanized.*

The staff veterinarian and/or the medical consultants will place his/her diagnosis

and recommendation for euthanasia in writing and submit same to the Zoo Director. The Zoo Director or his designee will review each case with the staff veterinarian and/or consultants and if he agrees to the euthanasia, the Zoo Director will cosign the document with the medical personnel and place it on permanent file.

If time is available and a meeting to discuss the individual animal's fate does not result in prolonged suffering, the following committee will meet:

- 1. Zoo Director or his designee*
- 2. Staff Veterinarian and/or medical consultant*
- 3. General Curator and/or Assistant General Curator*
- 4. Area Supervisor of the specific job assignment*
- 5. Zookeeper from the specific job assignment area*

In the event of an emergency, such as massive trauma, the veterinarian will attempt to obtain verbal agreement with the Director or his designee before euthanasia. If this is not possible, euthanasia will be performed at the veterinarian's discretion and a statement of justification will be submitted to the Director in writing after the fact.

A decision will be reached, the members of the committee will cosign the recommendation and it will be placed on permanent file. If the committee cannot agree, the Zoo Director will make the decision based on the facts available.

In anticipation of difficulties with the euthanasia as a means for dealing with surplus animals, the first step taken at our institution was to gather the zoo staff and explain that we had a policy in place. They were asked to state whether they agreed or disagreed with the policy that we now put into practice. Out of the 92 staff members, 47 returned the questionnaire. It is interesting to note that 47 or 100% agreed with the zoo's present euthanasia policy, that is considerations 1-5. However, when it came to the question of, "Do you agree or disagree with the use of euthanasia to control numbers of a given species in a captive population when there are no recipients for the surplus?", 19 staff members agreed, 25 disagreed and 3 were undecided.

In response to the question, "Do you agree or disagree with the euthanasia of healthy animals which are deemed genetically undesirable for a captive breeding program?", 22 agreed, 23 did not agree, and 2 were undecided.

From the staff's standpoint, it is felt that euthanasia may be necessary to manage the genetic diversity of a captive animal population. However, the major standout, or the point in which people start to disagree, is when you do start to use euthanasia as a means of removing surplus animals from a captive population.

It is obvious that as we move into a program of species survival, the issue does become, "what happens to those individual animals that by virtue of the strategies developed become 'surplus'? What happens when all other avenues other than euthanasia are exhausted and do not provide any results as to how to place these animals into another zoo animal facility?" Then, euthanasia becomes a looming question.

In 1983, the final strategy papers for the Siberian Tiger SSP program were produced. In this strategy, it indicated that the tigers owned by the Milwaukee County Zoo (five in-house and four on breeding loan) were, according to SSP standards, non-tigers. They were no longer a viable part of the SSP program. Why? 1) The tigers were, in most cases, nonreproductive; 2) Those that we had out on breeding loan had been such successful breeders that their particular genetic input into the breeding strategy was at maximum; therefore, it was felt that no longer should these animals be bred. It is not only the tigers that live at the Milwaukee County Zoo that are considered surplus to the SSP strategy, but it includes those that are on loan to other zoos. Thus, what to do with the surplus tigers?

In the questionnaires we sent out, there is definitely a frustration in the comments made. "We really do not want to face the problem. There should be some other way;" "How did we get into the problem in the first place?"

Obviously, one way we got into the problem was that as zoos in the '60's and '70's addressed the endangered species problem and began breeding the animals, the breeding was successful, but the strategy for genetic balance and diversity was not considered. Therefore, this successful but continuous breeding of limited gene lines was continued in captivity and we began to see the negative results of inbreeding. Indeed, the offspring were not as healthy and in increasing numbers were showing "deleterious genetic expression." Also, mortality of offspring was increasing. We were losing animals in the wild, but our population in captivity was not being managed in a way that the most viable offspring were occurring and the healthiest with the most genetic balance and diversity was not considered. Therefore, this successful but continuous breeding of limited gene lines was continued in captivity and we began to see the negative results of inbreeding. Indeed, the offspring were not as healthy

At this time, the zoo has a euthanasia policy. Our policy does not include the application of euthanasia to animals that are considered surplus because there is no room for them or that animals have reached those criterias set up by SSP (overexpression of genetic lineage, top age in the population or, indeed, nonreproductive).

So, we start out to address the problem — What are we going to do? Most zoo directors in the U.S., in fact, all of them, are struggling with the same question and not just the

zoo director but the staff, the societies, and volunteers. All people who are aware of the situation definitely have a great concern.

The Board of Directors of the Zoological Society and the Board of Trustees of the Zoological Gardens have endorsed the euthanasia policy of the Milwaukee County Zoo and the five-point program under which we operate. However, we have not come to grips with the other question. Before we make a judgment call, we feel that we must have extended dialog, extended discussion, extended understanding and, hopefully, through this process we will prepare ourselves for some rather difficult decisions. Perhaps, we can uncover some alternatives. The fact remains that many zoos, including our zoo, do have animals which are considered surplus. But they are animals that we are concerned about.

We are going to launch an educational program, a format in which we will conduct panel discussions and provide the opportunity for interaction with the various segments of our interested zoo population. We want to talk down this very difficult road to policy-making in a cognizant, intelligent manner. Prior to March 21, two panel sessions will have taken place, one for staff members of the Milwaukee County Zoo and one for volunteers who so graciously give of their time and energies to support our zoo and society programs. Then, on March 22, 1984, at 7:30 p.m., there will be a speaker panel for the zoological society membership in the main dining room of the restaurant.

It is paradoxical that we know animals are disappearing from the natural habitats and that their habitats are disappearing as well. We know that we are developing the means by which we can keep animals healthy, viable and reproductive in captive populations and that is our role. But we know that in order to get all of this engineered into the most finely-tuned management program, certain individual animals will reach a point where they must be phased out of the program in name of the species and its species' survival. This is a very difficult time. We now have to stand and discuss the situation of individual animals in light of the preservation of the species. It is obvious to me that we have a long and arduous task before us to reach these very necessary conclusions. This article is one of the first steps to bring the problem into focus and to start the necessary dialog. The panel discussions are the next step. We hope that we will continually work to assess the situation, the role of the Milwaukee County Zoo and the Zoological Society of Milwaukee County in one of our most vital roles. We must ensure that these unique animal species, which have become our responsibility, will be intelligently managed so that the species and the gene pools remain healthy and viable for future generations.

We are definitely interested in your opinions on the subject of euthanasia. We would appreciate it if you would fill out the following questionnaire and send it to the attention of the Zoo Director's office.

EUTHANASIA POLICY QUESTIONNAIRE

1. Do you agree or disagree with the four considerations in our present euthanasia program?

Consideration #1 Agree Disagree

Comment:

Consideration #2 Agree Disagree

Comment:

Consideration #3 Agree Disagree

Comment:

Consideration #4 Agree Disagree

Comment:

2. Do you agree or disagree with the use of euthanasia to control numbers of a given species in a captive population when there are no recipients for the surplus?

Agree Disagree

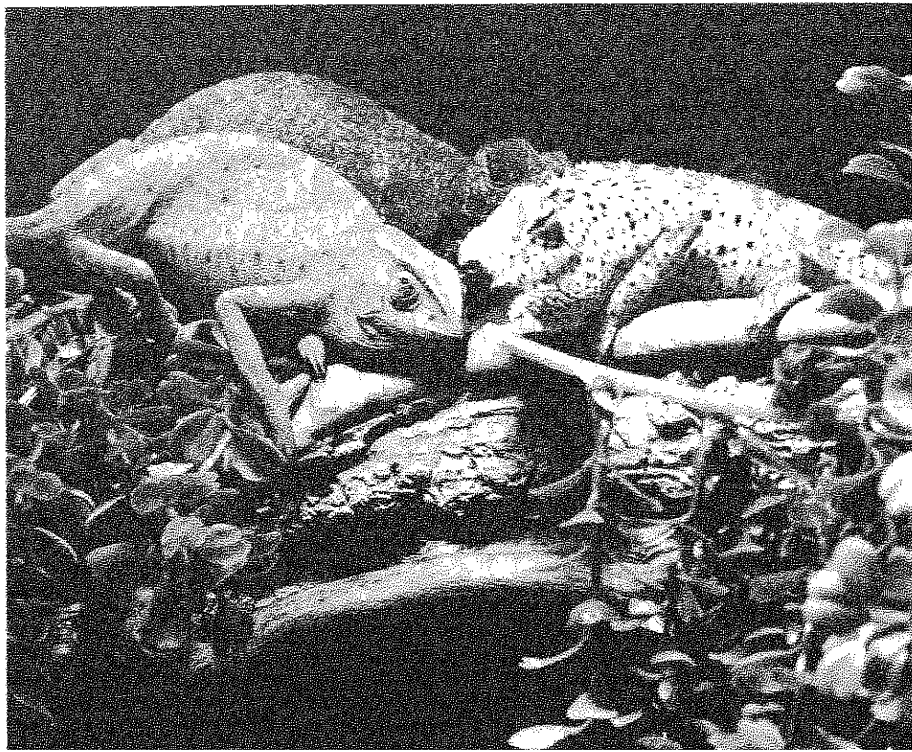
Comment:

3. Do you agree or disagree with the euthanasia of healthy animals which are deemed genetically undesirable for a captive breeding program?

Agree Disagree

Comment:

Signature (Optional)



David L. Denmark Photos

Curious Chameleons

Curious Chameleons
by Rich Sajdak, Zookeeper

The 'true' or Old World chameleons are probably the best known lizards in the world. Their ability to change color is famous and indeed, their name is synonymous with color changing ability. Many people do not realize however, that although chameleons are exceedingly well camouflaged, their color schemes have more to do with the lizards' body temperature, mood, health and the amount of sunlight it is experiencing than with an attempt to match their background.

They appear rather bizarre to us, with head crests, spines and in some kinds even horns, not unlike the ancient dinosaur, Triceratops. Bizarre perhaps, but these ornaments are functional, being used as displays for species and sex recognition. The horns are sometimes used in stylized territorial 'combat', but unlike the dinosaur, not in defense against predators.

One of the most fascinating things about these lizards is their prey catching method. Unlike most lizards, which make a quick dash or leap at their prey and catch it with a snap of the jaws, the slow moving chameleons have developed a more sophisticated way to eat. It resembles nothing so much as a modern guided missile system.

A typical chameleon (there are over fifty kinds, with more kinds found in Madagascar than anywhere else) moves slowly through a tree or bush, using opposable toes and prehensile tail to grasp leaves and twigs. Like the search radar of a missile system, its eyes are constantly sweeping the immediate surroundings, independent of each other, one eye pointed up, the other perhaps backward, alert for the movement which means food — a grasshopper perhaps, or some other small animal (some chameleons are over two feet long and can feed on birds, but most are less than a foot long). The chameleon brain, like a missile computer control system, ignores motionless objects as targets.

When a missile search radar finds a target, the information is passed to a second system, where precise information on distance, direction, target size and speed, necessary to aim the missile, is gathered. The chameleon, when food is sighted, swings its entire body to point at the target (it must move its body as its head and neck, which contain the long tongue, are almost immobile) and focuses both eyes on the prey. In this way the chameleon has three-dimensional binocular vision and obtains the distance information it needs to catch its prey.

Our chameleon then 'arms' its missile (the tongue) by opening its mouth and sticking the tongue out slightly. It is fired by squeezing circular muscles at the base of the tongue. The tongue squirts out of the mouth in less than a tenth of a second and can reach out a distance greater than the lizards' body. The tongue tip is covered with a sticky saliva

which holds the prey while a second set of muscles pulls the tongue back into the mouth.

In January the Milwaukee County Zoo opened a new chameleon exhibit in the Reptile/Aquarium building, a donation of Mr. Robert Meister of Chameleon Advertising in Brookfield. At present we are displaying Senegal chameleons from Africa. Chameleons have always been difficult captives, with a short life span even in the wild. They seem to require a separate cage, as they do not compete well with other lizards. Although they are found in tropical and subtropical areas of Spain, Africa, Madagascar, India and Ceylon, their habitats are usually at high altitudes where nighttime temperatures may drop to near freezing. Because of this, most chameleons require a nighttime temperature drop to maintain good health. Our new display includes an air conditioner and timer system which provides daytime temperatures of 85°F. and an evening low temperature of 65°-70°F. We are hopeful that our new arrivals will become a well-adapted and interesting new addition to the Reptile/Aquarium building.

Endangered Resources Fund

Under a new state law, taxpayers may help protect and care for Wisconsin's endangered resources.

The Legislature enacted the new Wisconsin Endangered Resources Fund, which allows taxpayers to voluntarily contribute via their income tax forms to a special fund for endangered and nongame wildlife and to help preserve examples of Wisconsin's native plant communities.

Some of the wildlife species that will benefit are eagles, loons, barn owls, ornate box turtles and others. In all, there are more than 500 species of vertebrate wildlife, 1,650 species of native plants, and 60 types of native plant communities that could benefit under the Endangered Resources Program.

Specifically, some uses of the fund might be to purchase radio transmitters to track Wisconsin's 20 timber wolves, to build nest platforms for homeless loons; or to purchase critical habitat for endangered white lady-slipper orchids. Funds may also be used to repopulate Wisconsin with pine martens, barn owls and peregrine falcons which disappeared years ago from Wisconsin's wild land.

Taxpayers wishing to contribute to the fund should look for line 19 on the short form and line 54 on the long form. Contributions can either be deducted from a refund or paid in addition to any taxes due. Because the funds are contributions, the state treasury suffers no loss of funds, and donations are deductible from next year's taxes.

Zoological Horticultural Conference

Kurt A. Bartel

In September I had the pleasure of attending the third annual Association for Zoological Horticulture conference. The host this year was the San Diego Zoological Garden. Study tours were a little hampered by rainy weather, but it was still very enjoyable to see many of the San Diego area parks. Seminars given by zoo horticulturists were very good, but three inspired many ideas that I would like to share. Since the AZH is a young organization, our purpose and objectives were discussed and will be brought out in my concluding remarks.

Study tours not only serve as good educational experiences, but are probably the most enjoyable part of conferences. It is nice to see places you read about, to compare landscapes with our zoo, and to get fresh ideas about future displays. One of the places that was of great interest is Balboa Park. This 1400 acre park was the site of the 1915 World's Fair that now serves as the cultural center of San Diego. The park includes the San Diego Zoological Garden, museums, and theater. The landscape displays formal gardens, a large collection of palms, and the world's largest lath house which displays many rare exotics.

Sea World also has a beautifully maintained landscape, as well as excellent animal exhibits and graphics. The Penguin Encounter is truly an outstanding exhibit. The landscape offers many collections, the most noteworthy are bromeliads and ferns. The landscape also displays a Japanese garden, complete with a pavilion transported from Japan in pre-cut pieces. The collections of plants included evergreens, flowering shrubs, and of course bonsai, all native to Japan.

The last two areas of interest worth noting are of course our host, the San Diego Zoological Garden and Wild Animal Park. The zoo's landscape is far more exceptional than the animal displays, although improvements are being made. They have a tropical garden walk in which tropical exotics from equatorial regions are displayed. Ferns, blooming orchids and gingers are beautiful in their natural rain forest setting. The entire display is maintained by mist nozzles running almost constantly, waterfalls and streams. The Wild Animal Park boasts collections of many plant varieties. Noteworthy is the largest collection of proteas in the northern hemisphere, an evergreen collection of which many are native to temperate regions, and an African succulent and cacti collection cultivated along an entire hillside. In the animal exhibits ornate electronic wire guards are displayed. With the use of insulators placed throughout the lower trunk, and wire used like a "dot to dot" picture, pulsating electricity runs through the system. The animals touch once and only once and from that point trees live undisturbed.

The seminars were all good, but some did not apply to temperate regions. Tim Hohn of the Bronx Zoological Garden gave a very

appropriate talk. Tim answered the question of botanical collection policies for zoological gardens. He argued for the policy of maintaining plant collections and integrating them in other zoo departments. Many arguments were good, if not only for the fact of stirring thought. In Milwaukee we have the good fortune of having the Mitchell Park Domes to display many plant collections. Therefore, if one would like to see such displays they have the opportunity.

David Ehrlinger of the Cincinnati Zoo gave an excellent talk on animal exhibit landscaping. He argued that one of the goals of zoo horticulture should be to represent the vegetative habitat of an animal species native to a particular geographical area with plantings typical of indigenous species or other species that resemble those species. Public interpretation of the plantings and its relationship to the animals displayed can be executed through graphics and tour guides. One such area that could be experimented with is the area in front of our giraffe exhibit. The honeylocust trees that are planted resemble those of acacia trees. Grasses native to or resembling African savanna could be displayed, as well as cacti and succulents on loan from the Milwaukee County Greenhouse Center. Another such area that has already been proposed is to plant spruce trees in areas in front of our bear exhibits to give the feeling of northern Wisconsin.

With the computer age spreading into many fields, discussion was held on incorporating computers into plant collection records. By programming all commercially available plants, their growth requirements, where they are native, and animal exhibits where success has been achieved, time may be saved and better results achieved when a new exhibit is planted. By sharing this information with other zoos, even greater success can be achieved.

The AZH is a nonprofit organization of zoo horticulturists dedicated to the advancement of zoo horticulture through professional exchanges, research and horticulture education. The AZH encourages the practice of horticulture in zoos and the improvement of the zoo horticulture profession. The organization provides a network for sharing ideas and exchanging of information in regard to solving plant problems as well as plant and animal relationships. The AZH publishes a biannual newsletter to inform its members of the activities of the organization as well as its members. At this past conference I had the honor of representing the Milwaukee County Zoological Garden and was elected vice president of the AZH.

I found the conference to be an excellent educational and enjoyable experience. I would like to thank the Zoological Society of Milwaukee County for their support and financial assistance that made it possible for me to attend. I hope that I may represent our zoo again next year at the fourth annual conference to be held at the Brookfield Zoological Garden in Chicago.



David L. Denmark Photo

Cheza Ngoma cochairmen: left to right: Sandy and Sunny Williams, John and Peggy Burns.

Africa to Take Over Zoo Grounds

By Connie Tym

The Milwaukee County Zoo has learned that the Continent of Africa is planning to take over the County Zoo grounds on the night of Saturday, June 30, 1984. Advance intelligence reports indicate the invaders plan to use the Zoo grounds for exotic African dancing, safari excursions, feasting and bonfires. The code name given to this operation is "Cheza Ngoma".

Cheza Ngoma is Swahili and means to participate in a gathering where you have fun and dance. However, the public need not be alarmed by the planned takeover because it will be for one night only and the proceeds will go to benefit the Zoo's outdoor gorilla enclosure.

Cheza Ngoma is actually the name chosen for Milwaukee's first annual Zoo Ball. Mr. and Mrs. Allen W. Williams, Jr. and Mr. and Mrs. John W. Burns are the cochairmen for this gala event. More than 200 volunteers began actively planning and organizing the ball last September. The 1984 Cheza Ngoma ball is the first of what the organizers hope will become a Milwaukee tradition.

According to Mrs. Williams, one of the cochairmen for the event, "We are really excited about Cheza Ngoma. The Zoo Ball will not only provide Milwaukeeans with a memorable evening, but will also greatly benefit the Zoo."

Cheza Ngoma will fill the Zoo with the sights and sounds of Africa. Immediately upon their arrival at the Zoo, participants will be greeted by the KO-THI African dancers dancing to the rhythmic beat of African drums. Torches and bonfires will light up the Milwaukee sky. Participants will be served exotic drinks prior to their departure on a torchlit scenic tour of the Zoo grounds via safari-mobiles. Participants will then partake of a deliciously prepared meal around tables for eight by lantern light prior to dancing the hours away to The Stanley Paul Orchestra under the direction of Jerry Norman. Such exciting menu items as the following are being considered: marinated roast chicken basted with pomegranate juice and walnut sauce, peanut soup, fresh flaming mangoes flamed at the table and hearth-baked millet bread served hot at the table-side with butter and fresh banana jam. During the evening festivities there will be a silent auction of beautifully unique items arranged in the setting of an African shopping bazaar. During dessert, participants will be treated to a live auction for such things as scuba diving trips, trips to the San Diego Zoo and other exciting dreams come true.

According to Dr. Gilbert K. Boese, Director of the Zoo, "The proceeds from this event will fund the building of an outdoor play area for our gorillas. We are extremely pleased to have such a terrific event planned

and to have more than 200 able volunteers is fantastic."

The cost for attending this event is \$75 per person, of which \$50 is tax deductible. However, special status will be given to those purchasing tickets for \$250 or \$500 a couple, and those arranging a table for \$1,000. All additional proceeds will go that much further towards benefiting the Zoo. Guests are invited to wear either black-tie dress or safari outfits. Mr. Allen W. (Sandy) Williams, Jr., cochairmen for the event, warns "We only have room for about 400 people to attend this event. We have early indications that this event will be sold out quickly. Therefore people should purchase their tickets early. In addition, if they would like to sit with friends at the event, they should let us know that they would like to sponsor a table (of 8)."

Tickets can be purchased prior to the official mailing of the invitations by contacting the Zoological Society at 258-2333 between 8:30 a.m. and 4:30 p.m.

First Annual Cheza Ngoma Kick-off

By Connie Tym

Organizers of Cheza Ngoma (the County Zoo's First Annual Zoo Ball) held a kick-off party for the June 30 ball on Friday, February 3, in the Aquarium and Reptile Building at the Zoo. About 150 volunteers involved in organizing the ball participated in the festivities while being watched by huge fish, snakes and reptiles. During the evening, zookeepers wandered among the volunteers exhibiting such exotic animals as huge pythons and tarantulas. Some volunteers were so adventuresome as to actually pet the woolly spider!

Following cocktails, there was a program which even included what not to wear to the Zoo Ball. Models adorned in such inappropriate clothing as mink coats and alligator shoes strutted through the building until chased away by an enormous gorilla (yet another enthusiastic volunteer).

If the kick-off party is any indication of the volunteers ability to organize a fun event, Cheza Ngoma will indeed be an evening you will not want to miss.

TOP LEFT: (left to right) Connie Tym and Judy Van Till admire tarantula held by Zookeeper Jack Uphill.

MIDDLE LEFT: Zookeeper John Kowalsky demonstrating "Animals in Action" to Mike and Herb Hurvacheck.

BOTTOM RIGHT: (left to right) Joe and Katy Harding, Lillian and Jim Ramaker (kick-off party co-chairmen).



David L. Denemark Photos

The Zoo's Baby Gorillas

An I-Can-Read-Story for Children
By Wilma B. Boese

Mandara and Kuja are great ape babies at the zoo. They belong to the lowland gorilla family.

Kuja came to Milwaukee from a zoo in Tennessee. Kuja belongs to the Brookfield Zoo in Chicago, Illinois. He is loaned to Milwaukee Zoo to be a playmate to Mandara.

The gorilla babies live together in the Monkey House. Mandara and Kuja like to be together. They play like sister and baby brother. Mandara can watch Kuja. Kuja can watch Mandara. They can see, touch, smell, and hear each other. This is good. In time they will know that they are alike. They will become a part of the zoo's gorilla family and live with the other gorillas.

Both Mandara and Kuja are raised by humans. The humans are animal keepers and volunteers. The volunteers are called Mandara Moms. The moms are like both human mothers and gorilla mothers to Mandara and Kuja. They hold and cuddle the babies. The moms plan quiet times for naps and sleep for the gorilla babies.

Mandara and Kuja have nest boxes to sleep in. Wild gorilla babies sleep with their mothers. Wild gorilla mothers make nests of branches and leaves. These nests are made in trees in the jungle forests of Africa. Wild gorillas come from Africa.

The Mandara Moms enjoy rough and tumble play with Mandara. Mandara is older and bigger than Kuja. She is a good climber.

The moms feed the little apes good foods such as apples, carrots, bananas, rice cereal, and milk.

Wild baby gorillas drink their mother's milk. They learn to eat many different wild plants. Great ape mothers show the babies which plants to eat.

The keepers and moms make sure Mandara and Kuja stay healthy and clean. Gorilla mothers groom their babies to keep them clean.

Do you have a brother or sister who doesn't like to share with you? Probably

you do. At first Mandara did not seem to like Kuja. She pretended he wasn't there. She moved by Kuja and did not look at him. When Kuja reached for Mandara's toys or blanket, Mandara picked them up and dashed away with them. She did not share with Kuja.

Sometimes a mom scolds Mandara when she cuffs Kuja. "No, Mandara, no, no!" The moms scold and shakes her head at Mandara. Mandara dashes off to a corner. She climbs a rope high above the mom's head. Kuja watches Mandara's funny antics. Mandara beats her chest with her open hands. This makes a sound, pock - pock - a - pock. Mandara acts like a gorilla.

Mandara tickles Kuja's tummy. Kuja grins. Mandara likes to make Kuja grin. Mandara licks rice cereal from Kuja's face. Kuja likes Mandara to do this. He likes Mandara's antics.

Mandara and Kuja like to be together. It is good they have each other. They are good little friends and good little apes.

Come see them, they are fun to watch.

Pronounce Mandara (man dare a), and Kuja (coo ya).

Vocabulary:

great apes — large, man-like, animals without tails

lowland gorillas — one kind of gorilla family, another kind is the mountain gorilla

volunteer — a person who gives time freely in service

human or human beings — you, a child, man, or woman

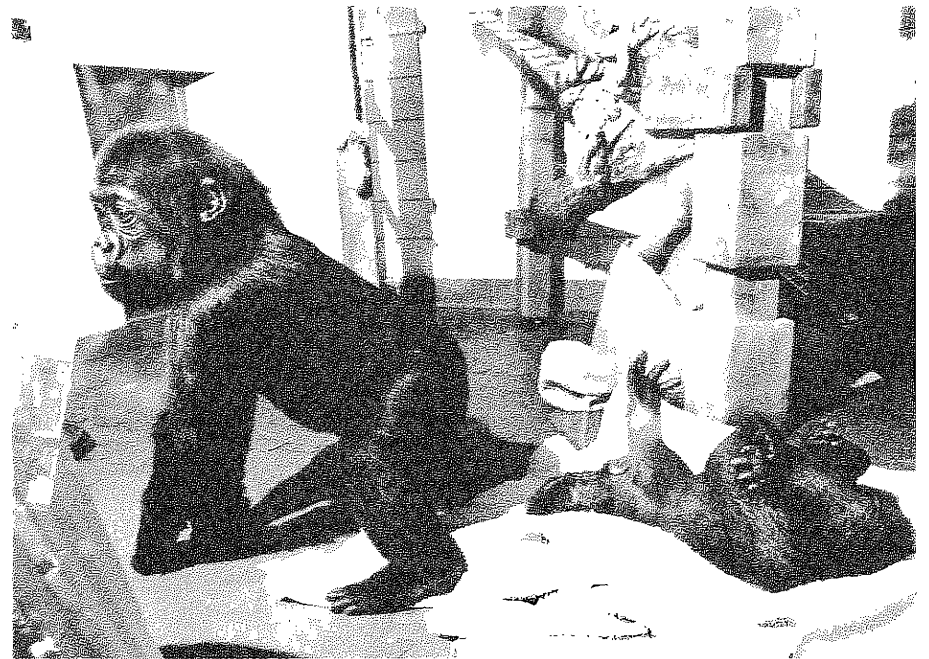
nest boxes — wooden and rope boxes made for baby gorillas to sleep in

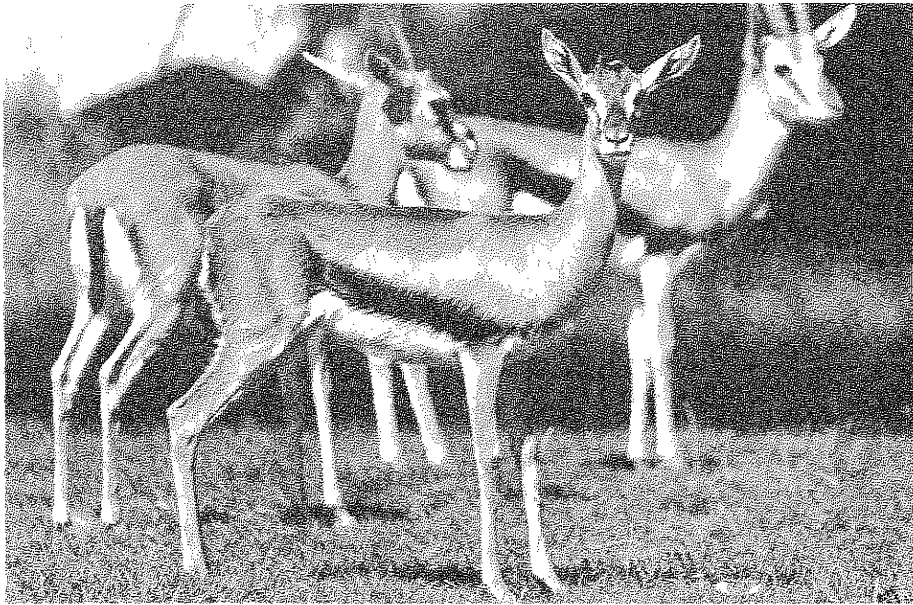
jungle forest — rain or cloud forest, on or near the equator, thick with many vines, plants, and different kinds of trees

groom — to pick carefully through the hair and clean it

cuff — to hit with the open hand, slap

antic — a trick, a prank

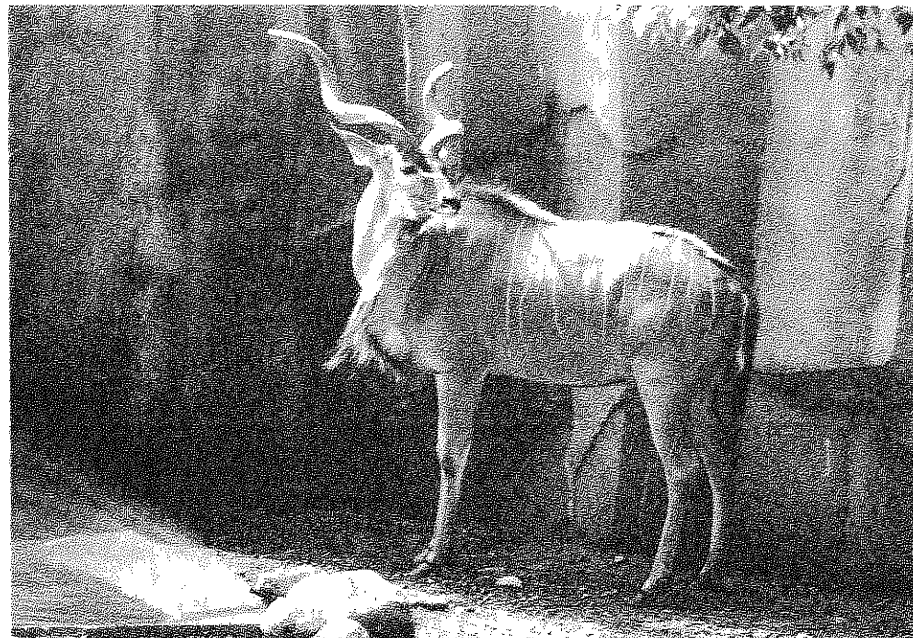




Milwaukee Sentinel Photo



Milwaukee Journal Photo



David L. Denmark Photo

Animal Inventory: More Than Just Numbers

By Robert Bullermann
Assistant Zoo Director

Every year at this time, we take an animal inventory. Many people are involved — area supervisors, zookeepers, curators, registrar, assistant zoo director and secretary. When we talk about the annual animal inventory, we are generally speaking of an actual "nose count", but in reality, the inventory is an ongoing process that continues throughout the entire year on a daily basis. It is the end result of record keeping.

The field or "nose" count must match in-house records and ISIS records. All of these records must be accurate; you cannot change one without changing the other. Accuracy depends on communication between office and field, zoo and ISIS. Mistakes return to "haunt" the record keeper. If common names, scientific names, taxonomic codes, vendor codes or institution codes are incorrect, then they must be corrected before they can compute. There are ways, however, to correct mistakes once they are found.

Each building has an inventory for their particular area, listing the name of the animal, the sex, ear tag number and the ISIS or in-house number. (House number and ISIS number are the same). When any activity occurs, the ID number is to be used. Births, deaths, animals shipped and animals received are recorded on the keeper's daily report. The following morning, this information is copied onto a daily log. The daily log is the source book and information is transferred to the animal's ID card from this log book. From the ID card, all information for ISIS, breeding loans and records of births are taken. It is the backbone of our entire mammal record system.

When inventory time arrives, usually in mid-December, a fresh copy of the field inventory is sent to each of the areas in the zoo. From their working copy, the field personnel update the inventory, adding sex, ear tag number and any other pertinent information that will be added to the ID card that was unknown before. This is the time the physical "nose count" is taken. Inventories are due in the office a day or two after January 1.

The final master inventory consists of the following information:

1. Ten field inventories. It should be noted that some of the field inventories are grouped, such as elephant east, elephant west and giraffe.
2. Mammal, bird, reptile and fish inventories by order, family and scientific name.

3. List of new species that entered the collection in the previous year.
4. List of species that left the collection and are no longer exhibited at our zoo.
5. List of breeding loans in and out.
 - a. new loans out
 - b. new loans in
 - c. return of breeding loans in/out
 - d. deaths of breeding loans in/out
 - e. births of young of our animals out on breeding loan
6. Lists of:
 - a. births
 - b. deaths
 - c. animals received
 - d. animals shipped
7. List of gifts to/from
8. Trades to/from
9. Sales
10. Purchases
11. List of federal permits we have from the Departments of Interior Agriculture, Commerce and Department of Health and Human Services. (Interior covers endangered species; Agriculture covers our exhibitor's permit and animal welfare; Commerce covers marine mammals; and the Department of Health and Human Services allows us to import primates directly into our zoo without going through quarantine.
12. Inventory Comparison 1962-1983.
13. General information. This section contains our Captive Bred Wildlife Permit, list of (USD) endangered species, list of other ISIS'ed zoos and other information helpful in managing our animal collections.
14. Yearly report to the Director.

Sections one and two are the actual inventories, and sections 3-14 are support information and a history of activities for the previous year.

Throughout the year, the inventory is a valuable tool in our business. It is used not only by the animal personnel, but by the Zoo Director, Zoological Society, Zoo Pride and our Education Department. It is particularly useful in planning changes in our collection, establishing surplus lists, breeding programs, marketing and promotional programs, press releases and other projects from outside interests, including other zoos.

ISIS — How Is It Done?

By Gay Reinartz, Animal Registrar

What's been going on behind the scenes at the Milwaukee County Zoo? A lot of pencil pushing. As always at the end of the year, our "ISIS team" is busy updating our animal inventory and registering all animal transactions. For the past nine years, this push has been credited to a Zoo Pride volunteer, Gigi Schroeder.*

For background, ISIS, or International Species Inventory System, is an organization which records the status of all mammals and birds kept by most major zoos throughout the world (see *Alive*, Winter 1982, Ken Kawata). Whenever an animal is born (hatched), it is given an identification number and then registered with ISIS as an "acquisition" into the holding institution. New animals that are purchased, traded or placed on breeding loan into the zoo are registered in much the same way. Subsequent to an animal's acquisition, the removal of that animal either by death, sale, outgoing breeding loan or trade is ultimately recorded. Because the inter-institutional movements of animals can be traced throughout the zoo world, important data useful for population analyses is amassed. ISIS requires not only an identification number, but accurate and detailed accounts of the animal's origin, parentage, age and circumstances surrounding any transaction or death. The required information is coded onto forms and fed into a computer at the ISIS headquarters at the Minnesota Zoo.

Participating zoos benefit from ISIS in many ways. On a semiannual basis, ISIS sends out to contributing zoos a current inventory of its holdings. Every animal is listed here by species, giving its ID, age, vital statistics, parentage, origin and location. In addition, microfiches, which summarize the institutional distribution of every species, are provided. Many zoos use these fiches as a reference library for selling or purchasing certain species. Moreover, entire pedigree summaries of any species are available. Ultimately, the most significant function of ISIS is to provide an enormous data base for the study of many species, especially those exotic species and endangered ones that can no longer be accessed in their natural habitat.

Accurate analysis of ISIS data can provide us with valuable insights into a species' population dynamics (in captivity); to longevity, age of first reproduction, survivorship, reproductive potential, etc. are essential guideline parameters for breeding management programs and species survival plans. For these important reasons, the greater part of the zoo world is actively involved in the great pencil push, coding endless computer forms to submit their share of data.

ISIS has been collecting data since 1973; the Milwaukee County Zoo first joined the

effort in 1974. Our decade of active membership would never have been possible without Zoo Pride volunteer Gigi Schroeder. Gigi is responsible for the complete and accurate registry of approximately 10,000 animal transactions. She has donated over 1,700 hours to the ISIS process.

Gigi has had to work closely with zoo staff members who keep our animal records. In the past, Robert Bullermann, Assistant Director, provided registry information on our mammals. Bullermann comments, "We were one of the first zoos to be ISIS'ed. Since Gigi has worked for us, we have been able to process our data, meet the ISIS deadlines and enjoy the benefits of the system." Joe Iding, Curator of Birds, has assisted Gigi in the registry of the birds.

In October, 1983, Gay Reinartz, Animal Registrar, joined the ISIS team and began a close association with Gigi. "One of my first jobs was to learn the ISIS process. I found a ready and willing teacher in Gigi. In late November, Gigi and I began to update our 1983 inventory. After two months of filling out endless forms, I can say that Gigi has been truly indispensable. With a volunteer force composed of devoted individuals such as Gigi, I am increasingly aware of why this zoo is so successful.

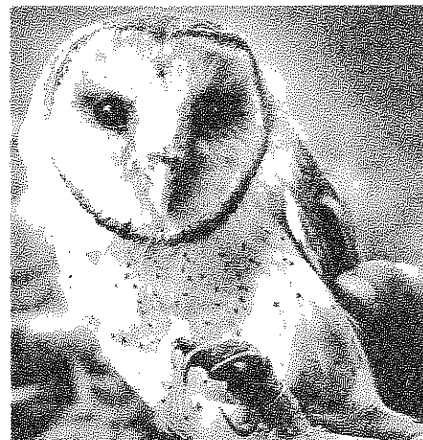
In the future, I hope to replace form and pencils and handle ISIS more efficiently by computerizing the data. I do not, however, foresee replacing the dedicated manpower. Gigi has some computer experience and enough overall knowledge of the records so that she can take part in helping me develop a workable regime and entering data.

The greatest challenge facing the zoo world in the future is the breeding and ultimate disposition of our animals. Zoos are attempting not only to properly house and care for the immediate animal population, but also to ensure a viable population and growth for the future. In order to do this, we must have some idea of the population dynamics and the genetic structure of our charges. The first step in any such project is data collection and record keeping. Therefore, ISIS is and will remain integral to the attainment of these management goals.

The overall worth of ISIS is only as good as the data it receives from each participating institution. For this reason, our zoo is indebted to the dedication of Gigi Schroeder in helping us in this endeavor.

The success of our involvement in ISIS, like so many of our programs, is the result of excellent volunteer support like that of Gigi Schroeder.

*Gigi is the founder and owner of Schroeder Realty in West Allis. She has belonged to Zoo Pride as a charter member since its inception in 1975.



Greg Anton Photo

Summer Concerts At The Zoo

A third super summer of "Summer Concerts at the Zoo" commences in July with an expanded season of Classical and Pops performances. In addition to Orchestra concerts, up to six special attractions are scheduled during the five week series at the Zoo.

Last season's Summer Concerts opened with Henry Mancini. Eight performances featured the full Orchestra with Mancini, Mel Torme, violinist Elmar Oliveira, and pianist Byron Janis, each appearing in a pair of concerts. New in 1983 were the one-night only presentations without orchestra by Juice Newton (pop), The Pat Metheny Group (jazz), and Larry Gatlin and the Gatlin Brothers Band (country).

Adding a gourmet twist to the festive pre-concert picnicking on the Zoo grounds were box suppers from La Boulangerie which will be available this summer. Watch this publication for further information on "Summer Concerts at the Zoo". Discount tickets will be available for Zoological Society members.

NEW MEMBERSHIP CATEGORY

Effective April 1, 1984, membership in the Zoological Society will include new categories: Family and Individual. The rates for all levels of annual membership are as follows:

Family	\$35
* Individual (see below)	25
Antelope	50
Grizzly Bear	100
Silver Fox	500
Golden Eagle	1000

* Individual Membership entitles only the member to benefit and does not include spouse and/or minor children.

Zoological Society Corporate Members

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ZOO PRIDE

Birthday Parties

Children's birthday parties are available for the summer of 1984, appropriate for your four to ten year old and friends. For a \$50.00 donation for Zoological Society members, (\$55.00 for non-members), there will be free admission to the zoo for your group, a decorated cake, drinks, favors, an exciting time in the Children's Zoo including pony cart rides, plus a tour of the zoo grounds on the train. All this is yours on Monday, Wednesday, or Saturday from Memorial Day until Labor Day. Plan a party at the zoo and have a Zoo Pride Volunteer take over all the chores of the annual birthday party from your shoulders. Your child will entertain friends in a unique atmosphere, and receive a special gift from the zoo.

To book a party or to obtain more information, call Mary Rockstad at 421-4158 or the Zoo Pride office 258-5667.

Teen Volunteers

By Dorothy Ann Matitz
Teen Volunteer Chairman

Do you like the outdoors, working with children and adults as well as learning about the Zoo? These are just a few of the qualifications of becoming a Zoo Pride Teen Volunteer.

Zoo Pride is looking for a limited number of young people between the ages of 13 and 16, who will make a commitment of one day a week including Saturdays at the Zoo this summer.

All Teen Volunteers will be required to attend Saturday training sessions at the Zoo. Participants must have a member of the immediate family enrolled in the Zoological Society and Zoo Pride or be willing to join.

Interviews will be conducted **Saturday, April 21, from 9:30 a.m. to 2:30 p.m.** at the Zoo Pride office, (on the Zoo grounds at the entrance). Please bring verification of age (birth certificates, student ID etc.). A photograph, not more than a year old, is also required. Photo's will NOT be returned. Appointments are not necessary.

VIP Tour

Milwaukee County Zoo and Zoo Pride have developed a Behind-The-Scene Tour of the Reptile/Aquarium Building, Winter Quarters, Pachyderm and Feline Buildings.

These two-hour tours are available on Wednesdays, Thursdays, Fridays and Saturdays from April 1st until May 25th. Tours will be scheduled to start between 10:00 AM and 1:00 PM. Each tour will include at least three of the areas and will be conducted by specially trained Zoo Pride Volunteers.

The cost of these VIP Tours is \$75.00 for 1 to 10 people, \$140.00 for 11 to 20 people,

and \$200.00 for 21 to 30 people. Fee includes admission to the Zoo and parking. Tours are restricted to persons 12 years or older.

For more information or to make reservations, please call the Group Tour Coordinator, Louise Whitcomb, at 771-3040.

Bird Walk

The Milwaukee County Zoological Society and Zoo Pride invite you to bring cameras, (200mm-300mm) lenses, binoculars, and bird books, to stalk and identify migrating warblers and other birds feathered in their dazzling spring mating colors, on a quiet early morning stroll through the zoo.

Afterwards a hearty breakfast at the zoo restaurant with your hosts, Director Gilbert Boese, and his wife, Wilma.

This fund-raising event will be offered on 2 mornings. Sunday, April 29, and Saturday, May 5, and is limited to 20 people each day.

Walk begins at the Zoo mall at 5:45 AM, gates will be open, breakfast at 7:45 AM. Dress for the weather.

Contributions, made payable to Zoo Pride are \$16.00 per single, or \$30.00 per couple.

Reservations can be made only on the following days. April 9 through April 12, by calling Zoo Pride at 258-5667.

Contributions due no later than April 21.

Indiana Field Trip

Join us for a motor coach tour of three specialized Indiana zoos May 18-20. Departing 5 pm* from the zoo's parking lot Friday night, the trip will take about 5 hours to Lafayette, Indiana. A gourmet box dinner will be served en route.

After a full breakfast Saturday morning, the bus will depart to tour the Indianapolis Zoo. After lunch at the zoo and afternoon sight-seeing, the bus will leave for Ft. Wayne where we will have dinner and stay overnight.

Sunday morning includes breakfast, a tour of the Ft. Wayne Zoo and a short drive to South Bend. After lunch, we will tour the South Bend Zoo. With departure for Milwaukee scheduled for 2:30 pm*, we expect to return home by 6:30 pm*. (*Times are approximate.)

Price is approximately \$150-175 based on double occupancy. A \$50 deposit will reserve your space on this limited tour. The deposit should be sent to:
Zoo Pride-Indiana Field Trip
c/o Leslie Grinker
6256 N. Bay Ridge, Milwaukee, WI 53217

Make check payable to Zoo Pride.

For further information call Leslie Grinker 964-0328 or the Zoo Pride office 258-5667.

EDUCATION

Milwaukee County Zoo 1984 Summer School Program

ZOO DAY CAMPS

This program consists of special tours, animal investigations, and environmental games. 9:30 am to 12 noon on two consecutive days.

Cost:
\$10 for the general public
\$7 for Zoological Society members

Sessions:
#1 June 27 and 28, ages 7 & 8
#2 July 11 and 12, ages 9, 10, & 11
#3 July 25 and 26, ages 7 & 8
#4 August 1 and 2, ages 9, 10, & 11

ZOO ADVENTURE CAMPS

This in-depth investigation will explore the zoo's animal collection, exhibit designs, and zoo operations. This program includes home assignment. 9:30 am to 12 noon on four consecutive days.

Cost:
\$50 for the general public
\$40 for Zoological Society members

Sessions:
#5 July 17-20, ages 10, 11, & 12
#6 August 14-17, ages 8, 9, & 10

VET SCIENCE CAMP

A two day program exploring the care of exotic and native animals, and animal diseases. 9:30 am to 12 noon.

Cost:
\$10 for the general public
\$7 for Zoological Society members

Sessions:
#14 June 21 and 22, ages 9-13
#15 August 3 and 10, ages 9-13

Registration is by mail only. Registration deadline is May 15, 1984. Enrollment is limited to 24 students per program. Run off copies of form as needed or call the Zoo Education Department, for additional forms, at 771-3040 ext. 155.

ZOO PROGRAM REGISTRATION

Session number(s) _____ Amount enclosed \$ _____ General _____ Society _____

Youth's name _____ Age _____ Phone _____

Address _____
City State Zip

Parent's Signature _____

Make check payable and send to:
Zoo Education Department
10001 W. Bluemound Rd., Milwaukee, WI 53226

If the session(s) you have requested should be filled, please list alternatives here:

AT THE ZOO

April 7 — Mandara's Birthday Celebration. Mandara's second birthday, cake to be in the Primate Building. Call 771-3040 for more information.

April 14 (Snow date - April 21) — Egg Days. Scavenger and learning egg hunt and more!

April 21 — Time for Tots. Families with preschool aged children are invited to participate in various learning activities.

April 22 — Easter Sunday. Parade of Animals! Flower exhibition in the Aviary.

April 23-28 — Zoo Investigation Days. Each day will highlight an exhibit with special programming provided by the Education Department.

May 1 — Zoo Pennant Contest. For youth grades 3 through 6.

May 5 and 19 — Photo Workshop for Adults. Fee for Zoological Society members \$15, general public \$20. Call Education Department for details. 771-3040.

May 13 — Mother's Day. Celebrate at the Zoo! All mothers admitted free. Horticultural display and plant sale.

May 23 — White Tiger Premier. For Zoological Society members only. A special invitation to see the newest addition to our animal collection will arrive in the next few weeks.

May 24, 25, 26 — Zoo Workshops. For children 4 and 5 years of age. Fee for Society members \$3, general public \$5. Call the Education Department for details. 771-3040

June 13-17 — Teddy Bear Days! Come join us for this week long special event sponsored by ZOO PRIDE.

June 21 — Annual Picnic. Mark your calendar for our annual, wonderful twilight picnic for Zoological Society members and their families.

June 30 — Cheza Ngoma. Join us for this first, annual, fun-filled fund-raising evening at the Zoo. Live auction, entertainment, Zoo safari tour and more! (See centerfold article and enclosed invitation for more information.)

ALIVE

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Lillian Ramaker, Editor

In support of
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