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THE TIGERS ARE HERE!
***TIGER MOUNTAIN* EXHIBIT**
OPENS AT BRONX ZOO

NEW YORK – May, 2003 -- Few animals stir the human soul like the tiger. *Tiger Mountain*, the newest exhibit at the Wildlife Conservation Society's (WCS) Bronx Zoo, transforms this passion for the world's largest cat into a personal and unforgettable experience.

What could be more thrilling than going nose-to-nose (safely!) with a tiger? As *Tiger Mountain* opens on May 15, this new, year-round home for Siberian tigers will not only get visitors up close – guests will also get to see and learn how zoo keepers keep the big cats playful and content every day. The Zoo's animal enrichment program is showcased at *Tiger Mountain*, to make this cutting edge habitat exciting for animals and visitors alike.

Like other award-winning Bronx Zoo exhibits, *Tiger Mountain* weaves together dynamic exhibit design – including a glass-front pool and motion-activated showers to cool the cats in warm weather -- with the latest information about WCS's work to protect wild tigers and their habitats.

"Tigers are the best advocates for their own conservation," said WCS President and Chief Executive Officer Dr. Steven Sanderson. "The new Bronx Zoo *Tiger Mountain* exhibit will inspire our visitors to understand how our work throughout Asia can ensure that these endangered big cats survive in the wild forever."

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Covering three-acres, the fabulous habitat for the Bronx Zoo's Siberian tigers recreates a corner of the Amur Valley, on the border between China and Russia. Although tigers are the quintessential representatives of wildlife, sadly, their existence is severely threatened throughout their natural habitat. In the Amur Valley, through WCS's efforts the small local population of tigers has increased to an estimated population of between 350-400.

Tiger Mountain brings together all three elements of the Wildlife Conservation Society's mission: scientific study and field conservation; providing optimal care to the animal ambassadors in its zoos; and creating instructional programs that enliven the life sciences and increase our understanding and appreciation for wildlife.

WCS Senior Vice President and General Director for Living Institutions Richard Lattis said, "*Tiger Mountain* offers the perfect blend of species conservation, guest experience, and zoo animal care. At the Bronx Zoo, our biologists, zoologists, and design experts have created an environment that each day, in pioneering ways, will stimulate and challenge our great tigers as it engages and delights our guests who visit from across the street or from around the world."

The Bronx Zoo's Education Department has developed special support materials for teachers to use before and after taking their classes to *Tiger Mountain*. These educational materials, some of which will be based on the Department's longstanding work in China and other tiger-range nations, will make class visits even more meaningful for students.

A Tour through *Tiger Mountain*

Visitors enter *Tiger Mountain* along the *Tiger Trail*, made possible by *Anita and Harry Keefe*, a forest path where horticultural plantings reminiscent of the Amur Valley create a strong sense of place. The entry path immerses visitors in a forest of the Russian Far East as well as

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acquainting them with the natural features of the woodland around them. Reclaimed wood has been used to build the structures throughout the public area. The Douglas fir was recovered from an old railroad bridge in Oregon. It is treated with a non-toxic preservative as an alternative to traditional pressure treatment.

The expansive *C.V. Starr Tiger Valley* habitat is visible from an open viewing pavilion, with glass on three sides, inset deep into the tigers' territory giving visitors dramatic up-close views of tigers. Only a few feet away from the largest of the world's great cats, Zoo-goers can experience *Tigers in Action*. This area provides an interactive focus on WCS's animal enrichment efforts, allowing visitors to observe tigers' natural behaviors and the steps taken by keepers each day to elicit this behavior within the exhibit. Visitors will have access to innovative touch screen monitors that describes all of the different activities and strategies used for animal enrichment, as well as the changing daily schedules. *Enrichment Demonstrations* areas support regularly scheduled keeper talks/demonstrations of animal enrichment components, made possible by *The New York Times Company Foundation*.

Tigers are the largest of the big cats. Three-dimensional elements like cast tiger skulls and paw prints compare a domestic cat to a tiger. Visitors can test their strength against a tiger's by pulling a spring-loaded ball mounted on an artificial log like the ones the tigers use. This test of strength should encourage other curiosities about tigers, such as how much tigers eat. Our latest

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tabulations estimate they consume about 10 pounds of meat a day, equal to approximately 40 healthy-sized cheeseburgers. *The Jonathan L. Cohen Fund for Feeding Tigers* at the Bronx Zoo supports the tigers' dietary needs.

Video monitors take visitors “behind the scenes” to show behavioral enrichment activities and staff interaction with the animals when they are off exhibit, while overhead high luminosity projection screens compliment keeper presentations.

The spacious second habitat for tigers, the *John Irwin II Tiger Ridge*, is a steep slope set in a natural forest, where visitors can view tigers from the glass-enclosed *Virginia and Warren Schwerin Pavilion*. Tigers are one of the few cats that like water. *The Tiger Swimming Hole* - a forest stream with 10,000 gallons of recirculated water - was made possible by *Donald and Barbara Zucker*. It encourages tigers to rest, drink, play, and swim and comes complete with underwater views and a video monitor of tigers swimming in the wild. Elsewhere in this pavilion, visitors can listen to “tiger talk,” -- “chuffing” by a tiger and a keeper, while learning what each sound means to other tigers.

In both pavilions, visitors can identify the tigers on view that day by matching their stripes with those of the displayed tiger photos, as WCS scientists do in nature. The pattern of an individual tiger’s stripes is as unique as a human’s fingerprints. These patterns are captured in the wild by

camera traps as an important scientific "tool" and used to determine the number of tigers in a location, travel patterns, etc. Later in the exhibit, visitors also be "camera trapped." In addition, exhibit graphics describe each tiger's features, encouraging visitors to look closely at the tigers, and develop the observational skills used by field researchers. Zoo-goers can also test their skills at the "Hunt Like a Tiger" pachinko game. Coins dropped through a slot can garner a prey of a peacock, Asian hare, gaur (Asian cattle,) or wild boar -- natural prey for a tiger. The goal of the game is to capture a prey and retrieve the coin -- all unretrieved coins are earmarked for operating support of Tiger Mountain. Another interactive illustrates how well tigers can be camouflaged despite their vivid coloration.

The *Saving Animals in Our Lifetime* station addresses the declining tiger populations around the world and what WCS, a leader in tiger conservation, is doing about it. As in Congo Gorilla Forest, presentation of tiger behavior and life needs connect with objects visitors encountered in the exhibit, using WCS scientists' research techniques for understanding tigers. Once there were eight subspecies of tiger, and today there are only five; the others have disappeared forever. The Siberian, the largest tiger subspecies, has a wild population of 350-400 animals. A range map will compare tiger populations before 1800 and now. Vivid photographs will introduce visitors to the major threats to tigers -- poaching, loss of prey species, and loss of habitat. All tiger populations around the world are in trouble, and WCS is actively working to conserve them in 80% of the top priority tiger areas. It features the efforts of several WCS staff members at work

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throughout Asia, including Dr. Ullas Karanth and his colleagues in India; Dr. Alan Rabinowitz in Myanmar; Drs. Tim O'Brien and Margaret Kinnaird in Sumatra; and Dr. Endi Zhang in China, Russia, and North Korea.

After viewing tigers, visitors will encounter the *Cline Outdoor Theater*, an interactive object theater that uses state of the art technology and digital media to show what threatens tigers and how WCS is working to save them. Visitors will be inspired, through this experience, to become involved in tiger conservation.

The pathway immerses Zoo-goers into a simulated WCS tented field outpost, complete with telemetry equipment, re-created samples of an elk's skull, femur, and vertebrae. An overhead high definition screen provides spectacular films showing the urgency to find and protect tiger populations in nature and the conservation challenges that face WCS field biologists.

Visitors are further encouraged to explore an imaginary "poacher's" abandoned truck called "Evil Unlimited" filled with crates at the *Tigers in Trouble* site, made possible by *Kathy and Alan Greenberg*. Visitors will discover crates fabricated with tiger pelts, rifles, bush meat, chainsaws and other objects that illustrate the three main threats to tigers: poaching, loss of prey, and loss of habitat. Here too interactive touch screens enable visitors to delve into current issues and solutions.

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As visitors enter the last portion of *Tiger Mountain*, striking images and voices of familiar figures including former President Bill Clinton, New York Mayor Michael Bloomberg, actors Glenn Close, Jerry Orbach, and Elaine Bracco, as well as Bronx Zoo visitors, family, volunteers, and staff relay their personal reflections about tigers.

Before leaving, Zoo-goers are given the opportunity to save tigers through a contribution. Each donation receives a special reward -- a tiger "growl" for coins or a tiger "roar" for any amount of paper money. The goal is to allow visitors to take an active role in supporting tiger conservation efforts at the Bronx Zoo and in nature. At three enrollment stations, visitors will be able to send an email "postcard" and later to have access at home to:

- Field reports from WCS field sites around the world
- An e-mail link to the Tiger Micro-site for remote access to more information
- A "You Can Do" section which educates the user about what he or she can do to conserve tigers
- A website subscription function which invites users to enter their e-mail address for additional information on tigers.

The Wildlife Conservation Society staff of field and Zoo scientists, exhibits and graphic arts designers, operations staff, television and media, and technology experts worked collaboratively to create one of the most engaging and technologically advanced Zoo exhibits. The architectural firm of Cetra/Ruddy Incorporated partnered with the WCS team on the *Tiger Mountain* project, along with the construction firm of Humphreys and Harding. Video system and software designers Magian Design played a major role supported by Archipelago Films.

The Wildlife Conservation Society saves wildlife and wild lands. We do so through careful science, international conservation, education, and the management of the world's largest system of urban wildlife parks - the Bronx Zoo, New York Aquarium, Central Park, Queens, and Prospect Park Zoos. Together, these activities change individual attitudes toward nature and help people imagine wildlife and humans living in sustainable interaction on both a local and a global scale. WCS is committed to this work because we believe it essential to the integrity of life on Earth. To learn more about WCS, visit www.wcs.org or www.savingtigers.com (live May 15, 2003.) Visit the Central Park Zoo Gallery for amazing images of tigers and *Tiger Mountain*.



BRONX ZOO ~ *TIGER MOUNTAIN* Exhibit Facts

Tiger Mountain, the Bronx Zoo's newest exhibit: designed to be good for animals, good for guests, good for zoos, and good for conservation

- Only zoo exhibit in the United States that connects people to conservation action, and demonstrates the special animal enrichment activities that keep each animal fit, playful and content.
- Uniquely integrates animal care, exhibit technology, and visitor-zookeeper interaction.
- Close-up viewing of tigers, the world's largest cats.
- Three-acre site; can accommodate up to eight adult tigers (currently, home to six.)
- Tigers can be seen year-round, including during our winter *Holiday Lights* evening event.
- The Animal Enrichment Program, which stimulates animals both physically and psychologically, is a key element -- includes enrichment items such as live fish, a cooling spray which the tigers can control themselves, hot and cool rocks to rest on, and specially designed toys.
- Keeper talks/demonstrations will take place at least four times daily between 11:00 am and 4:30 pm, made possible by *The New York Times Company Foundation*.
- The *C.V. Starr Tiger Valley* focuses on what zoos do for tigers, while the *John Irwin II Tiger Ridge* inside the *Virginia & Warren Schwerin Pavilion* focuses on seeing behaviors characteristic of tigers in the wild.
- Each tiger exhibit area is three-quarters of an acre.
- Night quarters: 4,000 square foot building with radiant heat slab for warmth; complete with a maternity area.
- The *Cline Outdoor Theater* and other discovery areas in *Tiger Mountain* are designed to inform and inspire each guest, as well as motivate them to conservation action
- *Tiger Swimming Hole*, made possibly by *Donald & Barbara Zucker*, is a naturalistic forest stream, created by WCS staff, with 10,000 gallons of recirculated water and live fish and an underwater glass viewing area
- Naturally existing forest
- Recycled wood throughout the public areas (pavilions, theater structures, etc.) The wood, Douglas fir, was recovered from an old railroad bridge in Oregon. It is treated with a non-toxic preservative as an alternative to traditional pressure treatment.
- Public exhibit space – 1/8 acre with pergolas and fabric garden structures.
- Public pathway – 600 linear feet.
- One of WCS's most technologically advanced exhibits, including features such as: year-round touch screens, live cameras that allow zoo-goers to see behind-the-scenes, interactive devices that allow visitors to hear and learn about tiger communication, and a camera "trap" to track visitors as WCS field conservationists track tigers in the wild.

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Tiger Mountain TECHNOLOGY & TIGERS

The Bronx Zoo's new *Tiger Mountain* exhibit makes use of some of the most sophisticated media display technology available. Developed through a consortium of Wildlife Conservation Society (WCS) specialists from its Exhibits and Graphic Arts, Television and Media, Media Services, and Information Technology departments, *Tiger Mountain* brings the magic of tigers to the Zoo visitor in ways never before imagined.

In the past, museum and zoo exhibits were virtually frozen in time on the day they opened. Updating information was time-consuming and costly. *Tiger Mountain's* video, graphic, and text screens can be instantly updated with images from around the world to give the public an up-to-the-minute snapshot of the world of tigers. For instance, video or photographs of events such as the recent discovery of tigers in China or new information about tiger poaching can be loaded directly into the system.

The audience experience has been restructured. In the past, films and videos had to be viewed in dark, indoor theatre spaces. *Tiger Mountain's* video experience takes place in the outdoors. High-brightness touch screens allow media savvy guests to navigate through the tiger's world and WCS's field research projects. Newly developed digital, high-definition video projectors and large-format screens bring amazing, face-to-face footage of tigers in the wild and tigers in the exhibit to zoo visitors in stunning clarity. These images can be programmed by tiger keepers to illustrate behavior. They can also be updated when new images are available.

Significant innovations include:

- High brightness outdoor, water-resistant, year-round touch screens for use by the public. These screens make outdoor touch video a radical new addition to Zoo visits for a highly media savvy urban public.
- Design of an accessible database that allows guests to explore, at their level of interest, current WCS field research projects.
- Innovative use of high brightness back projection and front projection screens in an outdoor setting. This is a new and durable way of allowing media to be part of guest experience without constructing buildings and dark places inconsistent with the high quality park experience that people expect from the Bronx Zoo.
- Design of a changing program of animal enrichment. First is the public view of the enrichment program, which will vary under the guidance of animal keeper staff. Secondly, using state-of-the-art live cameras, guests can see what have traditionally been behind-the-scenes animal care facilities, which address the psychological needs of the wildlife in our care.

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- Zoo-goers tend to experience either quiet days or intense, sunny very crowded days in cultural institutions. To address this concern, **Tiger Mountain** has been outfitted with motion sensors that track guest movement and population, adjusting sound experiences, video presentations and media experiences to optimize guest experience, depending on the visitor population.
- Making the most of news events. The design of the digital experience at **Tiger Mountain** allows the Wildlife Conservation Society to ensure that current events can be applied to update the exhibit experience as desired. With such an important species, current events inform guest experiences and now, with the technical advances in the database and exhibit design, exhibit experiences can directly connect current events in the exhibit.
- Connecting the visitor with the exhibit experience at home. Visitors will be encouraged to send themselves an email as a reminder of their visit to **Tiger Mountain** directly from the exhibit by way of a touch screen. The email will include a tiger photograph and will enable the visitor to stay in touch with the Wildlife Conservation Society.
- Underlying database that manages media assets and distributes them for use throughout the exhibit.
- 18" LCD (Liquid Crystal Display) custom displays with touch and audio that is high brightness and weather resistant.
- Reversa rear projection screen used with projector in weather-resistant housing.
- Mocom 20X front projection screen used with projector in weather-resistant housing.
- Dell pcs and server
- Audio amplifiers
- Marshall bullet camera for the camera trap

Film Design, Video Graphics, Technological Support:

- WCS Departments working collaboratively:
 - ~Exhibits and Graphic Arts
 - ~Television and Media
 - ~Media Services
 - ~Information Technology
- Magian Design - Melbourne, Australia
- Archipelago - New York, NY

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**WILDLIFE CONSERVATION SOCIETY
LIVING INSTITUTIONS
ANIMAL ENRICHMENT PROGRAM**

A History of Innovation

The Wildlife Conservation Society has a long history of innovative approaches to the care of the animals in its Living Institutions. It was the first to develop a true health center. We have outstanding programs in nutrition and our excellent work with emerging animal diseases was instrumental in the discovery of the West Nile Virus. Our innovative exhibits, such as the World of Birds, JungleWorld, World of Darkness and Congo Gorilla Forest, have shown the world that provocative and humane exhibits can be one in the same. These wondrous places inspire our guests to care about wildlife, even as they provide for the well being of individual animals.

Naturalistic exhibits, filled with opportunities to enrich the lives of animals, have replaced the once-popular, sterile concrete enclosures that were easy to clean, but offered the animals little to enjoy. The evolution of the naturalistic exhibit has been in parallel with exciting new developments in animal husbandry. Our veterinary scientists provide animal care equal to that available for humans, whether it be clinical or nutritional. Zoo and aquarium professionals, in spite of the dramatic changes they have created for the physical health of the animals, have only recently begun to truly address the animals' psychological needs. This emerging field of work has been collected under the descriptive umbrella of animal enrichment. It includes elements of training, animal behavior, exhibit design, nutrition, and ecology.

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A Case for Animal Enrichment

Zoo and aquarium animals are less likely to encounter life-threatening disease or injury from predators and consorts. They do not need to go for long periods without food and water and certainly do not risk starvation. Although we would all agree that this is a good thing, we do not truly understand what, if anything, in an animal's life is wanting because it does not experience the challenges of hunting, encountering other hostile animals, etc. Our assumptions are that the absence of some challenges and opportunities for exploration may result in boredom, an increase in stereotypic behavior and may negatively impact an animal's mental health. This is why the animal enrichment program is so vital to our program and why it is essential that we get the best information and the best minds to create solutions and opportunities.

Enrichment is a process that provides opportunities for animals to make decisions for themselves. Training, behavioral studies, food rewards, and the development of things for the animals to do are all products of an enrichment process. As an example, studies of the behavior of some birds in zoos have shown that they prefer to work for their food, rather than have it presented in a bowl. As a result, our enrichment experts have devised a system of wrapping rats in paper and tying this package with string. The birds are delighted to pick at it much in a way they would in nature.

Although the transition from feeding birds in a bowl to making them unwrap food for themselves may seem trivial, it is not. The innate needs of the animal have been met through a science based enrichment program. The keys to any successful enrichment program are science based, strategic and ultimately quantifiable. Our program attempts not only to provide opportunities for Wildlife Conservation Society staff to address the mental requirements of our animals, but also to invite experts in other fields to contribute to the baseline of knowledge that is essential for any successful program.

The Animal Enrichment Program at WCS Living Institutions

The recently formalized Animal Enrichment Program combines the efforts of staff from all the Living Institutions. WCS has incorporated enrichment tools in our husbandry efforts for years, but the formation of this new program recognizes our concern for the mental health of our animals, as well as their physical health.

Curators, keepers, trainers, research scientists are all part of the program – even engineers, exhibit designers and media staff get involved. The exchange of ideas with individuals from academic institutions and experts from the field is an essential part of such a dynamic program. WCS is now in a position of leadership. The Animal Enrichment Program is designed to optimize communication between these groups and utilize their imagination and intelligence with the goal of expanding the knowledge and methods available to provide the richest possible environments and opportunities for our animals. Our results are also made available to all zoos, aquariums and places where live animals are kept.

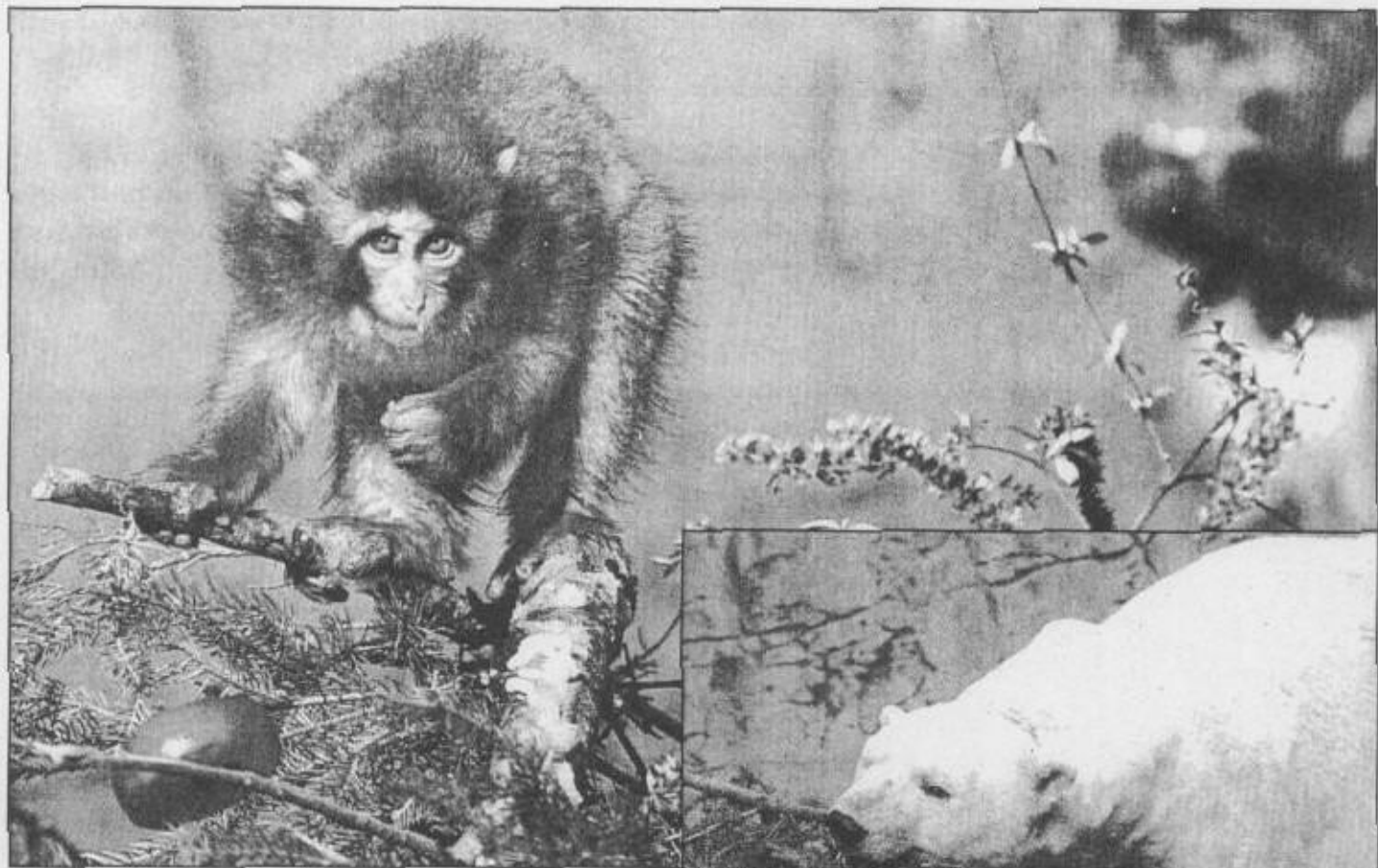
When enrichment is integrated into basic husbandry practices it provides activities and environmental complexities that encourage animals to exercise their natural behaviors. It addresses their psychological and physiological needs, giving them choices and control in their lives. With the opening of Congo Gorilla Forest, WCS expanded the horizon for creating behaviorally rich animal exhibits. Congo has revolutionized how zoos can provide for large social groups in a manner that promotes natural behaviors and inspires conservation efforts. Presently we are taking the lessons learned from Congo and incorporating them into a new Siberian tiger exhibit. Enrichment has been a fundamental aspect throughout the design process of the new exhibit. Not only will we expand the tools available to contribute to a complex and stimulating environment for these magnificent big cats, but we will also bring zoo visitors into the enrichment effort and provide a strong educational message on the psychological and social intricacy of wildlife.

A naturalistic exhibit does not in itself create a program of enrichment. Enrichment opportunities should be provided for all species in our collections in a systematic, planned and documented program. In addition to new exhibit designs, the enrichment program incorporates other habitat enrichment techniques, social enrichment, foraging enrichment,

novel object enrichment, occupational enrichment, adjustment of time budgets, husbandry training as enrichment, and sensory stimulation. One of the notable advances is the design and creation of novel objects, or toys, for animals. These objects promote problem solving, provide new foraging opportunities, and allow the animal to have additional control over its environment.

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AP photo

Above, a Japanese snow monkey at the Central Park Zoo enjoys a snack of apples while perched upon a branch of what was recently the Christmas tree in Rockefeller Center. At right, a polar bear picks up one of the tree's boughs for a little chewing.

Rockefeller Christmas tree now toys for zoo residents

By VERENA DOBNIK
Associated Press

NEW YORK — The Rockefeller Center Christmas tree reappeared Saturday — transformed into toys for polar bears, otters, monkeys and other creatures in Central Park.

At the park zoo just off Fifth Avenue, Gus the bear nuzzled giant slices of the trunk of the 76-foot Norway spruce, licking peanut butter stuffed into drilled holes.

The otters foraged for small fish hid-

den in pieces of hollowed-out trunk.

And the Japanese snow monkeys picked at apples and oranges hanging from an arching branch of the tree.

About half the Rockefeller Center tree was recycled at a New Jersey sawmill and turned into "enrichment toys," as zookeepers call sensory-stimulating toys that keep their animals mentally and physically fit in captivity.

"We're here to celebrate a late Christmas for the creatures," said Chris Kratt, who with his brother Martin hosts the PBS children's nature series

"Kratz's Creatures" and "Zoboomafoo."

A segment on the tree toys will air Monday on the National Geographic Channel, which helped pay for the project. Channel spokesman Russell Howard said enrichment toys are "the hottest trend at zoos across the country."

Zoos from San Diego to Boston to the Bronx have introduced enrichment toys to their animals — everything from plastic ice cube trays, animal-sound tapes and kiddie pools to catnip, old perfume and herbal vinegar.