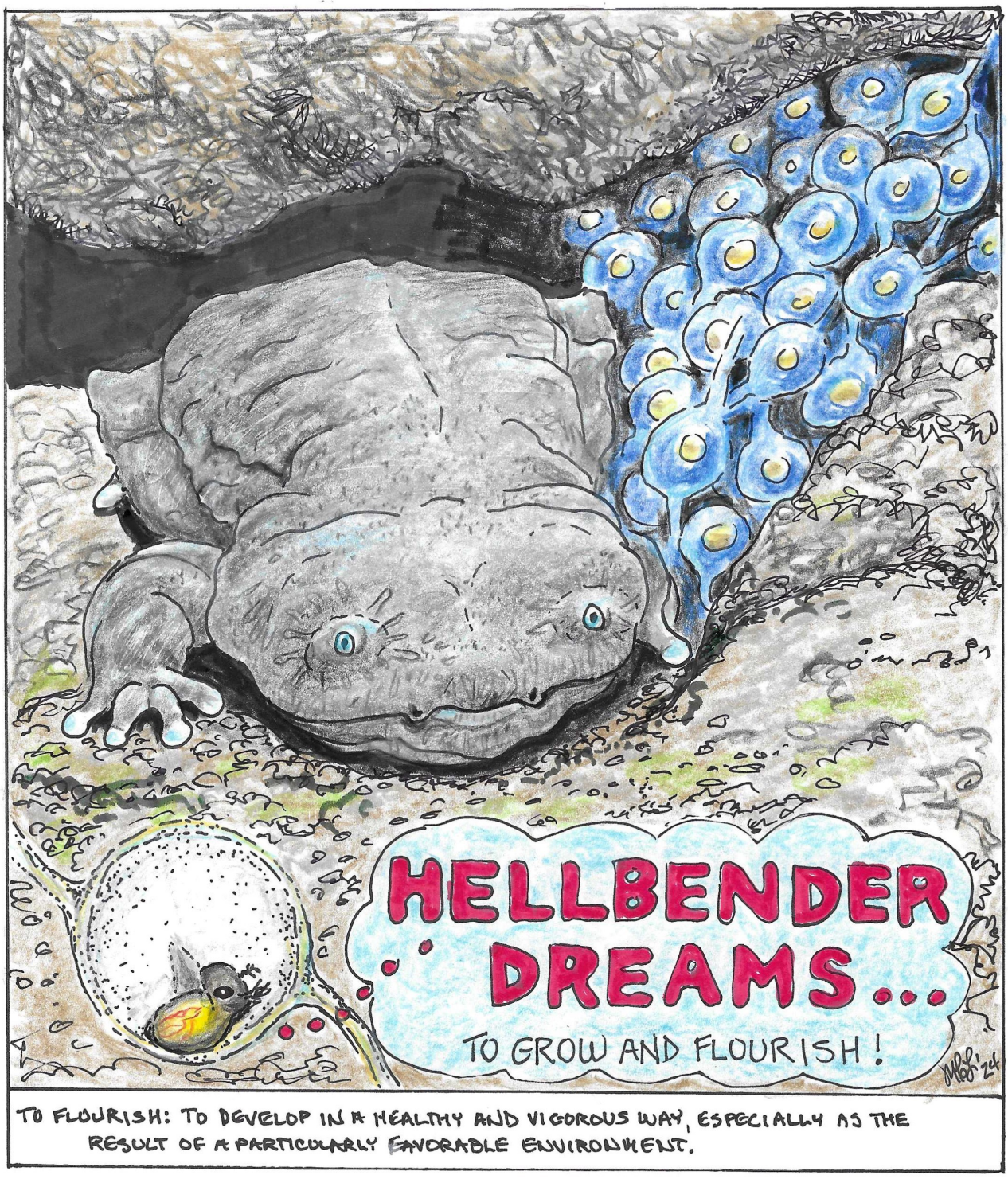
Volunteer Newsletter

The Columbus Zoo and Aquarium Volunteer Newsletter

April 2024



COLUMBUS ZOO AND AQUARIUM

Editor-in-Chief
LINDA CASTNER

Layout Editor
CINDY WESNEY

Copy Editors
KATHY GOLDSMITH
KELLY HANLIN
CATHY SHADE
CINDY PAYNE

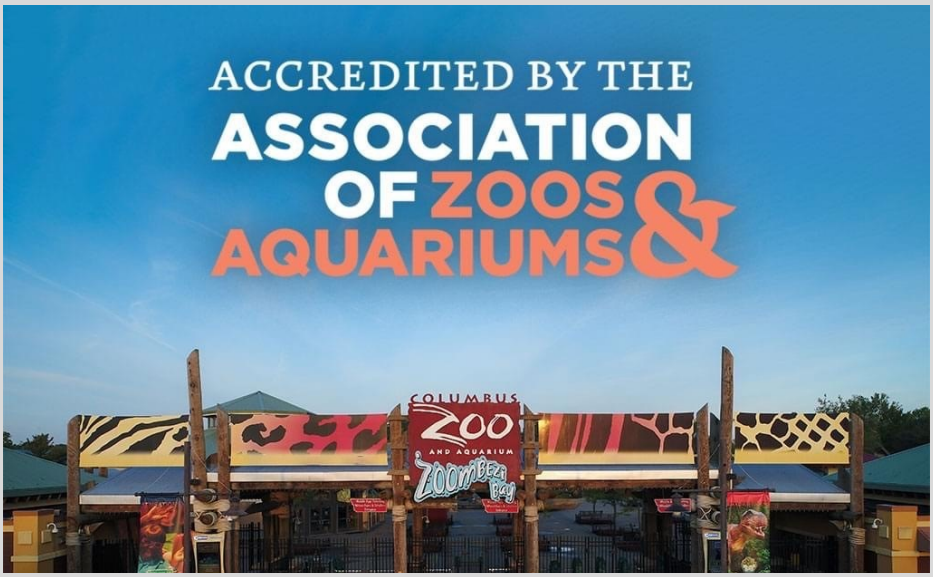
Staff Artist
CHRIS LUTMERDING

Team
SUE ALLEN
JULIANN BREEDING
KAREN LINN
NANCY MULHOLAND
DEBORAH POLING
MARY ROSE
SALLY RUDMANN

The mission of ZooNews is to promote awareness, education, preservation and conservation of our natural world.

To submit an article, please email us at: cbuszoonews@gmail.com

this issue



Conservation Mission Summit

On March 11, 2024, the first Conservation luncheon of the year was held. The luncheon was part of the three-day Conservation Mission Summit. According to the Zoo's Facebook page, "The goal of this three-day summit, which includes an all-day workshop, is to identify gaps in wildlife conservation, emerging issues, and how zoos and aquariums can be a bigger part of the solutions. The information and outcomes gained from this summit will help inform long-term conservation planning across the zoological community and serve as an important foundation as the Columbus Zoo and The Wilds develop new strategies to make an even bigger impact in saving species locally and globally."

The session took the form of a panel discussion in the form of a Q and A facilitated by Jill Allread, CEO of Public Communication Inc. The three panelists were Dr. Lisa Kelley, executive director of the St. Louis Zoo Wildcare Center; Dr. Simon Dowell, Conservation Policy and Science Director of the Chester Zoo in England; and Dr. Jenny Gray, CEO of Zoos Victoria, Australia. Throughout the Q and A, the panelists touched on topics they would be addressing during the summit. The Zoo plans to publish the proceedings of the summit in format accessible to the public in the near future.

During the Q and A, the focus of the panelists was to discuss ways zoos can inspire people, including their own staffs, to broaden their thinking about

Continued on page 3

Conservation Mission Summit, continued from page 2

conservation, and look at ways to expand their audiences even to those who think zoos do not matter to the world of conservation. Panelists spoke about ways to integrate people already involved in zoos and to "cultivate them as advocates." Dr. Gray spoke about how, during the devastating fires in Australia, the zoos decided that it was their mission "to be there for all wildlife." and told some amazing stories of citizens who were inspired by zoos to do their part in rescuing wildlife. Dr. Dowell spoke of his zoo's focus on thousands of "mini projects to cultivate back-yard conservationists."

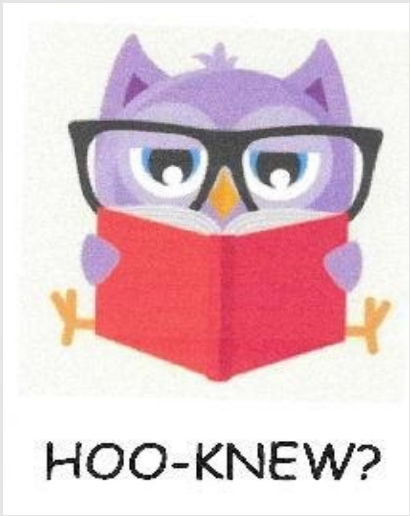
From the Columbus Zoo and Aquarium Facebook page

When asked about barriers to success, Dr. Kelley spoke of the difficulty of measuring impact. "Conservation is in it for the long hall," she explained, and so results are often not immediately evident. Dr. Dowell addressed the issue of long-term funding, and all three spoke of ways to inspire both those who come through their gates and their communities at large to participate in conservation projects.

The tone was decidedly optimistic: the panelists agreed that a "doom and gloom" approach does not work. "Leave that to the scientists," said Dr. Kelley. By highlighting successes and small accessible solutions, such as palm oil guides, zoos are managing to inspire what she called "wildcare partners" of all ages.

By embracing conservation as central to their mission, zoos are looking beyond the animals in their care to the well-being of global populations. All three panelists communicated the idea that by focusing on animal wellbeing, highlighting successes and taking a light approach, zoos can inspire both zoo visitors and entire communities to become committed to conservation solutions.

—Kathy Goldsmith



Wild Encounters Pinnipeds

Did you know that seals' flippers are fur covered with long claws and sea lions' flippers are skin covered with short claws?

Lorikeets

Did you know that lorikeets eat insects?

UNEXTINCT—a Win~Win

We all have a little stress in our lives. Stress is unavoidable and when stressed our bodies go on high alert. Once the threat passes our bodies recover. We learn tools such as mindful breathing from stress events to build resilience against stress. People who are resilient heal from trauma and are more willing to confront and grow from their fears. Resilience is the ability to withstand, adapt to and recover from adversity and stress.

Photo courtesy of Mary Hiser

Our Animal Care Team are dedicated to helping our animals thrive by providing a healthy, safe, comfortable environment in which our animals have choice and control in their lives. But they know all is not perfect and some events impact and have the potential of increasing stress of the animals in their care. Staff are constantly observing and trying to mitigate the cause. For example, the tigers historically pace at the back of the habitat near the tufted deer habitat, assumingly tracking the movements of the tufted deer, to them a prey animal. Through the wellbeing program the behaviors were studied to see if there was a pattern or potential cause. The study indicated this behavior increased in the winter when vegetation between the two habitats was absent (winter). A fence was erected between the habitats to affect that view and the Zoo will continue monitoring and evaluating to see if there has been an impact. The kiwi has historically not been viewable and through studying the natural history of the kiwi and understanding the environments they live in keepers started looking at the sound levels in the living space. After taking baseline data of the sound, and the kiwi's behavior there have been sound panels erected around the exhibit to dampen the sound transmitted into their room by incoming guests. Antidotally the kiwi has been seen more often, indicating a win.

Staff know generally what might happen when the Zoo has a night or crowded public event such as Boo or Wildlights but what they are starting to do is to collect data that evaluates the behaviors of the animals during these events and identifying outside stimuli that may impact the animals so they can more scientifically analyze and validate them. Adam Felts, Senior Curator and Director of Animal Wellbeing, is spearheading this scientific approach in preparation for a new event called UNEXTINCT at the Zoo. Our staff learned about UNEXTINCT, an event at the Sacramento Zoo offered during a time of lower attendance.

During UNEXTINCT, lights, sounds and visitors at night will be the outside stimuli and the Zoo wants to demonstrate a proactive assessment process to ensure the animals acclimate and thrive during the event. Adam feels the animals in Asia Quest are the most resilient so the largest areas that will entertain with lights and sounds will be in Asia Quest. In fact, some of the lights will project into or beside animal habitats while animals can choose to be in the habitats. For example, lights will be projected through the elephant habitat onto the building wall. Adam said the initial response to the lights in the elephant yard were met with amazement by the elephants, Sabu demonstrating a bull like behavior of pushing on the posts, but then went back to his usual behavior. This unusual opportunity for him to

Continued on page 5

UNEXTINCT—a Win-Win, continued from page 4

experience what could be a stressor will continue to help him adapt and prepare him for other stressors that may come along.

Photo courtesy of Bev Larson

UNEXTINCT offers an opportunity to gather actual data to help keep animals thriving during it and other events the Zoo holds. There will be a wellbeing coordinator and an observation intern walking around throughout the event collecting data and watching animal responses. This data will be collected the day before the event, all nights of the event and then the day after to understand the complete impact on their behaviors. When possible, animals will be given access to other outside and indoor areas so they can choose where they want to be.

Animals that are on the radar for the project are the red pandas because the animal sounds near them playing, the lights and sounds in close proximity to markors, tufted deer and aviary, and the lights in the elephant yard. There will be two "party" areas with louder sounds and "disco-like" lights. One is by tiger overlook and Asian aviary and the other near penguins. Penguins will be inside but tigers and muntjacs will have inside/outside options. To help animals adapt a little easier the sounds will begin during the day and at a low level increasing gradually so animals get used to them. The lights will also be introduced in a sensitive way.

Through constant observation, data collection and evaluation Adam feels this event will help our staff make changes for the better for our animals in daily and special event attendance and will make our animals stronger, stimulated, enriched and more resilient to the world in which they live.

—Juliann Breeding

Source: Adam Felts, Senior Curator and Director of Animal Wellbeing

What to do if a Guest has an Animal Welfare Concern

A visitor stops you with a question or concern about an animal's welfare. What do you do?

1. Let them know that the Columbus Zoo and Aquarium and The Wilds' top priority is assuring that every one of our animals receives excellent animal care.

2. Tell the visitor that you will contact the Director on Duty who will contact the Curator on Duty and ask the question. (You can contact the Educator on Duty if the others are not available to you.)

3. If the visitor wants a response, get their contact information and say that someone will get back to her/him.

Source: Columbus Zoo and Aquarium Volunteer Portal

Behind the Scenes……The Browse Business

It seems so commonplace, a porcupine chews on a twig, a moose pulls bark of a bundle of branches, a bonobo uses a stick as a tool to obtain a reward from a man - made termite mound. Scenes like this can be seen almost daily in every region of the Zoo. It is browse, a general term for parts of trees and shrubs which are cut and taken to the animal habitats for added nutrition and enrichment. Let us take a behind the scenes look at what is involved in providing almost 18,900 linear feet of browse to animals every week of the year.

THE WELLBEING COMPONENT

Browse is a vital component of our wellbeing program, impacting the overall health and wellness of the animals in a positive way.

Photo courtesy of Nancy Mulholand

It can be a primary diet item needed for optimal health (koalas), a substantial part of the animal's well-balanced diet providing much needed structural fiber (langurs, colobus, moose) or a dental benefit (capybaras, porcupine).

However, for many of the animals, browse is enrichment. In this role it provides the opportunity for natural species-specific behaviors, offers the animal choice and control, and provides mental and creative outlets for physical activity. Secondary benefits include protecting the planted landscape, promoting the visibility of the animal, and enhancing the guest experience.

ALL PLANTS ARE NOT CREATED EQUAL

Lists of plants deemed safe or poisonous exist for cats, dogs, horses, and birds, but there can be a lack of information about plant toxicity with regard to many of the animals in the zoo community. The creation and upkeep of browse lists for the wide array of animals in the Zoo is an on-going challenge. Zoos build their own browse lists based upon plants available in their location, their climate, and the animals in their care. The Columbus Zoo and Aquarium uses three different lists of approved browse, a general zoo-wide list of approximately 120 plants, grasses and herbs, a separate list for birds and an evergreen list. The Horticulture and Animal Health Departments are involved in the creation of the lists, plants are verified non-toxic by literature review. The Animal Nutrition Department maintains the master lists and the Planning Department uses these lists when renovating areas around the Zoo. All newly planted landscape materials must be native plants and potential browse. All plants, including those from off-grounds sources, must be

Continued on page 7

verified to be free of chemicals, pesticides, and herbicides. Lists are not static, plants are added or deleted if found to be newly acceptable or toxic in particular situations. The Evergreen Browse List was implemented in 2017. This list includes particular species of hemlock, spruce, fir, Douglas fir and pines that various birds, carnivores, cervids and herbivorous mammals are approved to receive.

Photo courtesy of Jessica Linek

Plants that are on the lists are not necessarily appropriate for all animals.

- Bamboo is approved for elephants and red pandas to ingest; gorillas may also get small quantities. Specific birds may get bamboo to rip apart for behavioral enrichment.
- Six species of maple tree are approved, the popular red maple and red maple hybrids are not.
- Apple and crabapple are approved with fruit and seeds attached only for elephants and moose once they have reached a certain weight limit. Seeds are removed before offering to smaller mammals.
- Honeysuckle and grapevine may be fed to primates and herbivores with fruit and flowers attached, but fruit must be removed before it can be fed to carnivores and omnivores.
- Sweet gum is an approved tree, but the spiney seed pods are not. Seeds pods from honey locust and catalpa trees are permitted for some species.
- Oak trees are excluded from the list, but can be used for perching, climbing structures and deadfall, but not in yards where ruminants live.
- The browse list for birds includes some plants excluded from other animals, birds use tree branches and grasses to build nests, sharpen beaks and for perching, not for eating. The pelicans in Manatee Conservation Center love to build nests and manipulate sticks with their feet, but they only use mangroves from their habitat.

Approved to feed does not always mean the animal likes this particular browse. Ash is an acceptable tree but is not a particular favorite while mulberry and willow are widely accepted. All plant material is labeled as to the species when delivered to the regions and the Animal Care Team records how much was consumed. Fresh leaves are picked from some browse in the summer and frozen for use during winter. Some plants tolerate the freezing and thawing process better than others and some animals accept leaves that have been frozen more readily than others. The colobus monkeys receive the frozen leaves while the langurs do not. Bare branches are often recycled after the leaves have been removed. Leaves are removed from branches in the Asia Quest kitchen. The leaves go to the langurs - they cannot have bark - and the branches to the markhor.

Continued on page 8

Behind the Scenes—the Browse Business, continued from page 7

Photos courtesy of Jessica Linek

SOURCES

In most cases the variety of browse delivered depends on the availability and time of the year. Zoo staff both cut and grow browse. Routine trimming of the Zoo's landscape provides only a portion of the total amount needed. Browse is also obtained from off grounds sources including Dawes Arboretum in Newark and the Chadwick Arboretum at Ohio State. Eucalyptus arrives from sources in Florida and Arizona twice a week. Over 300 pounds of deciduous browse is shipped in weekly during the winter months. However, the largest external quantity comes from American Electric Power's (AEP) Ohio's Trim to Treat program. AEP Ohio collects branches from eight species of trees when trimming close to power lines and delivers it to the Zoo two or three days a week. This material is inspected three different times during the trimming and delivery process to make sure no inappropriate material is mixed in before it gets delivered to the animal areas. Approximately 8000 linear feet is obtained from this program in a typical week. AEP Ohio in the Zanesville and Muskingum County area also delivers browse to The Wilds. Once it has been delivered to the animal areas browse is kept in shade, moist and usually in large tubs of water which are emptied and refilled daily until it is fed to the animals.

The Horticulture Department maintains three greenhouses in the service area behind the Business Office and a "browse lot" of several hundred trees, primarily sycamore, catalpa, pear, apples, crabapples, elms and zelkova, on Zoo property behind the Heart of Africa savanna. Two of the greenhouses contain eucalyptus plants. Along with the trees at the browse lot, the eucalyptus serves as a backup source if a supply chain breakdown occurs. The third greenhouse contains a variety of plants. There are large pots of tropical flowers and annuals seen on grounds in the summer, 200 willow cuttings that are being propagated for planting on grounds when they develop roots and some trees and shrubs that leaf out early in the spring being forced into bloom earlier than usual. This past winter was so mild that plants like forsythia and pussy willow started to bud earlier than usual. Gorillas began receiving blossoms in mid-February this year. Blossoms from ornamental plants wintering in the greenhouse, such as hibiscus, are picked and sent to prioritized animals all winter.

—Nancy Mulholand

Sources:
Dana Hatcher, Stoyan Iordanov, Dave Liggett, Ann Lokai-Owens, Columbus Zoo and Aquarium
www.aepohio.com/community/projects/tree-trimming/trim-to-treat, retrieved 3/3/24
Browse Selection and Management, Chapter 36, Fowler's Wild Animal Medicine Current Therapy, Volume 10, E. Miller, P. Calle, N. Lamberski editors. Elsevier 2023
www.nagonline.net retrieved 3/6/2024

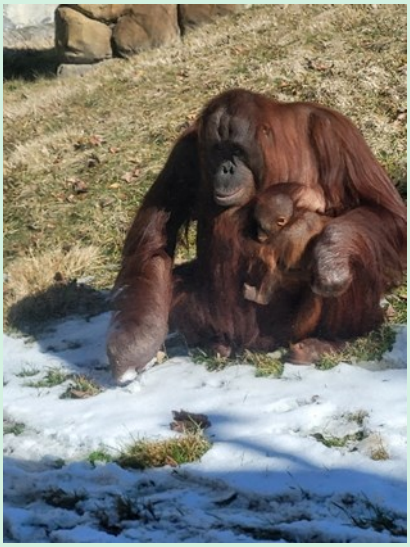
Clementine Goes Outside

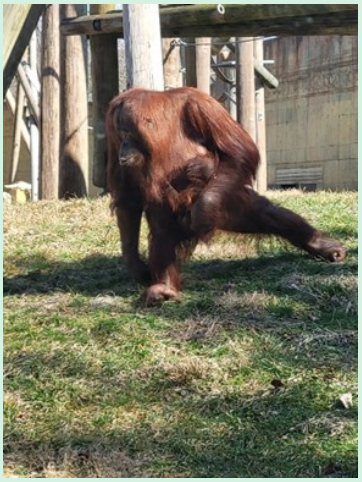
February 26 was an unusually warm day, and the Animal Care Team made the decision to give the orangutans the choice to go outside for the first time since baby Clementine's birth in November. Zoo photographers, staff and a few lucky docents and visitors were on hand to witness the event.

The path was still blocked off for the winter, and keeper Danessa said all they really needed to do was take a quick look around to make sure the yard was "Clementine proof." Khali had climbed high into the indoor room to look out onto the yard, and it was clear she knew something interesting was going on.

Once the door to the yard was open, out they came. Male Sulango was the first one out, and Khali, holding the baby as always, followed almost immediately. "Here comes the baby!" Congo curator Audra Meinelt exclaimed. Soon Khali was leading the way, moving across the yard, and looking behind to see if the others would follow. Clementine, as always, was holding on tightly. Khali began munching on fistfuls of grass, and soon moved across the yard to the lower viewing window. Meanwhile, Clementine seemed to be taking it all in. She started nursing within a few minutes, clearly relaxed and comfortable. Khali was interested in the snow that remained on the ground despite the warm temperatures, and grabbed handfuls to eat, with Clementine watching her closely. Khali stayed at the lower window for a while, and then (to the delight of the visitors who could see her again) climbed back up the hill to sit in the sun and chomp on more snow, while Clementine took it all in from the safety of Khali's arms.

—Kathy Goldsmith





Photos courtesy of Kathy Goldsmith

Conservation in Shores

Conservation efforts have always been important in the Shores region. In the past, freshwater species such as the desert pupfish, Lake Victoria cichlids and others were on view, but behind-the-scenes efforts to raise fish that were in danger of disappearing were in full swing. For example, the largest lake in Africa is Lake Victoria. Over time, about 500 freshwater cichlid species evolved by adaptive radiation, and eventually filled every different environmental niche of the lake. Introduction of a large meat fish, the Nile perch (a sight predator), devastated the population of cichlids. The Columbus Zoo and Aquarium assumed the care and observation of the habits, breeding and feeding of some species of these critically endangered fish. The desert pupfish ran into trouble with the lowering of water tables in the desert and we housed them.

The Johnson Aquatic Center became a refuge for several baby loggerhead sea turtles that were left anonymously at the Zoo. They were raised carefully and were eventually released back to the sea.

Amphibians in trouble have been of great interest in Shores, prompting the study of both reproduction and the raising of neonates in human care. Significant effort has gone into the program of raising and releasing hellbenders, an endangered aquatic salamander native to Ohio. Many of our animal care staff, volunteers, landowners, Ohio wildlife members and crafters participate in this conservation effort. There has been success - this past summer, one of our released males was found to have a nest of eggs in his “hellbender hut” (a human crafted “cave” where the males live, fertilize and guard the eggs that the females lay in there until they hatch). The SUCCESS is that this male hellbender was collected as an egg, raised in human care at the Zoo, released to the wild and has contributed to the next generation. Some of his eggs were brought back to be raised here!

Reptiles such as the endangered Plains garter snakes that we raise and release, monitoring the population of Lake Erie water snakes, turtle reproduction and the raising of the young are all part of our conservation efforts in Shores.

Conservation of freshwater mussels at the Watters Aquatic Conservation Center has been extraordinarily successful in protecting some of the most endangered mussel species. For 20 years their efforts have successfully rescued and provided temporary homes for mussel species impacted by disaster or poor living conditions, usually the result of dams. Staff assess the health of the mussels, propagate them for reintroduction to a stable environment and identify host fishes as part of mussel propagation. (In the wild, host fish “inhale” the glochidia stage of mussel reproduction which attach to their gill filaments for nourishment and eventually drop off to grow into adult mussels.) And lately, developing in vitro propagation methods (raising the glochidia in a Petrie dish on fish plasma substrate, thereby bypassing the need for a host fish) in partnership with Ohio State and the Ohio Division of Wildlife carries on this important work and training of high school, undergraduate and graduate students at this facility. Why all this work? Fresh water mussels are

Continued on page 11

Conservation in Shores, continued from page 10

vital in maintaining healthy river ecosystems. In the U.S,. 20% of threatened and endangered species are freshwater mussels.

Manatee Coast is another example of conservation in Shores. Curator Becky Ellsworth emphasized how important this is to the manatee population in Florida, commenting, “Where else can you make such a difference in a year?” Seeing that orphaned manatees get the care that they need to grow to a releasable size to get back to their home environment is managed for these youngsters. As of this year, 37 have returned to Florida from our Zoo. Stubby, a conditionally non-releasable female who is reevaluated for release every five years, and who was injured in a boat strike in 1995, losing a significant part of her paddle and suffering other recurrent health problems, is part of the team at the Zoo. She is a calming and caring presence to all incoming youngsters.

Discovery Reef and Aquarium, the home of our Indo-Pacific Ocean habitat, reminds us of the importance of protecting our oceans, coral reefs and all that live in them. The Zoo hosts conservation projects such as SECORE (sexual coral reproduction), their mission, to create and share tools and technologies to sustainably restore coral reefs worldwide. An example of their work is the die-out event of Caribbean elk horn corals in 2006. SECORE worked with larval culture and settlement and eventual out-planting of the coral recruits. Our own animal care staff has participated in these activities. By 2015, these recruits spawned after reaching sexual maturity in the wild.

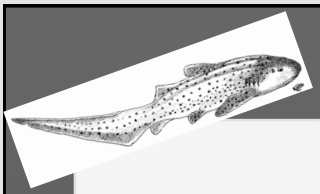
When Discovery Reef opened, it was noted that fish were spawning there. Fertilized eggs were collected; but after they hatch, what do you feed a tiny larval fish? Our Animal Care Team turned to Project Rising Tide (now called Rising Tide Conservation) for help. Their mission statement: Aquaculture research to develop techniques for raising marine ornamental fish for both public displays and aquarium hobbyists. These methods promote conservation and sustainability by providing an alternative to wild reef collection. Our aquarists have successfully raised larval fish with these techniques.

In the past four years, a disease called “stony-coral tissue loss disease” has spread 93 miles over the Florida Coral Reef Tract with an almost 100% mortality rate. This project has rescued 22 species (5000 coral colonies) ahead of the disease. These coral colonies have been dispersed to many institutions for protection and growth, to be used in the future to restore the reef that has died. We have 16 of the original 19 colonies we received that have increased to 31 because of fragmentation and asexual budding. This is conservation in action with hope for the future.

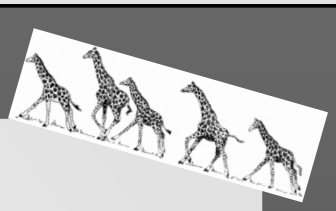
One more thing that is good news in conservation at the Zoo…the new Ohio Center for Wildlife Conservation, the redo of My House in North America. Overseen by ACSC (Aquatic Collections Sustainability Committee) and the Association of Zoos and Aquariums (AZA), it will be the new on-grounds home for the hellbenders, the plains garter snakes, burying beetles and mussels, spotlighting conservation activities of the Zoo and the Wilds leading to the restoration ecology of these species. This will highlight for our visitors some of the local conservation work done here in Ohio, and hopefully inspire others to do their part in conservation in their own back yards!

—Chris Lutmerding

Photos courtesy of Grahm S. Jones, Columbus Zoo and Aquarium



Empowering People. Saving Wildlife.



Welcome New Divers!

Robert Brenner
David Clancy
Donna Clark
Jess Cleary
Chase Connor
Eric Damato
Karin Danklefsen
Joshua DeHart
Stephen Dickson
Dustyn Douglas
Jeff Gallagher
Ashley Grace
Gabrielle Kamps
Jenna Kreider
Justin Kwascigroh
Justin Logan
Martin Morrissette
Mandolyn Newell
Joseph Roberts
Frederick Swarz
Lee Talley
Scott Templin
Lee Young

Welcome New Volunteers!

German Acosta-Campbell
Brandy Allbrite
Yatin Ambani
Jeanne Ashby
Cheryl Banner
Justin Barbour
Ronald Barnes
Carol Barnum
Julie Bergstedt
Nancy Calvary
Christopher Campbell Acosta
Fred Claussen
Laurel Courtney
Helen Davidson
Heather DeMali
Melissa Dippold
Kurt Douglass
Sharon Drummond
Maureen Dunnlevy
Rae Ellis
Bessan Elmosleh
Maggy Everett
Melissa Feinberg
Emma Ficorilli
Susan Fiore
Addie Flowers
Suzanne George
Alice Green
Jack Green
Nate Hale
Angela Hanks
Kirsten Hansen
Peter Hawkins
Renee Hawkins
Cheryl Hollern
Amber Horner
Deborah Hurley
Chandra Jennings
Haitham Khalil
Christopher Killeya
Chris Kristensen
Sheri Kunkemoeller
Mary Lewis
Dawn Loring
Mary Lucas
John MacBain
Marguerite Marsh
Rose Masimer
Hailey McCord
Scott McFarland
Karen McGrover
Anna Menker
Kole Misiewicz
Gregory Monfort
Edward Moon
Deanna Mox
Kimberly Mullins
Allan Nichols
Sheila Kay Nichols
Laurie Niles
Ron Ning
Anna Payne
Bonnie Peterson
Courtney Potts
Dallas Ray
Olivia Roath
McKenzie Sellers
Laurie Shaver
Jacquelyn Smith
Steve Smith
Brenda Snyder
Susan Steele
Jennifer Stoner
Kiera Summerville
Sandra Svoboda
Toni Tamburino
Rachelle Tinsley
Isabella Udeck
James Uhlman
Jill Uland
Theresa VanDeCarr
Kenneth Vitellas
Angela Vitellas
Deanna Walti
Timothy Whetstone
Julia Williams
Linda Wilson