

Where the wild things are: World Association of Zoos and Aquariums meets in St. Louis this week

By Jo Seltzer, Special to the Beacon

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The future of wild animals--among them the mighty elephant, the lowly hellbender salamander, and the American burying beetle--will be the topic of discussion when the World Association of Zoos and Aquariums (WAZA) meets this week in St. Louis.

Leading conservationists, including keynote speaker Ahmed Djoghlaif, the Executive Secretary of the UN Convention on Biological Diversity, will join about 200 heads of zoos and aquaria from all over the world at the Ritz-Carlton Hotel. They will meet for two days of presentations followed by work on plans to implement WAZA's updated conservation strategy. The event is hosted by the St. Louis Zoo.



Hellbender salamander, endangered in Missouri
Photo courtesy of St. Louis Zoo



Jeffrey Bonner, Ph.D.,
president and CEO of the
St. Louis Zoo
Photo by Gregg Goldman

For at least a century, the association's members have emphasized conservation and education, as well as providing inviting places to visit. But in recent years, in the face of human population explosion, climate change, and growing public awareness of the importance of biodiversity, their mission has evolved.

As recently as 1993, most zoos were directing their conservation efforts to rescuing and, if possible, breeding endangered species. But as Jeffrey Bonner, president and CEO of the St. Louis Zoo, puts it, "Wildlife in zoos was *safe* but not *saved*."

In 2005, the association met in London to enhance its mission. Since then zoos and aquariums have moved toward becoming field-based conservation organizations. Bonner, believes wildlife must be helped to thrive in its native habitat, "relatively secure from the depredations of humans."

Zoos are a laboratory for learning

As an example, Bonner tells of how the St. Louis Zoo helped deal with an anthrax outbreak among Grevy's zebras in Kenya.

Grevy's zebra is highly endangered. Just forty years ago, about 15,000 of these striped creatures populated several countries across Africa. Today, only about 2400 remain, a result of big-game hunting in the 1970's, some poaching, and then the loss of several hundred to anthrax during the drought of 2005-6..

Our government had developed a new vaccine against anthrax for equids (animals related to horses.) Conservationists in Kenya rounded up some Grevy's zebras to see if the vaccine would

work for them. But the Kenyans were not accustomed to dealing with penned animals.

Enter the St. Louis zoo. Tim Thier, a zoological manager of hoofed mammals, flew to Kenya to help with the inoculation of several experimental and several control zebras. Zebras in the zoo are routinely inoculated against several diseases, so he knew what to look for. He monitored their reaction for such complications as infections at the injection site and fever.

When the vaccine was declared safe, the Kenyans took over. They darted the animals from trucks or helicopters, while ground crews checked to make sure the dart hit the target. Then they tracked each animal for a day to make sure it had no ill effects. Because each zebra has a unique coat pattern, the inoculated animals were photographed and identified. About 600 animals in the infection hot spots were vaccinated, and the outbreak was contained.



Grevy's Zebra
Photo by Anna Parkinson

Zoos are centers for wildlife medical research

Bonner points out that zoos are uniquely suited for such efforts, because almost all knowledge about veterinary medicine in wildlife is discovered in zoos.

Many St. Louisans will recall that two female elephants here suffered a potentially fatal herpes infection this year. They were successfully treated with a human herpes anti-viral medicine, and curator Martha Fischer happily reports that at present herpes is not in their blood.



Addax being released from crates in Djebil National Park, Tunisia
Photo courtesy of St. Louis Zoo

Zoos are also where experts learn how to breed wildlife. In a number of success stories, zoo-bred animal populations have successfully been reintroduced into the wild. The California condor is one such success story. Another concerns two antelope species, the addax antelope and scimitar-horned oryx. The oryx became completely extinct in the wild 25 years ago, and the addax population was reduced to about 300. Fortunately, these animals had been bred in many zoos. Some zoo oryx

and addax were introduced into a Tunisian nature reserve in the 1980s, and have grown into a sizable herd. A few years ago, the Saint Louis zoo cooperated with several other American and

European zoos to enrich the gene pool by releasing 21 new zoo-bred antelopes to breed with the new Tunisian herd.

Two members of the Saint Louis Zoo staff will give presentations at the WAZA meeting. Eric Miller, the zoo's senior vice-president will speak on the first five years of the WildCare Institute that he directs. Fischer, curator of mammals/ungulates and elephants will speak on her work with Grevy's zebra and on elephant conservation around the world.

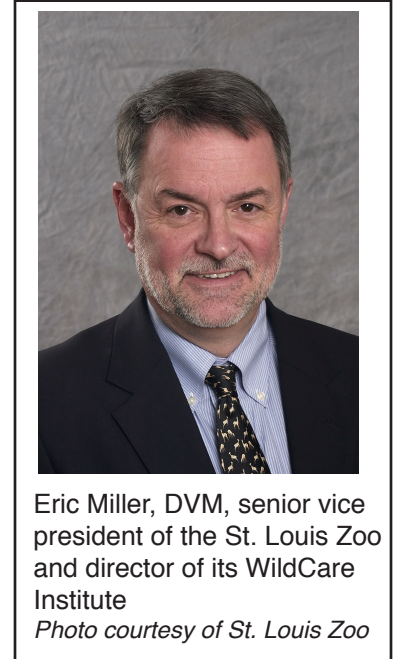
Zoos conserve through partnerships

The WildCare Institute was established in 2004 with a \$19 million gift from the St. Louis Zoo Friends Association and continual funding from the Conservation Carousel. With its twelve centers, it has tripled the zoo's conservation efforts in its first five years. Over 180 partners worldwide have collaborated with the centers.

The institute created 12 programs that zoo senior staff were passionate about. They ranged from saving endangered Missouri hellbender salamanders to Humboldt penguins in Peru to tree kangaroos in Papua New Guinea.

Miller tells many success stories. One of the most striking is the effort in Nicaragua. Two groups of indigenous people requested help with a sustainable hunting plan to prevent overhunting of endangered species. They wanted to maintain their lifestyle, and realized that they could not do that if they hunted their prey like jaguars and tapirs to extinction. They got their plan, and through the partnership of The Nature Conservancy, the Indians were able to gain title to their land. The sustainability plan should allow them to maintain their lifestyle in the largest rainforest in the Americas outside of the Amazon basin.

The Institute tries to look at programs that local people can manage, says Miller. It has already paid half the cost of a doctorate at the University of London for the Tanzanian man who runs the cheetah program in that country on a daily basis. A worker at the Papua New Guinea center was given half the cost of a Master's degree from the University of Missouri-St. Louis.



Martha Fischer, curator of mammals/ungulates and elephants at the St. Louis Zoo
Photo courtesy of St. Louis Zoo

Zoo conservation works for animals and people

The Grevy's Zebra Trust and the Northern Rangelands Trusts in Kenya sponsor programs that show people how the zebra benefits their communities. Ecotourism is very important in Kenya, and can provide jobs and income.

The Grevy's Zebra Trust gives scholarships for high-school expenses to children chosen by the communities.

The St. Louis Zoo has helped its partner, the Northern Rangelands Trust, by raising funds to build a girls' dormitory to house 60 students. That trust also provides microfinancing to creators of beaded jewelry sold at lodges in Kenya as well as at zoo gifts shops.

Bonner, who will shortly retire from a term on WAZA's governing board, points out that zoos today must deal with rapidly deteriorating situations. The effects of global warming must be at the forefront of planning, he emphasizes. Mountainous areas are probably the most threatened. With warming, suitable habitats keep moving up the mountains, until animals have nowhere to go.

Bonner is particularly worried about losing the great diversity of amphibians in the mountain streams from Mexico south. About half of the world's amphibians are already threatened or endangered. Many species are being infected with a deadly fungus that multiplies more rapidly with some climate conditions resulting from global warming.

Because warming allows mosquitoes to survive at higher elevations, about half of Hawaii's unique birds have become extinct due to mosquito-borne disease.

Zoos educate the public.

Education is a major priority of WAZA and its members. As visitors enjoy the antics of orangutans in our zoo's Jungle of the Apes, the signs tell them about declining orangutan populations in the wild. Visitors to the herpetarium will learn which jewel-colored amphibians are common and which are endangered.

Zoos are popular places. Zoos and aquariums in the U.S. get about 175 million visitors every year—more than the attendance at professional baseball, basketball, football and hockey combined. So, Bonner points out, “they have a powerful ability to reach the hearts and minds of the public.” The message of preserving biodiversity is imparted in the midst of a pleasure outing--education at its most subtle.