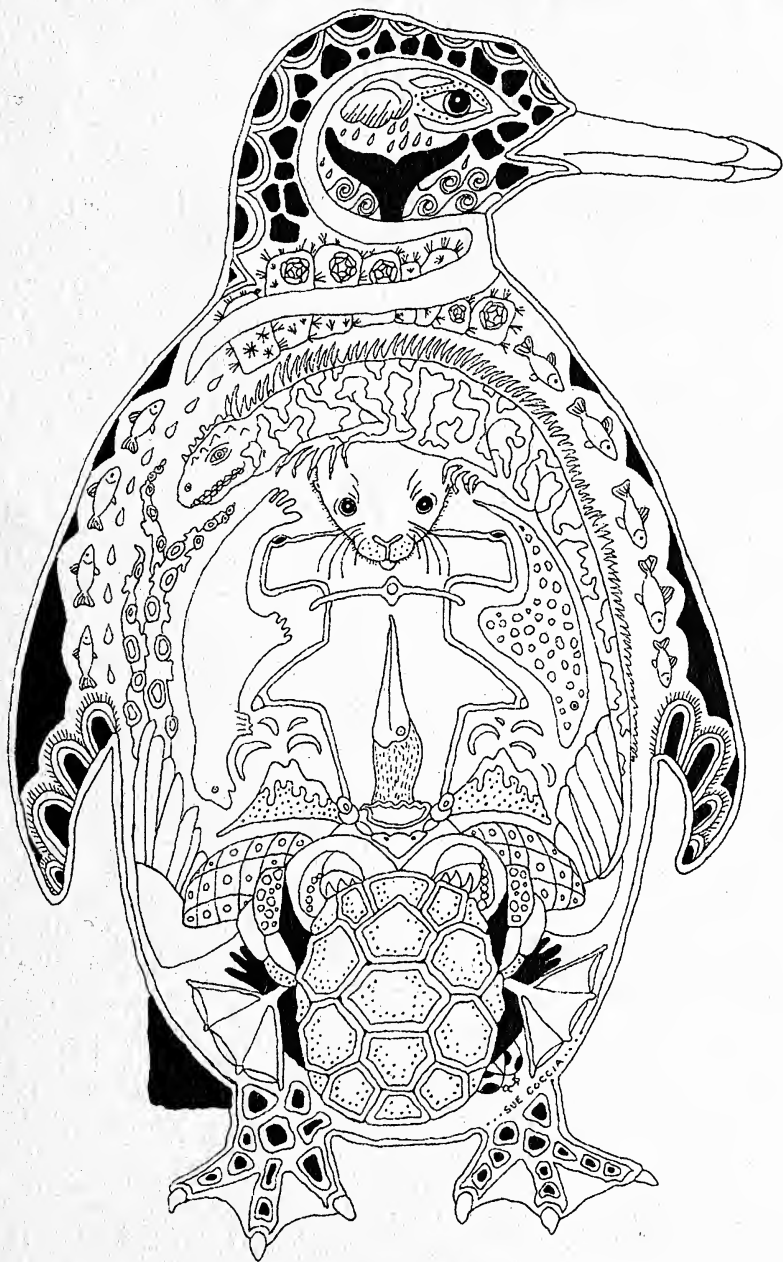


ANIMAL KEEPERS' FORUM



MAY 2008

**The Journal of the American
Association of Zoo Keepers, Inc.**

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also serves as **AAZK Liaison to the American Zoo & Aquarium Association (AZA)**

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34th Anniversary - 1974 - 2008

MISSION STATEMENT

American Association of Zoo Keepers, Inc.

To provide a resource and a forum of continuing education for the animal care professional and to support zoo and aquarium personnel in their roles as animal care givers, scientific researchers, public educators and conservationists. To promote zoos and aquariums as cultural establishments dedicated to the enrichment of human and natural resources; to foster the exchange of research materials, enrichment options and husbandry information through publications and conferences which will lead to a greater understanding of the needs and requirements of all animals.

*This month's cover features this interestingly stylized Galapagos Penguin (*Spheniscus mendiculus*) drawn by professional artist Sue Coccia from Edmonds, WA. Sue submitted the following information to include with her artwork: Penguins do not live in the wild in any location in the Northern Hemisphere. There are 17 species of penguin, each slightly different. The northern-most colony of penguins are located in the Galapagos Islands. The Galapagos Penguins can survive close to the equator because the Humboldt Current brings cold waters to the islands from the Antarctic. They have completely sacrificed the ability to fly, developing flippers, and their feathers have evolved into flattened feather shafts. Penguins are awkward on land but excellent swimmers underwater. In order to breathe while swimming, they 'porpoise' out of the water, take a breath, and then dive back into the water. They are adapted to dive deep and can stay underwater for long periods of time. They understand underwater currents, and spend a lot of time in the water, diving to find food such as crustaceans, krill, fish and squid. Look inside the cover drawing to find the Sea Turtle, Hammerhead Shark, and the very odd Blue-Footed Boobie. The Marine Iguana is basking on the volcanic rocks after a morning swim. One of my favorite experiences is having the honor of swimming with Penguins in the wild! Penguin may find you to give you a sense of purpose when you are lost, and to help you find the determination to get on with your life. Penguins appear to be very purposeful creatures. Many people feel that penguins are also the symbol of good manners and will teach you how to behave politely around others. Penguin energy also has a lot to do with dreams and slipping between worlds. Listen to your dreams how to move through life, and don't forget to find the Ladybug who will bring you good luck! Thanks, Sue!*

Articles sent to *Animal Keepers' Forum* will be reviewed by the editorial staff for publication. Articles of a research or technical nature will be submitted to one or more of the zoo professionals who serve as referees for *AKF*. No commitment is made to the author, but an effort will be made to publish articles as soon as possible. Lengthy articles may be separated into monthly installments at the discretion of the editor. The editor reserves the right to edit material without consultation unless approval is requested in writing by the author. Materials submitted will not be returned unless accompanied by a stamped, self-addressed, appropriately-sized envelope. Telephone, fax or email contributions of late-breaking news or last-minute insertions are accepted as space allows. Phone 785-273-9149; FAX (785) 273-1980; email is akfeditor@zk.kscoxml.com< If you have questions about submission guidelines, please contact the Editor.

Deadline for each regular issue is the 10th of the preceding month.

Dedicated issues may have separate deadline dates and will be noted by the editor.

Articles printed do not necessarily reflect the opinions of the *AKF* staff or the American Association of Zoo Keepers, Inc. Publication does not indicate endorsement by the Association.

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BFR Website: <http://aazkbfr.org>

Scoops & Scuttlebutt



New AAZK Committee Members Named

Board of Directors member Tammy Root (Indianapolis Zoo) has announced the addition of the following individuals to active AAZK committees for which she is oversight: Animal Training Committee - Vernon Presley (Toronto Zoo), Christina Stamer (Dallas Zoo), and Audra Emberton (Disney's Animal Kingdom); Enrichment Committee - Julie Hartell-DeNardo (Oakland Zoo) and Beth Rich (Racine Zoo). We welcome these new committee members and thank them for their willingness to participate in these important AAZK committees.

A Word to Those Submitting Papers to AKF

Please remember that when submitting photographs with your paper submissions to *Animal Keepers' Forum* that such photos need to be high resolution (minimum 200dpi/300 dpi better). Photographs taken with cell phones generally do not have high enough resolution to reproduce well. Both papers and accompanying photos, charts/tables/graphs may be sent electronically to the editor's email address (akfeditor@zk.kscocxmail.com). Photos, graphs, tables and charts should be sent as individual jpg or tif files. Authors may submit their papers with such graphic elements imbedded in order to give the editor an idea of how they would like the final manuscript to appear in *AKF*. However, be aware that because the editor is translating the sent manuscript into the more compact *AKF* page size, this is not always possible, although we will do the best we can to come as close as possible to the original. Also, be sure to include information on proper photo credit for each photo submitted, and you may submit suggested captions as well.

Additionally, it is preferred if manuscripts are submitted in 10pt Times New Roman font for body text with 14pt Times New Roman for title. Authors are asked to include their name, title, institution, city and state. Thanks for your cooperation in following these submission guidelines. --Susan Chan, Editor

Renewing Membership with PayPal - A Few Reminders

If you join or renew your membership in AAZK on the website (www.aazk.org) and use PayPal as your method of payment, please be aware of the following:

- The information we receive at our office via email confirmation from PayPal only lists the name on the credit card being used for payment. Therefore, the AAZK membership card we issue will be in that name. So, if you use a credit card other than one in your own name (spouse's, parent's, friend's, whatever), you need to email Barbara Manspeaker at aazkoffice@zk.kscocxmail.com letting her know that a PayPal payment for your membership is coming in, but the PayPal email confirmation will be under another individual's name.
- Also, the information AAZK's receives from PayPal does not tell us the zoo or aquarium with which you are affiliated. When you pay via PayPal, we ask that you email Barbara with your institutional information so that your listing on our membership database may be as complete as possible.
- If there are any problems with or questions about a membership submitted via PayPal, Barbara will be sending an email to whatever email address you have listed on your PayPal account settings. If this is not an email address you check regularly, you may not receive such an email and this could cause delays in processing your membership.

ATTENTION PHOTOGRAPHERS !!

We would like to begin putting together a library of photographs to be utilized in *Animal Keepers' Forum* either as an occasional four-color cover or in conjunction with material inside journal. We plan to gather this photo library electronically in jpg or tif formats. Past President Denise Wagner will be gathering and organizing this photo archive and photographers interested in submitting photos should send them to her at denise.wagner@aazk.org. Photos should be high resolution and in either jpg or tif format. When sending, please include common and scientific name of species featured in photo. Each photo must be accompanied by a Photo Release Form that is available on the AAZK website. You may submit the form electronically to Denise or print it out, obtain required signatures and send by regular mail to Susan Chan, AAZK, Inc., 3601 SW 29th St., Suite 133, Topeka, KS 66614-2054 Attn: photo release.



AAZK, Inc. does not pay for photographs, but will give appropriate photo credit to individual photographers and/or institutions whenever a photo is utilized and a copy of the *AKF* issue in which the photograph appears will be sent to the photographer.

Are You Moving? Help Save AAZK Some \$\$\$!

Make sure to notify AAZK of your change of address. Not only do you not want to miss a single *AKF* issue, but it costs AAZK about a \$1.00 for every *AKF* that is returned by the Post Office as undeliverable! This is money that could be better spent on AAZK's projects and programs. So, PLEASE take the time to notify us when you relocate.

Call: 785-273-9149 or you can email change of address information to: aazkoffice@zk.kscoxmail.com Please put "Address Change" in the subject line. You may also send in a change of address from the AAZK website (www.aazk.org)

See the Reminder Bar on the right side of the Homepage.

2007 AAZK Conference Proceedings Now Available for Download

The papers, posters and workshop summaries from the Galveston, TX 2007 National AAZK Conference are now available to download from the Member's Only Section of the AAZK website (www.aazk.org) They are available either as a complete download of all materials or as individual papers in pdf format. Proceedings will not be published in hard copy, so this will be your only way to access these materials. If you are not currently registered on the Member's Only Section of the AAZK website, you are encouraged to do so soon. You must be a current member of AAZK, Inc. in order to gain access to this section. Besides the Conference Proceedings, there is also lots of other good information available only to AAZK members in the Member's Only Section. See Scoops & Scutbutt from the March 2008 issue of *AKF* for further information on what is currently available there. The AAZK Board, Staff and Committees will continue to add information to this section.

So check back often to see what's new!

From the President

May is an exciting time of year, especially for those of you who have endured another long winter. Migrant birds are returning to their nesting grounds, wildflowers are emerging from the detritus of the autumn fall, and zookeepers are shedding layers of coats, gloves and hats while they prepare their outdoor areas for another busy summer season. This morning, right before I came upstairs to draft this month's Letter from the President, a flock of wild turkeys strutted through my front yard. In their midst, shining angelic, was a pure white albino hen. Many native cultures considered albino animals sacred, and for those lucky enough to gaze upon such a creature, it was considered a sign of good things to come. "Good things to come" is the theme of this month's letter. I'm sure you will agree, the future is bright for AAZK.

Bowling for Rhinos

About the time you read this, Bowling for Rhinos- Sponsored by Blue Rhino® will surpass Three Million Dollars in total funds raised since its 1990 inception. The best conservation projects are those with long term commitment. For 18 years, AAZK members have not only been conserving rhinos, but the entire ecosystems of Africa and Indonesia where rhinos roam. Additionally, affiliate programs of BFR support the surrounding communities, providing education and school lunches to the local children who will become stewards and ambassadors for their native wildlife.

Your conservation efforts do not go unnoticed. In a recent letter from Richard Moller, Director of Operations for the Lewa Wildlife Conservancy, he explained to me "...quite frankly, the many rhino we look after simply cannot do without your help." In similar fashion, a reputable conservation biologist in Indonesia recently opined "Sumatran rhinos might very well be extinct if not for the efforts of AAZK". Recognition in preventing the extinction of an entire species is lofty praise indeed.

We could easily rest on our laurels, basking in the glow of the record-setting year of 2007 for BFR, taking comfort in the knowledge that rhino populations are increasing by 12% annually at Lewa. However, we also know that rhino poaching is increasing and the black market price for rhino horn is higher than ever. Just this year, Lewa lost its first rhino to poaching since 1983. Five poachers have been arrested in Lewa in 2008. Additionally, the political and civil crisis in Kenya over the past year has significantly reduced Lewa's ability to self-generate funds through tourism. BFR is now needed more than ever before. Together, let's make 2008 another record-setting year for BFR. Rhinos will not be going extinct, not on our watch.

Professional Development

This month AAZK is unveiling our very first professional development class outside of an AAZK conference or the Advances in Zookeeping course, taught in conjunction with AZA. The Venomous Animal Workshop will be offered at Catoctin Zoo in Maryland, and is offered in collaboration with the Global Wildlife Trust. Additionally, college credits will be offered to students through Frederick Community College in Maryland.

Professional Development is a major focus of this Association. AAZK is at the forefront of a paradigm shift in how professional animal care specialists receive training and continuing education. Look for many more professional development opportunities in the near future.

Year of the Polar Bear

Eight local Chapters of AAZK are currently working on a pilot project with Polar Bears International (PBI) in support of 2008's Year of the Polar Bear. This is a global conservation education movement with the goal of protecting polar bears, conserving the Arctic ecosystem, and using education to Inform, Inspire, and Empower individuals as ambassadors for positive change in the shadow of global warming. PBI will have a significant presence at this year's AAZK conference in Salt Lake City. I hope you will be there to see some great presentations on climate change, hear some world-renowned speakers, and take part in some other exciting developments that PBI and the conference hosts have planned for you.

AAZK Conference 2008 – Salt Lake City

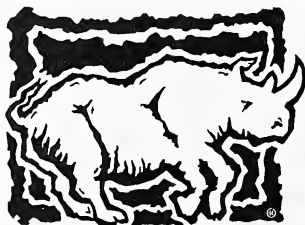
Speaking of the conference, I'm extremely excited about this year's upcoming AAZK conference. The Utah Chapter of AAZK has some very exciting plans! I won't let all of their secrets out, but there is an incredible list of speakers, outstanding professional development options, unprecedented panel discussions, and a general focus of learning, inspiration, and empowerment that will benefit every delegate who attends. The final call for papers has been circulated, the registration form is ready, and now is the time for making your plans to attend (see www.utahaazk.org)

Good Things to Come

I recently learned that AAZK Chapters raised just under One Million Dollars in 2008 for various conservation projects! You are an incredible force in the global conservation effort. Exciting things are happening at every level of AAZK. Let me know how your Association can further serve your professional and conservation endeavors. There certainly are good things to come. I'm betting on AAZK, the membership, the Chapters, and one sacred turkey to make it true.



Shane Good
shane.good@aazk.org



**AMERICAN
ASSOCIATION
of ZOO KEEPERS**

Correction: In my haste to make last month's deadline, I mistakenly omitted the following reference for the article "Sweet Corn for Sally" – A Zookeeper's Perspective on Safety:

Gonzales, Laurence (2007) Why Smart People Make Big Mistakes. *National Geographic Adventure* August Pp. 44-50, 85-86.

Additionally, upon further inspection, I feel that I would have been better served to quote Gonzales in certain aspects of the article rather than attempting to paraphrase. Hopefully the article still provided you with a unique perspective on safety that ultimately keeps you out of harm's way. Stay safe!

BFR Honorary Trip Winner Announced

Bowling for Rhinos is AAZK's biggest conservation effort. There are a number of people who are the true heroes in making AAZK's "Bowling For Rhinos-sponsored by Blue Rhino[®]" successful. Year after year, they tirelessly organize their event with little recognition. Their reward is knowing that they are helping to conserve wildlife worldwide.

In 2007, AAZK, Lewa Wildlife Conservancy, and Anna Merz began recognizing these dedicated members by rewarding them with a chance to see first-hand the results of their dedication. Anna Merz has offered to host an individual and a companion, if they wish, for one week at Lewa Wildlife Conservancy in Kenya. The winner's expenses would be paid and the companion would need to be able to stay in the same room as the winner. The companion would need to pay travel expenses. Travel would occur in October.

Winners must be AAZK members in good standing. These trips will be awarded on an as-warranted basis by the AAZK Board of Directors.

Rules for Honorary Bowling For Rhinos Trip Winner

- Travel will occur the following year in October. This coincides with Anna Merz's trip to Lewa for the fall Lewa Board meeting.
- Anna will "host" the trip winners which entails paying all their expenses at Lewa (except souvenirs & tips) for one week.
- The cost for the trip winner's plane fare, transport cost & hotel in Nairobi (roughly \$2,250) will be covered by Lewa Wildlife Conservancy. AAZK Inc. will hold back \$2,250 from the total BFR amount sent to Lewa in order to cover these costs.
- Recommendations for trip winners will be made by Patty Pearthree to the AAZK Board of Directors. Patty may solicit recommendations from AAZK members in case there are deserving members of which she is unaware.
- Winner will sign a "holds harmless" waiver for AAZK, Inc. prior to travel.

Michael Illig is the 2008 recipient of this trip. Michael has organized the Portland AAZK Bowling For Rhinos events since 1990. He just handed over the position this past year. That makes 17 years in a row that he organized the event!

The Portland AAZK Chapter, through Michael's efforts, has raised the most total amount for BFR over the years and is still #1 by \$30,000 (Oklahoma City Zoo AAZK is 2nd). Portland has raised \$191,280 for BFR since 1990. Portland has been the model event for many years.

Portland has never had a trip winner - until now! However, Portland Chapter has raised the most money in the U.S. and Canada four times so far (1990, 1994, 1995 & 1999). They have always been one of the top 10 money-raising Chapters participating in BFR.

According to a Portland Chapter member, "Michael was the backbone - getting things done for BFR all those years and was the reason we raised so much and really deserves the trip!"

Michael's tireless efforts have not gone unnoticed in the conservation field and so it is with great pride that I announce he be awarded with a free one-week trip to visit Lewa Wildlife Conservancy in Kenya in October, 2009. He and a companion will be hosted by Anna Merz on their one-week adventure to be firsthand observers of the wildlife that benefits from Michael's hard work and dedication. Congratulations Michael for a job well done year after year.

---Patty Pearthree, National Bowling For Rhinos Coordinator



Coming Events

7th Annual Callitrichid Behavioral Husbandry and Management Workshop - May 17-18, 2008. Hosted by the Los Angeles Zoo and Botanical Gardens, Los Angeles, CA. Free with pre-registration. This is a workshop for those working with tamarins and marmosets and will include formal presentations, posters, invited speakers, open discussions, and training demonstrations. It will cover a variety of topics such as husbandry, training, enrichment and conservation. E-mail Erin Fleming ebright_fleming@yahoo.com for pre-registration form and abstract guidelines. For information contact Michelle Farmerie at (412) 365-2385 or email mrfarmerie@aol.com

Australasian Society of Zoo Keepers (ASZK) Conference - May 23-25, 2008 - At Sydney Academy of Sports, Narrabeen, Sydney, NSW Australia. Contact www.aszk.org.au or eo@aszk.org.au

Measuring Zoo Animal Welfare - May 29-30, 2008 in Brookfield, IL, USA. Chicago Zoological Society presents - Measuring Zoo Animal Welfare: Combining Approaches and Overcoming Challenges. Symposium information including registration and abstract submission guidelines are available at <http://www.BrookfieldZoo.org/AWsymposium>

The 9th International Conference on Environmental Enrichment - May 31 - June 5, 2009 in Torquay, Devon, UK. First Call for papers and Registration. Go to www.recc.info for details.

AZA (American Zoological Association) Annual Conference - September 12-18, 2008 at Milwaukee County Zoo, WI. For more info see <http://www.aza.org>

35th Annual American Association of Zoo Keepers National Conference - September 24-28, 2008 in Salt Lake City, UT. The guiding theme, "Elevating Animal Care", will focus on concepts that highlight professionalism, creativity and initiative in the realm of conservation, education and animal husbandry. Animal care professionals from all related fields are encouraged to submit high quality, original topics for consideration. Abstracts are being accepted for papers, posters and workshops until May 1. For more information, please visit www.utahaazk.org, contact the Utah Chapter AAZK at utahaazk@hoglezoo.org or call (801) 584-1784. See insert this issue of AKF.

Association of Zoo Veterinary Technicians 28th Annual Conference - October 2-6, 2008 at Buttonwood Park Zoo in New Bedford, MA. For more information visit www.azvt.org

4th IUCN World Conservation Congress - October 5 - 14, 2008 in Barcelona, Spain. For more info go to <http://www.iucn.org/congress/2008>

Otter Keeper Workshop - October 9-12, 2008 - Hosted by the Oakland Zoo in Oakland, CA. The focus

of the workshop will be North American river otters and Asian small-clawed otters. Topics will include: captive management issues, enrichment, training, water quality, health care, nutrition, diet, hand-raising, exhibit design, lots of sharing of information between keepers. For further information, please contact David Hamilton - call 585-336-2502 or email dhamilton@monroecounty.gov

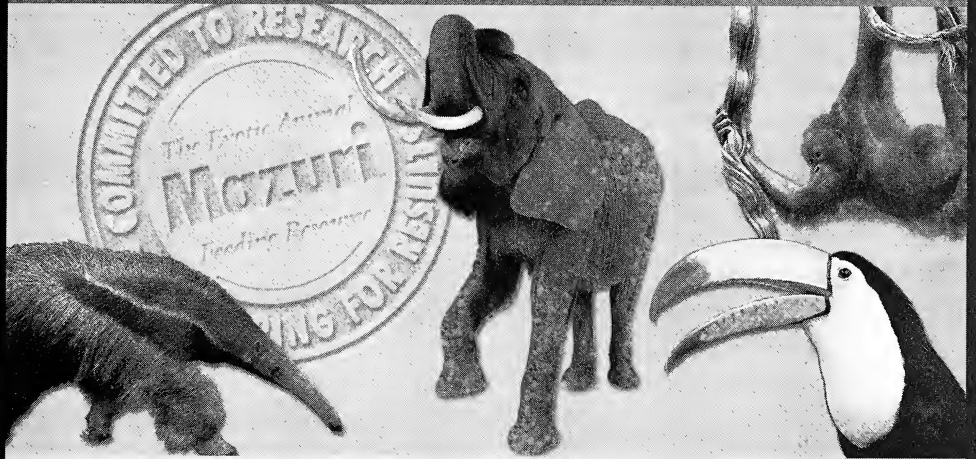
63rd Annual Conference of WAZA (World Association of Zoos and Aquariums) - October 19 to 23, 2008 in Adelaide, Australia. For further info go to <http://www.waza2008.com.au>

2008 Zoological Registrars Association Annual Conference - October 22-25, 2008. Hosted by The Saint Louis Zoo. The Sheraton Westport Chalet has been selected as the conference hotel and they have offered us the government rate of \$106 per night. The hotel provides free airport shuttle and parking. If you have any questions, please do not hesitate to contact Rae Lynn Haliday at haliday@stlzoo.org or at (314) 781-0900 x 372.

Zoos and Aquariums Committing to Conservation - January 23-26, 2009. Hosted by the Houston Zoo, Houston, TX. ZACC is a bi-annual event that promotes the role of zoos and aquariums in supporting conservation activities worldwide, both at their institutions and in the field. Bringing together individuals from different countries and disciplines, ZACC conferences help to build a stronger and more effective global network for wildlife and habitat conservation, and to establish direct links to zoos, aquariums, and their constituencies. For info contact: <http://www.houstonzoo.org/zacc> or conservation@houstonzoo.org

Neotropical Primate Husbandry, Research, and Conservation Conference - October 13-15, 2009 in Chicago, IL. Hosted by the Brookfield Zoo. This conference will focus on a variety of topics pertaining to neotropical primates and will bring together staff from zoological parks, sanctuaries, and universities, as well as field researchers and range country biologists to share the most current information on husbandry, conservation, and emergent issues pertaining to captive and wild populations of neotropical primates. The workshop will include three days of presentations, a poster session, as well as an icebreaker, silent auction, and banquet. Additional information regarding registration fees, travel information, and submission of abstracts will be made available in late 2008. Please

Post Your Coming Events Here
email to: akfeditor@zk.kscoxmail.com



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“One World, One Zoo”

First Call for Papers

A joint conference: The 3rd International Congress on Zookeeping and the 36th National Conference of the American Association of Zoo Keepers will be held in Seattle, WA, USA, in 2009. This will be hosted by The Puget Sound Chapter of AAZK and Woodland Park Zoo.



**ICZ
AAZK**
CONFERENCE
2009 SEATTLE USA

You are invited to submit abstracts of papers, posters & workshops on any aspect of zoo work. More information and guidelines can be found at the ICZ website www.iczoo.org

Abstracts for oral and poster presentations should be written in English, no more than 600 words long, and in RTF or MS Word® format. The abstract should contain title, authors and affiliations with the presenting author in bold letters. Body text to be Arial, font size 12pt and titles size 14pt. If you want to run a workshop focused on developing zoo keeper skills, please send a short description.

Please mark 'ICZ Abstract' and send to: Paul Howse, ICZ Steering Committee at p.howse@chesterzoo.org

Estimated attendance is 350 - 400 zoo workers from over 30 countries.

Deadline for abstracts is 1st April 2009

Conference dates are September 24th - 29th, 2009

International Congress of Zookeepers - www.iczoo.org

American Association of Zoo Keepers - www.aazk.org

The Puget Sound Chapter of AAZK - www.pugetsoundaazk.org

Woodland Park Zoo - www.zoo.org

Point Defiance Zoo & Aquarium - www.pdza.org

Chester Zoo - www.chesterzoo.org

Seattle information - www.cityofseattle.net/html/visitor



AAZK Announces New Members

New Professional Members

Paul Kmiolek, **Bronx Zoo (NY)**; Kelly Heilman, **Philadelphia Zoo (PA)**; David Powell, **Smithsonian's National Zoological Park (DC)**; Tamara Williams, **Virginia Zoological Park (VA)**; Bridget Lutz and Adrianna Diaz, **Santa Fe Community College Teaching Zoo (FL)**; Stacie Marchionne, **Discovery Cove (FL)**; Carolyn Kubasek, Jennifer Short and Nikki Maginness, **Lion Country Safari (FL)**; Audra Emberton and Kim Jensen, **Disney's Animal Kingdom (FL)**; Christine Laird, **Jackson Zoological Park (MS)**; Katie Logsdon, **Hattiesburg Zoo (MS)**; Amanda Rehborg, **Great Plains Zoo (SD)**; Robert Olmstead and Anne Nystrom, **Sedgwick County Zoo (KS)**; Matthew Frolich, **Audubon Zoo (LA)**; Taiana Carvalho, **Fort Worth Zoo (TX)**; Sarah Nowlin, **San Antonio Zoo (TX)**; Yvette Cook, **Cheyenne Mountain Zoo (CO)**; Trina Singley, **Utah's Hogle Zoo (UT)**; Clinton Lusardi, **San Diego Zoo (CA)**; Jenna Troublefield, **Moonridge Animal Park (CA)**; Alexandra Beraha, Jennifer Anderson and Megan Morse, **Wildlife Associates (CA)**; and Courtney Nickel, **Discovery Wildlife Park (Alberta, Canada)**. Beginning with the March 2008 issue of *AKF*, we will no longer list the names of those Professional Members who do not list their facility on their application.

Renewing Contributing Members

Hiroko Yoshida, Ph.D.
Kawasaki University of Medical Welfare
Japan

Danielle Beazley
Lockport, NY

Thomas C. Roy
Detroit Zoo, Detroit, MI

Ron Manseau
Detroit Zoo, Detroit, MI

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Animal Longevity Records Set for Two Species

Tarzan's Favorite Sidekick Cheeta Turns 76

It is 76 years since Cheeta the chimp was plucked from the African jungle to become a Hollywood star in the Tarzan movies. Yet incredibly, he is still going strong. The oldest known living chimpanzee (*Pan troglodytes*) enjoys a leisurely retirement in California, where he enjoys painting, piano and strolling in the sunshine.



Although he was fond of smoking and drinking, both have been forbidden since he arrived more than a decade ago at the Cheeta Primate Foundation in the desert enclave of Palm Springs. He helps pay for his keep with his "Ape-stract" paintings which sell for £75 (~\$150US) each.

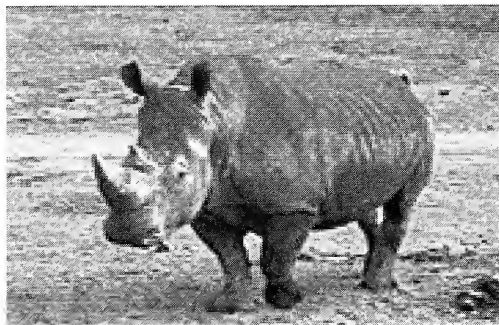
Cheeta, who is 4ft and 140lbs, was "discovered" as a newborn by an animal trainer on a trip to

Africa in April 1932. He appeared soon afterwards alongside Johnny Weissmuller in *Tarzan and His Mate*, and went on to star in a dozen films about the jungle hero who swung from tree to tree. Cheeta, also known as Jiggs, appeared in 50 movies before his final appearance, as Chee-Chee in 1967's *Doctor Dolittle*. He has outlived both Weissmuller, who died in 1984 aged 79, and Maureen O'Sullivan, who played Tarzan's mate Jane and who died aged 87 in 1998.

Chimpanzees in captivity regularly live to about 50, a decade longer than those in the wild. Another old-timer was Fifi, a star attraction at Sydney's Taronga Zoo until her death at the age of 60 last July. But Cheeta is by far the oldest documented chimp. *Source: David Gardner in Daily Mail.com 3/29/08*

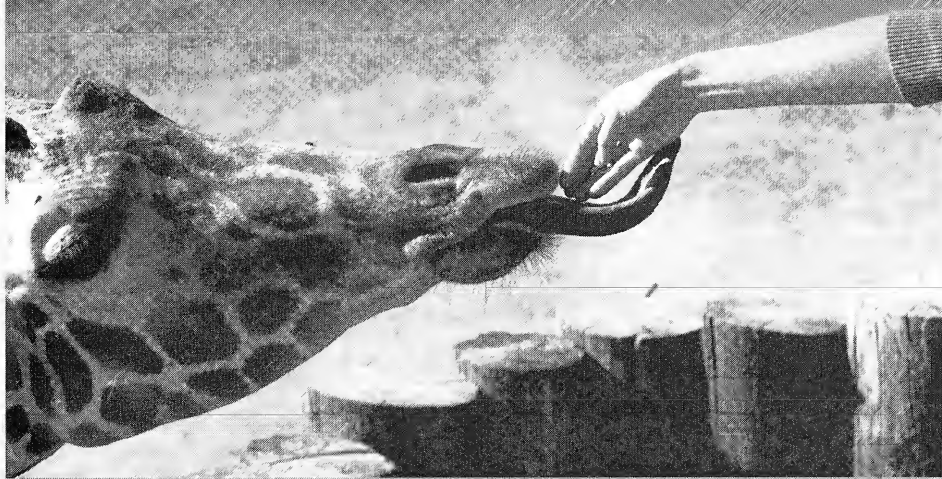
Oldest White Rhino Turns 50

Charly, a white rhino (*Ceratotherium simum*) at the Serengeti Park Zoo in Germany, has turned 50 and the zoo says he could be the world's oldest rhino in captivity. The zoo says that there is no record of any older rhinos in the world's zoos, and they rarely live beyond 40 in the wild.



Charly celebrated his half-century with a "cake" of fruit and vegetables from the zoo where he has lived since 1972. The zoo says Charly is in good shape and their vets are confident he can look forward to many more years in the park. *Source: Reuters 3/13/08*

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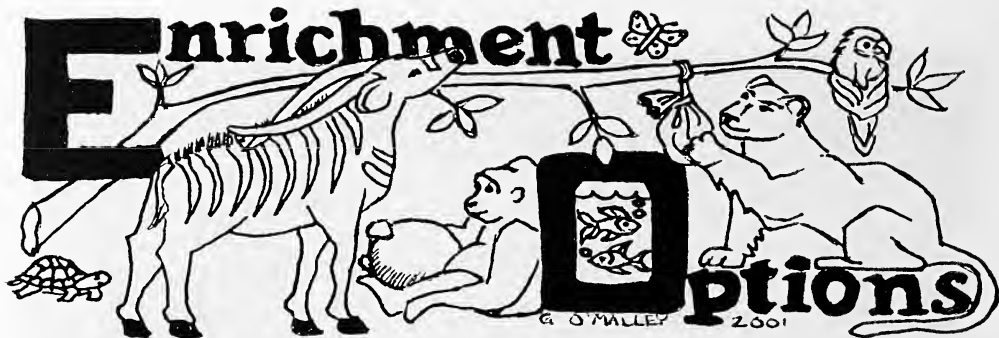
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EO Editor - Rachel Daneault, Disney's Animal Kingdom

No Money?.... No problem! The Animal Enrichment Giving Tree

By Jodi Carrigan – Zoo Atlanta Primate Department

Zoo Atlanta houses over 850 animals, so enrichment can get expensive – especially those heavy-duty items that are strong enough to withstand large mammal play. Wrestling with expenses is a regular part of all of our jobs no matter the size of our institutions' enrichment budgets, but getting staff, volunteers and the public involved is a great way to make a budget of any size go even farther. With a bit of creativity, you can bring enrichment straight to your animals at a very low cost.

Three years ago, I decided to introduce a Giving Tree that would allow volunteers and staff to give Christmas to the animals through the purchase of enrichment toys. The holidays are the perfect time to launch a project like this for sentimental reasons: everyone's already in the spirit of giving, and the tree is a concept everyone understands and for practical ones giving is anonymous, so no one gets embarrassed and no one has to worry about others knowing how much they spent.

First, I asked all of the keepers to submit lists of the enrichment items they wanted and exact names, prices and locations where the items could be purchased. (Obviously, enrichment items should always be approved by your manager, and you should always consider safety.) I also spent some time walking the aisles of local pet stores and searching websites, noting toys that zoo animals would be able to use and enjoy.

Once I had the enrichment list, I did some Internet research and printed photos of all the individual items. To make the ornaments, I used three differently-shaped, flat wooden ornaments (\$1.00 each from an art supply store) and traced their outlines on colored construction paper. Once I cut out the ornaments, I placed a photo of a toy on one side and the name, price, size (where applicable), store or website on the other side. Including specifics meant that it couldn't get any easier to find an item, and all anyone had to do was select an ornament and start shopping. There was no limit as to how many ornaments people could take. (See photo and examples next page)

Example: XXL black Kong® toy

~\$19.00

Any pet store

—or—

Dura Mirror

Item # DM46

\$24.95

www.ottoenvironmental.com



Enrichment Giving Tree

All we had to do then was sit back and wait to see what happened! I sent out a Zoo-wide email telling everyone about the trees, and responses started coming in immediately. Not only was feedback excellent, but people also found creative ways to spread the word. Some of our volunteers took the ornaments to their workplaces and asked for those items as their Secret Santa or gift swap. (Anyone who has a drawer full of useless workplace gift exchange goodies knows that this beats getting another coffee mug or knickknack you'll never use.) To keep everything consistent, I asked that all web purchases be shipped directly to me.

In 2005, we received almost \$3,000 in toys, due in part to a \$1,000 donation from our Zoo volunteers that helped us purchase some of the more costly items. In 2006, we collected around \$1,800. Every bit counts, as we all know!

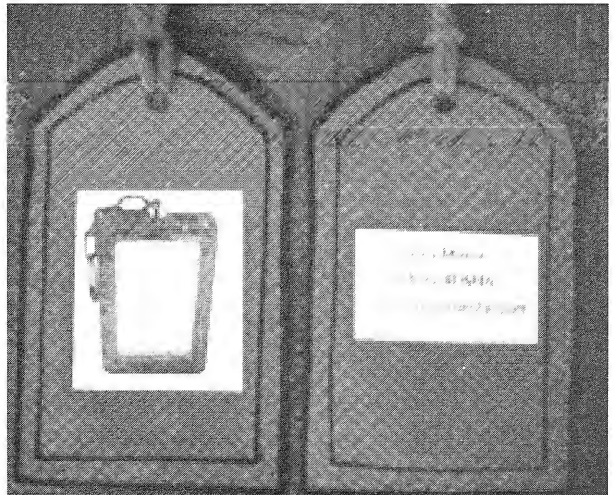
Of course, the most rewarding part was seeing all of the animals play with their new toys. Our slideshow of the highlights was a big hit (as you

know, any time animals and enrichment come together, there are always plenty of laughs) and provided an opportunity for everyone to see their gifts in action.

The items we were requesting ranged from \$2.00 up to \$500.00 for ape-and elephant-proof products, so individuals could choose gifts that best suited their budgets. We even took convenience one step further by offering the option of purchasing gift cards at well-known stores like Petsmart® and Home Depot® that carry enrichment supplies.

The last step was punching a hole in the top of each ornament, tying the ornaments with yarn and decorating the tree. The enrichment ornaments more than filled the tree, and I added a construction paper star and some garland for a finishing touch.

The trees work best when placed in high-traffic areas; in our case, we placed one in the Administration Building lobby and another in our volunteer/education building. We placed each tree next to a large, visible, holiday-wrapped box for convenient toy drop-off.



Giving Tree Ornaments

Giving Tree Materials: Artificial holiday tree(s); large box(es); construction paper; hole puncher; yarn; scissors; tape, glue or full sheet labels; flat wood ornaments in different shapes to trace or die-cut/pre-cut shapes and a black marker.

Optional materials: wrapping paper to cover the box where the toys will be deposited, a star for a tree topper and some garland for added appeal.

(Ideas appearing in this column have not necessarily been tested by the editors for safety considerations. Always think ahead and use good judgement when trying new ideas. You are invited to submit material for the Enrichment Options Column. Look in the January 2004 issue of AKF for guidelines for articles acceptable for this column's format or contact the editor at akfeditor@zk.kscoxml.com for a copy of the guidelines. Drawings and photos of enrichment are encouraged. Send to: AKF/Enrichment, 3601 SW 29th St., Suite 133, Topeka, KS 66614-2054, USA. Eds.)

AAZK Video Night - Submissions Sought

The AAZK Enrichment and Training Committees invite you to submit your enrichment and/or training videos to be presented at Video Night during the 2008 AAZK National Conference. Submissions should be in the following format:

- ◆ In VHS or CD format
- ◆ No more than seven minutes long.
- ◆ Good quality (steady frame, appropriate or no sound, clear picture)
- ◆ Videos may be edited for content and to accommodate time restraints.

We would like to see enrichment that encourages species specific behaviors and innovations in training that help facilitate husbandry and specific conditions. All submissions will be put onto one comprehensive CD. A complementary CD will be given to each facility that contributes a video. Please plan on having a representative present during video night to narrate your facility's submission. Submissions are **due by August 1, 2008** and should be sent to:

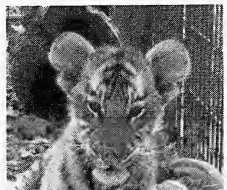
Rachel Daneault
1200 N. Savannah Circle E.
Bay Lake, FL 32830

You will be notified prior to the conference if your video is selected to be viewed at video night. Please contact Rachel Daneault rachel.b.daneault@disney.com or Nikki Bowens rhinogirl1@yahoo.com if you have any questions.

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TIGER MISSING LINK FOUNDATION / TIGER CREEK WILDLIFE REFUGE

Using Cooperative Feeding to Reintroduce

1.1 African Elephants (*Loxodonta Africana*)

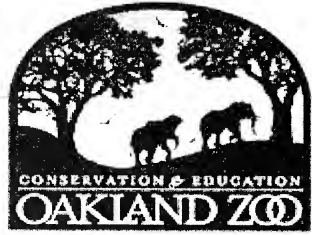
By Gina Gambertoglio, Elephant Keeper
Oakland Zoo, Oakland, CA

In 2004 the Oakland Zoo acquired a young nine-year-old bull, Osh, from Howletts Sanctuary in New England. Osh lived with his mother and aunts who were beginning to kick him out of the herd. In the wild young bulls are encouraged and then eventually forced to leave the herd when the older females start to shove them away with increased aggression. Osh's family in Howletts was doing exactly that, meaning it was time for Osh to move out. Osh's new home at the Oakland Zoo houses three adult females, Donna, M'Dunda, and Lisa. Donna standing at 9'11" [2.77m] and weighing 8,000lbs [4 tons] is the dominant of the three. The first time Osh was introduced in the exhibit to Donna, she chased him around inexhaustibly until she caught up with him, knocked him down, and continued to attack him. From then on Osh's only contact with the girls was through 150 feet of cable fencing separating the exhibit from the lower holding yards. Since that day, it would be another two years before Osh and Donna were reintroduced. After a year of training, using a technique called "cooperative feeding", slowly but surely Osh and Donna were reunited.

The beginning stages of my cooperative feeding were started with a thick barrier of steel as well as space. Donna was stationed parallel to a hydraulic exhibit gate, made of two thick steel beams. Osh was stationed about 50 feet away from the gate. One keeper held each elephant, bridging and reinforcing with small pieces of bread. Slowly Osh was brought closer to Donna, all the while reinforcing them. Donna was reinforced for being calm and non-aggressive and allowing Osh to eat, while Osh was reinforced for moving closer to Donna while remaining calm. Eventually this was done until Osh was within five feet of Donna. We did experience some aggression from Donna as she would thrust her head over the gate to swing at Osh. If she did this repeatedly we would take Osh away and give her a small time out. Slowly her aggression started to decrease. One strategy we found unsuccessful was trying to move Donna toward Osh. Donna found it hard to concentrate and would rush forward and swing at him. This may have been because she was moving toward him and was less focused on us, whereas when she's already stationed in the corner at the gate she focused on her position, maybe similar to an incompatible behavior.

Once we felt that Donna was ready, the top bar of the hydraulic gate was opened half way. This allowed Donna more access to Osh. We started the same way, moving Osh toward her from 50 feet away. Initially there was a slight increase in aggression, but after so many weeks of sessions Donna learned to accept him. Slowly we moved the top bar of the gate open all the way. With this step, the same results occurred as in the previous step. When we got Osh and Donna to a comfortable place, we began to feed them each a flake of hay next to each other. Amazingly enough, Donna did really well with this step and did not try to steal Osh's hay. Sometimes she would take her flake of hay and walk away if it was shady and cold at the gate. This behavior showed us that she wasn't very interested in Osh or the food he had.

The next step of the process was to even lessen the barrier between Osh and Donna using two long strands of 3/8" chain strung along a 20-foot wide path. We held Osh about 30 feet from the chains as we shifted Donna off-exhibit walking her down the pathway to the chains. Stationing her parallel to the chains, while feeding them both bread, we moved Osh closer and closer until he was almost right next to her. We saw the same kind of initial aggression and then decrease we had observed at the hydraulic gate. When this step was complete, we removed the lower chain, and repeated the same process over. Once Donna got used to Osh with one chain, we changed what we fed them. Instead of feeding bread we spread out a bunch of alfalfa cubes and apple wafers for them all over



This photo is of Osh and Donna on exhibit foraging for chopped produce on the ground with no aggression.

Osh left, Donna Right.

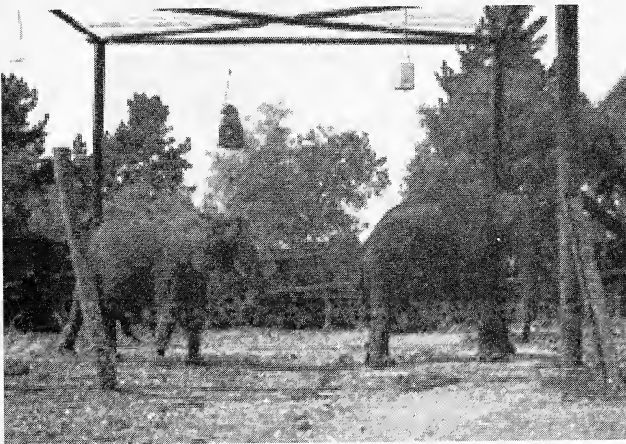
(Photo: Gina Gambertoglio)



Osh(left) and then author, then Donna (right). Here they have a single piece of chain in between them, while author feeds them bread. *(Photo: Colleen Kinzley)*

the ground. Both Osh and Donna would forage around for awhile until the food was gone, and once all the food was gone on Donna's side she would walk away and leave Osh at the chain. At this point it was obvious that Osh was becoming less and less novel to Donna.

We weren't sure where to go next once Osh and Donna were ready to move on from the chain. We did not quite yet feel completely comfortable releasing them together. My manager came up with the idea of putting Donna on a rear leg chain. This was a crucial step into their final reintroduction. Donna has been long accustomed to leg chaining, although we do not use the practice at our zoo for any daily purpose. Any leg chaining we may have done or may have to do would be for medical/emergency procedures only. Donna was put on a rear leg chain of about 20 feet. These feeding sessions lasted for only 15 minutes at a time or until the food ran out. To start with we put Donna on the leg chain and let Osh into the bullyard, one of the three lower yards of three acres in size. We had a hard time feeding them bread and trying to get Osh to move closer, so we changed the way we fed. We spread a bunch of produce around the yard within 60 feet of Donna so it encouraged Osh to get



Leg chain: While foraging for carrots and apples, Osh (right) backs into Donna who is on a rear leg chain.

(Photo: Gina Gambertoglio)

closer to her. After several sessions, Osh moved closer and closer to Donna, sometimes backing into her. She showed aggression to chase him off of the food if he got too close, but he learned his boundaries and she slowly became accustomed to foraging around in the yard with him.

Next, we lengthened Donna's leg chain. To make it much lighter on her, only ten feet was chain and another 50 feet of thin lightweight cable was added. This came as a

surprise to Osh since he knew her boundaries and didn't realize she could move further. This step worked out very well with the same kind of novel aggression but then a decrease in interest toward Osh as she got used to him. After several sessions of this step Donna was ready to be released. We decided to leave the ten feet of chain on her leg. This way, for a short bit, she wouldn't realize she wasn't restrained, as well as a hope that it would slow her down or give her less initiative should she choose to chase him. When we released Donna we were waiting for something big to happen, but nothing did. She approached Osh and then walked away. When we took the leg chain off completely, we observed some minimal aggression; at the most, a warning. Osh and Donna would both walk around and forage for the food, Osh keeping his distance. There were a few times he would try to get close to her, backing into her. She would accept this or sometimes push him away but for the most part she didn't show a lot of interest and certainly did not chase him away. With much hope and confidence on our part, they were ready to go up on exhibit together.

A small feeding of chopped up produce was spread all over the lower portion of the exhibit. Donna was sent up first with Osh soon to follow. After a few minutes of foraging for the produce, Donna realized Osh's presence. Shortly thereafter, Donna chased Osh around the entire exhibit all the way up around the corridor into the upper grass field. Eventually when Osh stopped running, Donna

gave him a few shoves but then Donna cooled off and left him alone. For the next several sessions Osh and Donna did very well. Some chasing occurred, but there was little aggression. Once the two of them were accustomed to being on exhibit together, we put M'Dunda and Lisa up to join them with no problems.



First time on exhibit: After Donna (left) chases Osh around the exhibit, then stops to check him out from across the mudwallow. Keeper Jeff Kinzley stands by to make sure everything runs smoothly. (Photo: Gina Gambertoglio)

I am now proud to say that after two years of Osh having very minimal contact with the females, especially Donna, he was successfully reintroduced after a year of some very intense cooperative feeding. The key was to be persistent by doing many sessions and working slowly, but also being creative. We tried to do sessions in different places of the yard, and in different ways, such as using the leg chain, which really eased the transition. Osh now has a better relationship with Donna than he does with Lisa and M'Dunda. We have often seen Donna actually backing into him at the gate in our lower yards. This is a submissive elephant behavior. One morning they had a huge play bout and Osh actually chased Donna! I rarely see aggression from Donna toward him besides some minor food aggression that she also shows towards the other females once in a while. Osh now goes up on exhibit every day, anywhere from 100hrs to 1500hrs. He enjoys himself with the girls, as we regularly see him interacting with them, sometimes standing side-by-side or gently sparring and twirling trunks. With the use of one small idea, we have changed and dramatically enriched Osh's life in a big way.

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November/December 2007

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Bowling for Rhinos 2008

(Feel free to photocopy this form to submit to Patty Pearthree)



It's time to start planning for "Bowling For Rhinos 2008". Please send in your information ASAP. There is a \$25 administrative fee for each event. Send check made out to AAZK, Inc. to Patty Pearthree, c/o BFR, 318 Montibello Dr., Cary, NC 27513. Remember, if you want to be eligible to win any of the trips being offered, all money must be sent to Patty Pearthree **by 1 September 2008**, and you **must** be a national AAZK member in good standing to qualify. If bowling isn't your thing, try "Rock'n for Rhinos", "Run For Rhinos" or send a Chapter or individual donation. Every penny counts toward saving rhinos worldwide! Questions? (919) 678-0449 or ppear3@pear3.org website: <http://aazkbfr.org>

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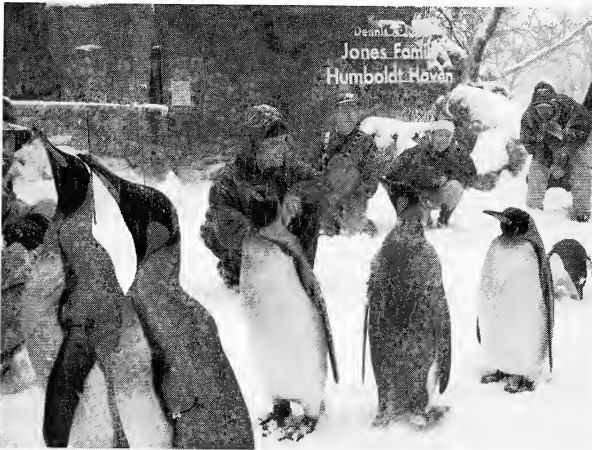
Penguin Parade at the St. Louis Zoo

By

Frank Fischer, Renee Van Deven, Rick Smith
Keepers - Penguin Puffin Coast
St. Louis Zoo, St. Louis, MO

Penguin walks are very popular in Europe and Japan. These walks inspired my fellow keepers, Frank Fischer and Renee Van Deven, at the St. Louis Zoo's Penguin and Puffin Coast. We watched a video of the Basel, Switzerland Zoo's penguin march and they were convinced that it would be great enrichment if we too could march our penguins during the cold months of the year.

A meeting was held with the Bird Department's management. It was agreed that we would investigate making the march a reality. Management received approval from upper management. Next we had to check if there were any veterinary issues because our collection is kept indoors with air filtration, etc. Upon veterinary approval we were given the go ahead to plan how we could successfully accomplish the march.



Authors and penguins in the snow

For the trial march we decided to use only a few individuals and march them in front of the building. We planned to do the march on a slow day with no announcement to the public. The 2007-2008 winter started mild, and there was little free time from the normal routines as we were also hand-raising penguin chicks. Nothing major was done until late February when there seemed to be a window of time and the weather was remaining cold. When time allowed, during our morning routine, each of us

practiced indoors with a couple birds of our choice. The penguins were either walking in the keeper areas and/or in the public walkway. The results were positive and took minimal practice. We were sure that the parade could be done.

On 28, February, 2008 six King penguins (*Aptenodytes patagonicus*) and one Gentoo penguin (*Pygoscelis papua*) walked through our automatic doors and outside. They were fairly calm and took little coaxing to walk and they very curious about the new surroundings. Our audience was three surprised guests, a couple of guards, our curator and ourselves. All of us grinned as the birds explored the walk way along the Humboldt penguin (*Spheniscus humboldti*) display. We all grinned and giggled as the penguins discovered the sunlight, sounds of song birds, rocks etc. Some of the kings even trumpeted with approval. The Humboldt penguins were also curious about their new visitors. Finally we allowed them to walk some of the zoo's pathways in front of our Humboldt area. The birds were

allowed to inspect public benches, climb on mulch and a small portion of snow left from a minor snow fall earlier that week. After about 30 minutes we returned the birds inside. It worked very easily. The parade was a success.

We had planned to do at least one more trial march before the weather became too warm. On 3 March 2008, there was a fantastic snow fall of nearly 25 centimeter (10 inches). It was time to have another trial parade. This time we invited select staff and volunteers to attend. We used the same birds as before and again they responded great. To their surprise there was now snow! Although some of the kings had seen shaved ice from previous facilities none of them had experienced the real thing.



King and Gentoo penguins on parade

They investigated snow banks and snow flakes and one king even began to show toboggan behavior. We allowed them to play in the snow for about 30 minutes. Then we walked them back indoors. The next obvious step was to include the zoo's Public Relations Department in our next parade. Plans were arranged for the next day to allow local media to film the event. This day the morning temperature

had risen to 40°F (4.44°C) and over 50% of the snow had melted. Despite the meltdown we had another successful parade. The penguins continued to explore and interact with the snow. The event made the local news in all media areas.



Frank, Renee and Rick with Penguins

Overall this was a very successful event. It did not take much planning or practice. The key to the parade's success was using proper communication with everyone involved and starting out with a small parade. The penguins we selected had very mellow personalities. There were several other candidates, but they were either nesting or molting at the time of our parades. Perhaps in the future we will include these birds. During the 2008 summer months the plans for next winter's penguin parade will be considered. We want to increase the number of birds used and certainly expand our audience to the general public. Without a doubt this was a fantastic idea and certainly is not our last parade at the Penguin Puffin Coast. ***Let it snow!***

The Animal Training Committee Presents



Where you can share your
training experiences!

*Training Tales Editors – Jay Pratte, Zoo Atlanta;
Kim Kezer, Zoo New England; and Angela Binney, Disney's Animal Kingdom*

Jay's Big Chinese Adventure



*By J.T. Svoke, Keeper II
Zoo Atlanta, Atlanta, GA*

The exchange of animal husbandry information has always been an important link between Zoo Atlanta and the Chengdu Base of Giant Panda Breeding and Research in China. With Chinese colleagues working in contact with the keepers at Zoo Atlanta, the benefits of behavioral training in the daily management of giant pandas was noticed. As a result, Zoo Atlanta keeper Jay Pratte was invited to the Research Base in 2005. He was asked to teach the Base keepers animal training methods to aid in the development of a behavioral husbandry program. Jay was there for one month (November 2005) and worked with the giant panda keepers, showing them how to use positive reinforcement to achieve specific behavioral goals. He also taught them a basic training methods class. Information about the challenges Jay faced and the progress he made during that time was published in the *Animal Keepers' Forum* (Pratte, 2006). If you were also lucky enough to attend the 2006 AAZK National Conference in Chicago, you had the chance to hear first hand everything that he did there (Pratte, 2007). After returning from a four-month stint in Chengdu, January through April of 2007, collecting data for an on-going research project, I thought it might be of interest to report on the progress of the panda training since Jay's departure.

Within the first week of my arrival to the Research Base, I was approached by one of the lead keepers, Den Tao. He asked me if I would be available to help with panda training and to help problem solve. Though we'd never met before, he sought to ask me for help because he wanted to expand the current program due to its success thus far. Although, due to scheduling conflicts, I never had a chance to help him directly with training, the fact that he specifically came to me showed the influence that Jay made on their program. Most of the information discussed in this paper is based on discussions that I had with veterinary staff at the Research Base and at the Chengdu Zoo. I was able to see some training performed at both locations, which also gave some insight to the development of behavioral training programs at the two institutions.

While watching the trainings sessions, it was clear that some training goals that Jay focused on, and techniques he taught, are still being maintained. For instance, fruit (always apples), was cut into small enough pieces to use as a reward to allow for multiple reinforcements. Only large pieces of fruit were used after a session for a job well done. I did notice there are still problems with the conditioned reinforcer (i.e. whistle), which Jay tried to address. As seen before, incorrect timing occurs along with the repetitive use of the reinforcer.

Most keepers that I saw trained their animals in front of areas that had large gaps in the bars, instead of the smaller spaces, which indicates that the keepers have gained the trust of the animals with which they were working. However, I don't know if this had to do with the possibility that these animals were perceived to be non-aggressive or "safe". During my time there I saw training sessions with all but one of the giant pandas, Kebi. This male is believed, by the Research Base staff, to be aggressive and training with him was highlighted in Jay's paper. If I'd been able to watch how the keepers interacted with Kebi, it could have shed some light on how training may have changed how the keepers view some the animals.

At the Research Base, the staff's main focus has been getting all giant pandas trained for voluntary blood draws. When I talked with one of the veterinary personnel, Lou Li, she mentioned that all pandas over one year in age are trained for this behavior. This was the most common training that I saw there. I observed multiple blood draws with a number of individual pandas. This was witnessed most because, unfortunately, it would often interrupt one of my data collection sessions. However, it gave me an opportunity, not only to see some training being done, but also to offer constructive feedback. While watching blood draws, I was also able to see the role that the vets played in the training process. They allowed the keeper staff to position the giant pandas correctly before starting the procedure, and open communication existed between the vets and keepers, which was something Jay encouraged.

At the Research Base, there are four subadults (i.e., age 4) housed together in one social group. To accomplish a blood draw with each, these pandas must voluntarily walk through a transfer hallway to another cage that leads into a squeeze where a blood draw apparatus is stationed. The only time they go into this area is for blood draws or to get weighed.



Giant panda blood collection, Chengdu, China, 2007

(Photo: JT Svoke)

The pandas can't be forced into this area, thus they must do it voluntarily, which they do because of the positive reinforcement that occurs. After entering the squeeze, the individual is trained to present his/her arm through the blood draw apparatus and grasp a bar, allowing the vets to draw blood. During a session, one of the pandas, HuaZuiBa, kept pulling her arm away from the bar not allowing the draw to be done. The keeper waited until she calmed down, asked for the arm again and rewarded the correct behavior. No negative reinforcement or punishment was seen during this time, which in the past may have occurred before Jay arrived. After the blood draw was successful, the keeper took the time and went through all the steps again to help correct the mistakes from before, which allowed the session to end on a positive note.

I also observed training on a number of other pandas. A female panda named Li Li was having problems one session with not positioning in a way that would allow the vet to perform a draw blood. The vet asked for her to be repositioned, and the keeper obliged. With the simple use of "target", he was able to scoot Li Li forward and into an upright position allowing for proper arm placement. After some blood draw sessions, the keepers would work on other behaviors. With a female named Cheng Gong, the keeper positioned her to lie on her back and then manipulated her tail. This most likely was for the purpose of future ultrasound training and possible vulva swabbing (I was not able to confirm this because of the language barrier, but I know these are behaviors that the vet staff want trained). There is also a male panda, Xiong Bang, who has been trained for testicle measurements, which aided a study that was being conducted by a researcher from National Zoological Park. From what I was told, he was trained for this behavior in under two weeks, using a series of small steps.

The biggest surprise to me was the work that is now going on at the Chengdu Zoo, even though only one training presentation was conducted there. As mentioned in Jay's paper, he was asked to teach a basic training methods class for the zoo staff; however, he was unable to demonstrate the techniques with the pandas. I saw one of the giant panda keepers, Mo Fan, conduct a training session with a male, Bing Dian, at the request of a vet. Even though the trainer did not use a conditioned reinforcer and only used tactile reinforcement, much had been accomplished. I watched as the panda came to him when called, then target, present a forepaw up onto the bars, and lie down on his back. Also while Bing Dian was on his back, the trainer was able to manipulate his hind-legs and look at the animal's feet by pulling the legs through the bars. At the time I did not know that Mo Fan had not attended any of Jay's presentation. Because he was unable to attend the presentation, Mo Fan requested information about training, which Jay provided during his 2005 visit. Therefore, just by reading the information that Jay provided about behavioral training methods, he was able to accomplish much.

Because of the successes that Mo Fan has had, along with another keeper in a different area of the



Jay Pratte working with a juvenile giant panda at the Research Base, Chengdu, China, November 2005

zoo, the management of the zoo and the vets recognized the value of this management technique. Paul, a veterinarian from Canada who worked at the time at the Chengdu Zoo (he was also mentioned in Jay's previous paper), said that the zoo was planning to have a series of presentation demonstrations about training and enrichment. They are planning to bring in specialists from a variety of Chinese zoos to talk out how to train and the effect that it can have. This started while I was there. A specialist from a Taiwanese zoo visited the Chengdu Zoo to talk about training and enrichment. During my discussion with Paul, he also mentioned that some of the pandas also knew additional behaviors.

For example, in addition to many of the behaviors mentioned earlier, one of the pandas was trained for voluntary injections. The next step they were planning was to train them for voluntary blood draws, because blood sleeves had recently been added to pre-existing squeeze cages. All this had been accomplished simply through the initiative of a keeper just reading material provided to him.

All the advancements that have occurred at both locations in Chengdu show the importance of sharing and communicating ideas. In just one month, Jay was able to impact the work environment, which not only benefited the animals housed there, but also the keepers by making their routines a little easier. As stated earlier, the great strides made by the Chengdu Zoo in particular are amazing to me. Even though little information was available to them, a keeper took the idea and applied it to his environment. He was able to show the benefit that it provided and now it will have a chance to expand, because of the support of the management there.

References:

Pratte, J. 2006. Teaching Operant Conditioning Methods and Training Program Management in China. *Animal Keepers' Forum*. The American Association of Zoo Keepers, Inc. Vol.33, No.10: 420-426.

Pratte, J. 2007. Teaching Operant Conditioning Methods and Training Program Management in China. *Proceedings 33 National Conference of the American Association of Zoo Keepers, Inc.* Chicago, IL. September 15-20, 2006. Omni Press. USA. pp: 165-171.

ATC Comments (by Jay Pratte): JT and I have an excellent working relationship, and since we have worked extensively together with the pandas at Zoo Atlanta I knew I could rely on him to objectively and honestly tell me what worked or "stuck" with the Chinese keepers, and what did not. What he related to me on his return was a pleasant surprise to me. While some areas and staff did not embrace the new techniques I had endeavored to teach, many more did. It was heartening to hear from JT and one of our visiting experts from the Base who helps each year with artificial insemination, Hou Rong, that many animals are undergoing voluntary blood draws and other advanced medical procedures. We take for granted now in our zoos that operant conditioning and training will allow us to reach husbandry and medical goals quickly and in a positive manner. This line of thinking was absolutely new to the Research Base, and to hear that so many keepers (and the vets and managers) took a new tool and chose to employ it, instead of relying on their tried and true methods, I find exceptionally reinforcing. I'm glad we were able to make an impact, especially at the Chengdu Zoo, and that JT was able to update everyone on how this foreign training program is doing two years later. Thanks JT!

The Animal Training Committee Presents

Training Tales...



Where you can share your
training experiences!

Just a reminder, submit your "Training Tales" and experiences in operant conditioning to share with *Animal Keepers' Forum* readers. This opportunity provides a convenient outlet for you to exhibit your training challenges, methods and milestones with the AAZK member network. See a more detailed description of the Training Tales concept in the August 2006 AKF on page 331. Please submit entries based on the following guidelines:

- a) *Submit a brief description of a training project at your zoo (500 words or less, in text or bullet points). Details should include the following:*
 - *Define the training goal*
 - *List important steps*
 - *Timeline used*
 - *Tips you learned along the way*
- b) *Include 1-2 digital photos (jpg or tif) that clearly depict the animal in the learning process or performing the desired goal (list source and photographer of each image).*

Please send entries or questions to: Jay Pratte at jpratte@zooatlanta.org (use Training Tales Entry as the subject line). Happy training!

Stimulating Natural Hunting Behavior in 0.3 Captive African Wild Dogs (*Lycaon pictus*) Using a Lure Course in a Protected Contact Setting

By Michael Murray, Zookeeper
Binder Park Zoo, Battle Creek, MI

Abstract

Binder Park Zoo houses three female African wild dog (*Lycaon pictus*) sisters that live together at all times. Previously, enrichment to inspire group hunting behavior has been kept primarily to stationary objects. To provoke more active hunting behavior we initiated a lure course program in a protected contact setting with our African wild dogs. The results of this program have proven highly successful to promote desired behaviors while ensuring the safety of both the animals and the keepers.

Introduction

Until recently, the African wild dog was a rare specimen in any zoo's collection. Binder Park Zoo has exhibited these fascinating canids since 1999 when our "Wild Africa" exhibit opened. These animals serve as a tool for connecting visitors to a relatively unknown African predator and have become an ambassador for their wild counterparts in need of conservation.

In the wild, African wild dogs live in pack sizes ranging from two to 27 adult individuals (Woodroffe *et al.*, 1997). These highly social animals have developed a "devil's dog" reputation based on their highly successful group hunting behavior that typically involves an intense chase, at speeds up to 45 mph, that can last several minutes, and cover many miles of territory. This cooperative hunting strategy enables African wild dogs to hunt prey at least twice their size up to animals ten times their weight such as buffalo (Woodroffe *et al.*, 1997). After the well-organized pursuit, that occasionally involves dogs coming at their prey from various directions, the pack usually begins to feed on the prey by disemboweling it while it is still moving. Since group hunting is such a priority in the culture of wild dogs living in Africa, we strive at Binder Park Zoo to encourage this behavior in a captive setting as much as possible. Until recently, all enrichment items presented were stationary objects. This brought us to our new challenge of introducing an enrichment activity that elicits more active group hunting behavior. This brought up the opportunity of lure coursing.



0.1 African wild dog "Boga"
(Photo: Michael Murray)

The Lure Course

For those unfamiliar with lure coursing, it is a system of pulleys embedded in the ground that are connected by a single string. Attached to the string is a lure. This string is powered by a motor connected to a car battery that can move the string, and therefore the lure, at extremely high speeds. Carnivores should instinctively chase the lure.

For the past four years, lure coursing has primarily been used at Binder Park Zoo as an enrichment activity for our cheetahs (*Acinonyx jubatus*). Zookeepers have set up the lure course numerous times to engage cheetahs in natural hunting behavior and to exercise the animal physically and provide mental stimulation. We wanted to transplant this enrichment activity and use it for our wild

dogs. However, our cheetah lure course is managed in a free-contact environment while our African wild dogs are managed strictly as a protected-contact animal. This meant that the keepers operating the lure course and the motor running the lure course needed to be placed safely behind the exhibit fence.

Our African Wild Dog Exhibit:

Our African wild dog exhibit is about one acre in size. It consists of a large grassy hill, and wooded areas around the perimeter that provide shade for the animals and also hide the exhibit fence. At the bottom of the hill is the visitor boardwalk where visitors can view both our wild dog exhibit and our 18-acre savanna exhibit. The savanna exhibit contains many of the wild dog's natural prey including giraffes (*Giraffa camelopardalis*), impala (*Aepyceros melampus*), greater kudu (*Tragelaphus strepsiceros*), Grant's zebras (*Equus burchelli*), waterbuck (*Kobus ellipsiprymnus*), bontebok (*Damaliscus pygargus dorcas*), and Addra gazelles (*Gazella dama*). The dogs have a full view of the savanna exhibit under the boardwalk and at the top of the hill.

Steps to introducing our 0.3 African wild dogs to the lure course:

Step One: Developing a system to see how the wild dogs would react to a moving item.

Before the lure course was set up approval for this enrichment activity was granted by the Collections Supervisor and the Curator of Collections. Numerous meetings occurred to establish the protocol and procedure to ensure keepers and animals remained safe.

The first time we tried the lure course with the wild dogs we did not use any pulleys. We did a straight pull of a cardboard box from the bottom of the exhibit hill to the top. The motor that runs the lure course, along with the keepers operating the lure course, were placed behind the fence at the back of the exhibit. The string was fed through the fence and attached to the box. Two additional keepers were placed on the visitor boardwalk so we were able to have a full visual of the animals in all locations of the exhibit.

We chose to use a cardboard box as our lure for three main reasons. First, the box was a large visual target for the dogs. Second, if the dogs got hold of the box we knew they would probably not ingest it, as we have used cardboard boxes for enrichment numerous times. Third, once the box was at the top of the hill it would hit the fence and the motor could rip the string from the box and leave the box in the exhibit without the string attached.

Results for Step One:

All three wild dogs never lost focus and continued to chase the box up the length of the hill. For this single pull, all wild dogs chased the box from behind. Each dog was given a rat to reward their "hunt".



0.3 African wild dogs chasing lure from behind
(Photo: Angel Mitchell)

Step Two: Putting the lure course on a loop to portray chases lasting several minutes.

The second time around, we placed one pulley in the exhibit at the bottom of the hill and made the string a loop connecting to the motor placed again at the top of the hill. Once again, the keepers operating the lure course and the motor were placed behind the fence. We again used a box for the lure as in Step One. The box was manipulated so it would be able to swing around the pulley at the

bottom of the hill. Once the box reached the top of the hill, keepers manually changed the direction of the string to ensure the box would not hit the fence. At the end of the session, the string was cut and pulled from the box and the box was left in the exhibit. Additional keepers were placed on the visitor boardwalk for full visual of the animals at all times.

Results for Step Two:

In the beginning, all wild dogs chased the box from behind as in Step One. As the session continued, animals would take turns coming in from the side and from behind the lure. At one point, "Asha" was running behind the box while "Boga" came in from the side, resembling the cooperative hunting behavior described in their natural history. The dogs were also observed jumping at the box, investigating the box after it stopped moving, and tearing it apart. All three dogs were given a portion of their daily meat diet to reward their "hunt".



0.1 "Asha" chasing from behind while 0.1 "Boga" comes in on the side (Photo: Angel Mitchell)

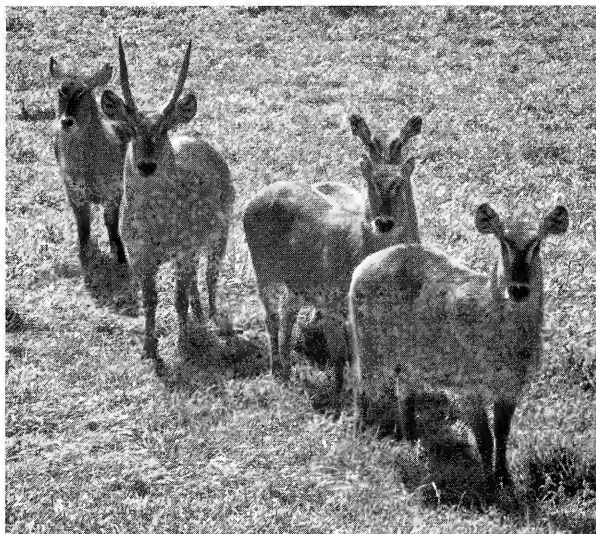


0.3 African wild dogs coming in from side to chase lure (Photo: Angel Mitchell)

0.2 African wild dogs begin to "disembowel" the box (Photo: Angel Mitchell)



An unexpected result of Step Two was that various hoofstock species in our savanna exhibit spent time observing the running wild dogs. Most notably our 1.4 waterbuck (*Kobus ellipsiprymnus*) fixed their eyes on the dogs and alarm called at the wild dogs for the majority of the session.



1.4 waterbuck observing African wild dogs running (Photo: Becky Bolen)

Conclusion

Since the African wild dogs successfully exhibited the high-speed group hunting behavior described in their natural history, we determined that the use of a lure course with them was effective. The cooperative hunting behavior included two different animals running at moving “prey” from different angles that had previously not been observed at Binder Park Zoo. This collaborative hunting behavior was only established because of the moving “prey” that lure coursing provided. The animals were able to reach high running speeds for a sustained period time that previously were only witnessed in short spurts. The wild dogs also simulated the disemboweling behavior by exploring the box at the end and tearing it apart. We even unexpectedly enriched the hoofstock in the neighboring exhibit! Another positive outcome was that the visitors who were able to witness this enrichment activity enjoyed watching and they left the exhibit area learning more about the abilities of the African wild dog. Lastly, the animals and keepers running the lure course were kept safe at all times.

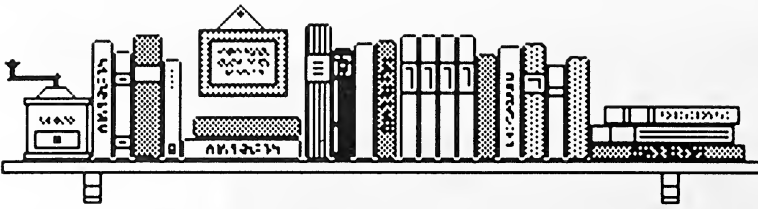
In future lure coursing sessions we will continue to add pulleys and change the pattern of the course. This will make each lure coursing session unique so the activity remains stimulating. At the time of writing, it is the middle of winter in Battle Creek, MI, so lure coursing wild dogs has unfortunately been put on hold until it warms up!

Acknowledgments

Thank you to the Collection Supervisors, the Curator of Collections, and veterinary staff at Binder Park Zoo for encouraging zookeepers to think “outside the box” and allowing us to implement this lure course. Thank you to all the animal care staff who made time in their day to assist with documenting and putting this experience together.

Reference

Woodroffe, R., Ginsberg, J. and Macdonald, D. and the IUCN/SSC Canid specialist group.
The African Wild Dog – Status Survey and Conservation Action Plan. IUCN, Gland, Switzerland. 1997



Wild About Wildlife: Have You Got What It Takes to Be a Zookeeper?

By Lisa Thompson

2007 Compass Point Books, Inc., A Coughlan Publishing Company

3109 West 50th Street, #115, Minneapolis, MN 55410

ISBN 978-0-7565-3616-9

48 pgs. Illustrated with color photos.

Hardbound. Price: \$26.60

Although this volume is listed as being appropriate for ages 9-12, there was a surprising amount of good information in it that might be helpful for anyone looking into pursuing a career as a zookeeper. Don't let its small page number fool you---there is quite a bit here ranging from what type of education is required in the profession to what a typical day as a zookeeper is like; from a brief history of zoos to the zookeeper's role as an astute observer of animal behavior. The book talks about animal diets, animal groups, zoo animal health, wildlife rehabilitation and the purpose of zoos.

I was pleased to see that it did not glamorize the job of zookeeper, but acknowledged that it is often hard physical work and can be a dirty job as well. The photos and illustrations are worked in nicely with the minimalist text and the "PunFun" inserts (i.e. Are evil wildebeests bad gnus?) bring a smile to one's face as you read through it. In the Find Out More section at the end of the book, it was interesting to note that according to the U.S. Bureau of Labor statistics there are more than 170,000 animal-care and service workers in the U.S.; however, fewer than 5,000 of these work in zoos.

AAZK Board Member Jacque Blessington (Kansas City Zoo) served as a content advisor for this publication which I am sure helped keep it accurate while still appealing to pursue. The only thing I found a little disappointing was that the publisher chose not to list AAZK, Inc. and the AAZK website under the Find Out More section. --*Susan Chan, Managing Editor AKF*

Sea Turtles: An Extraordinary Natural History of Some Uncommon Turtles

By Blair Witherington

2006 by Voyageur Press, Galtier Plaza, Suite 200, 380 Jackson St., St. Paul, MN 55101-3885 USA

ISBN 978-0-7603-2644-2

132 pgs. 80 color photos. Hardbound.

Price: \$29.95 US \$38.95 Canada

While some might consider this volume a "coffee table book" it is much more than that although its glorious photos certainly would qualify it for that category. But there is real "meat" inside its 132 pages as well. Marine biologist Blair Ernest Witherington presents an in-depth look into the mysterious world of sea turtles. Accompanied by the exquisite photos, his descriptions comprise a personal introduction to these amazing marine reptiles. Detailed, lively and up-to-date imagery tells the story of sea turtles' distant origins, their specialized form and undersea challenges, senses and life cycle, world voyages and navigational talents - and their ecological roles. The most comprehensive overview of sea turtles to date, this book includes close-up portrayals of each of the seven species, offering information on appearance, distribution, movements, life history, reproduction, diet, unique traits and conservation.

Species covered by the author, who has studied sea turtles for over 20 years, include: Green, Loggerhead, Hawksbill, Olive Ridley, Kemp's Ridley, Flatback and Leatherback turtles. An excellent reference for all things sea turtle. --*Susan Chan, Managing Editor AKF*

Conservation/Legislative Update

Column Coordinators: Becky Richendollar, North Carolina Zoo
and Greg McKinney, Philadelphia PA

This month's column was put together by
column co-coordinator Greg McKinney



SC DNR Gets Grant from Zoo for Reptiles, Amphibians - The Riverbanks Zoo & Garden has awarded the S.C. Department of Natural Resources \$13,000 to help in the implementation of the South Carolina Comprehensive Wildlife Conservation Strategy. The funds will focus on the conservation of four herpetological species: gopher tortoise (*Gopherus polyphemus*), Eastern diamondback rattlesnake (*Crotalus adamanteus*), timber rattlesnake (*Crotalus horridus*) and Southern dusky salamander (*Desmognathus auriculatus*).

The S.C. Department of Natural Resources (DNR) has actively sought partnerships in the conservation arena with federal and state agencies, local planners, nongovernmental groups, developers, and the general public as part of the Comprehensive Wildlife Conservation Strategy planning and implementation process.

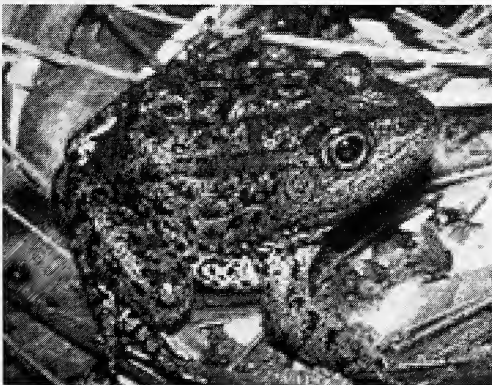
The Comprehensive Wildlife Conservation Strategy is a proactive approach to conservation focused on cooperation, which looks at 1,240 diverse species from the mountains to the ocean of South Carolina. Through its submittal to the Association of Fish and Wildlife Agencies, the state has become eligible and been awarded more than \$3 million dollars in State Wildlife Grants. More information on the Comprehensive Wildlife Conservation Strategy can be found at <http://www.dnr.sc.gov/cwcs/>

State Wildlife Grants allow each participating state to implement the action items discussed within their Comprehensive Wildlife Conservation Strategy on a 50/50 cost share. The Riverbanks Zoo grant will be used to match these grants for the four herpetological species. The gopher tortoise, Eastern diamondback rattlesnake, timber rattlesnake and Southern dusky salamander were selected due to the larger habitats each represents making them key indicators for their ecosystem. Conservation efforts directed to each of these four species will provide benefits far beyond the four species individually. *Source: The Times and Democrat, 3/14/08*

Memphis Zoo Breeds Critically Endangered Mississippi Gopher Frogs by In-vitro Fertilization

The first captive breeding of the endangered Mississippi gopher frog (*Rana capito sevosa*) has taken place at the Memphis Zoo. Approximately 94 tadpoles are developing at the Zoo in off-exhibit areas. This number is significant given that there are approximately 100 adult Mississippi gopher frogs left in the wild. This is the second time ever that a critically endangered amphibian was produced by in-vitro fertilization. The first time was in the spring of 2004 with the endangered Wyoming toad (*Bufo baxteri*), also done at the Memphis Zoo.

Photo: Memphis Zoo



"We are very excited about this scientific breakthrough at the Memphis Zoo," said Dr. Andy Kouba, the Zoo's Director of Research and Conservation. "Hopefully what we have learned here can also benefit other endangered amphibians."

The fully grown frogs will be about two inches long and have large hind feet made for digging. Mississippi gopher frogs have a dark grayish-brown back with distinctly darker bands on the legs. The belly is creamy white, with occasional dark spots. They have a pointed snout and large eyes, which they cover with their front feet when threatened. The Zoo's Mississippi gopher frog conservation efforts were supported by the

Morris Animal Foundation and Institute of Museum and Library Services. In the wild, the Mississippi gopher frogs are found in two shallow, temporary ponds in Harrison County, Mississippi. *Source: Memphis Zoo, 27 March 2008*

Cleveland Metroparks Zoo Initiative Enlists Allies for Imperiled Amphibians - 2008: Leap Year and Year of the Frog. Coincidence or conspiracy? Neither — just clever timing by the Association of Zoos and Aquariums, which is staging the Year of the Frog. Association members, including the Cleveland Metroparks Zoo, have committed this year to stirring up interest in the plight of the world's amphibians — frogs, salamanders, newts, toads and caecilians, which look like worms or eels and live in tropical areas.

Nearly one-third of the world's 6,000 species are in danger of extinction, according to the World Conservation Union. Scientists blame a confluence of factors, including an infectious fungal disease, global warming and loss of habitat. Amphibians infected with a deadly form of chytrid fungus display neurological problems and sloughing skin. The carrier might be the African clawed frog (*Xenopus Laevis*), sold as pets and used in medical research and apparently unaffected by the disease. There is no known treatment.

“Every amphibian on the planet is in danger of going the way of the dinosaurs,” said Geoff Hall, general curator at the Cleveland Metroparks Zoo. The fungus is a significant cause of the losses and has been in North America since the '50s, but habitat loss is by far the biggest problem, Hall said. “We have to value natural land,” he said. “The value of a grove of trees needs to be considered in relation to the value of a shopping center.”

The zoo also hopes to ignite interest through a display of rare amphibians, including Vietnamese mossy frogs (*Theleodermis Corticale*), Puerto Rican crested toads (*Bufo (Peltophryne) lemur*), White's tree frogs (*Litoria caerulea*), terrible dart frogs (*Phylllobates terribilis*) and Oriental fire-bellied toads (*Bombina orientalis*). They'll be on exhibit 22 May to 28 September.

Meanwhile, a consortium of conservation organizations is rescuing endangered species and putting them in protective custody in zoos and aquariums until the threats to their lives have been controlled. The Cleveland facility joined the effort about 11 years ago, when it began efforts to breed the Puerto Rican crested toad, a species on the brink of extinction. And for Project Golden Frog, which began in 2005, the zoo shelters and breeds Panamanian golden frogs (*Atelopus zeteki*), thought to be extinct in the wild. Next, it will research whether the skin of a different species of golden frog contains a chemical that fights the killer fungus. The Baltimore and Detroit zoos are conducting similar studies.

“We could create a strain that has greater resistance to the fungus,” Hall said. Amphibians are the “canary in the coal mine,” he said. “This could wake up people to how we've been behaving on this planet. The green movement begins with the decisions each of us make every day. We have to consider the consequences of our action. We have to look in the mirror and say we are the enemy.” *Source: Cleveland.com Plain Dealer, Fran Henry, 4/02/08*

Grey Wolf Hunts Planned in U.S. After De-Listing - Good news for grey wolves (*Canis lupus*) in the northern Rocky Mountains: They no longer need federal protection. The bad news for the animals? Plans are already in the works to hunt them. Federal Endangered Species Act protection of the wolves was lifted in Idaho, Montana and Wyoming, giving those states management of the estimated 1,500 grey wolves in the region. Even though environmentalists plan to sue the federal government to restore wolf protections, hunts are already being scheduled by state wildlife agencies to reduce the wolf population to between 900 and 1,250.

Idaho hunters will be allowed to kill between 100-300 of the animals this fall under a plan approved by the Idaho Fish and Game Commission. The hunts are partly in response to increasing numbers of livestock being killed as the predators' population has grown. “We manage big game for a living, we're good at it,” said Steve Nadeau, who oversees large carnivores for the Idaho Fish and Game Department. “The world is watching and we know it.”

Fish and Game estimates Idaho now has 800 grey wolves. Should the number of breeding pairs in Idaho fall below a target number, the animals could be brought back under federal protection. After a series of public shouting matches between wolf advocates and opponents, comments from Idaho Department Fish and Game officials seemed largely designed to reassure both ends of the debate.



Photo: USFWS

Cal Groen, director of the department, told reporters that his agency has already proven its ability to recover and maintain Idaho wolf populations. “We’ve exceeded all the goals the federal government set,” Groen said.

But Doug Honnold, a managing attorney for the nonprofit environmental law firm Earthjustice, disagrees. Honnold said the wolf populations won’t be fully recovered in Idaho and the northern Rockies until the animals number between 2,000 and 3,000. Earthjustice, which represents 12 local and national environmental groups, plans to sue the federal government next month to continue wolf protections.

Grey wolves were listed as endangered in 1973 after being hunted into near extinction, but the population has rebounded dramatically after restoration efforts began in 1995. The wolves were recently de-listed in the western Great Lakes, while the

wolf population in the Southwest remains endangered. Wildlife biologists estimate there are now 41 breeding pairs in Idaho, in 72 packs. If that number falls below 10 breeding pairs, or 15 during a three-year period, the wolves could be brought back under federal protection. *Source: Associated Press, 3/29/08*

Rare Parrot Chicks Born in New Zealand - A species of flightless parrot edged back from extinction with the hatching of five new chicks in New Zealand in recent weeks and two more on the way. The latest births of owl-like kakapos in southern New Zealand brought the population of the rare bird to just 91, said Emma Neill, a senior official of a Department of Conservation program to save the parrot. Neill said even a small lift in numbers was “awesome,” especially because the birds only breed every few years.

The kakapo (*Strigops habroptilus*) is an owl-like nocturnal parrot with finely blotched yellow-green plumage, a large gray beak, short legs, large feet, and relatively short wings and tail. The bird lost the ability to fly as it evolved because there were no ground level predators in the New Zealand environment to threaten the species. Polynesian and European colonization that began several hundred years ago introduced predators such as cats and rats that wiped out most of the kakapo. Surviving kakapos are now kept on small, predator-free offshore islands.

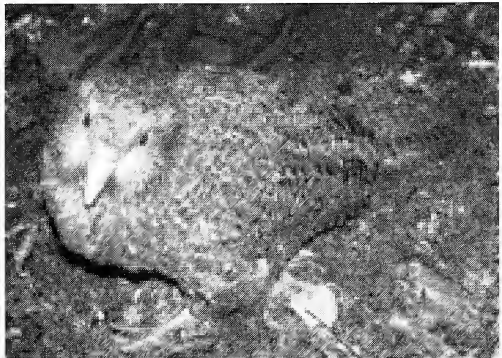


Photo: Wikipedia

Neill said all the kakapo eggs this year proved fertile, and two more birds are due to hatch within weeks on Whenua Hou, a small island off southern New Zealand. Four chicks were bred in the last breeding season in 2005, when the fertility rate was just 58%. *Source: Associated Press, 3/31/08*

Bat Population Under Siege—Wildlife scientists are scouring deserted mines in southern Quebec for traces of a deadly disease decimating bat populations in the U.S. northeast. Thousands of cases of a mysterious illness American wildlife officials call white-nose syndrome have popped up in grottoes and abandoned mines in a half-dozen states.

White-nose syndrome often leaves behind skinny, dehydrated corpses that appear to have had their snouts dunked in a bucket of flour. As U.S. wildlife specialists scramble to determine how many bats are infected with the previously unknown disease, Quebec biologists fear it might have crept north of the border.

“If we have this (disease) it could really threaten populations because there are huge mortality rates in the United States,” said Jacques Jutras, a biologist with Quebec’s Wildlife Department. “They’re dying by the tens of thousands.”

U.S. officials estimate a 50 to 90% mortality rate among bats with the syndrome. They don't know if humans can contract the disease.

"This, I hope I can say, is a once-in-a-lifetime event," said Susi von Oettingen, an endangered species specialist with the U.S. Fish and Wildlife Service. "We've never seen anything like this before with our bats, much less any other mammals, with a very large regional die-off."

Quebec wildlife scientists recently looked over hibernating bats in two abandoned mines on the outskirts of South Bolton, Que., near the Vermont border. Preliminary results revealed no signs of the disease but the department plans to study dead specimens that were collected. Two other mines are scheduled for inspection next week, with one quest requiring biologists to strap on snowshoes and trudge through seven kilometres of deep drifts to the entrance of one of the caverns, said Robert Patenaude of Quebec's Wildlife Department.

The disease was first documented in New York in the winter of 2006-07, but U.S. wildlife officials only realized the depth of its impact with a series of checks on hibernation caves that began earlier this winter. Scientists have since found the disease in Vermont, New Hampshire, Massachusetts, Rhode Island and Connecticut. Last year, between 8,000 and 11,000 bats – more than half the local wintering population – died of the illness in the Albany, N.Y. area, according to the U.S. Fish and Wildlife Service. *Source: thestar.com via Andy Blatchford, The Canadian Press, 3/22/08*

Asian Waterbirds Stage Remarkable Comeback - According to a report released by the Wildlife Conservation Society (WCS), several species of rare waterbirds from Cambodia's famed Tonle Sap region have staged remarkable comebacks, thanks to a project involving a single team of park rangers to provide 24-hour protection to breeding colonies. The project pioneered a novel approach: employing former hunters and egg collectors to protect and monitor the colonies, thereby guaranteeing the active involvement of local communities in the initiative.

The report shows that some species, which include varieties of storks, pelicans, and ibises, have rebounded 20-fold since 2001, when WCS and the Ministry of Environment of the Royal Government of Cambodia established the conservation project. Before that time, rampant harvesting of both eggs and chicks had driven the colonies to the brink of local extinction.

"This is an amazing success story for the people and wildlife of Cambodia," said Colin Poole, Wildlife Conservation Society director for Asia Programs. "It also shows how important local people are in the conservation of wildlife in their own backyards."

Researchers first discovered the colonies in the mid 1990s in Prek Toal, an area within the massive Tonle Sap—a seasonally flooded wetland critical to Cambodia's people and wildlife. According to WCS researchers, the colonies include the largest, and in some cases, the only breeding populations of seven Globally Threatened large waterbird species in Southeast Asia. Populations of all seven species have increased from a total of 2,500 breeding pairs in 2001 to 10,000 pairs in 2007. The success of the Prek Toal program has contributed to recent proposals for species status revisions, such as the down-listing of the spot-billed pelican (*Pelecanus philippensis*) based on the bird's observed population recoveries. *Source: Wildlife Conservation Society, 4/03/08*

American Songbirds Are Being Wiped Out By Banned Pesticides - The number of migratory songbirds returning to North America has gone into sharp decline due to the unregulated use of highly toxic pesticides and other chemicals across Latin America. Ornithologists blame the demand for out-of-season fruit and vegetables and other crops in North America and Europe for the destruction of tens of millions of passerine birds. By some counts, half of the songbirds that warbled across America's skies only 40 years ago have gone, wiped out by pesticides or loss of habitat.

Forty-six years ago, the naturalist Rachel Carson wrote *Silent Spring*, a study of the ravages caused to wildlife, especially birds, by DDT. The chemical's use on American farms almost eradicated entire species, including the peregrine falcon (*Falco peregrinus*) and bald eagle (*Haliaeetus leucocephalus*). The pesticide was banned and bird numbers recovered, but new and highly toxic pesticides banned by the US and European Union are being widely used in Latin America.

Because of changed consumer habits in Europe and the US, export-led agriculture has transformed the wintering grounds of birds into intensive farming operations producing grapes, melons and bananas as well as rice for export. Ornithologists say another silent spring is dawning across the US as birds are being poisoned by toxic chemicals or killed as pests in their winter refuges across

South and Central America as well as the Caribbean. They say that many species of songbird will never recover, and others may even become endangered or extinct if controls are not put in place or consumer habits changed.

More problems await those birds which make it home. Millions of acres of wilderness the birds use as nesting grounds have been ploughed under in the drive to grow corn for ethanol, for bio-fuel. Some 150 species of songbirds undertake extraordinary migrations up to 12,000 miles every year as they move from the south to nesting grounds in the US and Canada every spring. Ornithologists say that almost all these species are at risk of poisoning.



The migratory songbirds in most trouble include the wood thrush (*Hylocichla mustelina*), the Kentucky warbler (*Oporornis formosus*), the eastern kingbird (*Tyrannus tyrannus*) and the bobolink (*Dolichonyx oryzivorus*), celebrated by the 19th century American poet Emily Dickinson as “the rowdy of the meadows”.

The bobolink songbird has experienced such a steep decline, it has almost fallen off the charts. The birds migrate in flocks from Argentina, Bolivia and Paraguay to the east coast of the US, feeding on grain and rice, prompting farmers to regard them as a pest. Bobolink numbers have plummeted almost 50% in the past four decades, according to the North American Breeding Bird Survey.

It is only recently that the decline has been definitively linked to the use of toxic pesticides in the Caribbean and across Latin America. Growers are using high doses of pesticides, which the World Health Organisation calls Class I toxins. These are also toxic to humans and are either restricted or banned in the US and EU. But controls in Latin American countries are easily flouted. Testing by individual EU countries and the US Food and Drug Administration reveals that fruits and vegetables imported from Latin America are three and sometimes four times as likely to violate basic standards for pesticide residues. *Source: The Independent, Leonard Doyle, 4/04/08*

Ranger Arrested in Massacre of Rare Mountain Gorillas - A park ranger charged with protecting some of the world’s last remaining mountain gorillas (*Gorilla g. beringei*) has been arrested for allegedly masterminding the massacre of the endangered animals. Honore Mashagi, a ranger in Congo’s Virunga National Park used his authority to promote the destruction of the gorilla’s habitat for charcoal to make money, the international conservation group WildlifeDirect said.



“This threatened the gorilla habitat, so when the rangers tried to protect the forest, he allegedly orchestrated the gorilla massacres to discourage them,” the group said.

Mashagi is believed to be the chief suspect behind the mass killing of the Rugendo gorilla family, whose remains were found burned last summer, the statement said. The charges against the ranger were brought by the Congolese Nature Conservation Institute. WildlifeDirect called the arrest of Mashagi “a major breakthrough” and said his pending prosecution is “a moment of hope for all of us.”

Only about 700 mountain gorillas remain in the world, an estimated 380 of them in the Virunga range. About 100 of them are believed to live on the Congo side of the border, where 10 gorillas were killed last year. Virunga National Park is located in a lawless swath of eastern Congo, bordering Rwanda and Uganda, that the country’s government has struggled to bring under control for years. Established in 1925 as Africa’s first national park, it was classified as a U.N. World Heritage Site in 1979. *Source: International Herald Tribune 3/19/08*

Seahorses Thriving in Cleaner River Thames, Scientists Say - The discovery of a colony of short-snouted seahorses (*Hippocampus hippocampus*) living in the Thames means that the London river is becoming cleaner, conservationists say. Scientists from the Zoological Society of London (ZSL) have discovered five seahorses during routine conservation surveys in the Thames estuary in

the past 18 months, evidence which they say indicates that a breeding population exists. The rare species, which is normally found in the Mediterranean and Canary Islands and also along the south coast of England, has been found at Dagenham in east London and Tilbury and Southend in Essex. The sea creatures thrive in shallow, muddy waters, estuaries or seagrass beds.

Scientists at the ZSL say the presence of the seahorses in the Thames estuary is a good sign that river quality is improving, but warned that any disturbance to their habitats could be disastrous. The presence of a breeding population has been kept quiet to date as the species was not protected, the zoo said. But last month, the short-snouted and spiny seahorses (*H. hendriki*), along with the water vole (*Arvicola terrestris*), angel shark (*Squatina* spp.), and Roman snail (*Helix pomatia*), became the latest species to gain legal protection under the Wildlife and Countryside Act. The laws mean that anyone found killing, injuring or taking any of these species from the wild faces a £5,000 fine [~\$9800US] or six months' imprisonment.

Both long and short-snouted seahorses are housed at London Zoo's aquarium, which manages the European breeding program for both species. Scientists are studying their life history and behavior in an effort to understand more about them so they and their habitats can be better protected. ZSL is also the co-founder and partner in the global Project Seahorse initiative, which focuses on the conservation and sustainable use of the world's coastal marine ecosystems. *Source: The Guardian, Jessica Aldred, 4/07/08*

Tighter Turtle Protections Eyed - Loggerhead sea turtles (*Caretta caretta*) of the southeastern United States might soon receive a higher level of protection. The National Oceanic and Atmospheric Administration is seeking public comment on whether loggerheads of the western North Atlantic Ocean, including the Gulf of Mexico and Caribbean Sea, should be classified as a "distinct population segment." NOAA and the U.S. Fish and Wildlife Service is looking into the status of the loggerhead as result of a joint petition filed by the Center for Biological Diversity and the international ocean advocacy group Oceana.

Currently, the loggerhead sea turtle, which nests on Southwest Florida beaches May through October, is listed as a threatened species worldwide, but if the western North Atlantic population is designated a "distinct population", it could be listed as endangered independent of the world's other loggerhead populations.



Photo: Marco Giuliano, National Marine Fisheries Service

"I certainly think they need to be looking at what's going on with loggerheads: There's been a significant decline in loggerhead nesting numbers in Florida," said Anne Meylan, a research administrator for the Florida Fish and Wildlife Conservation Commission.

Four endangered sea turtle species also nest on Florida beaches — leatherback (*Dermochelys coriacea*), hawksbill (*Eretmochelys imbricata*), green (*Chelonia mydas*) and Kemp's ridley (*Lepidochelys kempii*) — but the loggerhead is by far the most common sea turtle in Florida. More than 90% of the loggerheads nesting in the United States nest in Florida, and, along with

Oman, Florida is one of the two largest loggerhead nesting areas in the world. From 1998 to 2007, however, Florida's loggerhead nesting numbers have declined almost 50%.

Man-made threats include longline fishing takes, boat strikes, recreational fishing and plastic bags, which sea turtles mistake for jellyfish, a favorite prey of sea turtles. On the beach, the main threat to sea turtles is armoring (building seawalls and jetties) which causes erosion, so turtles have fewer places to nest. Global warming also has an impact.

"With global warming, even under the most optimistic scenarios, most beaches will disappear in Florida," says Brendan Cummings, a spokesman for the Center of Biological Diversity. "If we want sea turtles through the end of the century, we have to plan now to protect higher elevations so they'll have someplace to nest. If we start planning for sea turtles now, we're protecting not only for sea turtles but for all Florida." *Source: NewsPress.com, Kevin Lollar, 04/07/08*

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