

ANIMAL KEEPERS' FORUM



JULY 2009

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

ANIMAL KEEPERS' FORUM, 3601 S.W. 29th St., Suite 133, Topeka, KS 66614-2054

Phone: (785) 273-9149 FAX (785) 273-1980

July 2009

Vol. 36, No. 7

AKF Managing Editor: Susan D. Chan • **Associate Editors:** Becky Richendollar, North Carolina Zoo • Mark de Denus, Winnipeg, MB • **Enrichment Options Column Coordinator:** Julie Hartell-DeNardo, Oakland Zoo and Ric Kotarsky, Tulsa Zoo & Living Museum • **Legislative/Conservation Outlook Column Co-Editors:** Becky Richendollar, North Carolina Zoo and Greg McKinney, Philadelphia, PA • **Reactions Column Coordinator:** William K. Baker, Jr., Abilene Zoo, Abilene, TX • **ATC Column Co-Editors:** Angela Binney, Disney's Animal Kingdom; Kim Kezer, Zoo New England; Jay Pratte, Zoo Atlanta • **Conservation Station Co-Editors:** Penny Jolly, Greater Orlando AAZK Chapter and Amanda Kamradt, New England AAZK Chapter • **Proofreader:** Barbara Manspeaker, AAZK Administrative Office.

Animal Keepers' Forum is published monthly by the American Association of Zoo Keepers, Inc., 3601 S.W. 29th Street, Suite 133, Topeka, KS 66614-2054. Ten dollars of each membership fee goes toward the annual publication costs of Animal Keepers' Forum. Postage paid at Topeka, KS.

AAZK Executive Director: Ed Hansen, AAZK, Inc., Topeka KS

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

AAZK Administrative Secretary: Barbara Manspeaker, AAZK, Inc., Topeka, KS

BOARD OF DIRECTORS

Shane Good, Cleveland Metroparks Zoo, Cleveland, OH 44109

President

Denise Wagner, The Phoenix Zoo, Phoenix, AZ 85008

Vice President

Jacque Blessington, Kansas City Zoo, Kansas City, MO 64132-4200

Tammy Root, Indianapolis Zoo, Indianapolis, IN 46222

Bob Cisneros, San Diego Zoo, San Diego, CA 92112-0551

COMMITTEES/COORDINATORS

By-laws

Chair - Gisela A. Wiggins, North Carolina Zoo

Ethics

Chair - Denise Wagner, The Phoenix Zoo

Grants Committee

Chair - Shelly Roach, Columbus Zoo

Awards

Chair - Janet McCoy, The Oregon Zoo

Behavioral Husbandry Committee

Chair - Deana Waltz, Tracy Aviary

Marketing Resources

Jacque Blessington, Kansas City Zoo, Oversight

Annual Conferences

Coordinator - Ed Hansen, AAZK, Inc.

Professional Development

Melaina Wallace, Disney's Animal Kingdom

ICZ Coordinators

Shane Good, Cleveland Metroparks Zoo
and Norah Farnham, Woodland Park Zoo

Conservation Committee Co-Chairs

Amanda Kamradt, New England AAZK Chapter
and Penny Jolly, Greater Orlando Chapter

Bowling for Rhinos

Coordinator - Patty Pearthree, Cary, NC

MEMBERSHIP SERVICES

Data Transfer Forms

Available for download at www.aazk.org

AAZK Historian

Mark Levin, Plymouth Meeting, PA

AAZK Website - Liaison to Webmaster

Denise Wagner, The Phoenix Zoo

AAZK Publications/Logo Products

AAZK Administrative Offices/Topeka

Table of Contents

About the Cover/Information for Contributors.....	282
Scoops & Scuttlebutt.....	283 - 284
From the President.....	285
Coming Events.....	286
Management of Geriatric Animals in Zoos - Order Information.....	288
AAZK Announces New Members.....	289
Conservation Station: Conservation Roles for Zoo Keepers Today.....	290 - 291
Green Tip of the Month.....	291
Crisis Management Special Issue Order Information.....	292 - 293
Enrichment Options (<i>Cardboard Feeders: Free & Green Enrichment</i>).....	294 - 298
Book Reviews (<i>Smiling Bears: A Zookeeper Explores the Behavior and Emotional Life of Bears and Night Kill</i>).....	299 - 300
Training Tales (<i>Training Tools on a Budget</i>).....	301 - 304
Have You Sent AO Your Email Address Yet?.....	304
Reactions Column (<i>Can behavioral research and observations play a part in being prepared for a crisis?</i>).....	305 - 307
CNAH Reaches Three Quarters of a Million.....	307
Silver-Eared Mesia (<i>Leiothrix argentauris</i>).....	308 - 309
From Los Angeles to Denver and Back: A Successful Journey Back Home.....	310 - 314
Conservation/Legislative Update.....	315 - 320



35th Anniversary - 1974 - 2009

MISSION STATEMENT

(Revised April 2009)

American Association of Zoo Keepers, Inc.

The mission of the American Association of Zoo Keepers, Inc. is to advance excellence in the animal keeping profession, foster effective communication beneficial to animal care, support deserving conservation projects, and promote the preservation of our natural resources and animal life.

This month's cover features a drawing of a Nile Hippopotamus (*Hippopotamus amphibius*) by Camille Dorian, a caretaker at the Monkey Zoo in San Diego, CA. The hipo is a large, mostly plant-eating African mammal, one of only two extant species in the family Hippopotamidae (the other being the Pygmy Hippopotamus). It is the heaviest extant artiodactyl, despite being significantly shorter than the giraffe. They are semi-aquatic, inhabiting rivers and lakes in sub-Saharan Africa in groups of 5-30 hippos. They also uses water to keep itself hydrated and able to carry out their life functions. During the day they remain cool by staying in the water or mud; reproduction and childbirth both occur in water, where territorial bulls preside over a stretch of river. They emerge at dusk to graze on grass. While hippos rest near each other in territories in the water, grazing is a solitary activity and hippos are not territorial on land. Despite their physical resemblance to pigs and other terrestrial even-toed ungulates, their closest living relatives are cetaceans (whales, porpoise, etc.). The common ancestor of whales and hippos split from other even-toed ungulates around 60 million years ago. The earliest known hippopotamus fossils, belonging to the genus *Kenyapotamus* in Africa, date to around 16 million years ago. The hippopotamus is recognizable for its barrel-shaped torso, enormous mouth and teeth, hairless body, stubby legs and tremendous size. It is the third-largest land mammal by weight (1.5-3.5 tons), behind the White Rhinoceros (1.5-4 tons) and the Elephants (3-7 tons). Despite its stocky shape and short legs, it can easily outrun a human. Hippos have been clocked at 18 mph (29 km/h) while running maximum short distances. The hippopotamus is one of the most aggressive creatures in the world, and is often regarded as the most ferocious animal in Africa. There are an estimated 125,000 to 150,000 hippos remaining throughout Sub-Saharan Africa, of which Zambia (40,000) and Tanzania (20,000-30,000) have the largest populations. They are still threatened by poaching for their meat and ivory canine teeth, and by habitat loss. Camille produces this distinctive artwork on a computer from photographs. Thanks, Camille!

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.

Items in this publication may be reprinted providing credit to this publication is given and a copy of the reprinted material is forwarded to the editor. If an article is shown to be separately copyrighted by the author(s), then permission must be sought from the author(s). Reprints of material appearing in this journal may be ordered from the editor. Regular back issues are available for \$4.00 each. Special issues may cost more.

E-Mail Addresses:

You may reach Barbara Manspeaker at AAZK Administrative Offices at: aazkoffice@zk.kscoxml.com<

You may reach Susan Chan and *Animal Keepers' Forum* at: akfeditor@zk.kscoxml.com<

Mailing Address:

AAZK, Inc., 3601 SW 29th St., Suite 133, Topeka, KS 66614-2054

AAZK website Address: www.aazk.org

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

Scoops & Scuttlebutt

2009 Election Results Are in for AAZK Board

AAZK, Inc. has just completed its first-ever “online election” for the Board of Directors. All Professional AAZK members were eligible to cast their vote in the Member’s Only section of the AAZK website (www.aazk.org).



Elected to serve on the Board for four-year terms were Penny Jolly, Animal Care Specialist, Disney’s Animal Kingdom, Orlando, FL; and Tammy Root, Senior Aquarist, Indianapolis Zoo, Indianapolis, IN. Elected to fill the two-year Board position was Gisela Wiggins, Veterinary Technician II, North Carolina Zoological Park, Asheboro, NC. New Board members will take up their positions following the close of the AAZK/ICZ Conference in Seattle, WA in September.

The current Board of Directors and staff of the Association wish to welcome Penny, Tammy and Gisela on board and thank them for their willingness to help chart the future of AAZK, Inc. The Board and staff would also like to thank those Professional members who were also candidates in the 2009 election: Amanda Hall, Primary Area Keeper, Scovill Zoo, Decatur, IL; Ric Kotarsky, Senior Primate Keeper, Tulsa Zoo & Living Museum, Tulsa, OK; and Kelly Wilson, Senior Keeper, Detroit Zoological Society, Royal Oak, MI.

Calling All Artists! Authors, too!

We are currently soliciting artwork for consideration as future covers for *Animal Keepers’ Forum*. While we will occasionally use color photos on the cover, as with the special Geriatric Animals issue, we will continue the long-standing tradition of featuring original member-generated artwork. If you are interested in submitting artwork please remember that drawings should be crisp and clean (pen and ink works best) and may be submitted as high resolution jpgs or tifs or sent as hard copy via regular mail. They do not have to be sized for *AKF* cover--we can take care of that aspect. If sending by mail, please use cardboard stiffening to make sure it does not get damaged in transit. Original artwork will be returned upon request. Send artwork files electronically to akfeditor@zk.kscoxml.com<

Artists are asked to include a brief paragraph about the species featured in their artwork for the “About the Cover” section, as well as their name, title, institution and contact information (daytime phone or email address).

We know there are lots of interesting and informative things happening at your facilities. Why not make this your year to submit an article to share with your colleagues through the pages of *Animal Keepers’ Forum*. Articles on subjects like husbandry, reproduction, behavioral research, hand-rearing, enrichment, operant conditioning, training, etc. are encouraged. They may be submitted electronically in MS Word ONLY to akfeditor@zk.kscoxml.com< Accompanying photos, graphs or charts should be submitted as individual jpg or tif files. You should include suggested captions for photos as well as photo credit for each photo submitted. Authors should include their name, title, facility and a daytime phone number and email address in case the editor needs to contact them on an article.

Training Opportunity with ZOOmility

You can register now for a unique animal training experience located in Central California’s wine country, presented by Conservation Ambassadors and Dr. Grey Stafford. Stafford is author of *ZOOmility: Keeper Tales of Training with Positive Reinforcement*, recently featured on NBC’s The Tonight Show with Jay Leno. [See *AKF* review of this book in August 2008 issue.] This two-day event is open to anyone interested in learning how to train the way zoos and aquariums do--with the exclusive use of positive reinforcement! Best of all, every participant from professional trainer, keeper and veterinarian to pet owner will learn to apply these proven techniques to improve the lives of any animal, wild or domestic. This educational event will feature a blend of discussion, behavior problem-solving, and live training demonstrations with exotic animals from all over the globe by Conservation Ambassadors’ founders David and Anita Jackson. The program will take place in Paso Robles, CA, 26-27 September 2009. Cost is \$159.00 US and includes lunch on Saturday. For more information or to register visit www.iReinforce.com

Problem with Profile Info on Member's Only Section of Website

It is important for all AAZK members to understand that the information you fill out in the Profile area on the Member's Only section of the AAZK website (www.aazk.org) **DOES NOT** come to the Administrative Office. Therefore, if you enter a change of address or name change in this section, we **do not** receive it.

If you change your address or name and do not notify Administrative Office and thus do not receive your *AKF*, be aware that you will not be sent any missed back issues of the journal. It costs us 78 cents for each "returned" *AKF* from the Post Office due to an incorrect address, including "no forwarding address on file" designation. To resend a single issue of *AKF* via first class mail (domestically) costs \$1.38 per copy. With AAZK membership rates as low as they are comparable to other professional organizations, we simply cannot afford to do this each time a journal is returned to us. Because the *AKF* is sent under a nonprofit bulk rate permit (domestically), it is not automatically forwarded when you change your address like First Class mail would be.

If you need to register a change of address or a name change for the monthly receipt of *Animal Keepers' Forum*, you need to do so by clicking on the "Change Your Address Here" link under the Reminder Board on the homepage. Or you may call 785-273-9149 or email Administrative Secretary Barbara Manspeaker at aazkoffice@zk.kscoxmail.com<

It is the individual member's responsibility to keep AO aware of any address changes that occur. **Bottom Line: If you want to receive your *AKF* each month, let us know ASAP whenever you move.** We appreciate your cooperation in keeping the AAZK/*AKF* mailing database as up-to-date as is possible. Thank you.

Internet Searching for a Cause

What if AAZK earned a penny every time you searched the Internet? Or how about if a percentage of every purchase you made online went to support our cause? Well, now you can! GoodSearch.com is a Yahoo-powered search engine that donates half of its advertising revenue, about a penny per search, to the charities its users designate. Use it just as you would any search engine, get quality search results from Yahoo, and watch the donations add up! Each search generates a penny for AAZK - and that can add up quickly!

Here's an example of how much AAZK can earn:

100 supporters search 4x a day = \$1460/year

500 supporters search 4x a day = \$7300/year

1000 supporters search 4x day = \$14,600/year

So get in the habit of searching using GoodSearch.com and support AAZK, Inc.!

*** Openings Available for February 3-18, 2010 Kenya Safari ***

I will be co-leading an extra "zoo group" safari to Lewa Wildlife Conservancy for 2010 February 3-18. If interested, please contact Patty Pearthree ASAP as spots will fill quickly at: ppear3@pear3.org or 919-678-0449.

Estimated cost is \$4,200 including flights, food, shuttles, lodging. We will be staying at Lewa Safari Camp
See http://www.lewa.org/lewa_safari_camp.php for more info
or

http://www.pear3.org/photos/lewa_2009/ for safari photos from previous safaris

"Zoo groups" stay at Lewa Safari Camp for \$230/night/person
rather than the regular rate of \$490/night/person.

From the President

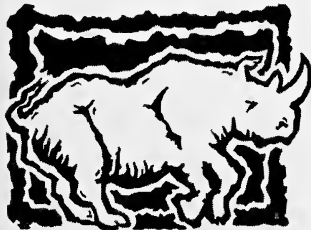
Most people think of July as a month of holiday picnics, fireworks, and summertime fun. But it is also the month that gives Zoo Keepers a week all for themselves. July 19-25 is National Zoo Keepers' Week. Many zoos and AAZK Chapters are planning week-long festivities to celebrate the work that you do on behalf of the animals under our care. It is the personal connection you have with these animals, the educational programs you share with our zoo visitors, and the work you do on behalf of conservation that make you all the rock stars of the zoological industry. Thanks for everything you do as animal care professionals, and for your membership in *Your* National Association, AAZK.

Thinking of things that keepers do, several members of AAZK have really stood out over the last couple months. First, I want to thank fellow Board Member Denise Wagner for her work on creating a new look for our website at aazk.org. If you haven't noticed by now, the website has a whole new look that is pleasing to the eye, easy to navigate, and loaded with lots of new information, especially in the Members' Only section. Websites are the hub of any successful organization, and Denise has created a site that should be of great benefit to our membership for years to come.

Earlier this year I was able to attend the Detroit Chapter's 25th Anniversary celebration. It was an outstanding event attended by members of several different Chapters of AAZK. Friends old and new enjoyed great food, music, a raffle and several presentatons. The Detroit Chapter has a rich and vibrant history within this Association, and all of its members should be proud of the work they have done over the years. However, I would be remiss if I did not single out Kelly Wilson for his efforts in putting the event together. Kelly's dedication and enthusiasm for this Association is infectious and appreciated by the Board.

Finally I want to give a shout out to the members of the Puget Sound Chapter who are working hard on September's National Conference. There are too many to thank, and rather than risk leaving anyone out, I just want to give a collective thanks for all of your efforts in providing what will be yet another great conference. I just had a sneak peek at the conference program and all I can say is

Wow! The opportunities for professional development, fun, and networking have never been greater. The list of keynote speakers is impressive, throw in presentations from our colleagues in the International Congress of Zookeepers, and a record number of workshops, and this conference may have the most diverse and educational program ever assembled for a zoo-related conference. Hope to see you there!



**AMERICAN
ASSOCIATION
of ZOO KEEPERS**

A handwritten signature in black ink that reads "Shane Good". The signature is fluid and cursive, with a large, prominent 'S' at the beginning.

Shane Good, President, AAZK, Inc.

Coming Events

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

July 18-19, 2009 - First African Symposium on Zoological Medicine – at the Johannesburg Zoo, South Africa. Financial assistance available for vets from other African countries. For more details contact Teresa Slackie- vetadin@jhbzoo.org.za

August 28 - 29, 2009 - 8th Annual Great Lakes Bat Festival - Milwaukee County Zoo, Milwaukee, WI. For more information: <http://www.batconservation.org>.

August 31 - September 2, 2009 - Third Orangutan SSP® Husbandry Workshop - hosted by Zoo Atlanta, Atlanta, GA. This workshop will focus on the care and management of the orangutan in captivity. The workshop will bring together orangutan caregivers, managers, researchers, and field biologists to share and disseminate the most current information on husbandry, conservation, and emergent issues pertaining to captive and wild populations of orangutans. For more information please visit our website at www.2009orangutanworkshop.org or contact Tom Heitz at theitz@zoatlanta.org or call 404-624-5939.

September 24-29, 2009 - Joint 36th National AAZK and 3rd International Congress on Zookeeping Conference - in Seattle, WA. Hosted by the Woodland Park Zoo and the Puget Sound Chapter of AAZK. Check out www.pugetsoundaazk.org/ for conference information.

October 1-6, 2009 - 29th Annual Association of Zoo Veterinary Technicians Conference - in Jackson, WY. If you would like more information, please visit www.azvt.org or contact Virginia Crosse via virginia.crossett@louisvilleky.gov

October 4-8, 2009 - 64th WAZA Annual Conference - in St. Louis, MO. Hosted by the St. Louis Zoo at the Renaissance Grand Hotel. For more information please visit <http://www.waza.org>

October 21 - 25, 2009 - The Zoological Registrars Association (ZRA) 2009 Annual Conference "Foundations for the Future", will be hosted by Zoo Boise in Boise, Idaho. The Annual Conference Program will begin with leadership training and the Icebreaker on Wednesday, October 21. General Sessions will be held on Thursday, October 22 and Saturday, October 24 and will feature topics from four categories of presentations under Record Keeping, Permits and Wildlife Legislation, Animal Transport and Records and Collection Management. Possible topics from each of the four categories will include presentations on ZIMS; ARKS; animal transactions; permit applications; roundtables on permit issues; legislative updates; policies and procedures; accreditation; collection management; disaster preparedness; archives management; records retention, protection and disposal. There will be a variety of formats for presentations including individual papers, workshops, panel discussions and poster presentations. Zoo Day will be held on Friday, October 23 and will culminate with a special dinner celebrating ZRAs' 25th Anniversary. A

special evening at Bogus Creek Outfitters featuring a cowboy-style dinner, cowboy poetry, Wild West shoot out, karaoke and a bonfire has been scheduled on Saturday, October 24, and the 2009 Annual Conference will end on Sunday, October 25 with additional ZIMS sessions.

ZRA, Zoo Boise and the Owyhee Plaza Hotel welcome delegates to Idaho. Please visit the ZRA website at www.zooregistrars.org or contact the 2009 Annual Conference Host, Corinne Roberts/Registrar for Zoo Boise, at (208) 384-4260 ext. 101 or by email at cxroberts@cityofboise.org. If you have questions about the 2009 ZRA Annual Conference Program, please contact the Program Chairman, Pam Krentz/Registrar for Cleveland Metroparks Zoo at (216) 635-3361 or by email at pak@clevelandmetroparks.com

November 6-8, 2009 - Second International Bear Care Conference: "Advancing Bear Care '09" – to be held in San Francisco, CA. For more info see <http://www.bearcaregroup.org>

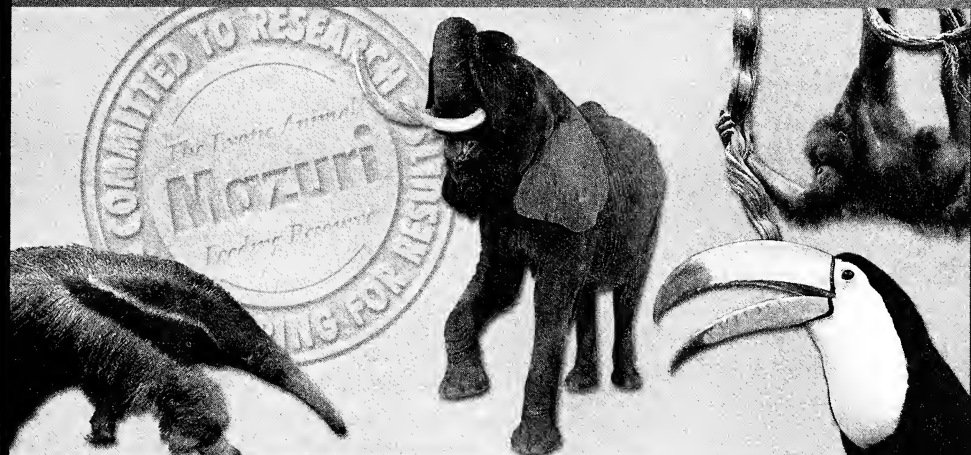
April 15 - 18, 2010. - 4th Otter Keeper Workshop - the Cincinnati Zoo in Cincinnati, Ohio will host. This year the focus of the workshop will be expanded to include all of the otters managed under the Otter SSP® North American river otters, Asian small-clawed otters, African clawless, African spot-necked and giant otters. Keepers working with any of the species are welcome to attend. 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.

Registration will be \$75 and the deadline is December 15, 2009. Spots fill up fast so please register early. A waiting list will be maintained once the workshop is filled. Due to the popularity of the workshop, priority will be given to first time attendees. Please just one registrant per institution. No refunds after January 15, 2010. Accommodations: A hotel near the Cincinnati Zoo or the Newport Aquarium. Room negotiations are ongoing. Roommates are encouraged. You will be matched if you indicate that you wish to have a roommate. Information can be found on: www.OtterSpotter.com

For more information contact: David Hamilton at Seneca Park Zoo, 2222 St. Paul St., Rochester, NY 14617; phone: 585-336-2502; 585-266-5775 fax dhamilton@monroecounty.gov

August 30 - September 3, 2010 - 7th International Penguin Conference - in Boston, MA. Hosted by The New England Aquarium. For info email ipcboston@neaq.org

September 28-October 2, 2010 - 20th International Zoo Educators' (IZE) Biennial Conference - at Disney's Animal Kingdom, Orlando, FL. For more information, please visit <http://www.izea.net>



DIETS AS DIVERSE AS THE ANIMAL KINGDOM

Working in partnership with zoos and aquariums, MAZURI® PhD nutritionists develop industry leading products specifically for each species. From aardvarks to zebras, we work hard to give your animals the most of what they need.

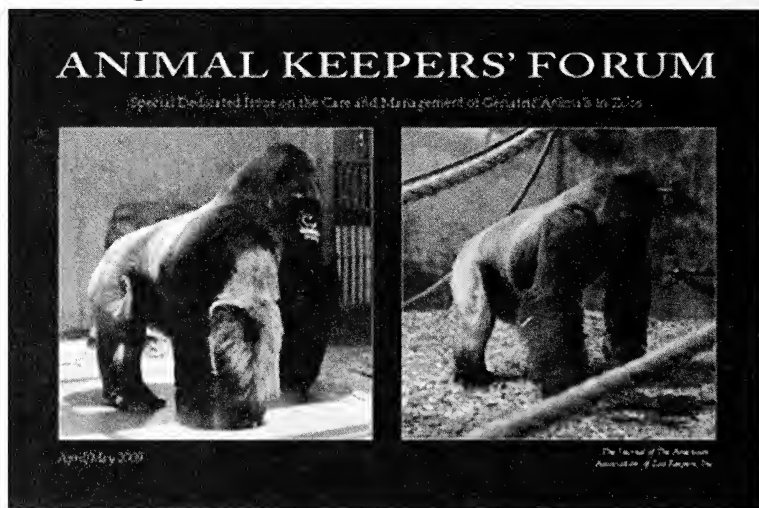
For more information on MAZURI® products—including nutritional analyses and research findings—visit www.mazuri.com

or call 1-800-227-8941 for the location of your nearest dealer. Because when it comes to great nutrition, we're committed to the health and longevity of every animal.

Mazuri®
The Exotic Animal Feeding Resource

www.mazuri.com

Special Double Issue of Animal Keepers' Forum Dedicated to the Care and Management of Geriatric Animals Available for Purchase



- From the President - Remembering the Golden Girls
- Acknowledgements from the Editor
- The Future is Now: New Strategies for Geriatric Care at the Oakland Zoo
- Some Thoughts on Veterinary Considerations on the Management of the Geriatric Zoo Patient
- Pachyderm Milestones
- The Oldest of the Old
- An Easy Way Out: PVC Ladder Assists Geriatric Animals
- The Old Hippo That Could
- It's a Geriatric Jungle Out There
- Joint Disease and Its Management in Captive Bear Species
- Never Too Late (Training a geriatric white rhino)
- Assiniboine Park Zoo's Debby the Polar Bear
- The Widower - Care of a Geriatric Bird at The National Aviary
- The Care and Management of Geriatric Gorillas in Captivity and The Role of Louisville Zoo's Husbandry Program
- Gravity and Hydrotherapy Procedures as a Way to Reduce the Possibility of Stiffening Joints in Elephants After an Injury
- A Public Relations Professional's Look at Geriatric Animals and Euthanasia
- Donna the Hippo is 57 years Old
- Using Cue Conditioning to Facilitate Voluntary Separation for Supplemental Feeding in a Geriatric 0.1 Scimitar-horned Oryx (*Oryx dammah*)
- World's Oldest Asian Elephant Lived to be 86 Years Old
- Some Considerations in the Care of an Elderly Red-Ruffed Lemur
- Collaborative Management and Interpretation of Arthritis in a Geriatric Giraffe
- Indoors Natural Substrates for Elephants and Medical Issues Associated with Hard Surfaces
- Old Bears, New Care
- Improving the Quality of Life for Tiffany, a 40-year-old Female Western Lowland Gorilla (*Gorilla g. gorilla*) at the Topeka Zoo
- Topeka Zoo's Long-lived Hippo Duo
- Ode to the Oldies: Geriatric Keepers Caring for Geriatric Critters
- Longevity in the Animal Kingdom
- 104 pages of great information!

Price: \$25 for AAZK Members
\$50 for Non-Members

Order at www.aazk.org (under Publications)
Or call 785-273-9149 to order by credit card
(Mastercard or Visa)

AAZK Announces New Members

New Professional Members

Kellyjean Moore, **Turtleback Zoo (NJ)**; **Sahar Jahani, Central Park Zoo (NY)**; Larry Boles, **North Carolina Museum of Life and Science (NC)**; Erin Nemecek, Stephen Coombs and Julie Taylor, **Duke Lemur Center (NC)**; He'Lana Leigh Zirhut, **Jacksonville Zoo & Gardens (FL)**; Mindy Rabideau, **The Zoo of Northwest Florida (FL)**; Christina Layton and Shannon Knight, **Busch Gardens (FL)**; Alice Schoebel, **Timbavati Wildlife Park (WI)**; Giana Gieffre, **Lincoln Park Zoo (IL)**; Jamie Bronleewe, **Rio Grande Zoo (NM)**; Kim Anicito, **TGR Exotics (TX)**; Linda Henry, **SeaWorld of San Diego (CA)**; Elizabeth Johnson, **The Living Desert (CA)**; Kelly McCumber, Jennifer Orrison and Jennifer Walker, **Santa Ana Zoo (CA)**; Adrienne Mrsny, **The Gorilla Foundation (CA)**; Holly Ianniciello, **Cat Tales Zoological Park (WA)**; Brandon Wyatt, **Toronto Zoo (Ontario, Canada)**. *We no longer print the names of those Professional Members who do not list their facility on their membership application/renewal. (There were five this month).*

New Institutional Members

Wildlife Wonders - Zoo To You
Cleveland, GA

Tom & Hope Bennett, Founders/Operators

Renewing Contributing Members

Danielle Brant, Lockport, NY
Angela Maxwell, Clarksville, TN
Elizabeth Cary Mungall, Houston, TX

Renewing Institutional Members

Columbus Zoo & Aquarium, Powell, OH
Dusty Lombardi, Director of Living Collections

John Ball Zoological Garden, Grand Rapids, MI
Bert Vescolani, Director

Out of Africa Wildlife Park, Camp Verde, AZ
Dean & Prayeri Harrison, Founders

Hillcrest Park Zoo, Clovis, NM
Herschel Arnold, Director

San Francisco Zoo, San Francisco, CA
Executive Director/President, Merrill Magowan

Micke Grove Zoo, Lodi, CA
Ken Nieland, Director

Fossil Find Sheds Light on Primate Evolution

Scientists were excited in mid-May when the nearly complete skeleton of a small 47-million-year-old creature was displayed for the first time. It is about the size of a small cat, has four legs and a long tail. While not believed to be a direct descendent of monkeys or humans, it does offer a good indication of what such an ancestor may

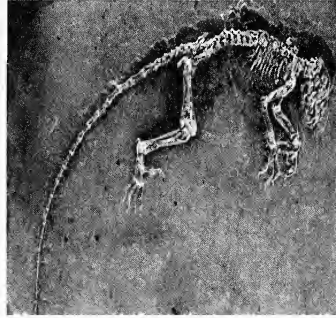



Photo: Atlantic Productions Ltd.




have looked like. The fossil, named *Ida*, was a juvenile female whom scientists believe died at around 9-10 months of age.

Because the skeleton is so remarkably complete and preserved, scientists believe it will provide important clues into primate evolution.

"She tells so many stories. We have just started research on this fabulous specimen," said Jorn Hurum, University of Oslo Natural History Museum, one of the scientists reporting the find. The story of the fossil will be shown on The History Channel and a book will also be published. The unveiling took place at New York's Museum of Natural History. *Source: CTV.ca 5/19/09*



THE GOURMET RODENT, INC.™



RATS AND MICE

Bill & Marcia Brant

12921 SW 1st Rd., Ste 107,
PBM #434
Jonesville, FL 32669

(352) 472-9189
Fax: (352) 472-9192
e-mail: GrmtRodent@aol.com

CONSERVATION

STATION



Conservation Roles of Zoo Keepers Today

*By Holly Hummel, Keeper
San Diego Zoo, San Diego, CA
Member AAZK Conservation Committee*

As keepers we work with rare and unique animals on a daily basis. Many of these animals the public may never see or learn about if it wasn't for the zoo. We have the opportunity to talk about conservation issues with them and become directly involved in conservation efforts worldwide. Zoo employees are playing an important role in conservation efforts around the world by participating in local fundraising events, reintroduction programs, and participating in SSP® program goals.

Keepers often hold fundraisers for conservation causes such as protecting orangutan habitat in Indonesia or to support animal behavior research in the field. Many AAZK members are familiar with fundraisers like Bowling for Rhinos, an event which has raised \$3.2 million for rhino conservation in Kenya and Southeast Asia. There are many more fundraising efforts that you may not be familiar with like Eco-cell phone recycling.

Zoos and aquariums in 35 states and seven provinces in Canada participate by collecting cell phones, cell batteries and accessories to send to Eco-cell. In turn they receive a donation for every phone collected and Eco-cell donates to the Dian Fossey Gorilla Fund. This program is helping local participants by reducing the number of cell phones, which may leach harmful chemicals, that may end up in landfills. Eco-cell sends usable phones to be refurbished and resold and recycles all unusable phones, batteries, and accessories. (see <http://www.eco-cell.org>)

In addition to keeping electronic waste out of local landfills, participants can feel good about helping to protect habitat in the Democratic Republic of Congo (DRC). Many cell phones rely on a mineral called coltan, the majority of which is mined in the DRC. This mining industry is affecting habitat for gorillas and other animals. Recycling cell phones is an easy and effective way for zoos to benefit these local and international conservation efforts.

Keepers are not only working to help protect rhino and gorilla populations, but less celebrated animals such as the Chiricahua leopard frog (*Rana chiricahuensis*) are getting a leg up too. The Phoenix Zoo is part of the Chiricahua leopard frog recovery project. Leopard frogs, native to Arizona, are endangered due to habitat loss, diversion of water for other uses, and diseases. Keepers and volunteers rear tadpoles that are released back into the wild as either large tadpoles or frogs. This helps increase the number of leopard frogs that survive in the wild. In addition to raising frogs in captivity, zoo staff participates in frog surveys, habitat restoration, and public speaking events.

Insects are frequently overlooked as being necessary and beneficial animals. At the St. Louis Zoo, keepers are working to restore their local flora and fauna, including the American burying beetle (*Nicrophorus americanus*). This beetle feeds on carrion and is an important element of decomposition. Historically these beetles were found throughout the US, but are now present in only six states. Keepers are captive rearing these beetles to be released back into suitable habitat in Missouri. A future goal of the captive program is to create a species survival plan or SSP® for the species.

Species Survival Plans are an important way for keepers to participate in conservation. One aspect to the SSP® program is breeding for reintroduction, like the leopard frog and burying beetle programs, but an important goal to the program is to increase public awareness of wildlife conservation issues. As keepers we have the ability to share our knowledge of the animals in our care with the public, with the hope that sharing this knowledge will create a network of conservation-minded individuals. This can be incorporated into public keeper talks, zoo blog posts, and fundraisers among other things.

At the Cheyenne Mountain Zoo in Colorado Springs, keepers are using the web to share conservation information. Orangutan habitat in Indonesia is threatened by the conversion of habitat into palm oil plantations. Cheyenne Mountain is taking a unique step by creating a palm oil strategic plan. Their goals include informing guests about the palm oil crisis, sharing resource kits with zoos across the country, empowering employees to change product labeling and legislation, and becoming a leader on palm oil issues. Their website contains information about orangutans, the palm oil crisis and how to become involved in conservation efforts to protect animal habitat in Indonesia. Learn more about their efforts at: <http://www.cmzoo.org/conservation/palmOilCrisis>.

Keepers are conservationists. We participate in fundraisers, raise animals in captivity to help wild populations, participate in SSP® programs, and share conservation messages with the public. All of us work with animals that inspire us to become involved in conservation efforts. *Keep up the hard work and remember we are making a difference for the animals and habitats we care about.*

Footnote:

Do you want to be directly involved in conservation work but don't know where to start? The AAZK Conservation Committee is creating a database of *in-situ* research opportunities worldwide. This database will be available to AAZK members only. It is our hope that the database will allow you to find short-term and long-term research and volunteer opportunities by directly contacting the researchers. Look for the database to be on-line in 2010.

If you have a conservation program at your facility that you would like to share information about, please send it to the Conservation Column via Amanda Kamradt (Amanda_Kamradt@yahoo.com) or Penny Jolly (jollyhome@verizon.net).

GREEN TIP of the MONTH

Even when they are not on, electricity still flows through your electronic gadgets so they will jump into action more quickly. This so-called "vampire" electricity sucks up \$4 billion a year in energy for things that aren't even on. Your laptop computer alone, turned off but plugged into the wall, will cost you \$9 a year. Cell phone chargers that aren't connected to a phone but remain still plugged into the outlet cost 14 cents a year. Considering there are approximately 250-300 million chargers out there, it can really add up. So unplug what you are not using. Better yet, plug multiple things into a power strip unit with an on/off switch.



ANIMAL KEEPERS' FORUM

Special Dedicated Issue on Crisis Management in Zoos

November/December 2007

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

A Must for Your Professional Library

Crisis Management in Zoos

Special 136-page issue of *Animal Keepers' Forum* dedicated to Crisis Management in Zoos. This special issue contains papers designed to help animal-care facilities supplement their own crisis management protocols and provide information on how various plans have worked at other facilities.

Table of Contents

Acknowledgements - Susan D. Chan, Managing Editor, *Animal Keepers' Forum* • *Preface* - Ed Hansen, Executive Director, AAZK, Inc. • *Forward* Kris Vehrs, Executive Director, Association of Zoos & Aquariums • *Introduction* - W.K. Baker, Jr., Director, Abilene Zoological Gardens, Abilene, TX • *Crisis Management Planning in Zoological Institutions* - Geoff Underwood, Stirling, South Australia • *Disease Risk Communication and Highly Pathogenic Avian Influenza* - Robyn Barbiere, D.V.M., Lincoln Park Zoo, Chicago, IL • *Developing a Weapons Team for Dangerous Animal Emergencies: Organization and Training* - Norm Piwonka, Departmental Technical Analyst and Ken Kaemmerer, Curator of Mammals, Dallas Zoo, Dallas, TX • *Who's Afraid of the Big Bad Wolf? Dealing with a long-term, high-profile animal escape* - Jennifer Barnett, Director of Wildlife Management, Binder Park Zoo, Battle Creek, MI • *Chemical Restraint of Exotic Animals in an Emergency Situation* - Marilyn M. Baeyens, DVM, Veterinarian, Little Rock Zoo, Little Rock, AR • *The Veterinary Role as First Responders to a Medical Emergency in a Crisis Management Situation* - W.K. Baker, Jr., Director, Abilene Zoological Gardens, Abilene, TX • *Critical Incident Stress Management: A Proven Tool for Addressing Staff Needs After a Traumatic Event* - Lisa Fitzgerald and Gary Sanchez, Dallas Zoo, Dallas, TX and Jay Pratte, Zoo Atlanta, Atlanta, GA • *Developing a Program for Dangerous Animal Emergencies: Procedures for Animal Escape, Unauthorized Person in with Dangerous Animals, and Unified Command System* - Ken Kaemmerer, Curator of Mammals, and Norm Piwonka, Departmental Technical Analyst, Dallas Zoo, Dallas, TX • *Dive Safety in Zoos and Aquariums* - Gil Falcone, Senior Dive Safety Officer, Monterey Bay Aquarium, Monterey, CA • *Wildfire! One Facility's Response and Lessons Learned* - Chuck Brinkman IV, Professor, Moorpark College, the Staff of America's Teaching Zoo and the Students from the Classes of 2004 and 2005 • *Keep Communication Equipment Powered in an Emergency, Part 1 What to Put in Your Emergency Power Kit* - Thomas Shaddack, TechSoup.com • *Keep Communication Equipment Powered in an Emergency, Part 2 How to Convert Your Devices to Run Off Batteries* - Thomas Shaddack, TechSoup.com • *The Terrorist Threat to Zoological Institutions* - W.K. Baker, Jr., Director, Abilene Zoological Gardens, Abilene, TX and Commander W.S. Graves, U.S. Navy, Retired • *Hurricane Preparedness: Lessons Learned from Hurricane Katrina* - Elizabeth E. Hammond, DVM, Lion Country Safari, Loxahatchee, FL and Daniel K. Maloney, General Curator/Life Sciences, Zoos Victoria, Parkville, VIC, Australia • *Training Dangerous Animals Safely is No Accident* - Gary M. Priest, Curator-Applied Animal Behavior, San Diego Zoo/San Diego Wild Animal Park/ Zoological Society of San Diego, San Diego, CA • *Firearms Use and Training in AZA Institutions* - Dan Beetem, Director of Animal Management, The Wilds, Cumberland, OH • *Aspects of a Safety Program for Zoos and Aquarium Facilities in the United States* - Ed Hansen, Risk Management Coordinator, City of Tucson, Tucson, AZ

Crisis Management in Zoos Order Form

(Please type or print clearly)

I wish to order _____ copy (ies) of the Crisis Management in Zoos dedicated issue of *Animal Keepers' Forum*.

AAZK Member \$25.00 Non-Member \$50.00

#copies x price \$ _____

Price includes Domestic media rate postage and Canadian airmail postage.

Total for Order \$ _____

Name _____

Address _____ Apt. # _____

City _____ State/Province _____

Zip/Postal Code _____ Country _____

Payment Options: check enclosed _____ Mastercard _____ VISA _____
(checks payable to AAZK, Inc. U.S. Funds ONLY)

Credit Card # _____ - _____ - _____ - _____

Exp. Date _____

Name on Credit Card _____

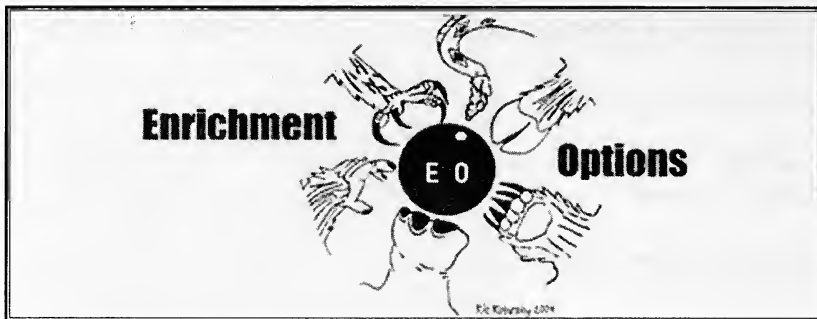
(please print clearly)

Signature _____

Phone # _____

Email _____

Mail completed Order Form and payment or authorization to: AAZK, Inc., 3601 SW 29th St., Suite 133, Topeka, Kansas 66614-2054 USA ATTN: CMZ Order. **North American phone orders using a Mastercard or VISA credit card may be placed by calling 785-273-9149.**



EO Editors -

Julie Hartell-DeNardo, Oakland Zoo and Ric Kotarsky, Tulsa Zoo & Living Museum

CARDBOARD FEEDERS: FREE & GREEN ENRICHMENT

*By Adrienne Mrsny, Animal Behavior and Enrichment Specialist/Caregiver,
The Gorilla Foundation, Woodside, CA*

Introduction

Designing enrichment presents many obstacles, it must be complex enough to challenge the mind as well as stimulate the senses. An added challenge at The Gorilla Foundation is that since we are a non-profit, we try to minimize the cost of enrichment by making it inexpensive or free. Finally, there are the complications of safety requirements for our two Western Lowland Gorillas. One of our gorillas, Koko a 36 year-old female, has been known to nibble on tape, glue and paper, which restrict these items from use in our enrichment.

Piñatas are a fun way to encourage problem solving and distribute food to the gorillas. Unfortunately, piñatas are not a suitable enrichment because of the above considerations. When faced with the challenge of finding an alternative to piñatas, I looked to cardboard. Cardboard offers the flexibility to be made into different shapes, the durability to stand up to the roughness of a gorilla's curiosity and the benefit of reusing a forest resource.

Shown below are two of my cardboard feeder designs, the star and fish. They are an easy and fast alternative to piñatas. They are easy to refill with food and simple to repair. They can be made with holes so when shaken food can fall out or completely sealed closed so the gorillas have to pry the sides open to get to the food. With colorful designs painted on them they are stimulating for the animal to look at and play with. Their applications are incredibly diverse, and they can be used for almost any terrestrial species as a simple feeder that encourages problem solving.

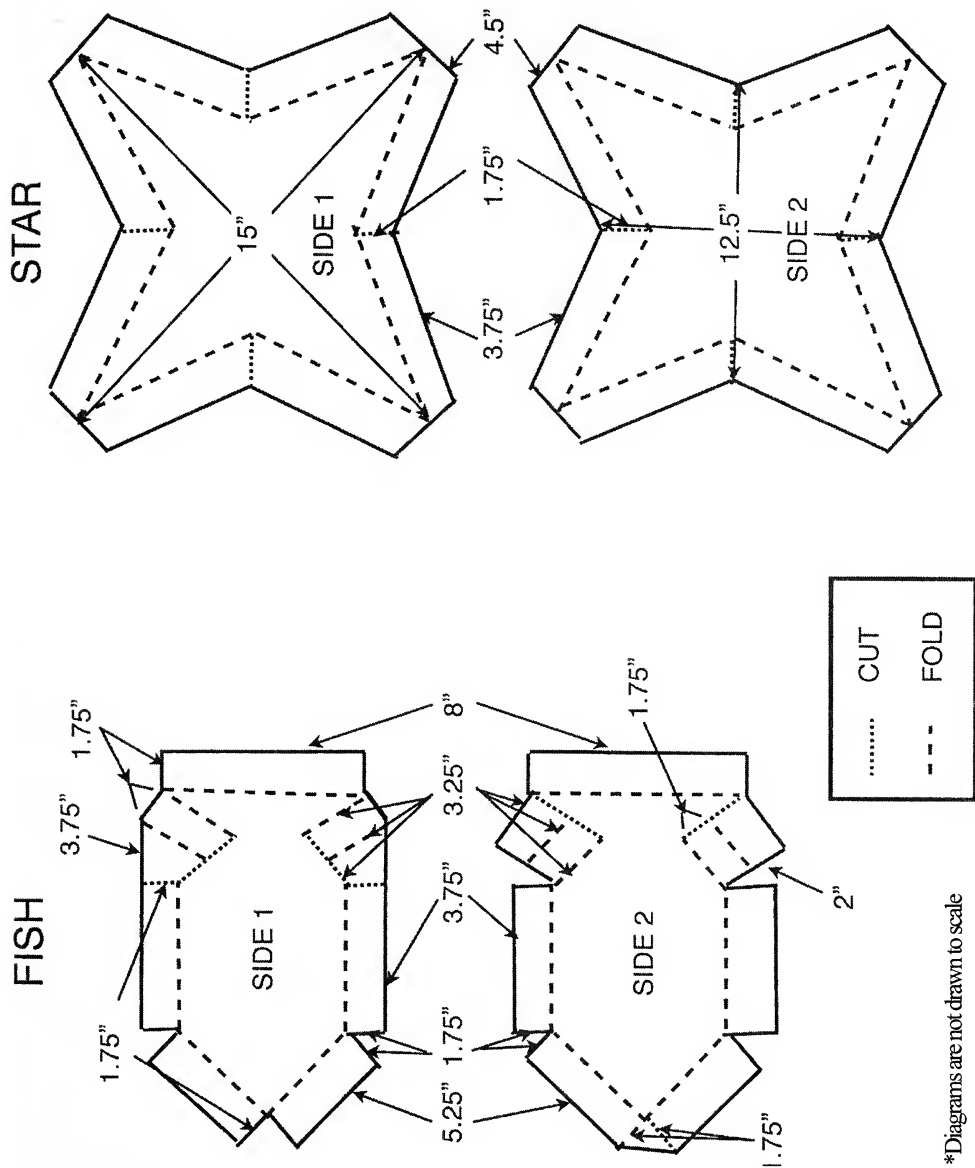
The Project

The Star and Fish feeders are typically used on holidays or special events a few times a year. They can be filled with the morning's browse (vegetables, lettuce, fruit, etc.) or popcorn for a special treat. I typically make 15-30 of them for a special event for our two gorillas.

By contacting a local grocery store we were able to obtain various types of boxes that were intended for their recycling. Water bottle flats and shipping boxes also work well. For larger projects, produce vendors can be contacted about donating watermelon or apple boxes. These large shipping and display

boxes are 3 feet high and 4 feet long [.914m h x 1.22m l], made of triple thickness cardboard and are great for larger enrichment ideas.

The following template designs are based upon fruit/vegetable boxes. Each item takes about 20 minutes from tracing the outline onto the box, to putting the final touches of paint on it. Painting decorations are made with nontoxic tempura children's paint for aesthetic/stimulating value (for both human and gorilla), or left plain to give it a more natural look. String can be attached for hanging purposes around the enclosure, from mesh or trees. Or they can be laid around the enclosure hidden amongst permanent fixtures and other enclosure items. If there is concern with the animal ingesting the string keep pieces short or don't hang them. Additionally, Velcro® sewn on ribbon is a great alternative to string and is reusable.



*Diagrams are not drawn to scale

*The fish is a complicated design, and too long to fit in this article, photos and directions will be available on our website www.koko.org under our CAREGIVER CORNER section. If you have any questions please email me at Adrienne@koko.org.

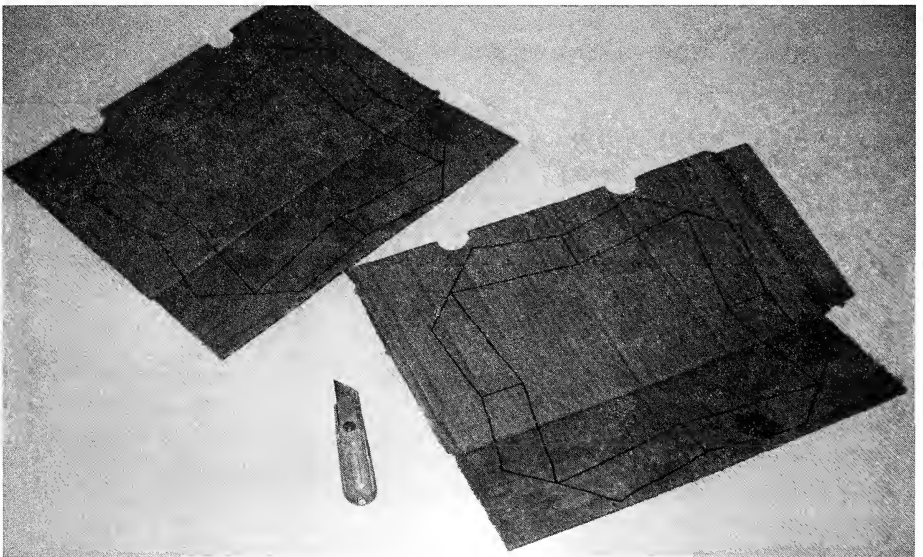
HOW TO MAKE A CARDBOARD STAR

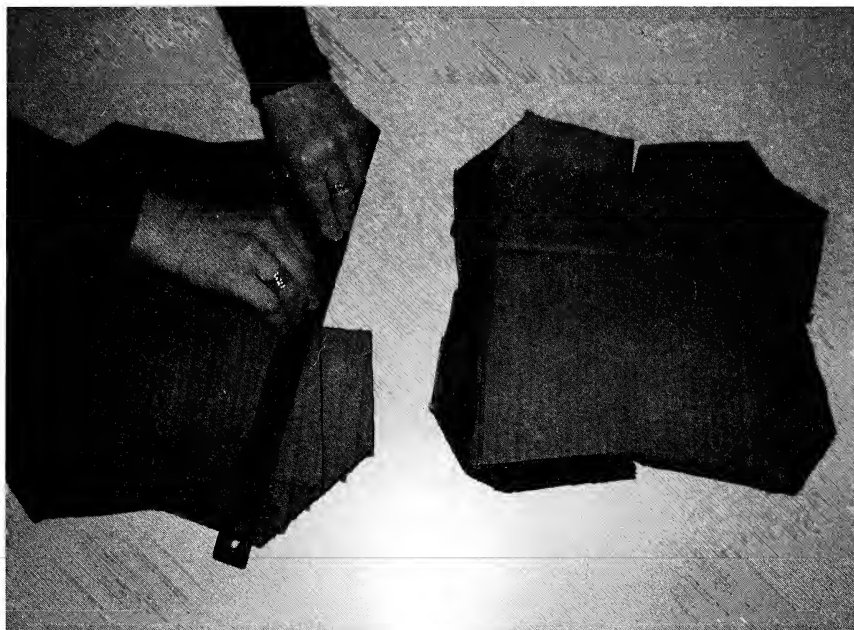


Step 1: With 1 complete fruit box (top and bottom) you can make 2 stars.

Step 2: Pry the box open at the seams, so that it is a long side that can lie flat. The seams are usually lightly glued together and can be easily pulled apart.

Step 3: Separate the individual sides by cutting at the seams.





Step 4: Trace the above template out on two of the larger sides of the opened box. I recommend doing this on the sides you don't want visible.



Step 5: Cut out the design and fold the sides inward. Using a ruler helps you get a straight and tight fold. The sides that are folded over are 1.75" [4.44 cm] wide.

Step 6: Line up the two sides of the star, with the folded flaps on top of each other in an alternating pattern. Using a sharp object punch a hole through both flaps, towards the center of the flap.

Step 7: Using twine, knot it then push it through the hole from inside to outside. Tie it tightly on the outside of the box. Cut any excess string, or leave long to hang the star by.



Step 8: Paint the star and let it dry.

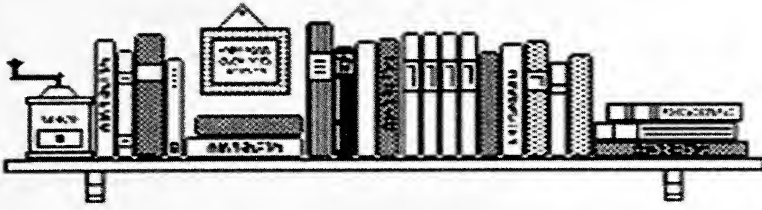
Step 9: Stuff paper in the bottom corners of the star if you are planning to hang it, so food doesn't fall out. Then fill with vegetables, fruit or a special treat.

Step 10: Place the stars in the enclosure and watch your gorillas have fun investigating their new enrichment.

Results

The design was improved to its present look, based upon the observations of the gorillas' interaction with them. When each animal was introduced to the item, a caregiver filled out a record sheet tracking the gorillas' interaction. The caregivers numerically ranked how successful it was according to: individual/group response, duration of interest, and safety concerns. Based upon this, adjustments were made to optimize the effectiveness of the design.

Both gorillas knew when the enrichment was being put in the yard and became visibly excited, gesturing and vocalizing to be let out into the yard. Success was gauged by interest in the items along with determination and time taken to access the contents. The feeders proved successful since the gorillas came back to it throughout the day to see if they overlooked any food. Our silverback (Ndume, shown above) was seen carrying one of the cardboard fish around throughout the day.



Book Reviews

Smiling Bears: A Zookeeper Explores the Behavior and Emotional Life of Bears

By Else Poulsen, 2009

ISBN#: 2009. 978-1-55365-387-5

Greystone Books, D&M Publishers, Inc., 2323 Quebec St., Suite 201,
Vancouver B.C. Canada V5T457

Hardback, 236 pgs

Price: \$29.95

*Review by Robert Blohme
Northwoods Prairie Keeper I
North Carolina Zoological Park
Asheboro, NC*

This book goes beyond the standard training manual and natural history of bears. The author has shown that you can take the word “anthropomorphic” and put it in the trash can where it belongs. In each chapter, she takes the bear she is dealing with as having a unique personality.

In the beginning of the book, Ms. Poulsen states that she approaches each bear with two questions on her mind: “Who are you?” and “what can I do for you?” She looks at each bear as a unique individual with its own way of thinking.

The book looks at ways to enrich the lives of captive bears from the individual bears’ perception instead of lumping them into group or species stereotypes.

The bears in the book are looked at far beyond the typical five or ten minute training sessions given at most zoos. The author emphasizes the importance of going beyond the standard training session even to the point of putting herself in the bears’ place. At one point in the book, she paced back and forth in an exhibit area just to see what a Polar Bear exhibiting stereotypical behavior was experiencing that might cause the behavior. Emphasis is put on reassuring the bear before reinforcing it. One point made in the book is spending time with the bear, not training, not cleaning, not feeding, but just spending time. There is no negative reinforcement. It is plainly stated in the book that if a bear did not feel like training, then the training session was over.

I really liked that the emphasis is always put on the welfare of the animal. The wants of the public and the concern of zoo profits are put on the back burner as it should be.

Patience and the ability to recognize each bear as an individual with different needs is the most important theme throughout the book. This book should be read by all zoo keepers, not just bear keepers, because it goes outside the realm of day-to-day zoo keeping.

The epilogue of this book reminds you why you signed up for this career.

Night Kill

By Ann Littlewood, 2008

ISBN#978-1-59058-505-4

Poisoned Pen Press, 6962 E. First Ave. #103, Scottsdale, AZ 85251

Hardcover, 238 pgs

Price: \$24.95

*Review by Becky Richendollar, Keeper
North Carolina Zoological Park
Asheboro, NC*

Zookeeper Iris Oakley has one problem: reconciling with her newly sober husband. That is, until her husband is found mauled to death by the lions Iris has so lovingly taken care of for years. But was Rick's death a suicide, murder, or just an unfortunate accident? As Iris begins to uncover the mystery surrounding Rick's death, she begins to experience several accidents of her own. Is someone out to get her? Or is her grief getting in the way of her being a good keeper? Find out in *Night Kill*.

Night Kill is a mystery novel set in a small zoo in the upper northwest of the United States. The novel captures the reader's attention and introduces them to characters that, while somewhat flat, lead interesting lives within the zookeeping profession.

Author Ann Littlewood, herself a former zookeeper, weaves her knowledge of animals and animal behavior into the novel. Unfortunately, these "fun facts" often seem abrupt. The random mentions or bizarre metaphors don't always help the plot evolve. Nevertheless, her intimate knowledge of the zoo world makes the story much more believable.

This novel is a quick and interesting read for anyone familiar with zoos and zookeeping. For students interested in getting a small idea of what zookeeping is all about, the book actually shows a somewhat accurate portrayal. For managers, this novel will perhaps entertain them while it reminds them of the frustrations of being a young keeper. And as for keepers themselves, it is both interesting and oddly satisfying to read a novel that in many ways mirrors our own lives. We can easily picture the big cats throwing themselves against mesh to get a reaction from keepers; we can hear the squeak of old shift doors from personal experience; and we know first hand the frustration with old buildings and even older equipment. We even know the deep care a keeper has for his or her animals, and the gut-wrenching decisions that must be made when tragedies occur.

Night Kill, while not a work of great literary achievement, is an entertaining and worthwhile novel that will be well worth your time.

Big Cat Internships Available

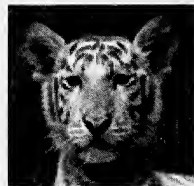
Join us in

"Saving Tigers One by One"

As seen on Animal Planet®

"Growing Up Tiger"

Apply at: www.tigercreek.org



Learn about Big Cat Management. Internship involves Animal Care Apprentice and Public Education. We offer experience that counts towards employment.

TIGER MISSING LINK FOUNDATION / TIGER CREEK WILDLIFE REFUGE



One World, One Zoo

Conference At A Glance:

Hosted by The Puget Sound Chapter of AAZK and Woodland Park Zoo, in conjunction with ABWAK, AAZK, AICAS, AFSA, BdZ, De Harpij, ZAP, ASZK, and AKAA.

Major Sponsors: The North of England Zoological Society.

On behalf of the AAZK and the ICZ organizing committee we would like to invite you to attend the 3rd International Congress on Zookeeping and 36th American Association of Zoo Keepers joint conference, held in Seattle, WA USA from 9/24/09 through 9/29/09.

Following the success of the past conferences of both organizations this joint conference is sure to be just as successful, educational and most of all fun. The ICZ and AAZK present an excellent opportunity for zoo keepers and zoo professionals from around the world to come together and share a wealth of knowledge. We hope you will join us to enhance the zoo keeping field and look forward to seeing you there.

~ Pat Owen Conference Co-Chair Puget Sound AAZK Chapter

New at Woodland Park Zoo this Summer:

Twenty Humboldt penguins moved into their brand new home representing the Punta San Juan reserve in coastal Peru. The 17,000 square foot exhibit allows visitors to observe penguins' natural behavior – they can watch them swim, dive, “porpoise,” climb, waddle, nest and fish. Visitors can see them on land, under water and on the surface. Several daily programs are offered. Keepers and program staff inform visitors about penguins, their exhibit and their endangered status. From May through August, a Peruvian scientist will share his research experience at Punta San Juan, site of the largest penguin population in Peru. Staff, docent volunteers and Zoo Corps teens have three programs to share. Penguinino Bingo allows children to observe and record penguin behaviors. A Penguin Backpack contains several artifacts, such as feathers, egg replica and bones, useful for educating visitors about penguin natural history and conservation. Simulated fishing at the Seafood Watch Conservation Cart informs visitors about sustainable seafood and encourages use of the Monterey Bay Aquarium's Seafood Watch cards to make good seafood choices. Staff and Zoo Ambassadors explain this greenest of green exhibits. Zoomazium, an indoor nature play space for young children, has a variety of penguin themed programs. Penguin activity heightens during their feeding time along with viewer enjoyment.

Registration:

This year registration will be offered only online. To register click the registration link on our website www.pugetsoundaazk.org

Accommodation:

Conference will be at the Red Lion Hotel on 5th Ave. in Seattle. Conveniently located in downtown Seattle, The Red Lion Hotel on Fifth Avenue offers an upscale, boutique hotel experience, personal, award-winning service, first-class meeting space, and - perhaps most importantly - breathtaking views of the Cascade Mountains, Elliot Bay, the Puget Sound and the Emerald City itself.

Getting There:

For Seattle, planes fly into SeaTac International Airport, which is approximately 25 minutes by car from the conference venue.

There are several ways to get from SeaTac International Airport to the conference hotel. Ground Transportation information is available at the fully-staffed information booth in Baggage Claim near Carousel 12 (open seven days a week from 6 a.m. to 2 a.m.) and at the information booth on the third floor of the Airport Garage. For information on all modes of transportation to and from the airport, call (206) 431-5906.

- Shuttle Express (van ride-share service) has agreed to offer conference attendees a discount fare. Normal rate is \$32US one way. The discount rate is \$19US one way. To receive the discount attendees MUST book online using the reservation portal link: Shuttle Express—Woodland Park Zoo Conference Online Reservation Booking Portal. Please note this is an online discount only.
- Curbside taxi service is available. The rate is approximately \$40US each way.
- Public busses are available for about \$2US and stop in the vicinity of the hotel. Schedules vary.
- Nine rental car companies have information counters in the Baggage Claim area, and five have car pick-up and drop-off at the airport on the first floor of the garage across from the Main Terminal.

Passports and Visas:

Visitors entering the United States of America need a valid passport and the appropriate American Visa. Check with your local travel agent or Diplomatic office. In addition to working with a travel agent, here is the link to learn if you need a visa to enter the US:

http://www.travel.state.gov/visa/temp/temp_1305.html

Climate:

Seattle weather is unpredictable with September temperatures ranging from 52°F to 70°F [-11-21°C] Bring layers of casual clothes including sensible walking shoes. It's always a good idea to have some light rain gear!

Conference Language: The conference will be conducted in English.

Program: Check our website for paper abstracts, workshops, and updated information at www.pugetsoundaazk.org

Silent Auction:

Join us for a silent auction hosted at Red Lion Emerald Ballroom as part of the evening's activities on Sunday, 27 September 2009, during our silent auction you can bid on a variety of items donated by your fellow delegates. All proceeds collected will assist in furthering the goals of the AAZK/ICZ. Auction items are now being collected. You can either bring your item or have it shipped early. Look for more information on our website.

Pacific Northwest Information:

Seattle is a major tourist destination in The United States. They are well organized for International Travelers with numerous money exchange services, translation services and duty free shopping facilities available. For more information visit <http://www.portseattle.org/seatac/>

Optional Tours: Check our website for more detail information

Pre-Conference Tours:

1. Day Trip to Mt. Rainier National Park 23 September 2009

Cost \$75.00

2. Day Trip To Pt. Defiance Zoo 24 September 2009

Cost \$35.00

3. North Cascades Mountain Loop

- NO FOOD INCLUDED, HOTEL AND TRANSPORTATION INCLUDED

September 21 – September 23

Cost \$495.00

Post Conference Tours:

1. Day Trip to Portland Oregon 30 September 2009

Take the Amtrak Cascades to Portland Oregon and then Portland's TriMet to the Oregon Zoo. Then take the TriMet to the world famous Powells Bookstore and then back to Seattle on the Amtrak Cascades.

Cost \$59.00

2. Olympic National Park - FOOD NOT INCLUDED, TRANSPORTATION - PICK UP AT HOTEL, HOTEL ACCOMODATIONS INCLUDED

September 30 – October 2, 2009

Cost \$495.00

Icebreaker: September 24, 2009, Thursday Evening 6:30-10PM

Come and enjoy a magical underwater adventure at the Seattle Aquarium. Native American dancers will be on hand to entertain you, as well as a Windows on Washington Dive show. Octopus and marine mammal feeding will also be part of the evening's activities. You will experience exhibits from Ocean Oddities, to Life on the edge, to an underwater dome that features 360 degree views into a 400,000-gallon tank filled with fish.

As you explore the aquarium appetizers and drinks will be available.

Chapter Challenge: This year the Chapter Challenge has many ways to participate. Help us achieve our goal of having 100% participation from ALL AAZK Chapters! We are also looking for Sponsors for the hospitality suite, breaks between paper sessions, and foreign delegates. The sponsors for the hospitality suite are first come first served. If you have any questions about the other two sponsorship opportunities, please contact Joanna Bojarski at Joanna.Bojarski@zoo.org

We are thinking "Green" for this conference. More information about our and your efforts will be posted soon. There will also be a Conference Photo contest!!

Foreign Keeper Sponsorships:

This combined ICZ/AAZK conference represents the first time these two professional zoo keeper organizations have joined to bring together animal care professionals from around the world to the United States.

It is of vital importance to the success of the meeting to have international participants! We believe that a common conference for animal care professionals from around the world will not only improve the levels of communication between keepers internationally, but will serve as a basis for supporting the development of zoo keeping as a profession in regions where professional keeper associations do not currently exist. You can be that vital link in the success of this exchange. We have numerous requests for assistance right now but have very limited funds.

Average cost to fully sponsor a foreign keeper is \$2,500, but any amount is a help! Can you help us make the conference a success for keepers all over the world by helping to bring them together? This is a rare opportunity, and it's easy to do. Simply contact Norah Farnham at Norah.Farnham@zoo.org for information on how to sponsor a keeper.

You can also add a donation when you register yourself for the conference.

Thank you for your time and consideration. If you have further questions, do not hesitate to contact any PS-AAZK member or officer.

Any Questions? Email: pugetsoundaazk@gmail.com or
Website: www.pugetsoundaazk.org

The AAZK Behavioral Husbandry Committee Presents

Training Tales...



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

Training Tools on a Budget

By

*Julie Hartell-DeNardo, Lead Keeper, Oakland Zoo
Behavioral Husbandry Committee Member*

Training tools can be expensive and often a stumbling-block, or excuse, for not training. Creative reuse, recycling, and shopping can greatly contribute to a training program while putting little to no strain on the budget. This paper is written to provide some alternative ideas for basic training tools that are inexpensive or even free! In many cases, these alternatives have been better at withstanding the rigors of the training environment than some of the more expensive items available for purchase.

Training Pouches

Many donated or reused items make excellent training pouches. A favorite item at the Oakland Zoo is a small camera bag (lower left in photo) that clips to a belt via a snap hook. Often these bags have a variety of pockets which are helpful for sorting reinforcement or holding smaller training tools, like laser pointers, syringes or pen flashlights. Some of these bags have loops on the side, which you can use as a target pole holster and/or attach a clicker via a rubber band or hair tie which helps free hands and prevent dropping.



Recycled belt packs, conference name badge holders and camera bags make great treat pouches. (Photo by author, The Oakland Zoo)

Lanyard name badge holders from conferences also make great training pouches (upper and lower right in photo). While some organizations, like AAZK, Inc., have adopted a greener conference policy and now reuse these pouches from year to year, others do not and send attendees home with a new badge. A clicker or whistle can easily be clipped to the lanyard. Again, the multiple pockets can assist with sorting reinforcement types. These pouches can be conveniently worn around the neck or clipped to a belt loop, depending on your preference.



Reinforcement for a cotton top tamarin fits nicely in a lanyard pouch. (Photo by author, The Oakland Zoo)

Fanny packs (upper left in 1st photo), tool belts, or two-pocket waist tool aprons (left) also make great training pouches. These are frequently donated to our zoo. No donations? Try the hardware store, tool aprons can be found for less than \$2. If you are using moist food as reinforcement items, it is easy to find inexpensive plastic containers, or reuse yogurt containers that slide into the pockets. All of these types of training pouches hold up well to washing and drying over many times. Each training pouch can be tied around or clipped to the trainer, leaving hands free.



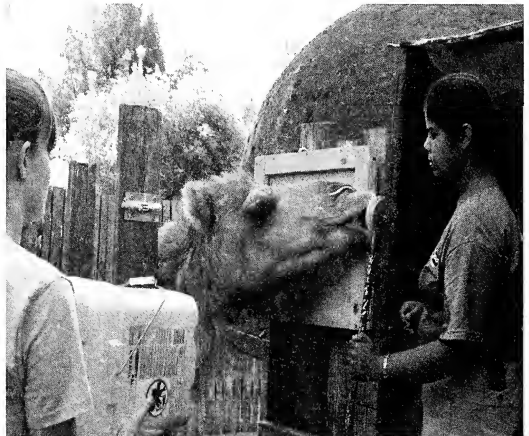
A keeper trains a zebra using the tool apron pouch.

(Photo by author, The Oakland Zoo)

Targets



A lion is trained using a flyswatter as a foot target. *(Photo by Erica Calcagno, The Oakland Zoo)*



A camel is trained for radiographs using a reflector as a target. *(Photo by Erica Calcagno, The Oakland Zoo)*



A cotton swab is used as a target for a cotton top tamarin.

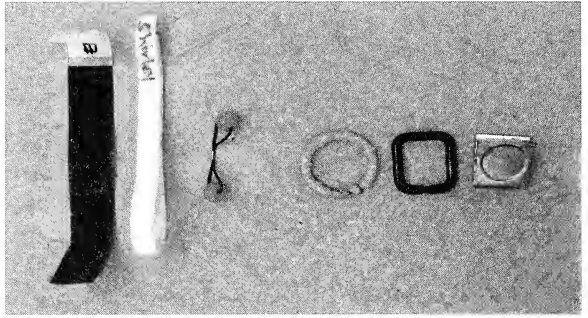
(Photo by author, The Oakland Zoo)

Some low to no-cost target ideas include: flyswatters, tennis balls on the end of a dowel, or broom handle, reflectors on short lengths of PVC pipe, wooden rounds on the end of a dowel, and even cotton swabs. Except for the cotton swabs, these items are fairly durable, and all are easily replaceable at little to no cost. Cotton swabs can be restocked with a stop at the vet clinic, flyswatters are available at the dollar store, most of us have extra wooden handles around waiting to be reused in a new creative way, and wooden dowels and round ends can be found at a craft store for less than a dollar. A length

of scrap PVC pipe or bamboo reed with either non-toxic paint or colored taped at the end is another no-cost target pole used by trainers. Ping Pong paddles attached to the end of a stick work well too.

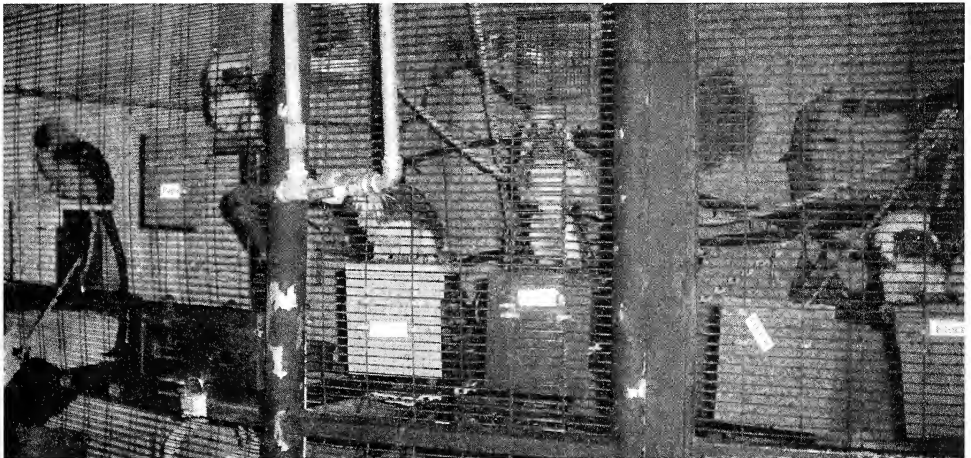
Training Stations

Training stations can be made from just about anything: lengths of Velcro®, hairclips/ties, child toy links, Wiffle Balls®, shower curtain rings, PVC segments, bucket lids and many other items. Most of these items can be easily moved by the trainer and adjusted to attach to various sizes of caging, perching or fencing. Many come in various colors or can be painted when working with multiple animals. Colorful Velcro® strips can be purchased from a cattle supply company for less than a dollar each. (The most challenging part of using Velcro® stations is getting the animal used to the sound of the Velcro®). At the Oakland Zoo, bags of children's toy links are often donated, but they can also be found at thrift shops for less than a dollar.

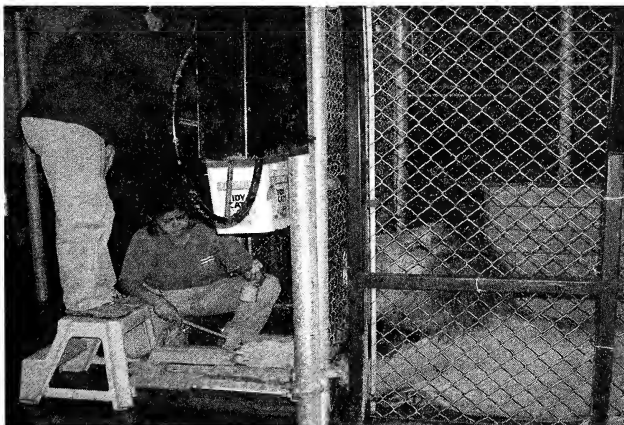


Examples of station props for smaller animals: Velcro® straps, link toys, and hair ties.

(Photo by author, The Oakland Zoo)



Color coded stations work well when training in groups. These are cotton top tamarins, each with their own station. *(Photo by author, The Oakland Zoo)*



A lion is trained for radiographs of the front feet using a cat litter box as a prop for desensitizing the animal to the visual presence of the machine. *(Photo by Erica Calcagno, The Oakland Zoo)*

Training Props

In training, many times we need to desensitize an animal to various pieces of equipment. At the Oakland Zoo, we have used empty cat litter containers to mimic portable x-ray machines when working with lions (shown here) and camels (target section). To desensitize our tamarins to our microchip scanner we have made imitation hand-held scanners from painted cardboard and used shoelaces as a wrist-strap. Scrap pieces from old stall mats

ABC
of
ANIMAL TRAINING
Art, Belief & Confidence

**DOLPHIN
TRAINER
academy**

abcanimaltraining.com
Basic Academy
Sept. 14 - 18, 2009
Advanced Academy
Sept. 21 - 25, 2009

ENROLL TODAY! SPACES ARE LIMITED!

have been cut into shapes and used as foot targets for hoofstock. Another idea is to use an empty roll-on deodorant bottle to desensitize an animal for the ultrasound probe.

Conclusion

Many training tools can be created from discounted, dollar store items for under \$5, donations, rummage sales or even from spare parts lying around. Post a "Needs" list in your break room for keepers or volunteers to bring in items they no longer want or use. Try adding some of the items described in this article to your "wish list" - you may be surprised what may be donated. Remember, creatively reusing discarded or old items doesn't have to stop with enrichment - use your creativity for training items as well!

(Editor's' Note: Articles dealing with all aspects of training may be submitted to akfeditor@zk.kscoxmail.com for consideration for inclusion in the Training Tales column. Articles should be submitted in MS Word only and accompanying photos, charts or graphs should be submitted as separate jpps or tifs. If you have questions on making a submission, please contact the Editor

via email or at 785-273-9149).

Have You Sent AO Your E-mail Address Yet?

In order to better communicate with our members, and also save the Association the rising costs of mailings/postage, we are working to establish an AAZK member e-mail database. With such a database we would be able to send out electronic membership renewal notices, information about upcoming conferences, and other Association news. In order to make this work, we need your help.

Please send an e-mail to Barbara Manspeaker at aazkoffice@zk.kscoxmail.com with the words "AAZK Email Database" in the subject line. Please be assured that your e-mail address will not be shared with any other group or individual without your express permission. We are simply looking for ways to stay in touch with you as a member and to also help cut the costs of mailings and postage for the organization. It's all part of AAZK's continuing push to be more "green" in our administration. Thanks in advance for helping us achieve this cost-cutting goal.

REACTIONS

A Question and Answer Forum for the Zoo Professional on Crisis Management

By William K. Baker, Jr., Director
Abilene Zoo, Abilene, TX



Question

Can behavioral research and observations play a part in being prepared for a crisis?

Comments

I realize this question at first glance could prove quizzical when applied to the topics of crisis management and zoological safety. Still, when placed in context it can prove to be valuable and an asset to an increasing awareness of understanding our animal charges. Historically one of the cornerstones of wildlife management and research in the field is the use of the basic tool of observation. For decades, if not centuries, we as scientists have been following the exploits of zoologists in the field with their research subjects as they try and understand them better.

This field research has shaped our management techniques in captivity then and now. What we garner from field work has helped us to develop more effective techniques to address husbandry, reproduction, and environmental enrichment in captivity. The immense and respected work of Jane Goodall, Laurie Marker, George Schaller, Richard Estes, and Mark and Delia Owens comes to mind. Within the framework of their research can be found the tools to make us better animal managers.

Wildlife field observations and the supporting research is then utilized to assist in the progression of captive management techniques through the development of husbandry manuals and disseminated through presentations at conference.

Exhibitry

Through a clear understanding of an animal's native habitat we can better understand its environmental needs. Meeting those needs and incorporating them into an appropriate exhibit design can help satisfy the behavioral aspects of a given species. Clouded leopards spend much of their life in an arboreal environment and by understanding that during the exhibit design process, we are meeting a fundamental species' need, which in turn insures that we build into the vertical plane, but we also top the exhibit with mesh for the sake of safety.

Containment

Understanding the relative strength of a given species dictates the techniques of containment. For example the Tiger; it is a remarkably agile, powerful, and intelligent animal. As a result, the primary containment must be capable of handling both impact and potential ricochets. However since it's a soft skinned species, some degree of flexibility in the mesh is desirable to prevent potential injury. Sharp edges and points in the mesh or mounting hardware are not desirable, yet the material should be resistant or coated to prevent urine damage that will accelerate rust and potential containment failure.

Landscaping

In any exhibit we find the final dressing and regional match for a species, landscaping. Landscaping in and of itself is not a problem. But, when a dangerous animal is added to the mix, the situation changes. Is the landscaping just an accent or has it taken over the interior or perimeter of the area to the point of no return? It's important for security to have the capability to observe your charges for location and to inspect the primary containment at a glance. There needs to be a balance between safety and spatial comfort.

Enrichment

In my experience, an enriched specimen is a calmer specimen. Let's use a Cougar, for example. Understanding the predatory habits of this species is critical in their management. Enrichment devices that can capitalize on this should theoretically have a high degree of success. By using a fast moving low to the ground object, it simulates prey items in the wild. I would much rather manage a tired and content cat than a bored and temperamental cat.

Captive Behavior

This in my opinion may be one of the most important aspects of this process. We take as a given that some species act in a certain manner that is characteristic. Within a species group there will always be variances in personality. Yet, beyond that we also know that there are exceptions to the rule; animals that just don't act the way the others do. We do our best to reconcile what we observe in captivity against what has been seen in the wild as a benchmark, and often that provides a new context for what we are seeing and points us in the right direction as animal managers.

I think the hardest part of this is realizing that somehow we have to make time in our workday to make behavioral observations of our charges. Certainly we check our animals when they go out on exhibit, when we are feeding them, and also when we bring them in for the night. Yet, with increasing workloads and limited staffing this can prove challenging. In my experience it's difficult at best from a staffing standpoint to just sit and watch. By that I mean observe our charges much like researchers in the field do.

By understanding the intricacies of a specific specimen we, in turn, better understand what they need. Good recordkeeping is a critical facet of this process. It not only provides an accurate record of observations, it also provides a linear process that your co-workers can draw upon in the process. In my experience having a really good data template, clipboard, and binoculars are invaluable tools.

Once we understand the behavior patterns of a specific animal we better understand its likes, dislikes, and triggers for certain behaviors. This in turn provides management guidelines for that animal. If you know that the street sweeper cleaning the sidewalks will be a trigger for certain negative behaviors such as anxiety, fear, and running the mesh at high speed, then you know that it's best to wait until it's gone past to put the animal out on exhibit.

Taking this a step farther in a herd setting. If the dominant herd animal becomes agitated due to an outside influence such as heavy equipment going past its exhibit, if it has a history of transferred aggression to conspecifics this may become amplified by that trigger resulting in injury. Every animal has its dislikes; it's just a matter of identifying them and working around or preventing them altogether. Realizing the existence of these factors can also play a crucial part in desensitization to the activity and its eventual elimination as a trigger for negative behavior.

In closing I would have to say that the keys to success are observation either first hand or by way of video monitoring followed by good communication with co-workers and then analysis of the observed

behavior. When in doubt contact colleagues at other facilities that are holding similar species; there is always strength in numbers. The more data you collect the better the understanding and as a consequence safety, and identifying how an individual animal may react in a crisis situation.

Next Column: What is meant by directed routes of containment?

If you would like to submit a question for this column or have comments on previously published materials, please send them to AAZK, Inc., 3601 S.W. 29th St., Suite 133, Topeka, KS 66614 Attn: Reactions/AKF

(About the Author: Since 1985 Bill has been active in the fields of science, zoology, and wildlife management. His education and experience include a B.S. in wildlife management and post-graduate studies in zoology, Lab and Museum Assistant, Shoot Team Leader, ERT Member, Large Mammal Keeper, Senior Keeper, and Zoo Curator at various zoological facilities. His area of research is crisis management in zoological institutions, which draws upon practical experience and training as a Rescue Diver, Hunter Safety Instructor, NRA Firearms Instructor, and Red Cross CPR/First Aid Instructor. Away from work he operates Panthera Research and may be contacted at puma_cat@hotmail.com).

CNAH Reaches Three Quarters of a Million

The Center for North American Herpetology, the most frequently accessed academic herpetological web site on the Internet worldwide, recorded user 750,000 on 5 June 2009. The number of visitors that then went on to access the various pages and gratis services provided within the CNAH web site numbered in the millions. The CNAH web site went online on 1 January 1998.

Why do herpetologists visit the CNAH web site?

Access the CNAH PDF Library. Download over 1,050 herpetological articles gratis. PDF articles are the future (and will eventually replace print journals). Why? No dues, no trees chopped down, and, above all, fast and free distribution of research and knowledge about amphibians, reptiles, turtles, and crocodylians to any interested biologist.

Access the CNAH Directory of Herpetologists and be sure to add your name to it. With 1,600 herpetologists registered, it is the largest such internet directory in the world.

Access the CNAH Standard Common and Current Scientific Names List. It is the only such list on the Internet that is updated daily (by our diligent foundation staff), thus ensuring that users of the web site have instant access to any proposed taxonomic changes involving the North American (north of Mexico) herpetofauna. Also, the CNAH list keeps North American herpetologists apprised of the common names and taxonomy that will appear in the next (fourth) edition of the "Peterson Field Guide to Amphibians, Reptiles, Turtles, and Crocodylians of Eastern and Central North America."

Access the CNAH Standard Common and Current Scientific Names List and view over 1,200 professional color images of these creatures, most of them by noted photographer Suzanne L. Collins. Access the CNAH list of jobs/positions for herpetologists. There aren't that many jobs in our profession, so keep abreast of those offered.

Access our link sites; we have 290 links to North American herpetological web sites, the largest such academic assemblage on the Internet. These are but a few of the many gratis services provided on the CNAH web site.

To the many of you who have contributed financially to our foundation, we express our sincere thanks and gratitude. Your generosity ensured long ago that THE CENTER FOR NORTH AMERICAN HERPETOLOGY would be permanently endowed, and because of that, we will continue to operate as a constant and reliable source of information through the next millennium. That notwithstanding, should you wish to continue your support of CNAH or make your first contribution to us, you may do so online via PAYPAL at <http://www.cnah.org/> Source: *The Center for North American Herpetology, Lawrence, Kansas 6/8/09*

Silver-eared Mesia

(Leiothrix argenteauris)

By

Rachael Cohen, Keeper

Blank Park Zoo, Des Moines, IA

Silver-eared Mesia are a small bird averaging 15 to 16 cm and weighing 24 to 36 gm. Do not let their small size fool you because they can bite really hard! Both males and females have an olive back, yellow belly, and black head with white/silver "ears." The wings of both sexes are red, yellow, and grey. They exhibit sexual dichromatism as males have a bright red throat patch wrapping behind the head, whereas females bear yellow or slight orange color in this region.

Mesias have a large distribution. They range from the Himalayas through southern China down into Sumatra. They can be found up to ~3000 ft. and descend to lower elevations when temperatures drop. Habitat includes mountain and broadleaf forest, secondary growth, jungle and scrub. In captivity, Mesias do well in large aviaries that are well stocked with vegetation. Due to their natural habitat, Mesias can tolerate lower temperatures in captivity, however, warmer temperatures are most suitable to encourage breeding. Access to a warm shelter during a cold spell would allow them to be kept outside.

The behavior of Mesia is tolerant with exceptions. They can be housed with different bird species without concern as long as the other species are larger.

In the wild, this species flocks up to 10 or so birds. In captivity they can be kept in numbers up to 30 as long as they have adequate space. During breeding season, each pair will become very territorial and lack of space will incite fighting. Mesia have been known to kill other Mesia during breeding season.



Photo by Chad Comer

The Blank Park Zoo maintains a large indoor aviary that is 80ft (l) x 56ft.(w) x 32ft (h – at tallest). It is filled with a variety of vegetation. There are three tall trees, multiple bamboo species varying in height, palm species, and an assortment of smaller shrubs and plants.

Blank Park Zoo currently has 10 adults and three chicks that are housed with a Red-throated Bee-eater, Sun Bitterns, Green-winged Doves, Speckled Mousebirds, Bamboo Partridges, Pink Pigeon, Pheasant Pigeon, Rothschild Peacock Pheasants, Scarlet Chested Parrots, Ringed Teals, and Victorian Crown Pigeons.

Nests are small and cup-shaped. It can take 1 to 3 days to build a nest, depending if they start from scratch. They will reuse an entire old nest to build a new one.

Some studies have shown that Mesia will nest around 12 to 13 ft. high. The Blank Park Zoo nests have been found at 20 to 30 ft. high. During the nest-building process, birds have been observed “testing” different plants with nesting material before they settle on one spot. Generally nests are not found until entirely built.

Clutch size is 3 to 4 eggs with incubation lasting up to 14 days. Chicks fledge from the nest at 12 to 14 days. It is best not to disturb the nest or band the chicks until after they have fledged as there is a high abandonment rate. Males especially do not tolerate disturbance and have been known to push chicks from the nest if they are banded.

Silver-eared Mesia are omnivores. In the wild, they eat insects, fruits, and plant materials. In captivity, they are fed a softbill diet that is comprised of softbill pellets, chopped fruits and vegetables, and live insects such as mealworms and crickets. Insect consumption is usually increased at the start of breeding season and when chicks are a few days old. Parents will take softbill pellets and captured insects to their chicks.

Mesia are a great exhibit bird. They are always active and easily brought to the ground for the public to view them better. Their calls are another perk for this bird; they have a variety of different songs that can be heard across a large aviary. Since these birds are listed in CITES Appendix II, increasing the captive population and increasing awareness of their natural habitat will hopefully save this bird in the wild.



Silver-eared Mesia

Photo by Haley Anderson

References

- Karsten, Peter. (2007) *Pekin robins and small softbills: management and breeding*. B.C. Canada: Hancock house Ltd.
- The Mesia Story. *Just Finches & Softbills*. April 12, 2009, from <http://www.finchsociety.org/cfa/mesia/mesia.htm>.
- Pichner, Jimmy. (2003) *Babblers Husbandry and Management: A brief Review, originally presented at the AZA 2003 Eastern Regional*. Minnesota Zoo.
- Silver Eared Mesia. *Bird Breeds an encyclopedia of the world's pet birds*. April 12, 2009, from http://www.bird-breeds.com/Silver_Eared_Mesia.htm
- Silver-eared Mesia. *Birds and Birding in India*. 10 Apr. 2009, from <http://www.birding.in/>.

From Los Angeles to Denver and Back:

A successful journey back home

By

Jody Hodges and Michelle Valois, Primate Keepers

Denver Zoological Gardens

Denver, Colorado

(303) 376-4932

mvalois@denverzoo.org

In April of 2003, the Denver Zoological Foundation added a second troop of gorillas as well as another female and silverback male to the existing female pair that currently resided there. One troop would call Denver home, the other would be temporarily housed while their new exhibit was being constructed at The Los Angeles Zoo. This vacationing troop consisted of an adult male, Kelly, and two adult females Rapunzel and Evelyn. While housed at The Denver Zoo, Kelly and Rapunzel had a female offspring, named Tinga, in 2005. In 2007 construction was complete at The Los Angeles Zoo and Kelly and his troop needed to return to California. This paper will focus on the preparations that took place for Kelly, Rapunzel, Tinga and Evelyn to return to California.

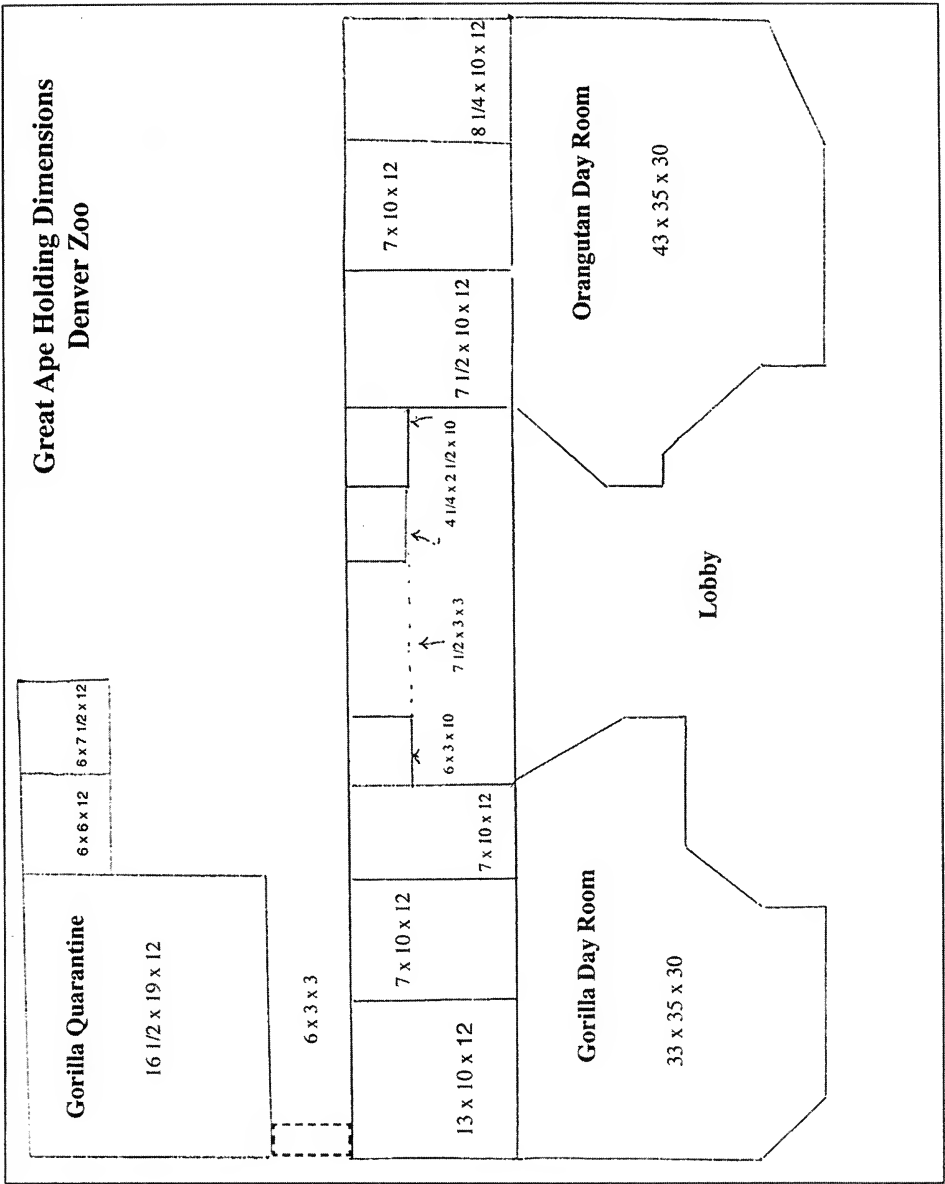
In June 2007, the great ape keeper staff, primate supervisor, primate curator, behavior manager and veterinary staff had a meeting to discuss shipment details for these gorillas. We all agreed that we wanted this to be a very smooth process for the gorillas, producing the least amount of stress for them and for us. Without crate training facilities at Denver, a training plan was established to implement separation, hand injection immobilization, pre-shipment exams and crating all in one day. This was a collaborative strategy between Denver and Los Angeles, to eliminate the stress of a second immobilization and crating for the gorillas. We also utilized a drug combination that would ideally provide a smooth and rapid induction state and recovery.

Based on this first planning meeting, our training objective was two-fold. First, we wanted to have all gorillas visually separated from one another, with the exception of Rapunzel and Tinga, who would be separated by a shift door but still in visual contact. This would encourage each gorilla to perform the necessary training behavior without being influenced by others in the troop. Kelly was previously conditioned to be separated on a regular basis from the girls using a creep door overnight. Rapunzel, Evelyn and Tinga were not routinely separated from each other.

Secondly, we wanted all gorillas to accept a hand injection for immobilization. We felt a hand injection, coupled with our chosen drug combination, would produce the least stress for the gorillas during the immobilization.

These four gorillas had previously been trained at The Denver Zoological Foundation to accept a hand injection, and Tinga had received her immunizations using this method in March of 2006. Since this was an already established behavior for Kelly, Evelyn and Tinga, our focus was on using a sharp needle during training, hair pulling at the injection site, and extending the hold time. Rapunzel was our only gorilla that we had to begin teaching the injection behavior. Although she had prior training at Denver to accept a hand injection, she had two immobilizations in 2004, neither of which utilized a hand injection. These experiences created in her a high aversion to syringes and needles.

Great Ape Holding Dimensions Denver Zoo



To be able to visually separate all gorillas, we had to use three separate areas in our great ape house. We chose these stations based on where we were able to separate Rapunzel from Tinga in previous training sessions. This arrangement relied heavily on Kelly being willing to transfer away from Rapunzel, which is a behavior that has been difficult for him. After a very short trial run and some resistance from Kelly, we decided to swap Kelly's station for Rapunzel and Tinga's station. We hoped to have more success with these stations as this was where Kelly spent every other night and where he was fairly comfortable. This was a much better arrangement, and put less stress on Kelly, as he was already at his station.



Denver and LA staff surround Evelyn during her immobilization. The makeshift exam room is a part of the Great Ape House.

The separation training progressed fairly quickly, and within days we were already closing doors between the gorillas. Evelyn was completely separated into the quarantine yard within two weeks, and Kelly was completely separated into the holding hallway by mid-July. Each gorilla had a training session at each separation, which included maintaining and improving the hand injection behavior, or for Rapunzel, the continued training of this behavior. Multiple times per week, our veterinarian attended and trained each gorilla while separated. We relied heavily on a large pool of trainers to maintain daily separation and injection training. Excellent communication was also needed to ensure we kept moving forward with our behaviors.

With training progressing well, we began to extend the amount of time each gorilla spent separated before having a training session. This would simulate the actual wait times on the immobilization day. We also began to decrease our food reward when asking for the injection behavior, also to simulate the actual conditions on the day of the im-

mobilizations. Since Evelyn would have the longest wait time, we began teaching her a behavior in which she used a paint brush and paints to decorate a canvas. We hoped this would reduce her stress and keep her occupied until her turn. We also had to desensitize Evelyn to her crate being near her outdoor exhibit. We chose to put the crate here to make loading her easy after her exam. She adjusted well to this. We also simulated the increased traffic on the day of the procedure, both foot and vehicular, that would be occurring behind our great ape building and in plain sight of Evelyn. We invited many people from the zoo to come visit and also

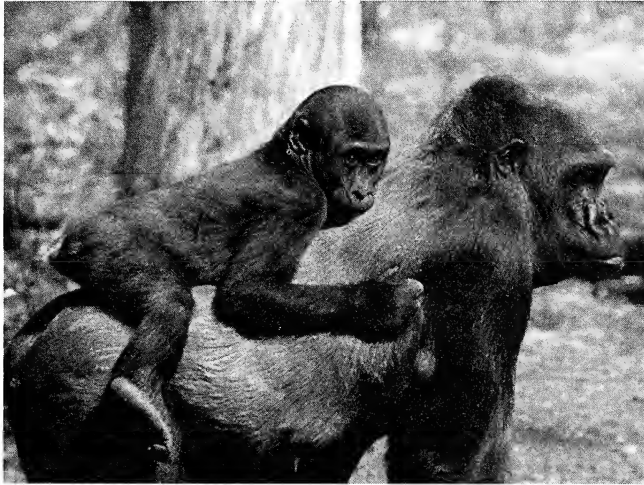
Rapunzel and Tinga are loaded into a semitrailer. Staff used a forklift to set the crate in the back of the truck where it was strapped down for the trip to LA.



had visitors drive the veterinary van down at odd times during the day. Rapunzel continued to improve in accepting a needle and syringe at her shoulder. We also set up a creep situation for Tinga, this being a small step in the direction of her complete separation from Rapunzel. Her training was also progressing right on schedule.

Kelly's training encountered a few bumps in the road. Kelly became increasingly intolerant of separation, and throughout the month of August, he would intermittently refuse to transfer in the normal manner. Kelly also tried to prevent Rapunzel and Tinga from transferring to their stations. In another attempt to make this process easier for Kelly, we began housing him in the gorilla holding hallway every night, instead of the varied schedule we used before. By the end of August, Kelly seemed back on track. His training sessions seemed more pleasurable for him again as well. We also used being

reunited with Rapunzel and Tinga immediately after his training session as a reward for his cooperation, as this seemed to be more of a motivator than food.

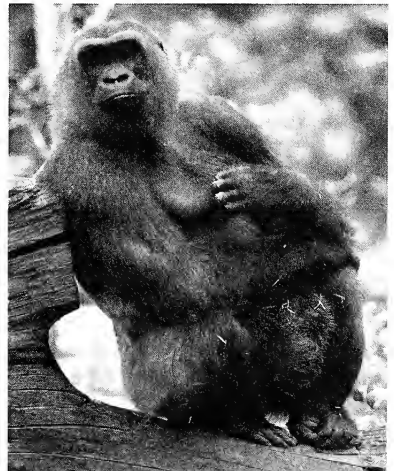


Tinga hitching a ride on Rapunzel's back.

In mid-August, we began separation training with Rapunzel and Tinga. We decided to make this a three person project, one trainer for each gorilla and a trainer to manipulate the door. Again, we heavily relied on the availability of a large pool of trainers to continue forward progress. Adding a third trainer

was at first a bit daunting for Tinga, but she quickly adapted. Two weeks into this behavior, we closed the door separating Tinga from Rapunzel for the first time. She accepted this well, and we continued to work on this, extending the time the door was closed. In the beginning of September, at one of her training sessions, the door was closed for four seconds, which initially she seemed to tolerate well. Yet after this session, she regressed back to stationing only. Regression was an expected outcome with training this behavior. We decided due to the lack of time necessary to complete this behavior, that we would remove it completely from training, and only close this door on the day of the immobilization, simultaneously when injections were given. Tinga came back to stationing and holding for a syringe and needle to her shoulder within a week, and all gorillas seemed prepared for separation and hand injections.

This is Evelyn in Denver



The shipment date was set as 13 September 2007. We began

our morning as normal as possible, and all gorillas allowed us to separate them into their station areas. Rapunzel and Tinga were scheduled to be immobilized first, and both accepted their injections without a hitch. As the injections were given, our door trainer closed the door between Tinga and Rapunzel, which was very stressful at first, but as the immobilization drugs began to take effect, both calmed. Tinga was first to be completely down, and she was taken into our examination area for her physical exam. Rapunzel needed to be given more drug, and after this second injection, by hand, she was also completely anesthetized and taken for her physical exam. Both Kelly and Evelyn, while obviously upset to hear Tinga's vocalizations, remained fairly calm while they awaited their turn.

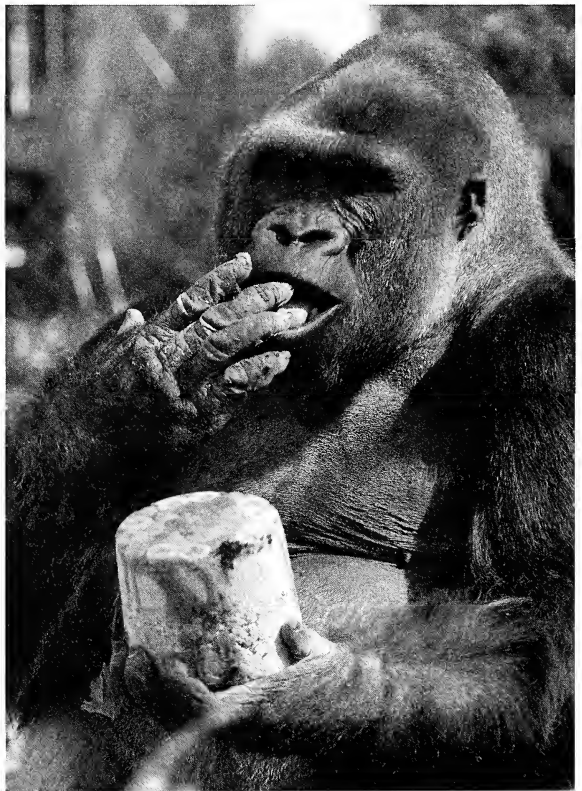
Once Rapunzel and Tinga were loaded into their crates, recovered and reunited, Kelly accepted his hand injection. He too required another injection of immobilizing drugs by hand, and was then taken to his exam. Evelyn was our last exam, and though she had to wait the longest and could see people walking up to the rear of our ape building and the van driven transporting the animals to their crates, she accepted her hand injection with flying colors. She went down without additional drugs and her exam was completed. All three gorillas were recovered in their crates, and once recovered, were transferred to the climate-controlled semi-trailer that would take them back to Los Angeles.

Our success hinged on an amazing amount of teamwork between the animal caretakers, supervisors and veterinary staff of two separate zoological institutions in two different states, a well thought out, if a bit flexible, training plan and a trusting relationship between caretaker and gorilla. The Denver Zoological Foundation was very pleased with the success of our endeavor. This experience demonstrated to us the results of putting hearts and minds together for the benefit of our animals.

*All photos for this article taken
by Dave Parsons*

Notes: All of these gorillas were born in captivity. The gorillas's ages when they were sent back to Los Angeles were:

- Kelly 20 years old
- Evelyn 31 years old
- Rapunzel 23 years old
- Tinga 2 years old



This is Kelly in Denver at his 20th birthday celebration. He's eating a monkey chow cake!

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*



Obama Administration Adopts Bush's Polar Bear Extinction Plan as Its Own

Secretary of the Interior Ken Salazar announced on 8 May 2009 that he will not rescind a "special rule" created by the Bush administration that sharply limits protections for the polar bear (*Ursus maritimus*) under the Endangered Species Act.

"For Salazar to adopt Bush's polar bear extinction plan is confirming the worst fears of his tenure as Secretary of the Interior," said Noah Greenwald, biodiversity program director at the Center for Biological Diversity. "Secretary Salazar would apparently prefer to please Sarah Palin than to protect polar bears."

Congress passed legislation on 10 March giving Secretary Salazar power until 9 May to rescind with the stroke of a pen both the special rule for the polar bear and a rule that exempted thousands of federal activities, including those that generate greenhouse gas emissions, from review by expert scientists in the U.S. Fish and Wildlife and National Marine Fisheries services. This latter "consultation" rule was revoked by the Obama administration, but Secretary Salazar has stated he will allow Bush's rule eliminating protections for polar bears to stand.

"It makes little sense for Salazar to rescind Bush's national policy barring consideration of global warming impacts to endangered species in general, but keep that exact policy in place for the one species most endangered by global warming — the polar bear," said Greenwald.



Photo: US Fish & Wildlife Service

Salazar ignored strong criticism of the rule and requests to revoke it from more than 1,300 scientists, more than 50 prominent legal experts, dozens of lawmakers, more than 130 conservation organizations and hundreds of thousands of members of the public. The rule severely undermines protection for the polar bear by exempting all activities that occur outside of the polar bears range from review. The polar bear, however, is endangered precisely because of activities occurring outside the Arctic, namely emission of greenhouse gases and resulting warming that is leading to the rapid disappearance of summer sea ice.

"As part of comprehensive efforts to address greenhouse gas emissions, we should take measures to ensure that we're not unduly harming polar bears and other species threatened by climate change," said Greenwald. "With its sea-ice habitat rapidly disappearing, the polar bear needs the full protection of the Endangered Species Act." The special rule also reduces the protections the bear would otherwise receive in Alaska from oil industry activities in its habitat. "Salazar's decision today is a gift to Big Oil and an affirmation of the pro-industry/ anti-environmental policies of the Bush administration," said Greenwald. "This is not the change Obama promised."

The Center for Biological Diversity and other organizations are challenging the polar bear special

rule in court. Oil-industry organizations, trade associations representing the nation's largest polluters, and Sarah Palin have intervened in the court case to help Secretary Salazar defend Bush's extinction rule. Addressing greenhouse gas emissions under the Endangered Species Act is no different than addressing any other pollutants that have been effectively addressed under the Act for years, such as DDT and other pesticides that had severe impacts to the bald eagle (*Haliaeetus leucocephalus*) and other species. *Source: Center for Biological Diversity, 8 May 2009*

U.S. Project to Fight Frog-Killing Fungus - Zoos in the United States, Panama and Mexico are deploying researchers in Central America to develop new ways to fight a fungus blamed for wiping out dozens of frog and amphibian species. The Smithsonian Institution is leading six other zoos and institutes in the Amphibian Rescue and Conservation Project, announced 11 May, which aims to raise \$1.5 million to fight the fast-spreading chytrid fungus. Their protection efforts will focus on a small slice of Panama that is the only area in Central America that appears to be untouched by the disease, said Dr. Karen Lips, a University of Maryland researcher. Lips said it is only a matter of time, though, before even that area is hit with the fungus, perhaps as short a time as five years. The speed at which the fungus has spread is "absolutely incredible," she said. "It's probably much worse than we even appreciate."

Scientists say the chytrid fungus threatens to wipe out a vast number of the approximately 6,000 known amphibian species and is spreading quickly. Already, 122 amphibian species are believed to have gone extinct in the last 30 years, primarily because of the fungus, conservationists say.

"We're looking at losing half of all amphibians in our lifetime," said Brian Gratwicke, the Smithsonian's lead scientist on the project.

The fungus has been found in 87 countries, including the United States. Scientists involved in the project will work on implementing recently published research from James Madison University in Virginia that shows bacteria in frogs' skin can be used



Photo courtesy of Zoological Society of London

to fight the fungal infection. Frogs bathed in a mixture containing the bacteria and then exposed to the fungus had a 100% survival rate in the study published in the *International Society for Microbial Ecology Journal*, said Professor Reid Harris. The survival rate was low for another set of frogs that did not get the bath. Applications for the research could include a spray to help build frogs' resistance to the fungus or a benign, fungus-fighting bacteria strong enough to pass from one frog to another.

"It's a very exciting discovery," Gratwicke said. "It's really the only thing we've got going."

Other groups involved in the project include Cheyenne Mountain Zoo in Colorado Springs, Colorado; Zoo New England in Stoneham, Massachusetts; Washington, D.C.-based Defenders of Wildlife; African Safari in Mexico; Houston Zoo in Texas; and Summit Municipal Park in Panama. *Source: Associated Press, Brett Zonager, 12 May 2009*

In a related story, scientists are rescuing dozens of one of the world's most rarest species of amphibians, the mountain chicken frog (*Leptodactylus fallax*). The frogs are being airlifted to safety from Montserrat in a final attempt to save it from the deadly chytrid fungus, which is ravaging their shrinking habitat and threatening extinction worldwide. Montserrat is a tiny British Caribbean territory that is one of only two sites where the once-prevalent mountain chicken is found, but hundreds of the frogs have been killed in just the last few weeks by the fungus. The two-pound mountain chicken, named because locals claim its flesh tastes like chicken, is threatened by hunting and loss of habitat from a volatile volcano, and most recently by outbreaks of the chytrid fungus. The volcano has erupted constantly since 1995 and more than half of the island's 12,000 people have had to evacuate. Ironically enough, the volcano might be the frog's lifeline. Local officials plan to eventually reintroduce the frog to a region cut off by lava and ash that is inaccessible by foot, and hopefully fungus free. Scientists estimate that

there are only a few thousand surviving frogs and the number is decreasing everyday.

Chytrid fungus is a disease that infects the skin through which many amphibians drink and breathe. Chytridiomycosis causes lethargy and convulsions, and thickens the skin. It has spread quickly in recent decades, and some scientists believe the situation is becoming more severe as climate change is causing elevated temperatures.

“Its impact has been catastrophic,” Andrew Cunningham, senior scientist with the Zoological Society of London, said about the chytrid fungus. “The mountain chicken frog has been virtually wiped out.”

Gerardo Garcia, director of the herpetology department at the British-based Durrell Wildlife Conservation Trust says that experts have found 300 dead frogs and have reason to believe that hundreds more have died since the fungus appeared in late February. Scientists are treating some of the frogs with anti-fungal baths and flying dozens of others to zoos in Britain and Sweden, where they live in temperature-controlled rooms with automatic spray systems. About 50 have been flown off the island, costing \$14,000.

“We’re in a situation where the species could become extinct forever,” Garcia said.

Andrew Terry, Durrell’s conservation manager, says that the frogs should ultimately be kept in their natural habitat, but flying them out was the only immediate solution available considering the fungus-free areas could not provide enough food. The other stronghold of the species, nearby island Dominica, saw populations plummet beginning around 2002 as a result of the disease, which is believed to have spread to Montserrat late last year or earlier this year. Natives on both islands used to love the frog’s meat, but it is mostly tourists that request it now, said director of Montserrat’s Department of Environment, Gerard Gray.

Experts are working hard to find a way to eliminate the fungus, which has killed various frog species from Asia to South America. The Durrell trust has housed its rescued frogs in a bio-secure unit at its wildlife park in Jersey and is hoping to breed the frogs to create a population that can be reintroduced to their natural habitat in as little as two years. ZSL London Zoo will now protect mountain chicken frogs from both Dominica and Montserrat in its captive breeding unit which includes temperature controlled rooms, automated spray systems, and areas for growing live food. Bio-security involves full paper suits, masks and gloves worn by keepers, to make sure that no pathogens, such as the fungus, are able to enter. *Source: RedOrbit, 10 May 2009*

IUCN Red List for Birds is Updated - On 14 May 2009, the new Red List update for birds was published. Set up by Sir Peter Scott in 1962, the IUCN Red List of Threatened Species is the world’s most comprehensive inventory of the global conservation status of plants and animal species. It evaluates the extinction risk of thousands of species and subspecies. The aim is to convey the urgency of conservation issues to the public and policy makers, as well as help the international community to try to reduce species extinction. BirdLife International’s latest evaluation of the world’s birds, on behalf of IUCN, has revealed that more species than ever are threatened with extinction. A staggering 1,227 species (12%) are now classified as Globally Threatened, including 192 as Critically Endangered, the highest threat category, a total of two more than in 2008. This includes the Brazilian merganser (*Mergus octosetaceus*) and Madagascar pochard (*Aythya innotata*), both priority species for the Wildfowl & Wetlands Trust.

WWT is drafting a research and monitoring strategy for the Brazilian merganser. This follows a successful expedition with Terra Brasilis to Serra da Canastra, Brazil, in 2008 where 14 Brazilian mergansers were caught and colour-ringed - a conservation first. The Brazilian merganser is extremely sensitive to habitat loss and disturbance caused by factors such as logging, river siltation, mining and tourism. There are currently just 200-250 known to exist in the wild, almost all in Brazil.

The Madagascar pochard, is the rarest duck in the world. Only 25 birds are thought to remain in the wild, all at a single lake in northern Madagascar. Without dedicated conservation action, there is a significant possibility it may become extinct in the near future. WWT has joined up with Durrell Wildlife Conservation Trust and The Peregrine Fund in a major conservation project to save this

endangered species. This will establish a viable population of Madagascar pochards in the wild through a conservation-breeding and release programme. A site visit will take place in July to identify the best place for a breeding facility.

Peter Cranswick, Head of Species Planning, explains: "At WWT, saving threatened species is a key focus for our activity. Critically Endangered species, such as the Brazilian merganser and Madagascar pochard need urgent help if they are to survive. In this, Sir Peter Scott's centenary year, we are working as hard as ever to continue his legacy to improve the outlook for these special birds." *Source: Surfbirds News, 16 May 2009*

Ape Rescue Forest to Be Logged - An Indonesian paper company is planning to log an area of unprotected jungle which is being used as a reintroduction site for about 100 critically endangered orangutans. A coalition of environmental groups said a joint venture between Asia Pulp & Paper and Sinar Mas Group had received a licence to clear the largest portion of natural forest remaining outside Bukit Tigapuluh national park on Sumatra. The area is home to about 100 great apes that are part of the only successful reintroduction programme for Sumatran orangutans (*Pongo abelii*), the sub-species most at risk of extinction, the coalition said in a statement. It is also a crucial habitat for the last remaining Sumatran tigers (*Panthera tigris sumatrae*) and elephants left in the wild, it said.



Photo from Wikipedia

'It took scientists decades to discover how to successfully reintroduce critically endangered orangutans from captivity into the wild,' said Peter Pratje of the Frankfurt Zoological Society, which is part of the coalition. 'It could take APP just months to destroy an important part of their new habitat. These lowland forests are excellent habitat for orangutans, which is why we got government permission to release them here beginning in 2002. The apes are thriving now, breeding and establishing new family groups.'

The unprotected forest is also considered essential habitat for around 100 of the last 400 critically endangered wild Sumatran tigers, as well as around 40 to 60 endangered Sumatran elephants (*Elephas maximus sumatrensis*), the activists said. *Source: AFP, 18 May 2009*

World's Smallest Snake Slithers Into Charts - The world's smallest snake and longest insect are among the top ten new species discovered over the past year. Measuring almost 2 ft., a bug that resembles a stick became the world's longest insect when it was spotted in Malaysia. A tiny snake, just 4 in. long, was also discovered last year, in Barbados. Known as the Barbados threadsnake (*Leptotyphlops carlae*), it is believed to be the smallest snake in the world. The creatures are just two of tens of thousands of new species discovered across the globe over the past 12 months. An international committee of taxonomists – experts in species classification – has drawn up an annual list of the top ten species discovered.

A pea-sized seahorse half an inch tall, found off Indonesia, also made it on to the list, as well as a coffee plant that is free of caffeine from central Africa. A self-destructive palm from Madagascar that dies once it has flowered was also included in the top ten. There are fewer than 100 of the giant palms in the world, and they all live in a small area of north-west Madagascar. The palm produces a huge, spectacular flower and then, after fruiting, dies and collapses. Soon after the species was discovered, seeds were distributed throughout the palm grower community in Madagascar to raise money for its conservation by the local villagers. It has since become highly prized. Closer to home, a "ghost" slug was a surprising find in the busy capital of Wales, Cardiff. The white carnivorous slug has blade-like teeth. A type of bacteria that

lives in hairspray was identified by scientists in Japan and was by far the smallest species to be chosen.

A fossil of a fish that was the oldest-known vertebrate able to bear life also made it on to the list. The extraordinary fossil, called *Materpiscis attenboroughi*, was found in Western Australia. It shows a mother fish giving birth approximately 380 million years ago. The specimen has been nicknamed "Josie" by the discoverer, John Long, in honour of his mother.

As well as the largest insect and smallest snake was a creature that was possibly the most twisted. It was a snail from Malaysia which has a shell that twists around four axes. A beautiful damselfish was discovered in the deeps off the coast of Ngemelis Island, Palau, in the Pacific Ocean.

Professor Quentin Wheeler, director of the International Institute for Species Exploration at Arizona State University, an entomologist involved in the top ten list, said: "Most people do not realise just how incomplete our knowledge of Earth's species is, or the steady rate at which taxonomists are exploring that diversity. We are surrounded by such an exuberance of species diversity that we too often take it for granted."

He added: "Charting the species of the world and their unique attributes are essential parts of understanding the history of life. It is in our own self-interest as we face the challenges of living on a rapidly changing planet."

More than 18,500 species new to science were discovered and described in 2007. About three-quarters were invertebrate animals, and 11% were plants. This year is the 300th anniversary of the birth of Carolus Linnaeus, who initiated the modern system of plant and animal names and classifications. About 1.8 million species have been described since it was invented. Scientists estimate that there are about ten million species on Earth. The State of Observed Species report and list of top ten new species is issued annually by ASU's International Institute for Species Exploration. The committee made its choices based on unique attributes, surprising facts about the species, or even peculiar names. *Source: The Scotsman, 23 May 2009*

Lawsuit Announced to Protect Arctic Seals Threatened by Global Warming - The Center for Biological Diversity has notified the National Oceanic and Atmospheric Administration of its intent to file suit against the agency for delaying protection of Arctic seals under the Endangered Species Act. In May 2008 the Center filed a petition to protect the ice-dependent ringed, bearded, and spotted seals under the Act due to threats from global warming and increasing oil development in their habitat. In September 2008, the agency found that the three seal species may deserve Endangered Species Act protection but has subsequently failed to make a decision on whether the species warrant legal protection within the one-year deadline provided by the statute. This June 2009 issued 60-day notice of intent to sue is a legally required precursor before a lawsuit can be filed to compel the National Oceanic and Atmospheric Administration to comply with the law.

"The Arctic is in crisis due to global warming," said Rebecca Noblin, with the Center in Anchorage. "An entire ecosystem is rapidly melting away, and we risk losing not only the polar bear but the ice seals and other ice-dependent species if we do not take immediate action to address global warming."

Ringed, bearded, and spotted seals use the sea ice in slightly different ways, but each depends on the sea ice for giving birth, rearing pups, and resting. Ringed seals (*Phoca hispida*), which are the primary prey for polar bears (*Ursus maritimus*), excavate snow caves on sea ice to provide hidden, insulated shelters for themselves and their pups. The early breakup of sea ice destroys these snow sanctuaries, resulting in increased deaths of pups. Bearded seals (*Erignathus barbatus*), which are distinctive for their mustachioed appearance and their elaborate courtship songs, give birth and rear their pups on drifting pack ice over shallow waters, where their bottom-dwelling prey is abundant. The early retreat of the sea ice off the food-rich shallow shelves decreases food availability for these seals. Spotted seals (*Phoca largha*), whose longer noses give them a dog-like appearance, rely on the edge of the sea ice



Barbados Threadsnake
Photo: Blair Hedges/Penn State

away from predators as safe habitat for giving birth and as a nursery for their pups. Loss of sea ice and early sea-ice breakup threaten these seals' ability to successfully rear their young.

In addition to loss of sea ice from global warming, these seals face threats from increased oil and gas development in their habitat and the proliferation of shipping routes in an increasingly ice-free Arctic. Both activities bring heightened risk of oil spills and rising levels of noise pollution and other kinds of human disturbance.

“With rapid action to reduce greenhouse gas pollution, combined with a moratorium on new oil and gas development in the Arctic, we can still save the ice seals and other Arctic wildlife,” Noblin said. “If the ice seals are to survive, we need to protect their habitat, rather than converting it into a polluted industrial zone.”

Listing of the seals would not affect subsistence harvest of these seals by Alaska natives, which is exempted from the law's prohibitions.



Bearded Seal

Photo: Kathy Frost, Alaska Department of Fish and Game

The Center has also filed petitions seeking protection of the polar bear, Pacific walrus (*Odobenus rosmarus divergens*), and ribbon seal (*Histiophoca fasciata*) from melting sea ice and other effects of global warming. The polar bear was listed as a threatened species under the Endangered Species Act on May 15, 2008. The Bush administration denied listing of the ribbon seal in December 2008, a decision the Center will shortly challenge in court. An overdue decision on the Center's walrus petition is now due on September 10, 2009, pursuant to a settlement of a previous Center lawsuit. The Center has also filed suit against the National Oceanic and Atmospheric Administration over the agency's failure to meet legal deadlines with regard to Center petitions to protect sea turtles threatened by global warming and industrial fisheries.

“Unfortunately the National Oceanic and Atmospheric Administration has shown the same disregard for the law under the Obama administration as it did under Bush,” said Noblin. “Federal officials should not be allowed to view compliance with legal deadlines as optional.” Source: *Center for Biological Diversity*, 4 June 2009

Tiger Pugmarks Found at 10,000 ft - Pugmarks of a Royal Bengal Tiger (*Panthera tigris*) have been found in the snow at an altitude of 10,000 feet in the Himalayas near Jelepala in eastern Sikkim. Officials called it a rare discovery, since tigers are usually found in the plains and almost never above 6,000 feet. The latest pugmarks were photographed 27 March in the Ganek-Lungto area in eastern Sikkim. Tiger pugmarks were last officially recorded at this altitude in Sikkim some 18 years ago, by then divisional forest officer Tshesum Lachungpa. Legshey said forest officials were on a routine patrol when they found the pugmarks on the snow in the north eastern part of the Pangolakha Wildlife Sanctuary in Sikkim. The team then recorded the altitude of the pugmark site using the Global Positioning System. They also measured the pugmarks and photographed it, he added. “The pugmarks measure 19 cm long and 17 cm wide with a stride of around 110 cm,” Legshey said. He added that the trail of around 70 metres (of the animal's track) resembled that of a tiger on a “normal walk”. The team then followed the track from Ganek to Devithan from where the terrain became too steep to follow. and senior officials, it was presumed that the animal is a female,” he added. The residents in the area heard tiger roars in the past and also came across carcasses of yaks and goats killed by the animal, Legshey said. He said the tiger might have crossed into Sikkim from Bhutan through the Pangolakha Wildlife Sanctuary, which is a forest extending into the neighboring country. Currently, a team of forest officials is camping at Zuluk to monitor and alert the villagers, police and defence personnel about the probable presence of a tiger in their midst. Meanwhile, forest officials have urged the local residents not to harm the animal even if it attacks livestock, and assured appropriate compensation in case of an attack. Source: *Wildlife Watch Group* www.citesnepal.org 5/5/09

AAZK Membership Application (Please Print)

Check here if renewal []

Name _____

Email _____

Mailing Address _____

City _____ State/Province _____ Zip/Postal Code _____ Country _____

U.S. Members

Canadian Members

\$40.00 Professional

Full-time Keeper

\$35.00 Affiliate

Other staff & volunteers

\$25.00 Student
Must supply copy of current student ID at time of application

\$65.00 or up - Individuals Contributing/U.S.

\$150.00 or up Institutional/U.S.
Organizations/Institutions (requires Board approval)

\$150.00 Commercial Member
(i.e. animal-related food & supplies)

\$55.00 International Members *(All members outside U.S. & Canada regardless of category)*

\$40.00 Professional

Full-time Keeper

\$40.00 Affiliate

Other staff & volunteers

\$25.00 Student
Must supply copy of current student ID at time of application

\$65.00 or up - Individuals Contributing/Canada

\$150.00 or up Institutional/Canada
Organizations/Institutions (requires Board approval)

\$40.00 Library Only
Available ONLY to public & university libraries (In U.S.)

Zoo Affiliation (if any) _____

Zoo Address _____

Title _____

My check is enclosed (AAZK, Inc.)

Please charge my credit card

Mastercard Visa Card# _____ - _____ - _____

Name on card _____ Expiration date _____

Signature _____

Mail this application to: AAZK Administrative Offices, 3601 SW 29th St., Suite 133, Topeka, KS 66614-2054. Make checks/money orders payable to AAZK, Inc. **Must be in U.S. FUNDS ONLY**. Membership includes a subscription to *Animal Keepers' Forum*. The membership card is good for free or discounted admission to many zoos and aquariums in the U.S. and Canada.



**AMERICAN
ASSOCIATION
of ZOO KEEPERS**

*"Dedicated to
Professional Animal Care"*

**3601 S.W. 29th St.
Suite 133
Topeka, KS
66614-2054
U.S.A.**

Return Service Requested

Non-Profit Organization
U.S. POSTAGE PAID
Topeka, KS
Permit # 646

SMITHSONIAN INSTITUTION LIBRARIES



3 9088 01463 5411

*****MIXED AADC 66340
GRP 1
TRAY 5
9/10 NATIONAL ZOO LIBRARY
VISITORS CENTER - MRC 551
PO BOX 37012
WASHINGTON DC 20013-7012

