

ANIMAL KEEPERS' FORUM



OCTOBER 2007

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

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AAZK PUBLICATIONS - CONTINUING DATA COLLECTION

Resources for Crisis Management in Zoos & Other Animal Care Facilities, Vol. 2 - Susan D. Chan, Topeka, KS;
William K. Baker, Abilene zoo, Abilene, TX; Diana Guerrero, ArkAnimals, Big Bear Lake, CA

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33rd Anniversary - 1974 - 2007

MISSION STATEMENT

American Association of Zoo Keepers, Inc.

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

About the Cover.....

This month's cover features a Marine Iguana (*Amblyrhynchus cristatus*) drawn by Kim Lovich of the Curator's Department of the Zoological Society of San Diego. This species is found only on the Galapagos Islands. These large bodied lizards spend a great deal of their time at sea where they forage for algae, their primary food source, along the rocky shores. When feeding, they can remain submerged for up to an hour, though dives of 5 to 10 minutes are more common. Being cold-blooded, these lizards need to regain the body heat lost by diving in the cold ocean waters and can be seen basking in the sun to warm themselves (depicted on the cover). The males, which are larger than the females, may grow to a length of 4 feet or more (almost half of which is tail). Large males assemble "harems" of several females and guard the harem against intrusion by other males. Head bobbing is a threat gesture that warns other males (and sometime humans) to stay clear. Fights occasionally occur between males. These are quite harmless and consist of a contest in which the two males put their heads together and attempt to push their opponent backward. The loser retreats without further fuss. Listed on CITES Appendix II as vulnerable, introduced predators such as cats and dogs pose a significant threat to these iguanas and their young. Thanks, Kim!

Call for Cover Art

We are currently seeking cover art for use on *Animal Keepers' Forum*. Artists are encouraged to submit their artwork for consideration. Cover subjects include all species of animals and also art of keepers working with their animals. Clean, crisp artwork, such as that done in pen and ink, reproduces best in *AKF*, but other mediums, such as pencil, may also be considered. Submission of artwork does not guarantee that it will be selected for an *AKF* cover. Artists should send a brief natural history piece to accompany their artwork. If the animal subject is an animal from their zoo, artists are encouraged to include info about that particular animal such as house name, breeding history, etc. Artists should include their name, title and facility as well as their preferred mailing address. Artwork may be submitted in hardcopy to Susan Chan at the address on the cover of this publication. Or artwork may be sent as jpg or tif file attachments to the editor's email: akfeditor@zk.kscoxmail.com< If the artist wishes hardcopy artwork returned, they should include a self-addressed, appropriately-sized envelope when submitting.

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 *AKE*. 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.kscoxmail.com<

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

AAZK website Address: www.aazk.org

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

Scoops & Scuttlebutt



Conference 2007 at Galveston Now Part of AAZK History



A big "Thank You" to all the sponsors, presenters, attendees, and Moody Gardens' staff for a successful 34th Annual AAZK conference! Check out our website to see who made this conference possible. We also have photos and a quick review of the conference. See at www.gcaazk.org --Galveston Conference Committee

The AAZK Board of Directors and the staff of the Administrative Office would like to thank all those involved at Moody Gardens and the Galveston Chapter of AAZK for the hard work and dedication they put into making the 2007 AAZK Conference truly a memorable event. See everyone next year in Salt Lake City!

Board Thanks Member for Donation

The AAZK Board of Directors and the AAZK Administrative Office staff applaud member Linda Colbert of the Louisiane Purchase Zoo in Monroe, LA for her creative fundraising efforts. Linda made various items which were sold in her zoo's gift shop. The money generated was split between AAZK and some of her favorite conservation projects. We thank Linda for her donation of \$306.00 to AAZK, Inc.

From the Editor - Notice on Special Issue of AKF

We want everyone to be aware that we are planning a special double, expanded Nov/Dec issue of *Animal Keepers' Forum* that will deal with topics related to crisis management in zoological facilities. Topics we are planning to include are: Hurricane Preparedness, Diver Safety, Trainer Safety, Contingency Planning for Dangerous Animals, Crisis Management Planning in Zoological Institutions, The Benefits of Critical Incident Stress Management (CISM) at the Zoo, Developing a Program for Dangerous Animal Emergencies, Exhibit Design and Construction: How it Affects Crisis Management, The Terrorist Threat to Zoological Institutions, Emergency Communications, Transport and Handling of Sedated Specimens, Advancements in Shipping Crate Design, Fabrication, and Application, The Veterinary Role as First Responder to a Medical Emergency, and Disease Risk Communication and HPAI, among others.

So be aware you will **not** receive separate November and December issues of *Animal Keepers' Forum*. We currently anticipate that this expanded issue would be mailed in early December. Make certain that AO has your current mailing address so you don't miss this special issue. Because of the additional postage expense for this larger issue, we will not re-mail copies that go to incorrect addresses. It is each member's responsibility to keep AAZK apprised of your current mailing address. You can do this on the AAZK website (www.aazk.org) or call our office at 785-273-9149. It just takes a moment and not only insures that you won't miss a single issue of *AKF*, but also helps save the Association money (it cost us about a \$1 for each *AKF* issue returned by the Post Office for an incorrect/old/outdated address). Your cooperation on this is greatly appreciated.

AZA Avian Scientific Group Offers Grants

A key action plan item in the Avian Scientific Advisory Group (ASAG) Strategic Plan of 2000 – 2003 was the collection and dissemination of information among its members. Additionally, recruiting and building capacity in the next generation of zoo bird curators is vital to the continuity and survival of zoo avian programs. To this end, ASAG offers small grants to bird keepers and working bird husbandry supervisors. These grants support travel to ASAG-sponsored workshops for the purpose of presenting papers on advancements in the care and reproduction of avian species in zoos and/or field conservation projects in which the applicant has been involved in a lead role. It is envisioned that grant recipients will become more familiar with ASAG purpose and goals, begin to establish a network of colleagues and mentors, and become active participating members of the group.

Grant applicants must be paid employees of an AZA-accredited institution (or current AZA member in good standing), working in a position that involves the care and management of captive birds. Persons holding the title Curator of Birds (or its equivalent) at an AZA-accredited institution are not eligible. Applicants must be willing to write a professional paper on a topic relevant to zoo aviculture and travel to the next scheduled ASAG workshop to present it (workshops typically held in conjunction with an AZA regional conference; locations and dates vary annually). Preferred topics are those which involve: taxa of current or future priority in the appropriate TAG regional collection plans; taxa for which innovation in breeding or captive management are needed; taxa of conservation priority in the wild; significant advancements in the welfare of captive zoo birds. Applicants will also be judged on their leadership potential, initiative and problem solving skills as recommended by their direct supervisor.

Pre-Proposal Submission Deadline: 1 November of the grant cycle year

Full Paper Submission Deadline: 15 January of the grant cycle year

Maximum grant awards will be \$800.00 but can be less based on actual travel needs/costs. Grant funds can be used for transportation costs, hotel, meals and conference registration fees in line with ASAG travel expense guidelines.

Grant application is a two-step process. Applicants should first submit an application form, a letter of support and an abstract for the professional paper by the pre-proposal submission deadline. The application will include current job title, a summary of personal avicultural experience, rationale for how the professional paper will advance the science of zoo aviculture and a draft travel budget. The letter of support will be from a senior member of zoo staff. It will verify the zoo will provide the support necessary to ensure the applicant can attend the ASAG workshop if awarded a grant and will comment on the leadership potential and initiative of the applicant. Abstracts will be reviewed based on the criteria stated above. Those judged to be of high quality and relevance will be notified by 15 December and invited to submit their full paper by 1 February. Applicants will be notified of final award by 15 February.

See the AAZK website for further information on this granting opportunity including downloadable application forms. **Send Proposals or Address Grant Process Questions To:** Ken Reininger, Curator of Birds, North Carolina Zoo, 4401 Zoo Pkwy, Asheboro, NC 27205; phone: 336-879-7605; email Ken.Reininger@nczoo.org

Mexican Herp Checklist Available

A Checklist of the Amphibians and Reptiles of Mexico by Ernest A. Liner, 2007. Louisiana State University Occasional Papers of the Museum of Natural Science 80: 1-60 - A modern checklist of the amphibians, turtles, reptiles, and crocodylians of Mexico is presented. Fifty-three families containing 216 genera and 1627 species and subspecies are listed as occurring in Mexico.

Reprints of this paper are available directly to individuals only by writing to: Dr. Ernest A. Liner, 310 Malibou Boulevard, Houma, LA 70364-2598 or requests can be made to him by email at liner_e@bellsouth.net

Institutions wishing copies should contact the Louisiana State University Museum of Natural Science, 119 Foster Hall, Louisiana State University, Baton Rouge, LA 70803. Phone: 225-578-2855; e-mail: museum@lsu.edu

Bowling for Rhinos Reminder - from Patty Pearthree

Please send in your "Bowling for Rhinos" money ASAP! Checks should be made payable to "AAZK, Inc./BFR" and mailed to:

Patty Pearthree
c/o BFR
318 Montibello Dr.
Cary, NC 27513



Ther \$25 Administrative Fee for each event can be mailed to the same address. Please send a separate check for the Administration Fee. Questions or concerns? Contact Patty Pearthree (919) 678-0449 or email ppear3@pear3.org<

2007 Bowling for Rhinos Trip Winners Announced

We are pleased to announce the top four fundraisers for the 2007 Bowling for Rhinos annual event. Participants had to turn in their funds by September 1st in order to be eligible for the four trips available. The two top moneyraisers get the first pick of trips. There are two trips to Lewa Wildlife Conservancy in Kenya and winners are allowed to take along a companion for which they must pay plane fare and travel expenses. There are also two trips to the Indonesian Rhino Parks in Java and Sumatra (Way Kambas & Bukit Barisan Selatan in Sumatra and Ujung Kulong in Java). The Indonesian trips are only for the winners; they are not allowed to bring a companion on these trips.

Top fundraisers for 2007 Bowling for Rhinos are:

1. Jaimee Flinchbaugh, Oklahoma City Zoo - \$31,091.00 (a record-breaking amount!)
2. Ruth Ann Prey - Detroit Zoo - \$28,359.00
3. Rana Bayrakci - Woodland Park Zoo/Puget Sound - \$14,088.00
4. Heather Strawn - Cleveland Metroparks Zoo - \$12,498.00

Congratulations to these winners! Great Job!!

Training Blog Invites Participants

Meg Dye of Animal Management Resources, Inc. has notified AAZK that they are starting a new portion of their website that is for blogging about animal training. It is set up so that anyone can share their experiences, challenges and words of wisdom with other trainers. In order to blog, each user will initially submit a contact form with their name and email and they will issued a user ID and password.

If you or someone you know would like to write about their training please feel free to log on to <http://www.animaltrainingblog.com/>> It can be about anything related to training...a personal account of your training, a training-related video you saw and would like to share (Meg will be putting one on about the clicker trained land mine detecting rats), how you overcame a particular challenge, consultation work you have done, training for research projects, applying training outside of the zoo/aquarium community, etc.

In addition, they are adding a gallery of training photos. If you have any training pictures you would like to share, please send them our way! (The current pictures of the park are place holders as we get our pictures together)

The direct url to the blogging site is www.animaltrainingblog.com < There will eventually be a link on the training store as well. We will be sending out a newsletter that announces the site in about one month. Until then, I am planning on finishing the development of the site and learning how to manage that new site. ---Meg Dye

Coming Events

28th Annual Elephant Managers Association Conference - 14-16 October 2007 - hosted by the Cincinnati Zoo & Botanical Garden, Cincinnati, Ohio. An optional pre-conference trip on October 13th to the Indianapolis Zoo is also available, as well as a post-conference trip on October 17th to the Louisville Zoo. The conference Icebreaker will be held the evening of October 13th. For more information visit <<http://www.elephant-managers.com/>> or call the elephant department at the Cincinnati Zoo at (513)281-4700 ex.8360.

Orangutan SSP® Husbandry Workshop - 16-18 October 2007 - Hosted by the Brookfield Zoo in Chicago, IL. This husbandry workshop will focus on the care and management of the orangutan in a zoological setting. Topics will include environmental enrichment, positive reinforcement training, nutrition, medical management, introductions, birth management, public education, conservation and general orangutan management. Workshop registration fee (\$85) covers most meals including a mixer and a banquet. Additional information including a registration form, travel information and an abstract submission form is available by contacting Carol Sodaro, Orangutan SSP Husbandry Advisor at casodaro@brookfieldzoo.org

Amphibian Decline and Chytridiomycosis Conference - 5-7 November 2007 in Tempe, AZ. Anyone who cares about amphibians should attend this conference. Participation is welcomed from scientists, fish and wildlife managers, policymakers, veterinarians, and any others working in the field of conservation, as well as representatives from the bait, biological supply, frog farming, and pet industries, zoos and aquaria, non-governmental organizations, and foundations and other funding agencies. Registration and Information: Contact Tala Woodward at tala@meyersalterman.com

The 4th Crissey Zoological Symposium - 7-8 December 2007. Held at The North Carolina State University College of Veterinary Medicine. This symposium is for professional nutritionists, researchers and veterinarians working with zoo animals; interested students. First day focus will be on reptile and amphibian nutrition; second day will encompass nutrition talks from all comparative nutrition areas. For symposium details see www.cvm.ncsu.edu/conted/zoonutrition/

2008 Gorilla Workshop - 23-27 January 2008 - Hosted by Disney's Animal Kingdom and the Brevard Zoo in Orlando, FL. For more information see 2008GorillaWorkshop.com, or call Beth Armstrong at (614) 506-7368 or Rachel Daneault at (407) 938-2337.

3rd Annual Aquatic Medicine Seminar - 22-24 February 2008 - Hosted by Shark Reef at Mandalay Bay Resort and Casino in Las Vegas, NV. The program consists of two full days of lecture on a wide range of aquatic animal health and medicine topics with an emphasis on elasmobranchs. In addition, there is a "wet lab" on day three that provides a "hands-on" learning experience. For additional information please contact Jack Jewell at (9702) 632-4560 or email "jjjewell@mandalaybay.com"

1st International Wildlife Reintroduction Conference - 15-16 April 2008 in Chicago, IL. to be hosted by the IUCN/SSC Reintroduction Specialist Group (RSG) and Lincoln Park Zoo. The theme of the conference will be "Reintroduction Programs: Applying Science to Conservation". Twenty speakers and 40 posters will be selected for presentation in addition to 12 already invited speakers. Registration is limited to 275 participants. More information about the conference theme and topics is available at the website <http://www.reintroduction.org>

International Primatological Society XXII Congress - 3-8 August 2008 - to be held in Edinburgh, Scotland. Online registration is now available at .ips2008.co.uk/Registrati.on.html to register to attend this exciting congress.

Seventh International Aquarium Congress - 19-24 October 2008 - to be held in Shanghai, China. The theme is—"Progress & Conservation: The Role of Aquariums in Protecting the Aquatic Environment". Main discussion sections include: Conservation and Education, Husbandry and Management, and Progress and Advances. For further information, please contact the IAC Secretariat Office: email "Secretariat@iac2008.cn/" Phone: 86-21-54065152; Fax 86-21-54065150. See the conference website at www.iac2008.cn

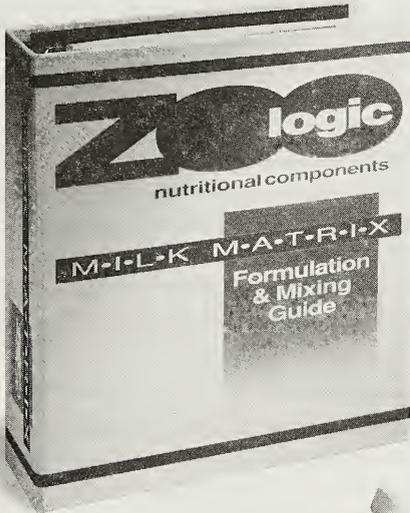


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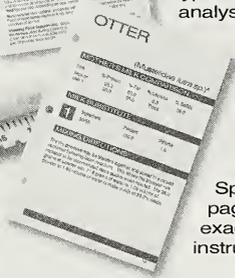
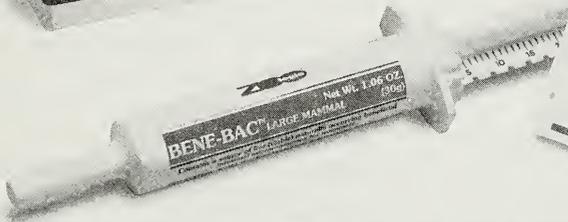
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2007 AAZK/AKF Award Recipients

The following are recipients of awards presented at the 2007 AAZK National Conference held in Galveston, TX and hosted by Moody Gardens and the Galveston Chapter of AAZK. *The Certificates of Recognition* and *the Certificates of Appreciation* are given by the AAZK Board of Directors. *The AKF Excellence in Journalism Awards* are selected by the journal's editorial staff. All other listed awards are determined by the AAZK Awards Committee from nominations received from the membership.

AAZK Lifetime Achievement Award

Mark de Denus, Reid Park Zoo. This award is based on his outstanding commitment to professionalism in his distinguished career as a zoo keeper. Specifically noted has been his work with L.I.N.K., *Junior Keepers' Forum*, Zooquest, "Animal Matters" newsletter, AAZK Insight, and serving AAZK on Chapter and National levels. Also outstanding were his exhibit renovation and design, innovative breeding strategies, creativity, and communication skills promoting professionalism, conservation and a passion for wildlife. Such action earns the praise and respect of all members of the zoological profession.

Certificate of Merit for Zoo Keeper Education

Erica Calcagno, Oakland Zoo, for initiating and serving as Chair of the Keeper Continuing Education Committee which has led to the zoo's general policy on keeper continuing education to a level where all staff are involved. She developed monthly quizzes, supplemented by handouts and reading options and encouraged keepers to join the committee which now has a mandatory Zoo-Studies course for all new keepers. Noted are her efforts to provide staff members with opportunities to learn, teach, share and create in ways that are fun and enjoyable.

International Exotic Feline Sanctuary, Inc. for the development of an intern program to instill a respect for nature and raise an awareness to preserve these species. They gain practical husbandry experience, learn habitat modification, are involved in education and enrichment programs and have the opportunity for scientific research. College credits can be earned at participating universities.

Lee Houts Excellence in Enrichment Award

Tessa Alden-Lackland, Theater of the Sea, for developing a Zoological Enrichment Program which includes toy engineering, an approval system that reviews each new form of enrichment that is identified for supervised, unsupervised or daytime only interaction, an inventory checklist and an enrichment schedule for each animal in the park. She also has created over 75 unique toys and holds monthly enrichment meetings for the staff.

Joseph Svoke, Zoo Atlanta, for coordinating the giant panda enrichment, and creating novel enrichment items for a panda research study. Also noted is the development of a enrichment log and schedule to allow for variability of enrichment presented to the pandas and sharing this information with the staff at the panda Chengdu Research Base in China.

Lee Houts Excellence in Enrichment Award – Honorable Mention

Jodi Carrigan, Zoo Atlanta, for developing, implementing and evaluating an innovative giving tree that provides enrichment items for the zoo's animal collection.

Jillann Rawlins-O'Connor, Oregon National Primate Research Center, for developing and implementing a new naturalistic structure for the Japanese macaques.

Kevin Mueller, Oregon National Primate Research Center, for developing and implementing a new naturalistic structure for the Japanese macaques.

Mark de Denus — Lifetime Achievement Award

Mark started his career in 1976 at the Assiniboine Park Zoo in Winnipeg, Canada. He started experimenting with enrichment before it was “the thing to do”. Although he worked in all areas in the course of his 22 years there, the Tropical House was his favorite. Exhibit renovation and design, along with innovative breeding strategies, was a constant preoccupation. He was the major caregiver for the Lion-tailed Macaques whose specimens were one of the most successful breeding populations in North America.

Mark has always believed in the power of connection and bringing people together, so for years he wrote a monthly zoo newsletter “Animal Matters” at the Assiniboine Zoo. His belief in the educational power of our profession was the force behind this extracurricular commitment. He was the originator and creator of the board game Zooquest®. The goal was to spread knowledge of animals using fun facts in a game setting. He co-chaired the 1986 AAZK National Conference in Winnipeg.

He arrived in Tucson in 1998 where he brought laughter to the staff, but if someone needed help with a project or idea, he was the one they sought out for help. Mark helped redesign and construct the Spot-Necked Otter exhibit, designed a Flamingo feeder to keep out opportunistic feeders, redesigned the Lion-tail Macaque exhibit, designed an aviary field guide, and hand-reared an abandoned King Vulture chick that is now the most recognized education animal. He was constantly on grounds to interact with the public. He developed a talk using one the zoos most elusive animals, the Hoffman’s Sloth. Mark was the driving force behind the resurrecting the Tucson AAZK Chapter.



Mark has elevated the zoo’s two biggest events to the caliber they are today. For Howl-o-ween, along with assisting others with their projects, he created the “Beetle Juice” set and was the major actor in it. He spent hundreds of hours after work to transform the zoo into a Festival of Lights. He has created numerous cut-outs with backlighting like a polar bear sitting around a campfire reading to other critters.

On a national level, Mark knew that the future of our zoos and wildlife will one day be in the hands of the children. To help them see why they should care not only about zoos and the animals housed in them, but their wild counterparts as well, he served as Editor of *Junior Keepers' Forum*. He served as Exhibit Design Form Chair, Chair of L.I.N.K. (Liaison and Information Network for Keepers), and was Editor of the LINK Bulletin. Along those lines he has developed and is Editor of AAZK INSIGHT with the goal of unifying Chapters and allowing them to connect by opening the lines of communication. Mark received the Meritorious Achievement Award in 1991 and served on the AAZK Board of Directors from 1991-1995.

Mark’s ability to connect with people has been a great asset in promoting professionalism, passion for wildlife, conservation and a greater understanding of why we do what we do. His creativity, passion for problem solving, and drive to make improvements has enriched the lives of animals, keepers, and visitors. Mark inspires us to be greater than we already are.

Certificate of Recognition

Jacque Blessington, Kansas City Zoological Gardens, Board of Directors 1997-2007
Norah Farnham, Woodland Park Zoo, Board of Directors 2005-2007
Andy Henderson, Lincoln Park Zoo, Board of Directors 2005-2007
Tammy Root, Indianapolis Zoo for her assistance in developing the
original draft of the AAZK Membership Survey
Bob Cisneros, San Diego Zoo, for his work on National Zoo Keepers Week
Diane Olsen, Moody Gardens, 2007 National AAZK Conference Chair
David Partington, Toronto Zoo, for his work in
writing, producing and directing the Keeper Profiles DVD

Certificate of Appreciation

Moody Gardens – AAZK 2007 National Conference Host Institution
Tricia Newman, Brigham Young University,
for the development and analysis of the membership survey
Brynn Janke, Brigham Young University,
for the development and analysis of the membership survey
Jessica Church, Brigham Young University,
for the development and analysis of the membership survey
Dr. Jeff Thompson, Brigham Young University,
for fostering the relationship between AAZK and Brigham Young University.
Representative Nancy Boyda, Democrat - Kansas,
for Co-Sponsoring the resolution for National Zoo Keeper Week.
Representative Susan Davis, Democrat - California,
for Co-Sponsoring the resolution for National Zoo Keeper Week.
Susan Chan, National AAZK, for her work on the polar bear issue
of the *Animal Keepers' Forum*
Robert Buchanan, Polar Bears International President,
for his cooperation in producing the polar bear issue of the
Animal Keepers' Forum
Barbara Nielsen, Polar Bears International Newsletter Editor,
for her cooperation in producing the polar bear issue of the
Animal Keepers' Forum

Chapter of the Year

Cleveland Chapter of AAZK
Southern Ontario Chapter of AAZK

Distinguished Service Plaque

Galveston Chapter of AAZK – AAZK, Inc.
2007 National Conference Host Chapter

2007 AKF Excellence in Journalism Recipients

"Scale Training the Malayan Flying Fox (Pteropus vampyrus)"

**Victor Alm, Keeper II and Adam Fink, Relief Keeper,
The Oakland Zoo, Oakland, CA**

*"Positive Reinforcement Training for Biomedical and
Reproductive Research of Giant Panda"*

**Laurie Perry and Lisa Stevens, Dept. of Animal Programs
David Powell, PhD., Dept. of Conservation Biology
Smithsonian's National Zoological Park, Washington, DC**

*"Management and Treatment of Avian Chlamydiosis in a Captive Magellanic
Penguin Colony (Spheniscus magellanicus) at the San Francisco Zoo"*

**Brenda Melton, Victoria McCloskey, Rachel Orlando, Animal Keepers
Bird Department, San Francisco Zoo, San Francisco, CA**

*"Radiograph Training of Juvenile Male African Lion (Panthera leo)
Using Operant Conditioning"*

**Erica Calcagno and Kasturi Mukherjee-Kahol, Keepers
The Oakland Zoo, Oakland, CA**

*"Breaking the Cycle: Hand-rearing and Early Reintroduction as a Step Towards Appropriate
Behavioral Development and Successful Family Bonding in Two Species of Callitrichids"*

**Stephanie Forbes, Roz Sealy, Harmony Frazier, Norah Farhnam, Linda Moneymaker
and Greg Toffic, Woodland Park Zoo, Seattle, WA**

*"Training 0.1 Reticulated Giraffe for Voluntary Transabdominal Sonograms Using
Operant Conditioning and the Touch Method®"*

**Amy Phelps-Kinzley, Keeper II and Melissa McCartney, Keeper I
African Veldt, The Oakland Zoo, Oakland, CA**

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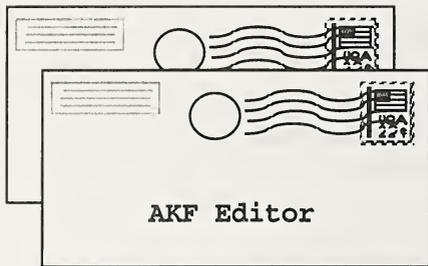
"The Evolution of Protected Contact Tapir Training at Disney's Animal Kingdom"

**Angela Cecil Binney, Lois Johannes, Maureen Leatherberry,
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Letters to the Editor

Readers are welcome to comment upon material published in Animal Keepers' Forum through a Letter to the Editor. We welcome a free exchange of ideas benefiting the zoo keeping profession.

31st August 2007

Dear Editor,

Congratulations on the August issue of AKF - a well-done compendium of articles dealing with a much-needed problem – the management of Polar Bears. Honouring the well-established principle that you only contact such organizations if you have a topic with which you wish to take issue, I hope you will understand that my comments are in no way a criticism of the magazine nor of its editorial staff. The issue I would like to address is as follows:

Reference is made periodically to what have become known as the Manitoba Standards for Polar Bears in Captivity established by the Provincial Government, but the only place that the concept is mentioned in any detail in this magazine is in the article on page 338, justly praising Bill Watkins for his work in furthering the implementation of the guidelines. It was rather disappointing then, not to see any reference anywhere to the setting-up of those standards in the first place, and I will attempt to correct this oversight. The establishment of the Manitoba document was a direct result of the Manitoba Government's Natural Resources Department, now known as Manitoba Conservation, requesting advice on establishing facility and husbandry standards for Polar Bears that might be made available from wild sources in Manitoba (orphans, nuisance bears and the like). This was considered necessary due to revelations that some at least of that unfortunate group of animals, which I have often referred to as "the dancing bears of Mexico", came from this province, being shipped unknowingly by Provincial Government scientists some years ago to a dealer calling his company a zoo, and thence to Suarez Circus.

Natural Resources officer Ron Larche gathered together a group of people he deemed appropriate to give advice on requirements for the bears in captivity, essentially to recognize the shortcomings of certain past decisions and to attempt to ensure that such mistakes would not be repeated – a rather noble objective to my way of thinking. Members of that committee included respected scientists Drs. Jim Neufeld and Cam Elliott, well versed and experienced with handling, tranquillizing and the study of wild bears amongst other things; Vicki Burns, Director of the Winnipeg Humane Society; Dr. Bob Wrigley, Curator of the Assiniboine Park Zoo; and me, as Foreman of the Assiniboine Park Zoo. Bill Watkins was not a member of this committee, and while I do not mean to imply that this in any way lessens the value of his subsequent involvement, I'm not sure that your article makes this point clear.

Dr. Wrigley and I are very pleased to have been given the opportunity to represent the Assiniboine Park Zoo in a major capacity in what we felt was a very valuable and well-focused process, and I just wanted to express more than a little frustration that our Zoo's involvement in a process intended to better the opportunities for captive Polar Bears has received virtually no recognition outside the Manitoba Conservation Department. For purposes of information, we have bred Polar Bears here several times, and are currently very proud to have in our care the world's oldest captive specimen, aged 41 years. A curious irony has arisen subsequent to our meetings, however, which reflects the

control that political whim plays in such matters. It seems that no Polar Bears are to be made available from Manitoba, for Zoos or Aquariums, the preferred method now being to turn any orphaned ones loose, even babies, with the hope that they will either make it on their own or be adopted by an existing mother. This apparently by government directive, a somewhat irksome example of complete disregard for considerable work and planning by a group of committed participants whose only objectives were to contribute to the betterment of the lives of Polar Bears in captivity, likely to appease the animal rights faction, or in the words of a late respected colleague of mine, "the great unqualified-to-judge".

But I digress. Perhaps another point of clarification is required as well, that being that Polar Bears International has established a major base of operations here in Winnipeg, but it is not connected with the Zoo in any way. In fact, the opportunity of participation in any form was never even offered to us. Another disappointing snub, in a way.

So, this letter is not intended as a railing diatribe against government intervention, animal rights loonies or anyone else. It is simply an effort to correct a perceived oversight, perhaps even an actual oversight, and an effort to set the record straight, if you will.

Cordially,

Phil King,
Zoo Foreman
Assiniboine Park Zoo, Winnipeg, Manitoba, Canada



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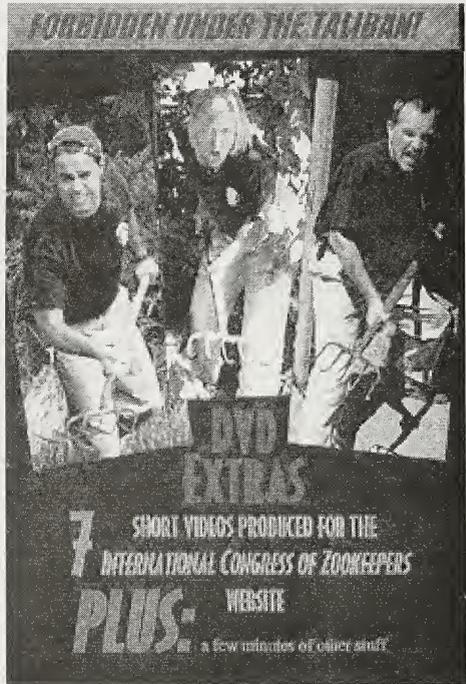
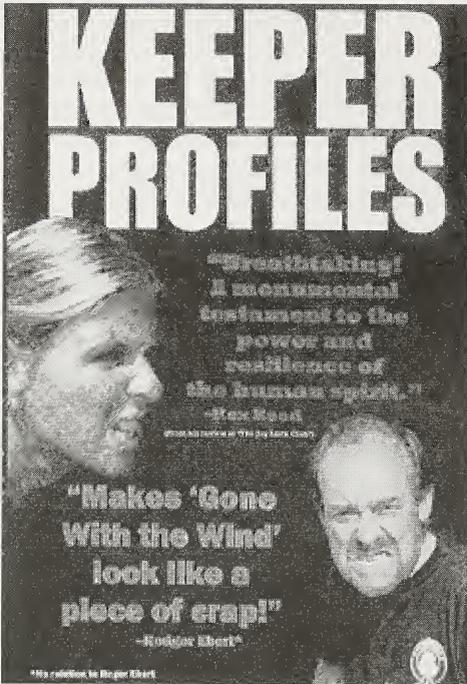
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Renewing Contributing Members

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Cleveland Metro Parks Zoo, Cleveland, OH

Gloria K. Kahn, Volunteer
Los Angeles Zoo, Los Angeles, CA

New Contributing Members

Lorraine Perkins
Atlanta, GA

Susie Ellis
International Rhino Foundation, Yulee, FL

Frances Klemmer
Geneva, IL

Renewing Institutional Members

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Gorilla Haven, Morgantown, GA
Stewart Dewar, CEO

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Steve Wing, Curator

Grizzley & Wolf Discovery Center
W. Yellowstone, MT
John Heine, Director

Miller Park Zoo, Bloomington, IL
John Tobias, Director

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The Tracy Aviary, Salt Lake City, UT
Jennifer Evans, Registrar

Happy Hollow Zoo, San José, CA
Gregg Owens, Director

New Institutional Members
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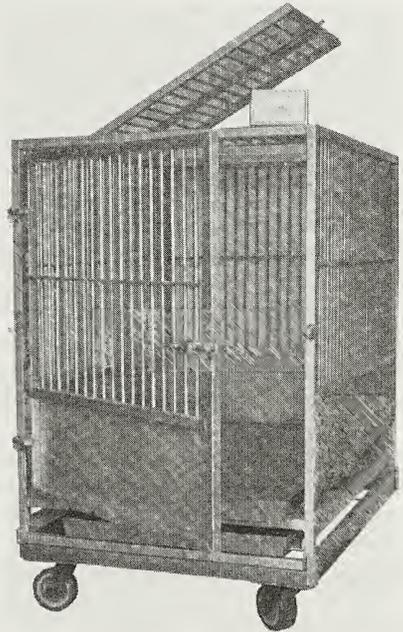
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Viewpoint . . .

(Editor's note: The Viewpoint Column offers readers an opportunity to their express opinions on topics related to the profession of animal keeping, AAZK or AKF. It is not a forum for expressing disagreements with employers about labor-related issues. Opinions expressed in this column do not necessarily reflect those of AAZK, Inc. or Animal Keepers' Forum. Publication of opinions in this column does not constitute endorsement by AAZK, Inc. or Animal Keepers' Forum. Materials submitted are published at the discretion of the editor.)

Performance Evaluations

*By Judie Steenberg, Retired Zoo Keeper
Maplewood, MN*

This is in response to the February 2007 *Animal Keepers' Forum* article in People Skills for Animal People (PSAP) on performance evaluations. This is a difficult process in a zoo's operation and seems to be following the trend away from the focus on animal care as a Keeper's primary role. The delay in responding until now is in part due to disbelief and amazement at what I had read. I was also waiting to see if there were other responses to the article as requested by the author, Jolene Hamrick, both in the beginning and at the end of her column. According to *AKF* Editor Susan Chan, there have been NO responses to date. That was equally discouraging.

My first reaction when I read the PSAP article on the subject of "performance measurement in the animal keeping profession." was... "The cart has been put before the horse" and out came my soap box. I was very disappointed to see it reported that "...for many zoological institutions" animal care and health, training, breeding and low mortality rates were relegated to LOWER LEVEL status. The categories listed under "Higher Level" and "Lower Level" should be 100% reversed. Granted, promoting conservation, public education and research are important, but not until the essentials of animal care are met. Listing a goal such as "providing public entertainment" as more important than animal husbandry suggests a sad return to the bad old days when animals were exploited, and easily replaced if lost to questionable husbandry practices

The three most basic and essential components of a Zoo are:

- 1.) the animals
- 2.) the enclosures they are kept in
- 3.) the keepers taking care of them

If, and when, the status of these three elements is found to be: healthy animals, adequate enclosures and a well-trained staff, a zoo is well on the way to success. When a zoo is well staffed with trained and experienced Keepers, things just go better all the way around. When the animals' needs are met, Keepers often then turn their efforts and energy toward working on conservation and research projects, as well as helping educate the public on the wonderment of the animals in their keep.

The first and foremost responsibility of a Zoo and a Zoo Keeper is the care and welfare of the animals. It is what zoo keeping is all about. Animal husbandry-related categories should be evaluated before all else. Yes, they are intangibles, and yes, it is difficult to pigeon-hole the various aspects of a Keeper's job into easily evaluated items. However, therein is the challenge for a knowledgeable, experienced zoo administration.

Unfortunately, I've been hearing an oft-repeated concern over the past six-eight years. Keepers are being asked to do more and more non-animal care tasks, thereby stretching their attention and energy. Many zoos are reported to be under-staffed with Keepers, and only a handful of zoos have actual Keeper Training Programs. Today, a Keeper's job requires making time to learn about, and to properly conduct operant conditioning as well as engaging in a well-planned, consistent enrichment program. When a Keeper has to struggle to do his or her job, morale suffers; this is nothing new, nor

will it change. Regrettably, many Keepers are required to participate in other, non-animal, activities without additional time, or adequate staffing for relief, and animal care has to take a back seat. Keeper staffing at many zoos remains lower than needed while management positions and other non-animal departments are increased and vacancies promptly filled. Keepers who are given the training and the *means to do their jobs well, and who are respected for what they are accomplishing, will not only succeed but most often will excel at the job. The result will be well-adjusted healthy and, as designated, reproductive animals.

*Training, safe environment, adequate equipment, proper enclosures and professional support staff (Animal Health, Maintenance, Horticulture, Education, Visitor Services)

Oh, sure, there are exceptions such as hard-nosed, inflexible Keepers who not only resist but work against *positive* changes. Then again, not all changes are as positive as first perceived. Computers have been both an asset and a bane for Zoo Keepers. At three zoos recently visited, I found Keepers working at computers. One of the best Keepers I know has said that computers have interfered with animal care, especially with time needed to observe the animals. Yet another Keeper said computers are full of erroneous information and there's little control over it. Sadly, there are those who believe that whatever is found on a computer must be true.

Another concern is the comment about performance evaluations being conducted in your institution for the "first" time. From 1975 – 1998, at three of the zoos in which I worked as a Zoo Keeper, performance evaluations were routinely conducted, at various intervals. They are not a NEW item. The best evaluations were based on central goals and objectives that were mutually viewed as important by the Keepers and the Administrator conducting the evaluation. When the goal is teamwork for the best animal husbandry practices, in the best interest of the animals, evaluations should be nothing to dread. Let me qualify that...that is, as long as the evaluator is experienced in animal husbandry, can be objective not subjective, and doesn't have an "agenda". This is truly an important factor. The trend has been toward more and more people in the zoo profession with little or no animal husbandry experience who sometimes lack an understanding of the complexity of zoo animal husbandry practices and management.

So, back to *performance measures*: start with the basics such as attendance, tardiness, fitness, appearance and a sincere interest in animal care, tempered with objectivity.

1. A performance evaluation program should be implemented as part of a new hire's orientation. It is important that goals and objectives are clearly stated from the beginning of employment.
2. Don't equate animal care with "performance metrics" Animals are living, breathing, and constantly adapting; they cannot, in any way, be compared to widgets, desks and chairs or any other inanimate object.
3. Animal health, breeding, low mortality rates, training and enrichment are the criteria upon which a Zoo Keeper's performance should first be evaluated.
4. It is also highly recommended that the person doing the evaluation has either been a Keeper or is otherwise directly involved with animal care and welfare. Does the evaluator know what the job is really about, and what it is they are evaluating?

Let me throw out an idea that I've heard suggested over the years. Evaluations should be a two-way street. Managers should also be evaluated on how well they are providing the support necessary for a Keeper to do his or her job. From day one as a Keeper I understood the need for a good solid supportive staff, from Director, to Curators, to Horticulture, to Maintenance, to Veterinary Staff and all other departments, as well. To be successful zoos should function as a cohesive unit and not be compartmentalized and competing for resources. Unfortunately, the bigger the zoo the less

likely that is to occur. But, within an area, a unit, or specialized exhibit, teamwork, that cohesive unit, can still be achieved. It will work if everyone works at it.

One of the best Senior Keepers I worked with during my career had the philosophy that when you have good people, your job is to support them and they'll do their best. Keepers on that crew were **involved, hard-working and innovative**. Their advocacy for the animals in their care was respected by their peers and management. Oh yes, there were frustrations, but there was still that sense of working together toward a common goal, animal care.

There are those "intangibles" again:

- involved:

working *with* co-workers regardless of "department", being aware of what is going on in the unit and throughout the zoo, being a team players, communicating the needs of the animals.

- hard-working:

showing up for work on time, being physically fit for the job, willing to help co-workers, completing routine work, developing and implementing improved husbandry practices, being considerate of break time/lunches, and low absenteeism.

- innovative:

improving conditions, researching and keeping current on new developments, sharing information with colleagues, in-house and within the zoo profession.

In closing, I'd also like to hear from Keepers on this subject....have things really changed so much that none of this is relevant anymore? If so, how can it be fixed? If the cart is truly before the horse, maybe there is a need for a column on Animal Skills for People People.

Respectfully submitted,

Judie Steenberg, Retired Zoo Keeper



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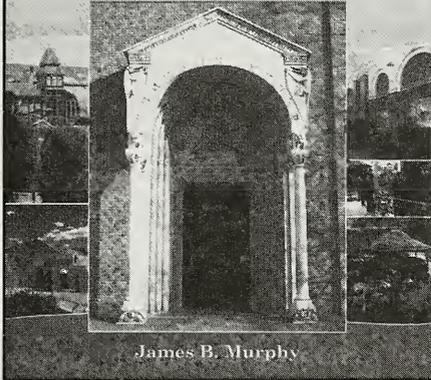
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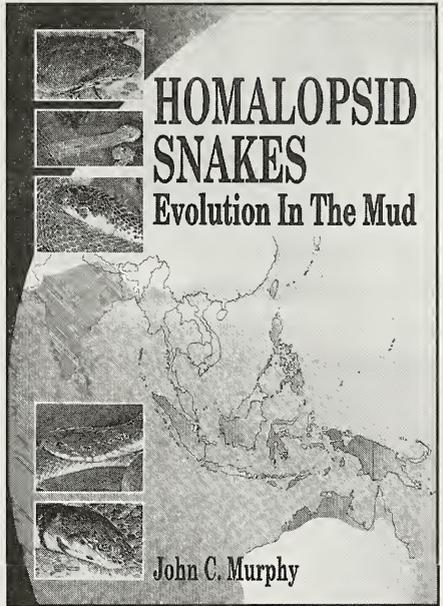
Foreword by Roger Conant

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Moving Day for Grevy's Zebra (*Equus grevyi*)

*M. Katherine Roberts, M.S., Catherine A. Backry,
Kimberly J.D. Kezer (AAZK, ATC Co-Chair)
Zoo New England, Franklin Park Zoo, Boston, Massachusetts*

It has long been said that Grevy's Zebras (*Equus grevyi*), the largest of the wild equid species, are the zebras that evolution forgot. In the wild, they survive on vegetation that other species cannot utilize. The animals' social structure has remained as territorial rather than a harem. This social structure demonstrates their primitiveness and how they have remained unchanged. Their territorial and combative nature in the wild is often demonstrated in captivity by aggressive and flighty tendencies. They have been known to cause harm to other species within a mixed-species exhibit. These instincts often make Grevy's difficult to manage without chemical or physical restraint.

In May of 2001, the Franklin Park Zoo (FPZ) in Boston, MA maintained a herd of 1.5 Grevy's Zebras in two areas. Eventually, 0.5 Grevy's were relocated from their old holding facility to a new facility on zoo grounds. Shortly after, the group was introduced to a breeding male and 2.0 Masai Giraffe (*Giraffa camelopardalis tippelskirchi*) in a new exhibit. Through each step of the relocation, animals were conditioned and positively rewarded for progress. No chemical or physical restraint was necessary. This article aims to detail the steps that led to the success of the Grevy's Zebra move at FPZ.

Conditioning to the Trailer

In 1999, FPZ began construction of the Giraffe Savannah exhibit. The 2.0 Masai Giraffe arrived first, and then 1.0 Grevy's was moved directly from hospital quarantine to the new holding facility. The 0.5 Grevy's were housed on zoo grounds in another section of the zoo that required transport to the new facility. The staff designed a training program to condition the animals to enter a trailer and then allow the door to be closed once they were inside. This trailer was used to transport them to their new location.

The individuals in the program ranged from a three-year-old filly that was still being housed with her dam, to a 17-year-old mare (See Table 1). The program began by desensitizing the individuals to the sound of a clicker, used as their bridge. Both inside and outside the barn, the animals were offered produce. When they accepted the food, they were bridged. Conditioning of the bridge only occurred in the barn where the animals could be separated - the herd was too competitive with each

other in a group setting. Individuals reacted positively to the bridge after being exposed to it in their first sessions.

Two weeks following the conditioning to the bridge, the trailer was brought to a location outside their exhibit space where the Grevy's had visible access to it. The animals were communally fed along the fence line nearest the trailer to desensitize them to the sight of it. A few weeks later the trailer was placed against the building where the animals only had access to it from the stalls. Each individual began their acclimation with free access to the trailer and a few individuals entered the trailer upon their first encounter with it.

Following initial introduction, a portion of the animal's diet was placed in a tub on the trailer floor next to the trailer's entrance. The animals were shifted into the stall with trailer access. Once secured, the door leading to the trailer was opened. Three clicks signaled the start of the session, which was timed with the opening of the door. The animals were bridged when they ate from the tub. Incrementally, the tubs were moved further ahead in the trailer encouraging the animals to step in. Additionally, the trailer was equipped with a protected space for the keepers to enter at the same time as the Grevy's. A trainer would enter and request the "step up" command; to which the animal was to move forward in the trailer. Hay was always provided at the furthest end of the trailer as a supplemental reward. Certain individuals were closed into the trailer using the stall door prior to the move. Training was then delayed for four months, as the trailer was required elsewhere for another animal move. When it was returned, the majority of the animals only required a few days to re-acclimate to the trailer and stationed in the same locations.

Table 1

<u>Zebra Identification</u>	<u>Date of Birth</u>	<u>Bonds/Relations</u>	<u>Comfort with Trailer</u>	<u>Comfort with Exhibit</u>
Storm	30Mar84	Bonded to Daisy	Medium	High
Daisy	24Jun86	Bonded to Storm, Dam of Akina	Low	High
Akina	18Jun92	Daughter of Daisy, Dam of Taitu	Medium	Medium
Evita	20Aug95	None	High	High
Taitu	19Nov98	Filly of Akina	High	High

Moving Day(s)

It was determined it would be best to stage the moves over a few days. This option provided some flexibility in case a particular animal refused to load or if any other situations arose. The moves took place over a three-day period. We moved the most difficult and unpredictable animal first (Daisy). Aside from general excitement when the trailer began to move, she did well. She unloaded smoothly and settled into a stall near the male. When the trailer was returned to load the others, the zebras were keenly aware that something was different and they were hesitant to load. As a result, only one animal was moved on the first day.

The remaining animals were moved at a rate of two per day. The last zebra to move was the young filly (Taitu). Although she was agitated when we moved Akina, she settled down when offered treats by her trainers. Although she loaded easily when the trailer returned, she refused to unload at the new barn. Attempts to shift her off the trailer at two different locations were unsuccessful. Eventually her dam was shifted into the holding yards, where Taitu could see her, and Taitu unloaded to be with her mother.

Introduction to Exhibit and Giraffe

To reach the exhibit, the zebras need to maneuver through a chute approximately 200 feet long. This became one of the biggest obstacles for the zebras. Daisy and Taitu were the only animals to walk freely on to exhibit. As a result, they were used to guide the other animals onto the exhibit. Each animal was allowed a day or so in small groups to familiarize themselves to the three and a half acre exhibit, the perimeters, the electric fence, and the water feature. The individuals were rotated among the groups to maximize the possibility that they would encourage others to explore new parts of the exhibit.

The introductions to the giraffe were a point of concern for ZNE as none of the Grevy's had previously been exhibited with another species. The only animal that appeared interested in the giraffe was the oldest female, Storm. She freely approached the giraffe and walked amongst them. In return, the giraffe were just as interested in her. During a period of 14 days, all animals were successfully introduced to the giraffes.

Conclusion

The Animal Care staff was pleased with the successful move and introductions. There was no need for anesthetics and no injury to any of the animals occurred. While the time from the start of the training to the actual move was lengthy, it worked advantageously to the training goal. The needs of each animal were consistently met, as they all reacted differently to the various training stages. This project demonstrated that with time and consistency, some of the most difficult animals can be worked with to achieve results beneficial to the keepers and the animals.

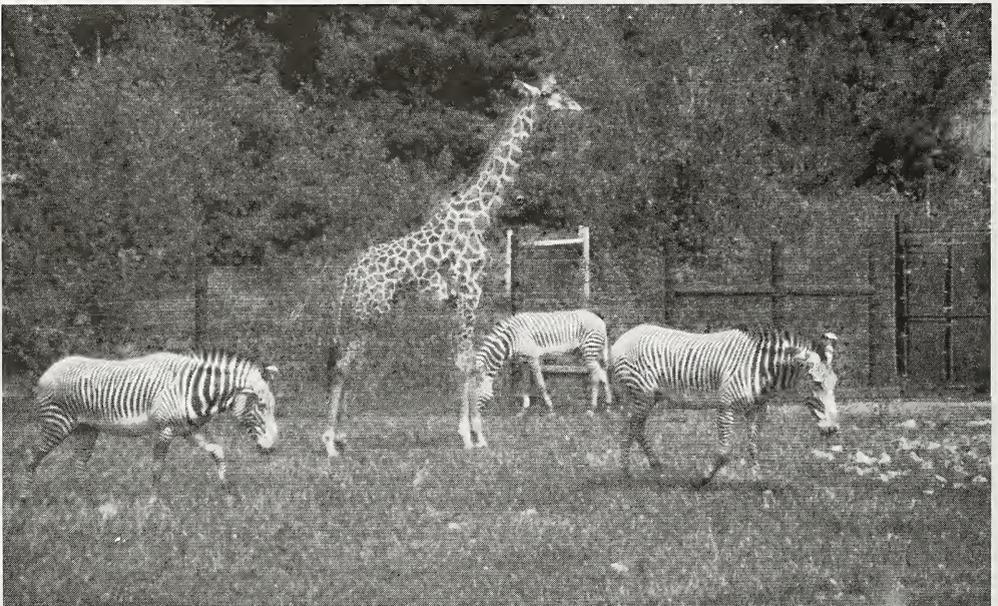


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REACTIONS

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

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



Question

You have mentioned in previous columns that good communication and attitude is important, do you have any advice on how to improve communication and reduce conflict in a zoo environment? (Part II of II)

Comments

First and foremost, there is a point to remember, that there is no such thing as the perfect workplace. Politics and strife can be found in every walk of life and in every workplace. Every facility has its issues, some more than others. What defines a facility, much like an individual, is how it deals with their problems. This is what sets the tone for the professional attitude for the staff and it starts with the power of one. The power of one is a truly magnificent concept and simply put it means that one person, at the right place, at the right time can make all of the difference.

History is replete with examples of this in action, especially in times of great conflict. The trick is to keep it in perspective. By that I mean, history glorifies great people and they seem somehow greater than life as time goes by. But they are still just people who had the courage and conviction to do the right thing when the time came. This can be seen in our daily lives if you take the time to slow down and look at the world around us. We really are surrounded by great people everyday, literally living heroes for our planet. But you have to stop and notice.

These same concepts can be applied to our profession and, at times, are applied when we recognize those who came before us and those who are still with us. They saw something in life that was greater than themselves and believed in it. So much so that they gave until it hurt, unflinching they believed that the needs of conservation outweighed their own personal goals and safety...that they could make a difference. That is the mark of a true professional, they put the needs of their animals, their habitat, and their co-workers above themselves and, in a word, it's about dedication.

Still I'm realistic, not every person will be a leader in our field, but these are admirable attributes to have, to strive for and there are many professionals who do have these traits. And in a perfect world every person would embody these traits, but we don't live in a perfect world. We live in a world with diverse personalities and many of the people that we share it with can be problematic to say the least. That's the issue, how do we work with these individuals who never seem to be willing to work well with other?

This is the challenge that's handed to every person who works for a living. To get past the office politics, the in-fighting, the outright conflict, so that we can get on with the job and make a real difference. The problem is not everyone considers that a priority. This is an important point, just because an individual works at something that they believe in, it doesn't inherently mean that they are above causing problems in the workplace. This is a function of personality, not their belief system.

So that's the crux of the matter...problem people who intentionally or inadvertently seem to cause trouble in the workplace. You know in your heart of hearts that they really aren't bad people, but they just can't seem to get it together, or they had it together and they forgot where they put it, or the co-worker who actually does really good work, but you just wish they would stop stirring the pot to see what comes to the surface, almost as if their agenda was to destroy morale. Now, here comes the

question that challenges management and staff alike, "What can we do about it?" The first step in solving a problem is identifying it. What follows is a brief overview of some of the more common problems in the zoological workplace.

Management versus staff

Inevitably this is the most common scenario that Zoo Keepers mention when discussing internal politics. A specific situation or problem was mishandled by management and usually develops into an us against them stance. The reality is that usually the problem rests with a single member of the administration and how their decision impacts the animal welfare of the collection under their control. This results in a rift between animal caretakers and animal management. No harm was intended by the manager, but it doesn't detract from the truth that the end result was that the staff feels their animals may be at risk.

Solution

The first and foremost method of diffusing the situation is improved communication. It is likely that the instruction could have been misinterpreted. It is also possible that the management decision could be based on faulty or incorrect information. Should this not be the case then it's the responsibility of the primary animal caretakers to address the situation with their superior. Failing this, take it up the chain of command. It does little if any good to complain quietly in the shadows. This only sows the seeds of discontent and in the end it's the animals that will suffer. Be professional, have your facts and data ready, and pick and choose your battles carefully. Ideally, the manager should apologize, implement a better course of action, and be more sensitive to the staff in the future.

Interdepartmental rivalry

This type of scenario can easily develop out of territorial situations over animal care based either on teams or, more often than not, different animal sections or areas in a larger institution. Occasionally it even manifests itself over equipment or personnel in transition from one section to another. This unity of one area versus another can be exacerbated by institutional cliques and factions where other employees rush in to support a friend.

Solution

It is the responsibility of the Senior Keepers and Area Supervisors to establish an effective working relationship with their counterparts. Only an ineffective leader allows this type of competition to continue. It serves no purpose and doesn't aid the animal welfare in the least. On a daily basis it can injure the exchange of information, which enhances our ability as progressive animal managers. The key to this situation is realizing that the differences and diversity of sections can be a strength. Professional working relationships are the foundation for cooperation and survival in a crisis situation. Through teamwork and joint projects a new level of professional respect can be achieved.

Negative employee

The inevitable problem child. Every zoo has at least one it seems, marching forth across their section and the zoo sowing despair wherever they go. They never seem to do quite enough to get fired, but just enough to annoy everyone in their field of view. Intelligent and talented; and an expert on everything and a master of nothing. Everyone is wrong and they are always right and if you disagree or they don't understand, you're an idiot.

Solution

Attempt dialogue, counseling, workshops and any other resource at your disposal. Realize that this drive and skill can be harnessed and pointed in a positive and progressive direction. Patience is the key to resolving this situation. Assign projects which will draw upon their resources and force them to utilize and develop their social skills in a progressive manner. Think of it as drawing out the strengths and giving them power and direction; positive social interaction will follow. Failing this, encourage them to find another profession. Remember, if you're in a management position you should document every incident, verbal counseling, and disciplinary action. If you allow this type of behavior to continue then you have no one to blame but yourself. Also, be aware that your staff is watching to see if you will actually do anything to remedy the situation and your credibility is on the line.

Comic relief

A little good humor can go a long way in the workplace, but sometimes it can go a little too far. The easiest way to tell when this occurs is when one of three things happens. One, when a practical joke goes too far and someone gets hurt. Two, when someone's feelings get hurt by a consistent line of humorous attack. Three, when you receive a harassment in the workplace complaint because of inappropriate content of the jokes, either verbally or of the traditional practical joke nature.

Solution

Remember, if someone has a great sense of humor they can be a godsend to your facility. If people are laughing you should thank your lucky stars that your staff actually come to work happy. The problem is when this crosses the line. The best approach is to harness this humor and mentor the employee through verbal counseling on a regular basis. If a harassment in the workplace complaint is filed, then all bets are off. They may have crossed the line, you will have to investigate, and document every step of the process. This is serious business and must be treated accordingly in today's litigation-oriented society.

Expert opinion

Usually every facility has one of these individuals and they inevitably gravitate towards the Emergency Response Teams (ERT). They're loud, abrasive, and insistent that they have the right answers. Usually they want to take a totally militaristic approach on how to handle the team, how it should be equipped, and how it should train. They are often disruptive during practice and drills, and have no problem pointing out their team mate's inadequacies.

Solution

Your first instinct will be to give this person a shot and let them try, they may have something to contribute to the team. Do not under any circumstances let this type of person on your ERT. They will destroy team morale and inevitably put everyone at risk. Based on personal experience, I can say with some surety that they will buckle or freeze during a real crisis event or simply use poor judgment at the wrong time. This can lead to serious litigation in today's society.

Internal politicians

These are the individuals who can be truly destructive. They are highly manipulative and politically astute. Usually they are at the heart of a powerful cliqué and faction and have enough credibility that other staff members give them credence. The key is that they work quietly behind the scenes building popular support for their personal agenda and goals. This type of individual can be found at every strata of the work environment.

Solution

Dealing with this situation will be dependent on the individual's position in your facility's hierarchy. If they are at a mid-level management position or less, than can be brought into line through the disciplinary system and professional counseling. If they are at the upper management level then you have an even bigger problem; they may be virtually untouchable unless the Director intervenes. However, there is one constant to both situations, you have to document, document, and document. This person will have a power base and a degree of professional credibility. They're smart, fast, and have very good instincts.

Silent minority

Every once in a while I meet staff members who are shy, reclusive, and often unresponsive. They often get missed in the shuffle by management and rarely venture an opinion in public even when solicited.

Solution

These are good individuals who have never developed solid communication skills in life. Empower them, mentor them, and believe in them. They too have their part to play and can contribute to conservation. It's up to management and co-workers to create a comfort zone for this to occur. I have seen some truly remarkable people evolve and grow from this situation. Have faith in them, you will rarely regret it.

Final Comments

Our profession calls upon us to be animal managers, conservationists, educators, and so much more. The work that we do is the very preservation of endangered species, never forget that. Without our intervention many of the world's species could disappear in our lifetime and the only place your children may see a tiger would be in a museum. Remember to take time to nurture the wonder of what we do and to hold onto the spirit of conservation.

Still, I would be lying if I said our work environment was stress-free. The captive management of zoological specimens can be a dangerous high stress environment. Know what your limitations are and work within them for a safer and more productive work environment. Don't let your personal life or the profession cause "burn out". I have lost many friends to this over the years and it makes our profession a smaller and lonelier place. Find a balance that works for you and embrace it.

Next Month: What options are available for handling hoofstock during crisis events?

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, which is a research and consulting firm.)

First Panda Born in European Zoo in 25 Years

The giant panda (*Ailuropoda melanoleuca*) Yang Yang, that came with 1.0 panda Long Hui to the Austrian Schoenbrunn Zoo in Vienna, Austria in 2003, gave birth to a cub in late August. Both animals are on loan from China. It's not only the first birth of Yang Yang and Long Hui in Vienna, but also Europe's first such event in 25 years. The last panda born in a European zoo was in 1982 in Madrid, Spain.

Early in the morning, a caretaker heard whimpering noises from the birth box where the seven-year-old female panda Yang Yang currently lives, confirming the tiny cub had been born. "The young mother is now taking loving care of her tiny baby, keeping it hidden close to her chest", the zoo said, adding that the gender of the newborn panda, weighing only around 100 grams and measuring 10 centimeters long at birth, was still unknown. Yang Yang and her baby would stay in their box for the next three months, before being presented to the public.

"We are incredibly happy that the young cub was born without artificial insemination and that is extremely rare, said the Zoo Director Dagmar Schratte, pointing out that female panda "are fertile only for three or four days each year".

The birth of the cub caused quite a sensation in Austria. The Austrian media promptly issued the explosive news and several websites uploaded the video recording of the young panda and its mother. The zoo believes that Vienna now has its own baby with "star potential", rivaling the Berlin Zoo's polar bear cub (*Ursus maritimus*), Knut.

Source: www.chinaview.cn 8-24-07

Baked Soil/Clay Block Enrichment for Captive Naked Mole-rats, (*Heterocephalus glaber*)

By Melba Brown and Markeita Matthews
Smithsonian's National Zoological Park (NZIP)
March 2007

Introduction

The naked mole-rat (*Heterocephalus glaber*) is a fossorial rodent typically found in Kenya, Somalia and Ethiopia (Thomas & Doherty, 1990). As its common name implies, individuals of the species appear quite naked but in actuality have sparse body hair that is readily apparent upon closer inspection. Naked mole-rat colonies cooperatively create and maintain elaborate underground systems of tunnels and chambers and have conspicuously procumbent incisors used for excavating compact soil, a process that helps keep their ever-growing incisors trimmed. Naked mole-rats are often compared to eusocial insects because they exist in colonies with a Queen, a few breeder males, non-reproductive workers and soldiers. (Stankowich & Sherman, 2002). The species is often maintained in zoos in a system of transparent plastic tubes and is very popular with visitors who delight in watching these active, social animals navigate networks of tunnels and chambers. Unlocking and interpreting the secrets of these highly-specialized mammals has been the aim of researchers for years. The scientific literature is packed with fascinating information about the species and much has been discovered to help illuminate the inner workings of the colony (Clarke & Faulkes, 1999; Faulkes, G., & Clarke, F., 1997; Faulkes, C. & Bennett, N., 2001).

In captivity, naked mole-rats often test their keepers' abilities to provide the best care and, fortunately, the National Zoo's collection of mole-rats has given us numerous opportunities to experiment with ways to improve their captive care and management. In this article, we describe how we approached two particular management challenges: 1) Providing a means of behavioral enrichment and 2) Incorporating some form of natural soil into their captive environment to help promote and maintain dental care.

The Association of Zoos and Aquariums' (AZA) husbandry manual for the species provides information for their care and touches on the use of soil as a substrate. In particular, it states that soil is not typically used because it creates problems with dust, exhibit visibility and cleanliness (Wood & Mendez, 2000). However, we wanted to experiment with some form of natural substrate both as a means of enrichment and to provide a source of a safe, naturally coarse material that would help wear down incisors because a few individuals developed overgrown teeth that required periodic trimming.

Animals and Methods

Currently NZP has three colonies of naked mole-rats that are housed in two separate buildings. Colony A consists of 8.2 individuals on exhibit in the Small Mammal House in an enclosure shared with Damaraland mole-rats, *Cryptomys damarensis*. Colonies B and D (10.9 and 5.7 individuals respectively) are both housed in an off-exhibit building (Colony B is on view through the Naked Mole-rat Cam found at the FONZ.org website). All three colonies live in plastic tubular tunnel systems fitted with chambers, each 6" (15.24cm) in diameter. (see Photo 1) Pine shavings are the primary substrate and periodically, fresh grass clumps are also presented. Paper towels are also offered and, as the husbandry manual suggests, the mole-rats use these as nesting material. A pumice stone was placed in one of Colony A's chambers however the mole-rats showed no interest in it.

In their African underworld, naked mole-rats have many opportunities to dig through, sweep, move and otherwise manipulate substantial amounts of soil (Catania, K., & Remple, M., 2002). Their sense of smell is acute (Sherman, Jarvis, & Alexander, 1991) and the natural substratum possesses

an organic quality that creates a complex olfactory environment in which mole-rats can use their keen sense of smell to discriminate different odors (Heth, Todrank, Begall, Koch, Zilbiger, Nevo, Braude & Burda, 2002).



Photo 1: Naked mole-rat Colony B with tubes and chambers

Any avid gardener will reveal that one of the attractions of gardening is the fresh scent and rich texture of the soil and we considered how we might incorporate an olfactory component into the mole-rats captive environment in a way that would work well for the animals and the exhibit space yet would be easy for staff to maintain.

Our solution was to create an activity tank for the naked mole-rats and the Damaraland mole-rats. (see Photos 2 and 3) We gathered fresh soil, collected from isolated zoo grounds and removed insects and any potentially hazardous objects from it. The resultant soil mix was ‘cooked’ in a microwave oven for 5-10 minutes to further purify it and, once cooled, was placed in a 5-gallon acrylic tank to about 1/4 its capacity. Two mole-rats were put in to see what, if any, response there would be to this novel environment. Within 30 seconds, one of them tentatively started to dig and within a minute, the digging activity increased to a frenzied level that was accompanied by vocalizations. These two mole-rats were very stimulated. After this preliminary trial, the whole colony was put in the soil enrichment tank close to a heat lamp for about 10 minutes. They initially huddled together then gradually started to dig with gusto and explore the enclosure while emitting ‘chirps’ associated with digging behavior in captive colonies (Sherman, Jarvis & Alexander, 1991). Subsequent sessions in the soil enrichment tank were conducted when the exhibit chambers and tunnels were being cleaned. The sessions were kept short to prevent the mole-rat’s skin from becoming too dry.



Photo 2: Naked mole-rats digging in soil enrichment tank

After a few weeks of intermittent and short enrichment sessions in the tank, a small amount of moist soil was placed in the exhibit chambers. After much digging, the pink mole-rats gradually took on a darker hue and, not surprisingly, visibility gradually decreased in several chambers. The keepers did not look forward to cleaning the 'dirty' chambers, so clearly this method of enrichment required further exploration and refinement - there had to be a way to provide a richly organic element without compromising the mole-rats, the exhibit space or the keepers. Baked soil/clay blocks proved to be the solution.

Again, the zoo grounds provided a rich source for the soil/clay mix. After we collected a pile of soil and clay (approximate proportion of 1:1), we processed it into an "enrichment block" (see Photo 4) as follows: Sharp rocks, millipedes, earthworms and foreign objects were removed, the mix was placed in a metal pan [10" (25.4 cm) long, 5" (12.7 cm) wide and 2.5" (6.35 cm) deep], and was patted down firmly to form a dense cake. The mix was then placed in a 500] F oven for one hour. After it was removed, the dry,



Photo 3: Damaraland mole-rats in soil enrichment tank

dense block was allowed to cool (see Photo 5) in the pan, then was turned out and broken into smaller blocks about 2 square inches (12.9 square cm). (see Photo 6) The soil/clay blocks required approximately three hours to make including gathering materials, processing, baking and cooling.



Photo 4: Processing the soil/clay mix

Photo 5: Baked soil/clay block



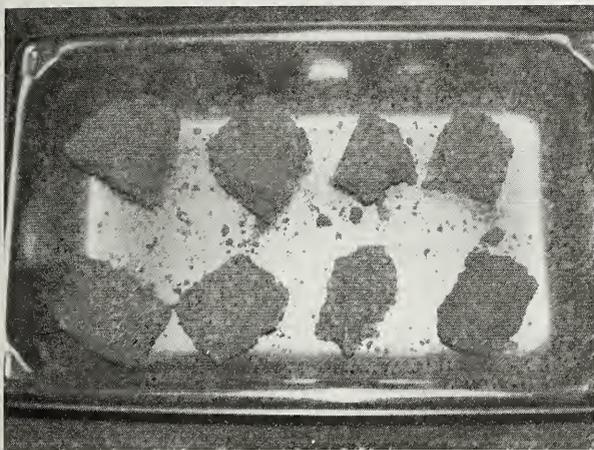


Photo 6: Divided soil/clay blocks

Results

We offered Colony A two of the small baked blocks and they completely ignored them. We could not detect any scent from the dried blocks and, although they have a keen sense of smell, we suspected the mole-rats might not either. When we applied a quick, light mist of water to the baked blocks, they took on a richly concentrated fragrance. When we placed the moistened blocks back into the chambers the mole-rats were quickly attracted to them and began to sniff them and bite chunks off (see Photos 7 and 8). Throughout the day, the blocks became smaller and by day's end were completely processed. The mole-rats began digging more than usual and sleeping less. Keepers reported that the little bits of soil were easy to clean.

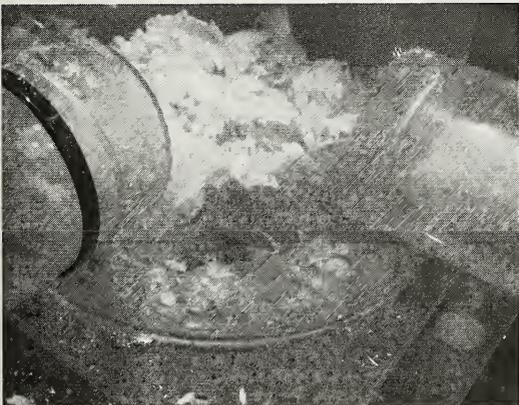
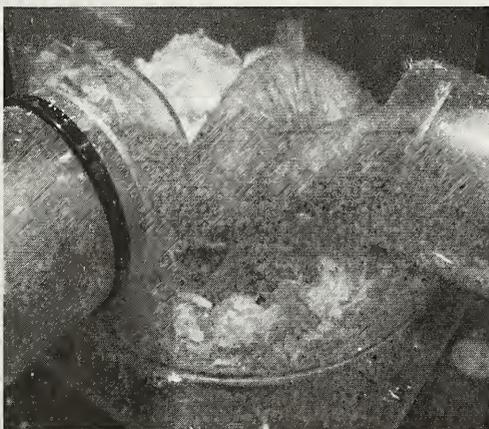


Photo 7: Naked mole-rat sniffing moistened soil/clay block

Photo 8: Three naked mole-rats 'excavating' a soil/clay block



To quantify the change, we observed each of the three naked mole-rat colonies for 10 minutes, twice a day between 0830-1130 hours on four days (a total of eight, 10-minute observation periods) and compared their activity and behavior when baked blocks were added to shavings to that when only shavings were present. One block was added to the chambers for each six animals, so Colonies A and D were presented with two blocks per observation day and Colony B was given three blocks. The observations were conducted after the colony had been cleaned, fed and given time to settle down. Every 60 seconds, we noted and recorded the following behaviors: walking/running; digging/sweeping (with incisors and limbs); oral movement of materials; eating; sleeping and non-specific interactions between individuals. The behavioral totals for each colony and the calculated mean for each category are seen in Charts 1 and 2.

Chart 1: Behavioral totals on shavings and calculated mean

	Run/Walk	Dig/Sweep	Material Movement	Eat	Sleep	Animal Interactions
Colony A	654	58	26	255	514	3
Colony B	189	17	4	52	709	4
Colony D	501	32	7	151	266	12
Mean: Shavings						
Colony A	81.75	7.25	3.25	31.875	64.25	0.375
Colony B	23.625	2.125	0.5	6.5	88.625	0.5
Colony D	62.625	4	0.875	18.875	33.25	1.5

Chart 2: Behavioral totals on shavings + soil/clay and calculated mean

	Run/Walk	Dig/Sweep	Material Movement	Eat	Sleep	Animal Interactions
Colony A	247	180	14	102	409	10
Colony B	716	310	16	214	268	2
Colony D	406	184	22	142	205	1
Mean: Shavings + Soil/Clay						
Colony A	30.875	22.5	1.75	12.75	51.125	1.25
Colony B	89.5	38.75	2	26.75	33.5	0.25
Colony D	50.75	23	2.75	17.75	25.625	0.125

Table 1 shows Colony A's behavioral frequencies on shavings and shavings with the addition of soil/clay blocks. This colony increased showed an increase in activities across the board with the exception of sleeping. Table 2 shows the response of Colony B to the different substrates with an increase in the frequency of running/walking and digging/sweeping in the presence of the soil/clay blocks. Table 3 depicts Colony D's activity levels which show an increase in digging/sweeping and material movement. Table 4 shows the frequency of activities on shavings for Colonies A, B and D. Table 5 shows the frequency of activities on shavings plus baked soil/clay blocks. Each of the colonies showed a clear trend toward sleeping when on shavings alone. When baked blocks were present, the trend changed with the colonies showing increased frequencies of several activities and a decrease in the frequency of sleeping. Also, a number of animals were observed digging later in the day well after the blocks had been introduced.

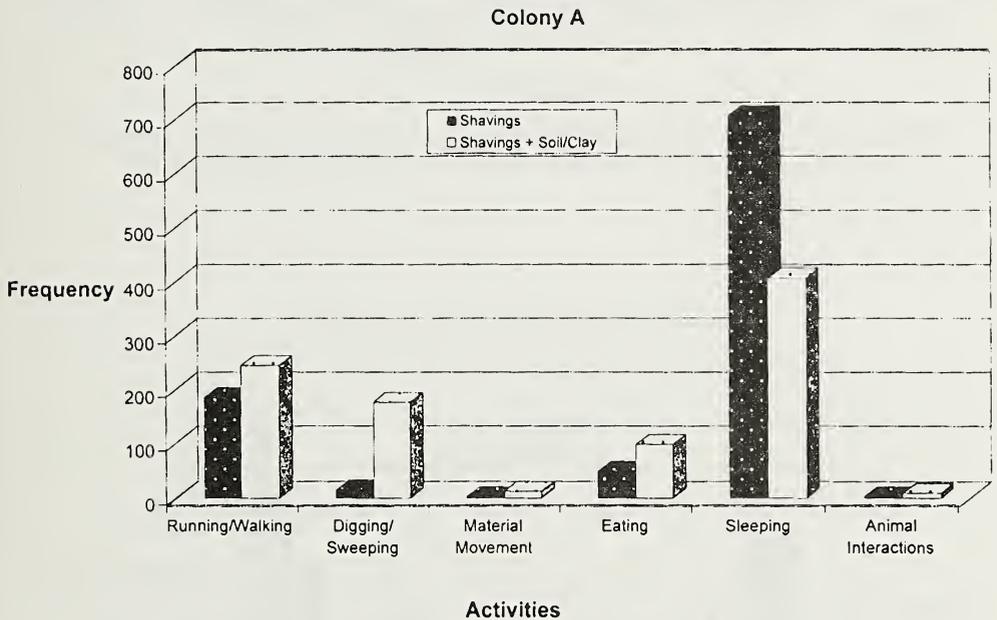


Table 1: Colony A's behavioral frequencies on both shavings and shavings + soil/clay

Colony B

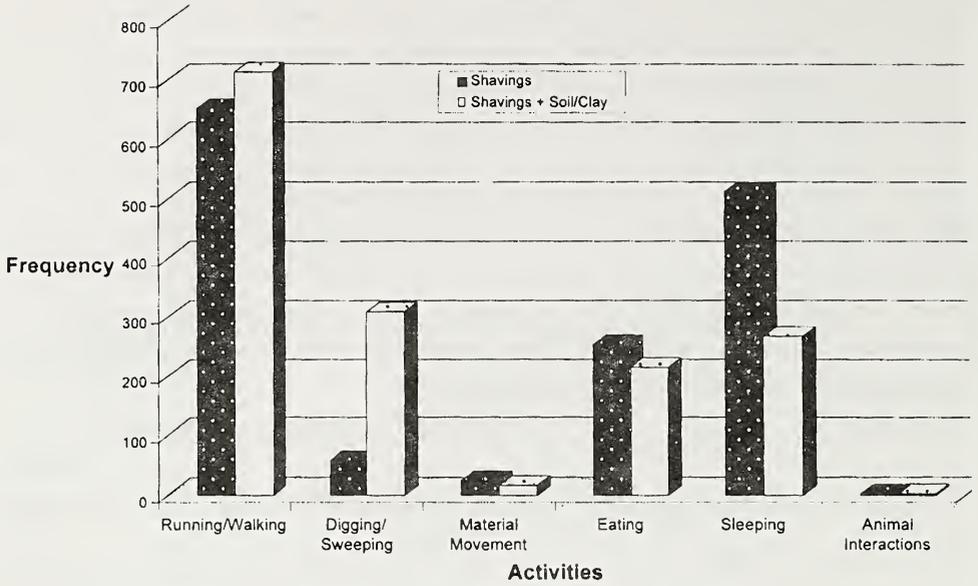


Table 2: Colony B's behavioral frequencies on both shavings and shavings + soil/clay

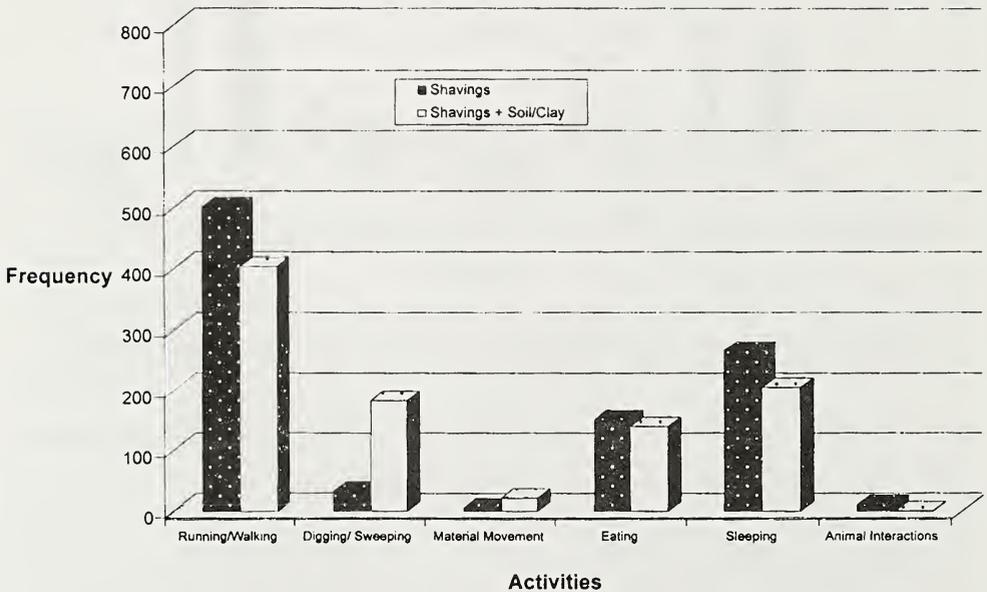


Table 3: Colony D's behavioral frequencies on both shavings and shavings + soil/clay

Activity Levels on Shavings

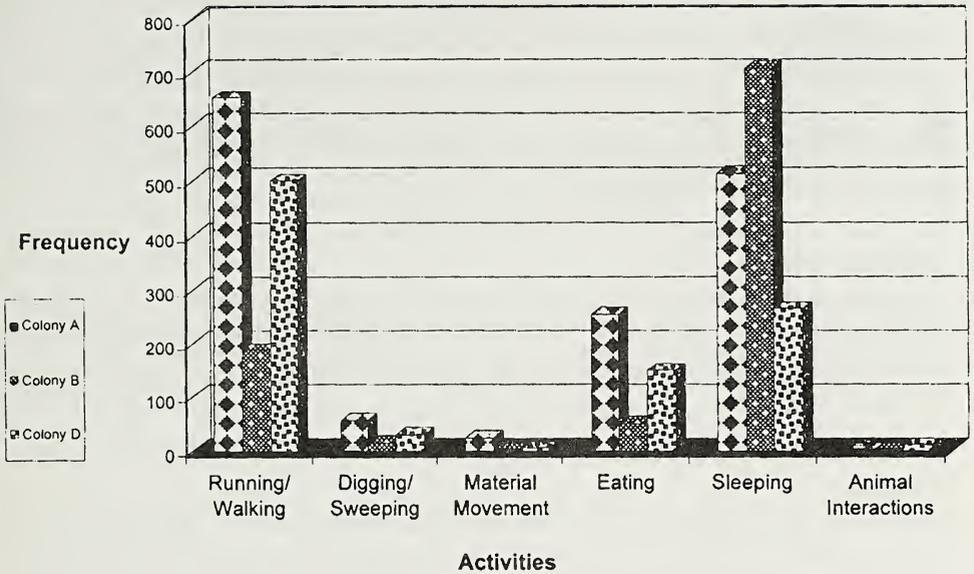


Table 4: Shows the frequency of behaviors on shavings for all three colonies.

Activity Levels on Shavings & Soil/Clay

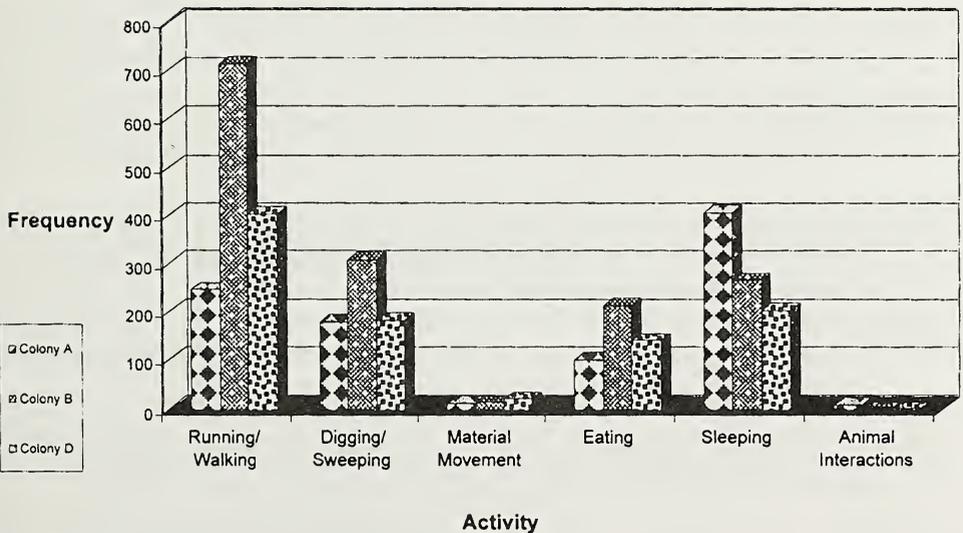


Table 5: The presence of the soil/clay blocks caused an increase in the frequency of digging/sweeping in all three colonies and a decrease in the frequency of sleeping in all three colonies.

Conclusions

The misted soil/clay blocks provided the naked mole-rats with increased opportunities to engage in their natural tendency of biting and digging through soil-based substrates, thus enhancing their captive environment. The remnant bits of soil were easily cleaned and the exhibit visibility was practically unaltered. In the future, we plan to present these baked blocks to the Damaraland mole-rats and we will explore the feasibility of creating chamber-sized baked blocks for the mole-rats to excavate with the expectation that the larger enrichment blocks will have a measurable impact on mole-rats with overgrown incisors.

Acknowledgements

We wish to thank the National Zoo's Small Mammal House staff for their support, Mr. Miles Roberts and the zoo's IUCAC Committee for approving this research project, Eleanor Roosevelt High School for producing budding scientists and most importantly, the mole-rats for engaging our minds.

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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 Becky Richendollar

Chinese River Dolphin May Still Have a Chance

Just a few months after it was declared to be extinct, a baiji, or Yangtze River Dolphin (*Lipotes vexillifer*) may have been spotted. While the sighting is not 100% confirmed, it has prompted scientists in China to launch a plan to save any remaining baiji dolphins.

Experts at China's Institute of Hydrobiology are studying the possibilities of taking the surviving members of the species to a nature preserve. The Yangtze is the baiji's sole habitat and the species lived and flourished in the river for more than 19 million years before humans arrived in the area. Experts at the Institute are now convinced that the last survivors of the species may be found along the small tributaries of the Yangtze.

Beat Mueller, a geochemist at the Swiss Federal Institute of Aquatic Science and Technology said, "The disappearance and extinction of such highly evolved endemic mammals as the white Yangtze River dolphin [baiji], from the Yangtze River can be attributed to a multitude of circumstances, such as the deterioration and loss of their natural habitats, overfishing of the river, the heavy freight ship traffic, and others," Mueller said.

Scientists at the Institute of Hydrobiology seek to catch the baiji dolphins and move them to the semi-natural Tian-e-Zhou Reserve, which is located along an oxbow of the Yangtze River. Residing in this area would offer this nearly extinct dolphin full protection. *Source: National Geographic News, August 31, 2007*

Is That a Monkey Under Your Hat?

The passengers aboard a New York-bound airplane were shocked when a species of marmoset (not named in news reports) emerged from underneath a man's hat and began to play with his ponytail. The passenger had smuggled the monkey from Peru to New York, claiming that he did not know that it was illegal to bring a monkey in from another country. The crew of Spirit Airlines Flight 180 were not amused by the curious creature, so they called ahead to the gate for a welcoming party the man wasn't expecting: the feds.

When the plane landed, the man went with U.S. Fish and Wildlife Service agents; the monkey with NYC Animal Care & Control. "I don't recall anything like this. The owner appeared to have a whim and purchased the animal on the streets," said Michael Pastore, the director of field operations for Animal Care & Control. "We don't know if it's harboring any disease or viruses." The monkey will be quarantined for 31 days, said Centers for Disease Control and Prevention spokesman Tom Skinner. After that, he could wind up in a zoo, he said.

The man with the monkey under his hat managed to avoid catching the eye of airline screeners at two different airports during his journey. Laura Uselding, a spokeswoman for the Transportation Security Administration, said that had the monkey been carrying weapons or explosives, an alarm would have triggered. *Source: New York Daily News, August 8, 2007*

Giant Spider Web Takes Over Texas Trail

Lake Tawakoni State Park, 45 miles east of Dallas, is home to a massive spider web that covers multiple trees, bushes, and the ground along a 600-foot stretch of trail. Entomologists say the web was probably created by social cobweb spiders which work together. Forest Service Entomologists say the massive web is very unusual, and officials at Texas A&M University say they hear a report

of a web such as this every couple of years. Park rangers expect the web to last until fall, when the spiders start dying off. *Source: Associated Press, August 30, 2007*

Investigation of Grizzly Death

Wildlife officials are investigating the killing of a grizzly bear (*Ursus arctos horribilis*) in north-central Idaho, where the last confirmed sighting of the species was in 1946. The bear was killed by a hunter from Tennessee who was on a guided trip, hunting black bear with bait. The male grizzly weighed 400-500 lbs. and was 6-8 years old. The hunter skinned the carcass and brought it out on horseback so it could be confirmed as a grizzly.



Photo: USFWS

In April, the U.S. Fish and Wildlife Service lifted Endangered Species Act protections for grizzlies in and around Yellowstone National Park. But this bear was not part of that population and therefore retained federal threatened-species protection. DNA tests are planned to try and determine the bear's origin. Before this incident, Fish and Game had been telling black bear hunters that there were no grizzly bears in the area. Hunters are now being warned that grizzlies are in the area and that they are illegal to hunt. *Source: Associated Press, September 7, 2007*

Whale Shot Off Washington Coast

A California gray whale (*Eschrichtius robustus*) was harpooned and shot with a machine gun off the western tip of Washington State. Coast Guard Petty Officer Kelly Parker said five people believed to be members of the Makah Tribe shot and harpooned the whale. Tribe members were being held by the Coast Guard but had not been charged, said Mark Oswell, a spokesman for the law enforcement arm of the National Marine Fisheries Service.

Although the tribe has fishing rights to kill whales, Oswell said this whale may have been shot illegally. "We allow native hunts for cultural purposes. However, this does not appear to be of that nature so far," he said. Tribal Chairman Ben Johnson said that the tribe has been seeking an exemption from the federal Marine Mammal Protection Act so that it could take up to five gray whales per year. However, Johnson said the tribe had not yet secured that exemption for a new hunt. *Source: Associated Press, September 9, 2007*

Lowry Park Zoo's Manatee Hospital Funding in Limbo

Since 1991, the manatee hospital at Lowry Park Zoo has treated nearly 200 sea cows that have been slashed by propellers, hit by boats, suffering from cold stress or poisoned by Red Tide.

Now its funding is in jeopardy as the state prepares for another round of budget cuts. The Florida Fish and Wildlife Commission put manatee rehabilitation on a list of proposed cuts for the Legislature to consider during a special session in three weeks. The roughly \$350,000 a year that the zoo's hospital would lose accounts for nearly half of its operating budget.

In the last two years, the zoo has released 22 treated manatees back into the wild. Florida's manatee population is estimated at about 3,000. Lowry Park also has an observation area where zoo visitors can watch as staffers and volunteers work on sick, 1,000-pound manatees in 25,000-gallon rehabilitation pools. *Source: TampaBay.com 8/30/07 by Mike Brassfield, Times staff writer*

Majority of Polar Bear Populations Could Be Extinct Within the Next 43 Years

United States Geological Survey biologists have released a report saying that the United States and Russia will likely lose all of their polar bear (*Ursus maritimus*) populations by 2050. The loss will

be due to the disappearance and thinning of sea ice. The only bears projected to survive live in the northern Canadian Arctic islands and the west coast of Greenland.

At the same time, the National Snow and Ice Data Center released a report showing that the Arctic sea ice has fallen 300,000 square miles in two years, since September of 2005.

A study last year published by the U.S. Geological Survey and the Canadian Wildlife Service showed a 22% decline in the polar bear population of the Hudson Bay area in just 17 years. The same study found that only 43% of cubs survived in their first year of life, compared to a survival rate of 65% in the early 1990s. Drowned polar bears are also being found for the first time in Alaska. There is some speculation that the lack of ice means longer swims for the bears, which could lead to exhaustion and cause drowning.

Photo: USFWS



The loss of ice also makes it more difficult for bears to find food. Unlike grizzly bears, polar bears aren't adapted to hunting land animals like caribou, instead feeding primarily on seals. However, recent aerial surveys by the U.S. Fish and Wildlife Service show that, over the past five years, polar bears are changing their habits and spending more time on land, congregating on beaches and scavenging whale carcasses.

Environmentalists say while the outlook for polar bears and other Arctic species — including walrus and 12 species of penguin — is dire, it is not too late to protect wildlife threatened by climate change.

"This grim news about polar bears and sea ice decline is horrifying, but it is a call to action, not despair," Kassie Siegel of the Arizona-based Center for Biological Diversity told the Associated Press. "The good news is that there is still time to save polar bears. Our hope lies in a rapid response, including both deep and immediate carbon dioxide reductions and a full-court press on other greenhouse pollutants such as methane." *Source: mongabay.com September 7, 2007*

700 Animal Skins Confiscated, Smugglers Busted

A three-year undercover investigation between the US and Mexican authorities has resulted in the arrest of five people. The five were engaged in international trade of exotic skins and parts from sea turtles as well as artifacts from other protected species.

The defendants face a total of 54 separate charges including conspiracy and smuggling charges. They smuggled approximately 25 shipments of wildlife skins and products between Mexico and the United States between 2005 and 2007. The objects included more than 700 tanned skins of sea turtle, caiman, python, and other protected species. Each conspiracy count in the indictments carries a maximum penalty of five years incarceration and \$250,000 in fines. Each smuggling and money laundering count carries a maximum penalty of twenty years incarceration and \$500,000 in fines.

The arrests are the result of a joint operation between the Department of Justice; the U.S. Fish and Wildlife Service, Branch of Special Operations; and Mexican law enforcement authorities. This is a significant partnership between the United States and Mexico as officials seek to protect wildlife and natural resources on both sides of the border. *Source: National Geographic News, September 8, 2007*



(Photo by Peter Denton, WWF)

Congo Rangers Flee Rebels, Leaving Endangered Mountain Gorillas Helpless

Rangers in the Democratic Republic of the Congo's Virunga National Park have been forced to flee their guard posts after an attack by rebels in the area. The rebels looted the park headquarters taking mobile phones, rations, and weapons.

The small mountain gorilla (*Gorilla beringei beringei*) population living there is now completely unprotected. Nine gorillas living in the park have been killed already this year and at least some of those deaths are confirmed to have been carried out by these same rebels. There are an estimated 700 wild mountain gorillas remaining and more than half of those live in Virunga.

"There are still no rangers whatsoever in the [gorilla] sector [of the park], so no monitoring or tracking of gorillas is going on," said Norbert Mushenzi, the park official in charge of the southern sector of Virunga—the park's only gorilla habitat. "This is very, very serious. We must be able to protect these animals, and at the moment we absolutely cannot."



Warfare in Virunga National Park puts these mountain gorillas at great risk.

(Photo by Sarel Kromer from Wikipedia)

Virunga National Park spreads over three countries: Rwanda, Uganda, and the Democratic Republic of Congo. The area has recently seen fighting between the Congolese military and rebel leader Laurent Nkunda. An ethnic Tutsi, Nkunda reportedly has entered the park in pursuit of Rwandan Hutu rebels who may be hiding there. Nkunda believes that the Congolese government is working with the Hutu-led FDLR. The FDLR is accused of involvement in the 1994 genocide against the Tutsis in Rwanda.

Despite the threat of angry poachers and rebel groups, the rangers in Virunga have long struggled to protect the gorillas. More than 120 guards have been killed in the last ten years while trying to protect these endangered animals. One guard was killed right before this latest attack on park headquarters.

Emmanuel de Merode, the Director of Wildlife Direct, says he does not believe the rebels are specifically targeting the gorillas. But he says the apes face enormous peril, as do the rangers.

"The gorillas happen to live in one of the worst areas of the world for conflict that is strategically important for armed groups," he said in a statement. "We fear for the safety of these endangered creatures." *Source: National Geographic News, September 5, 2007*

Environmentalists Challenge Political Interference with 55 Endangered Species in 28 States, Seek to Restore 8.7 Million Acres of Protected Habitat Across the Country

The Center for Biological Diversity in Tucson, AZ has filed a formal notice of intent to sue the Department of the Interior for political interference with 55 endangered species in 28 states. The notice initiates the largest substantive legal action in the 34-year history of the Endangered Species Act.

At stake in the suit is the illegal removal of one animal from the endangered species list, the refusal to place three animals on the list, proposals to remove or downgrade protection for seven animals, and the stripping of protection from 8.7 million acres of critical habitat for a long list of species from Washington State to Minnesota and Texas.

"This is the biggest legal challenge against political interference in the history of the Endangered Species Act," said Kieran Suckling, policy director of the Center for Biological Diversity. "It puts

the Bush administration on trial at every level for systematically squelching government scientists and installing a cadre of political hatchet men in positions of power.”

Many of the illegal decisions were engineered by former Deputy Assistant Secretary of the Interior Julie MacDonald, who resigned in disgrace following a scathing investigation by the inspector general of misconduct at the Department of the Interior. Other decisions were ordered by her boss, Assistant Secretary of the Interior Craig Manson, his special assistant Randal Bowman, and Ruth Solomon in the White House Office of Management and Budget. Some decisions were ordered by lower-level bureaucrats.

“The Bush administration has tried to keep a lid on its growing endangered species scandal by scapegoating Julie MacDonald,” said Suckling, “but the corruption goes much deeper than one disgraced bureaucrat. It reaches into the White House itself through the Office of Management and Budget. By attacking the problem systematically through this national lawsuit, we will expose just how thoroughly the disdain for science and for wildlife pervades the Bush administration’s endangered species program.”

In many of the cases, government and university scientists carefully documented the editing of scientific documents, overruling of scientific experts, and falsification of economic analyses.

Among the 55 species in the legal filing are the marbled murrelet (CA, OR, WA), Florida manatee (SC to TX), Arctic grayling (MT), West Virginia northern flying squirrel (WV), California least tern (CA), brown pelican (LA, TX, PR, VI), California red-legged frog (CA), arroyo toad (CA), Mexican garter snake (AZ), piping plover (NC to TX), snowy plover (CA, OR, WA) and Preble’s jumping meadow mouse (CO, WY).

Number of species per state: California (24), Texas (16), New Mexico (9), Arizona (5), Louisiana (3), Colorado (2), Oregon (2), Washington (2), Kansas (2), Georgia (2), Florida (2), Alabama (2), Mississippi (2), Puerto Rico (2), American Virgin Islands (2), Montana (1), Iowa (1), Minnesota (1), Nebraska (1), South Dakota (1), Missouri (1), South Carolina (1), Nevada (1), Utah (1), Wyoming (1), West Virginia (1), Guam (1), Rota (1). *Source: Center for Biological Diversity press release 8/28/07*

Campaign Launched to Save Endangered Birds Worldwide

An international conservation group has launched an ambitious plan on to raise tens of millions of dollars to save 189 endangered birds over the next five years by protecting their habitat and raising public awareness about their plight.

UK-based BirdLife International is calling on environmental groups, corporations and individuals to contribute the USD 37.8 million needed for what it is dubbing the Species Champions initiative. The campaign comes as the numbers of extinct birds is on the rise, mostly due to poaching, habitat loss and over development. In the last three decades, 21 species have been lost, including the Hawaiian honeycreeper or Poo-uli, Hawaiian Crow or alala, and the Spix’s Macaw from Brazil, BirdLife said.

The first birds to benefit will be the Bengal Florican in Cambodia, the Belding’s Yellowthroat in Mexico, Djibouti Francolin in Djibouti and Restinga Antwren from Brazil. All have seen their numbers drop from a few thousand to a few hundred and their ranges limited to a few isolated locations.

“Critically endangered birds can be saved from extinction through this innovative approach,” the group’s Chief Executive Mie Rands said in a statement. “This is an enormous challenge but one we are fully committed to achieving in our efforts to save the world’s birds from extinction.”

All the birds targeted in the campaign are listed by the World Conservation Union as critically endangered which means they are on the brink of extinction. *Source: The Times of India 8/16/07*

2007 Red List Shows More Animals and Plants in Trouble

Scientists have released an updated list of the world's most endangered plants and animals. It's called the Red List, and it's widely viewed as the world's most authoritative guide to the status of disappearing plants animals. Scientists from all over the world help the World Conservation Union keep the Red List up-to-date.

The 2007 list is the longest Red List ever, with entries for a total 41,415 rare and threatened plants and animals. Some are described as merely vulnerable, but more than 16,000 are said to be at least endangered. And one has now been officially reclassified as gone forever, according to botanist Mike Hoffman of Conservation International. It's the Malaysian woolly-staked begonia (*Arial sp.*) that hasn't been found in more than 100 years.

TheThis year's list include include an Indonesian Banggai Cardinalfish (*Pterapogon kauderni*)coveted by aquarium owners, an Indian crocodile threatened by dam-building and sand-mining, and almost every species of chimpanzee, orangutan and gorilla.

Russ Mittermeier, head of Conservation International, says people don't realize how rare these apes have become. "If you took all of the world's remaining great apes, all of the remaining individuals would fit into two or three football stadiums, and that's it," Mittermeier says. He says great apes are being ravaged by diseases like the Ebola virus, and by hunters who sell their meat.

The Sumatran orangutan (*Pongo abelii*) is one of the critically endangered species on the Red List, put out by the World Conservation Union. The ape has suffered a population decline of more than 80 percent over the last 75 years.

The status of the Western lowland gorilla (*Gorilla gorilla gorilla*) was changed from endangered to critically endangered. This subspecies has suffered a population decline of more than 60% since the early 1980s.

Gharial (*Gavialis gangeticus*)status was also changed from endangered to critically endangered. Its historic range extended from Pakistan to Myanmar, but today, three widely separated breeding sub-populations are left in India and Nepal. Its decline is mainly due to habitat loss through rivers being dammed and expansion of crop and livestock agricultural areas. Along with habitat loss, current serious threats to the species include entanglement in fishing nets.

There is some good news in the Red List. For example, many snakes and reptiles are doing better than expected in the United States. But even the most optimistic of experts predict that the Red List will keep growing in the years ahead. That's partly because the status of many marine species is now being assessed. This year, for instance, the first three species of coral were added to the Red List, along with several different kinds of seaweed. Hundreds of other species that live in the ocean could be added next year when the list is updated again.

According to Guidelines for IUCN Red Listing, an endangered species faces a very high risk of extinction, while a critically endangered species faces an extremely high risk of extinction when they meet any of the following criteria:

- Declining population (past, present and/or projected)
- Geographic range size, and fragmentation, decline or fluctuations
- Small population size and fragmentation, decline, or fluctuations
- Very small population or very restricted distribution
- Quantitative analysis of extinction risk

Sources: NPR Morning Edition 9/13/07; naturepl.com; IUCN Report

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