Program and Proceedings

Bear Care
GROUP

Advancing Bear Care 2009

6th - 8th November 2009

Welcome

Dear Bear Care Delegates,

In a year of global economic challenge, you have made Advancing Bear Care '09 a tremendous success right at the starting gate - we sold out! The Bear Care Group would like to thank each of you for making a commitment to bear welfare and conservation by your participation in Advancing Bear Care '09. Today, as never before, our greatest resource is communication and networking. This weekend you will enjoy stimulating presentations, interactive problem-solving sessions, two fabulous venues, good food, and the company of 85 international bear enthusiasts just like you. Thank you again - now let's do it!

Check Out www.bearcaregroup.org
For Bear Care Conference Updates and Networking Join bearcare@yahoogroups.ca
Subscribe at bearcare-subscribe@yahoogroups.ca

Contents

Bear Care Board of Directors

- Else Poulsen - President
- Gail Hedberg - Vice President
- Judy Willard - Treasurer/Secretary
- Valerie Hare - Director
- Jason Pratte - Director
- Lydia Fogal - Advisor
- Lisa Stoner - Advisor
- Kurt Stoner - Advisor
- JoAnne Simerson - Advisor

Bear Care Mission Statement

The Bear Care Group creates and enhances communication, cooperation and education among international bear care professionals by organizing bear care programs, publications and resources focused on advancing and sharing information on bear behavior, husbandry, enrichment, training, veterinary care and other topics to further global bear welfare and conservation efforts.

Sponsors

- AAZK San Francisco Zoo Chapter
- Animals Asia
- Behavioral & Environmental Solutions
- BenKilham.com
- Bornean Sun Bear Conservation Organization
- Half Moon Bay Brewery
- Mazuri
- Polar Bears International
- San Francisco Zoological Society
- Society for the Protection of Animals
- Spectacled Bear Conservation
- World Society for the Protection of Animals
- ZooMom.com

Advancing Bear Care 2009 Planning Team

- Robyn Appleton, Moderator
- John Beecham, Moderator
- Deb Cano - Goody Bag Coordinator
- Valerie Hare, EE Workshop Coordinator
- Gail Hedberg, Co-Chair, On-Site Coordinator, Registration Coordinator, Science Committee, Proceedings Editor
- Kent Hedberg - IT Technical Advisor
- Gail Laule - Behavioral Problem Solving Advisor
- Lydia Lefebvre - Bear Book and Art Den
- Brigitte Mercier - Science Committee
- Lory Palmer - Silent Auction Coordinator
- Else Poulsen, Co-Chair, Sponsorships, Agenda Coordinator, Science Committee
- Jason Pratte, Training Workshop
- Jill Robinson, Moderator
- Lisa and Kurt Stoner, Science Committee
- Bill Winhall - Moderator

2009 Volunteer Appreciation

The following individuals contributed to Advancing Bear Care '09 Hosted by SF Zoo

Ray Bandar
Anthony Brown
Robert and Carolyn Buchanan
Jesse Bushell
Patience Campione
David Carroll
Carol Casey
Tony Colonese
Mo Flannery
Amy Frankel
David Jaffe
Jacqueline Jencek
Cherie Mann
Alec Moss
Adrian Mutlow
Lynette Staffero
Chris Shuttlesworth
Debbie Marin-Towey
Ellen Williams
Judy Willard
Justin Miller (T-shirt art)

Name Badges

All delegates will be provided with a name badge upon registration. Please wear it as it is your official pass to all events and transportation. This will also help to introduce you to other delegates.

Registration

The Registration Desk is in the foyer of the Crowne Plaza Hotel.

Thursday November 5 2009 4:00-10:00 PM
Friday November 6 2009 7:00-8:00 AM

Poster Sessions

Poster presentations will be displayed on Friday evening, November 6, 2009. Please arrive at the Crowne Plaza Hotel foyer before 6:30 PM to set up your poster. Staff will be at the site to assist you. Posters will stay up for the duration of the conference.

Speaker Presentations

Speakers are asked to report to their *Session Moderator* prior to the session for last minute instructions. Speakers using computer data projection (PowerPoint) are asked to test their presentations before the start of the session.

Many Thanks

Thank you to all of those wonderful folks who have donated items for the Delegate goody bags, the Silent Auction, and to all of the San Francisco Zoo staff for their support, efforts, and western hospitality. (A special note of thanks to Polar Bears International for donating the *goody* bag)

- Donna Andrews
- Deb Cano
- Sylvia Dolson
- Kathryne Erigero
- Abby Garner
- Kerry Gunther
- Val Hare
- Hazel Holby
- Rick Lee
- Robert O'Donnell
- Mike Southern
- Tony Vaught

Thursday November 5 2009 Evening

4:00 - 10:00 PM	Registration at the Crowne Plaza Hotel Plaza Foyer

Friday November 6 2009

7:00 - 8:00 AM	Registration at the Crowne Plaza Hotel Foyer
7:00 - 8: 00 AM Plaza I	Egg Breaker/Breakfast Buffet - Crowne Plaza Hotel Sponsor: Polar Bears International
7:40 - 8:00 AM	Welcome Else Poulsen and Gail Hedberg Introduction by Gail Hedberg of Host Speaker Joe Fitting San Francisco Zoo Director of Education and Conservation
8:00 - 8:05 AM	Introduction of Key Note Speaker Else Poulsen
8:05 - 9:00 AM Plaza I	Robyn Appleton Ecology and Conservation of Spectacled Bears (*Tremarctos ornatus*) in Low-lying Desert Habitat in Northwestern Peru
9:00 - 9:05 AM	Introduction of Key Note Speaker Gail Hedberg
9:05 - 10:00 AM Plaza I	Siew Te Wong Behavioral Ecology and Conservation of the Sun Bear (*Helarctos malayanus*) in Borneo
10:15 - 10:30 AM	Coffee and Stretch Break
10:30 - 12:30 PM Plaza I	Behavior Based Bear Husbandry Workshop/Bear Training 101 Moderator: Jason Pratte The Principles of Behavior-based Bear Husbandry 101 - What are Bears Expecting? What Do Bears Need? Else Poulsen The Principles of Behavior-based Bear Husbandry 101- What Do Bears Need? Val Hare Bear Training 101 Jason Pratte Principles of Problem Solving Gail Laule

Friday November 6 2009 - continued

12:30 - 1:00 PM	Meet at Buses
1:00 - 1:30 PM	In Route to California Academy of Sciences Sponsor: Behavioral & Environmental (B&E) Solutions
1:30 - 5:00 PM	California Academy of Sciences
	Delegates Purchase Own Lunch
2:00 - 3:20 PM Pauline Tusher Education Classroom (3rd Floor East)	Skull and Bones Interpretation Sessions 2:00 - 2:20 PM Green Group 2:40 - 3:00 PM Pink Group 2:20 - 2:40 PM Red Group 3:00 - 3:20 PM Blue Group
3:30 - 4:30 PM Hearst Forum Gallery (2nd Floor West)	Environment, Morphology and Behavior Speaker Introduction: Else Poulsen Food Sharing Social Behavior in American Black Bears (*Ursus americanus*) Benjamin Kilham
5:00 PM	Board Bus at Music Concourse Sponsor: B&E Solutions
5:00 - 5:30 PM	In Route to Crowne Plaza Hotel
6:30 - 8:00 PM Plaza Foyer	Dinner- Taco Bar Buffet at Crowne Plaza Hotel
7:00 - 8:00 PM Plaza Foyer	Sign up for Problem Solving Sessions
7:00 - 8:00 PM Plaza Foyer	Poster Display at Crowne Plaza Hotel
7:00 - 8:30 PM	Bear Book and Art Den at Crowne Plaza Hotel
8:00 - 9:00 PM	Concurrent Discussion Groups
Bayside I	Problem Solving - Behavior Gail Laule Sponsor: Active Environments
Bayside II	Problem Solving - Neonatal Issues Gail Hedberg Sponsor: Zoomom.com
Plaza I	Bear Man DVD and Q&A Ben Kilham Sponsor: Benkilham.com

Friday November 6 2009 - continued

9:00 - 10:00 PM	Concurrent Discussion Groups
Bayside I	Problem Solving Session - Behavior Gail Laule Sponsor: Active Environments
Bayside II	Problem Solving Session - Ask the Vet Heather Bacon and Brigitte Mercier Sponsor: Animals Asia
Plaza I	Grizzlies Among Glaciers - DVD and Q&A Steve Stringham Sponsor: Bear Viewing Association

ECOLOGY AND CONSERVATION OF SPECTACLED BEARS (*Tremarctos ornatus*) IN LOW-LYING DESERT HABITAT IN NORTH-WESTERN PERU

ROBYN D. APPLETON, JAVIER G. VALLEJOS and KAREN V. NOYCE

Spectacled bears in cloud forests of the western Andes have been studied for years, yet much is still unknown about their ecology in the wild. Though typically considered a cloud forest species, spectacled bears may do well in low-elevation dry forests, provided human presence is low in areas where bear foods are abundant and steep cliffs provide refuge for mothers and cubs.

The relatively open terrain of Peru's dry forest provides excellent visibility throughout the dry season, and the concentration of bear activity around small dispersed water holes provide a unique and perhaps unparalleled opportunity to observe the spectacled bear in its natural habitat. Observational studies can provide important data on the ecology of wild bears.Using visual observation, remote cameras, and GPS collars, we studied bear behavior, movements, and habitat use over a 20-month period. Unique facial markings and human-tolerant behavior of some bears enabled us to identify 32 individuals. Local seasonal density appeared to be higher than cloud forest studies. Our observations suggested a seasonal influx of bears to our study area during summer coinciding with the ripening of the sapote fruit *(Capparis angulata*). Pairings of bears, vocalizations, and other behavior suggested that breeding activity may also have been occurring. Results from this work have helped identify key areas for bear conservation in a government conservation initiative under development. Populations of bears in this unique area are considered to be the most threatened in South America.

BIOGRAPHICAL NOTES

ROBYN APPLETON: Founder and research director for the spectacled bear conservation society-Peru (SBC), a Canadian registered non-profit. Through scientific research, environmental education, and community outreach SBC was established in 2007 to ensure the conservation of the spectacled bear in the equatorial dry forest of northern Peru. Robyn holds a double honors degree in wildlife management and culture geography and a professional masters degree from Simon Fraser University's' department of Resource and Environmental Management, specializing in spatial landscape and black bear ecology. Particular questions from Robyn's current research on spectacled bear ecology and behavior will be presented in her doctoral thesis in applied conservation biology and is the first behavioral study to have been conducted on wild spectacled bears. Robyn has presented these findings around the world at international conferences such as the IBA conference in Monterrey Mexico where she won the award for best presentation. More recent presentations were at the symposium on Andean Bears, Lima, Peru and for the Society for Conservation Biology, Beijing, China.

For details of projects and publications

Mail: Spectacled Bear Conservation Society- Peru, Squamish, British Columbia Canada
Telephone (Canada) 778-855-2670 (Peru) 51-74-699870
Email: robyn@specdtacledbearconservationsociety.com
www.spectacledbearconservationsociety.com

BEHAVIOR ECOLOGY AND CONSERVATION OF THE SUN BEAR (*Helarctos malayanus*) IN BORNEO

SIEW TE WONG

The Malayan sun bear is a true tropical bear species found in Southeast Asia. They remain the least known bear in the world. Several ecological studies conducted in Borneo over the past few years have revealed their elusive life history and little known behavioral adaptations to the tropical rainforest environment. Sun bears have small body size and hind limbs that are adapted for arboreal behaviors. Their long tongue, long claws, large canines, and well developed jaw muscles are specialized tools for feeding on wood-burrowing invertebrates. The forest of Borneo displays a supra-annual fruiting cycle, commonly known as general fruiting cycle, which results in low fruit production in most years. Figs (*Ficus* spp), which do not follow the general fruiting cycle thus become a keystone resource for all frugivores in the forest, including sun bears. It is recommended that captive management of sun bears provide a living environment that mimics their natural habitat. Captive sun bears should have plenty of opportunities to climb, dig soil, and bite woody materials as part of the enrichment program. The sun bear is one of the most neglected large mammals in Southeast Asia. They are categorized as Vulnerable in the current IUCN Red Book Listing. Habitat destruction and deforestation are by far the biggest threats to sun bears. Vast tropical forests in SE Asia have been cleared for human developments, agriculture, and unsustainable and illegal logging. Sun bears also continue to be poached for their body parts for human consumption, traditional Asian medicine, traditional costumes, and souvenirs. In addition, helpless sun bear cubs are captured for the pet trade. These captive bears grow up in extremely poor conditions. Very little conservation efforts are currently available to conserve this species across its distribution range in SE Asia. The lack of public knowledge and interest pose serious challenges to conserving sun bears from local to international levels. The goal of the Bornean Sun Bear Conservation Center (BSBCC), founded in Sabah, Malaysian Borneo in 2008, is to promote sun bear conservation in Borneo. The BSBCC aims to achieve this goal by creating the capacity to confiscate, and rehabilitate captive bears back into the wild, providing a more natural living environment for existing captive bears, educating the public and raising awareness of sun bears and their plight and achieving increased protection for sun bears through ongoing research, and protection of habitat.

BIOGRAPHICAL NOTES

Siew Te Wong has been studying the ecology and working on conservation of the Malayan sun bear for the past 11 years. He completed his B.Sc. and M.Sc. at the University of Montana, Missoula, and is currently completing his doctorate at the same institution. S.T. Wong is one of very few Malaysian wildlife biologists trained in a western country. Wong's pioneering studies of sun bear ecology in a Bornean rainforest revealed the elusive life history of the sun bear along with significantly raising conservation awareness for this little known species. Wong is fully committed to sun bear research and conservation as well as becoming a leading expert on this species. He is a fellow of the Flying Elephant Fellowship and the founder and CEO of the Bornean Sun Bear Conservation Center, based in Sabah, Malaysian Borneo.

For details of projects and publications

Mail: Bornean Sun Bear Conservation Centre, PPM 219, Elopura, 90000 Sadakan, Sabah, Malaysia.
Email: wongsiew@hotmail.com

THE PRINCIPLES OF BEHAVIOR-BASED BEAR HUSBANDRY 101 - WHAT ARE BEARS EXPECTING?

ELSE POULSEN

Bears are born with genetic expectations of their environment. The husbandry process of catering to those expectations in the captive community, which promotes mental and physical health, is called behavior-based husbandry. The wild niche for which each bear is genetically programmed to live in offers infinite complexities. The captive enclosure whether it be cement grotto, natural, or naturalistic (a cement-natural exhibit hybrid) is simplistic and finite in possibility. Behavior-based husbandry dictates that we bring as many parts of the wild living experience into the captive situation as is relevant to the individual bear. Wild bears have daily and seasonal routines that they carry out using what is at their disposal. Captive bears will also set up their own daily and seasonal routines if given the ingredients to do that in their enclosure. The bears' natural habitat and niche is composed of three parts: permanent structures like trees, rocks, and rivers; ephemeral events or structures, such as photoperiod, temperature, ground substrate, seasons; and constant changes like the location and availability of food and flexibility in the ease of the catch. An assessment of the captive environment, based on wild habitat and behavior knowledge, will generate deficiencies which can be remedied through the use of enclosure modification, environmental enrichment, training used as a communication tool, and developing relationship between the caregiver and the bear.

BIOGRAPHICAL NOTES

Else Poulsen holds a bachelor's degree in biological sciences, and a four-year zookeeper apprenticeship diploma. Among other institutions, she has worked at the Calgary and Detroit zoos, and is known internationally for her captive bear husbandry and rehabilitation. In 2000 she won the Zookeeper Research Excellence Award from the American Zoo and Aquarium Association's Bear Taxon Advisory Group. She works as an animal management consultant for zoos, sanctuaries, wildlife rehabilitators, and other animal welfare groups and lives in southern Ontario, Canada. Else has published numerous technical and scientific papers, was a contributing author in the textbook *Stereotypic Animal Behavior - Fundamentals and Applications to Welfare* [2nd edition], and also writes for the mass media. She has raised bears, comforted bears, taught bears, learned from bears, had bears communicate their needs to her, and nursed bears back to health. In May 2009, Else published *Smiling Bears - A Zookeeper Explores the Behavior and Emotional Life of Bears* revealing her insights about bears and their lives that she has gained through her work. She is the President of the founding Board of Directors for the Bear Care Group, and has co-chaired BIERZS 2007 and Advancing Bear Care '09. She is currently working on her second bear behavior book.

For details of projects and publications

Mail: Behavioral & Environmental Solutions, 2-126 Main Street West, Grimsby Ontario L3M 1R8 Canada
Telephone: 905-309-1370
Cell: 905-865-9345
Email: embpoulsen@hotmail.com

THE PRINCIPLES OF BEHAVIOR-BASED BEAR ENRICHMENT 101 - WHAT DO BEARS NEED?

VAL HARE

Behavior-based husbandry of bears requires that caregivers understand that wild bears have daily and seasonal routines in response to the circumstances and changes in their natural environment. For bears to express those behaviors in the captive community, which promotes mental and physical health, enough complexity needs to be introduced into their enclosures to sustain full daily and seasonal routines. Environmental enrichment, a vital component of behavior-based husbandry excellence, must be incorporated into the daily and seasonal husbandry routines in ways as to be significant to the bears' genetic expectations. Thus items and events are introduced into the bears' daily and seasonal life to allow him/her to carry out life sustaining routines that make sense to the bear. Bear relevant enrichment ideas, methodologies, and programs will be discussed

BIOGRAPHICAL NOTES

Valerie Hare co-founded The Shape of Enrichment, Inc. in 1991 and has been a principal ever since. In 2000, Valerie presented an enrichment mini-course at the Brazilian Zoo Congress in Belo Horizonte. With the help of its current instructors, that mini-course has evolved into The Shape of Enrichment Workshop and is designed to assist interested animal caretakers create enrichment plans for the animals in their care. Valerie is currently the Chief Financial Officer and Workshop Coordinator for The Shape of Enrichment, Inc. Valerie has worked as a Research Animal Care Supervisor (Massachusetts General Hospital), Zoo Keeper (San Diego Wild Animal Park), Behavioral Research Technician (San Diego Zoo), and Enrichment Consultant. As an enrichment consultant she has worked with giant pandas, polar, brown, spectacled, and sun bears. Valerie serves on the International Conference on Environmental Enrichment Committee (since 1997) and the Bear Care Group Board of Directors (since 2007). Valerie holds a Bachelor of Science Degree in Biology (Zoology emphasis) from San Diego State University and an Associates Degree as a Veterinary Technician from State University of New York.

For details of projects and publications

Mail: The Shape of Enrichment, 1650 Minden Drive, San Diego, CA 92111
Telephone: 858-279-4273
Email: hare@enrichment.org

BEAR TRAINING 101

JASON PRATTE

Session will focus on an introduction to training and operant conditioning, specifically in relation to bear husbandry. Primary theme will be the use of positive reinforcement techniques to achieve behavioral and management goals with the bears in respective facilities/collections. Other aspects of operant conditioning will be discussed, along with impact on training goals and long-term management.

Basic bear husbandry/management behaviors will be presented, along with discussion pertaining to the utility of each behavior. The behaviors discussed will be a compilation of those used most frequently and with great success by bear care-givers from around the world. Basic steps to teach these behaviors will be presented, accompanied by a Q & A session to ensure clarification. Training resources and contacts provided to delegates seeking future assistance or information.

BIOGRAPHICAL NOTES

Jason (Jay) Pratte is currently working as Lead Keeper for the Program Animals department at Zoo Atlanta. He has worked as a keeper and animal/bear caregiver for over seventeen years, and this experience covers zoos, game farms and animal training in the film industry. He moved to Atlanta and spent four years working specifically with giant pandas in research, husbandry and training. This rounded out the bear species he has worked with, and he now has experience with all eight extant bear species in captive management facilities. Jay collaborated with the Chengdu Research Base of Giant Panda Breeding in China to teach training to both pandas and caregivers. He has also been active for several years on a national basis as a member of the AAZK, Inc. Behavioral Husbandry Committee (previously the Animal Training Committee), and is currently on the Board of Directors for the Bear Care Group. He has published several papers on captive animal husbandry/management, and is column co-editor of “Training Tales” in the monthly AAZK, Inc. Forum journal. Jay co-authored "Spatial Memory Recall in the Giant Panda (*Ailuropoda melanoleuca*) with Bonnie Perdue *et al*, recently published in Vol. 123 of the Journal of Comparative Psychology, 2009. Currently working on his Masters degree in Zoo and Aquarium Leadership, he is always open to discussions regarding bear (and animals in general) care, husbandry and especially training.

For details of projects and publications

Mail: Zoo Atlanta, Program Animals, 800 Cherokee Ave SW, Atlanta, GA 30315
Telephone: 404-788-4788
Email: jpratte@zooatlanta.org

PRINCIPLES OF PROBLEM SOLVING

GAIL LAULE

Optimum care and management of captive bears includes the ability to effectively address behavioral problems when they occur. These problems include a wide array of management and animal welfare issues such as refusal to shift between enclosures, heightened aggression toward caregivers and/or conspecifics, sustained levels of fear and discomfort, and a wide array of stereotypic and abnormal behaviors. All of these behaviors are of concern for they inhibit caregivers from providing the level of care we strive for and may be indicators of diminished well-being. Therefore it is important to address behavioral problems proactively. The problem solving process provides a framework to examine behavioral problems, assess associated circumstances, and develop strategies to mitigate and diminish the occurance of these behaviors. This process is an exercise in the scientific method and involves the following steps: 1) identify specific behavioral objective(s); 2) assess the situation; 3) develop a hypothesis or educated guess as to why the behavior is occurring; 4) develop methods to address those reasons why; 5) implement methods; 6) evaluate results, and 7) if desired results are not achieved, go back in the process as far as necessary and repeat steps. This presentation will walk through the process with examples from real situations

BIOGRAPHICAL NOTES

Gail Laule has been an animal welfare advocate since she began her animal training career at Marineland in California. Through her consulting company, Active Environments, Gail has focused on developing and teaching techniques to enhance the care and welfare of captive animals. These include: protected contact, a positive reinforcement based system for managing elephants; cooperative feeding, a technique for enhancing positive social interaction in groups of animals; and behavioral management, an integrated systems approach to optimal care for all captive species. For the past 17 years, she has been an animal behavior consultant working with zoos, biomedical facilities, and sanctuaries assisting in the development of behavioral management programs. Gail divides her time between consulting work, and her function as Executive Vice President of Ocean Adventure, an open water marine park in Subic Bay, Philippines. Here she provides technical direction for the management, training, presentation, and welfare for all marine and terrestrial animals at the park. She also serves as President of Wildlife in Need, a U.S. non-profit running a rescue and rehabilitation center for wildlife and conducting conservation and animal welfare projects in the Philippines. Gail has been an invited speaker at a number of conferences and events, including American Zoo Association, International Environmental Enrichment Conference, Scientists Center for Animal Welfare, National Research Council, American Association of Zoo Veterinarians, American and Canadian Associations of Laboratory Animal Science, American Veterinary Medical Association, and American and International Societies of Primatologists.

For details of projects and publications

Mail: Active Environments, Lompoc, CA
Telephone: 805-737-3700 / 805-350-2655
Email: moonshadowe@earthlink.net

FOOD SHARING SOCIAL BEHAVIOR IN AMERICAN BLACK BEARS (*Ursus americanus*)

BENJAMIN KILHAM

This presentation will discuss food-sharing social behavior in black bears, which will include: emotional and intentional communication, olfactory communication, play, food acquisition, reproductive behavior, matriarchal hierarchy and general behavior. The lecture will be illustrated with photographs of bears in action.

BIOGRAPHICAL NOTES

"In the spring of 1993 BEN KILHAM, a naturalist who lives in the woodlands of New Hampshire, began raising a pair of orphaned black bears. The experience changed his life.

While spending thousands of hours with the cubs, Kilham discovered unknown facets of bear behavior that have radically revised our understanding of animal behavior. Now widely recognized for his contributions to wildlife science, Kilham reveals that black bears are altruistic and cooperative with unrelated, even unknown, individuals, while our closer relatives, the supposedly more highly evolved chimps, cooperate only within troops of recognizable members.

Kilham, who turned a disability, dyslexia, to his advantage as a naturalist, offers fascinating insights into the emotional life of bears." From Among the Bears by Ben Kilham and Ed Gray, 2002.

Ben Kilham and his ground breaking work have been featured on National Geographic "A Man Among Bears" and "Bear Man", Discovery Channel "Papa Bear", BBC "Home Waters", CBS "Coast to Coast", and NH Public TV "New Hampshire Crossroads". He has been featured on such programs as Good Morning America ABC, The Today Show NBC, ABC Nightly News, Bill O'Reilly FOX, and Inside Edition.

For details of projects and publications

Mail: P.O. Box 37, 172 Grafton Turnpike, Lyme, NH 03768
Telephone: 603-795-4135
Email: Benjamin.Kilham@valley.net
Website: www.benkilham.com

EVENING PROBLEM SOLVING SESSIONS - CONCURRENT SESSIONS
Friday and Saturday 8:00-10:00 PM

BEHAVIOR - GAIL LAULE
These hour long sessions will provide the opportunity to practice the problem solving process. Real behavioral problems of bears from participants' facilities will be used for each session. Problems will be chosen that are representative of the types of issues most of us face in daily management and care.

Bayside I

NEONATAL ISSUES - GAIL HEDBERG
This round table discussion group will allow participants to ask detailed questions about mother-reared and hand-rearing protocols for ursids. Individuals with husbandry experience in these areas are encouraged to share their experiences.

Bayside II

ASK THE VET - HEATHER BACON and BRIGITTE MERCIER
Participants will have the opportunity to discuss medical topics with experienced veterinarians and the relationship to captive ursid management.

Bayside II

HUMAN RESOURCES - JUDY WILLARD
Participants will have the opportunity to discuss any human resource challenges.

Bayside II

VIDEO PRESENTATIONS

GRIZZLIES AMONG GLACIERS - STEVE STRINGHAM

Meet the bears of Katmai National Park up close and personal from animal communicator, cinematographer, wildlife ecologist, and author Steve Stringham. Get to know them not as generic bruins, but as distinct personalities -- or should we say "ursinalities"?
Learn what bears communicate to one another, and how they do it. Plaza I

BEAR MAN - BEN KILHAM

Look through a window into the lives of black bears with naturalist Ben Kilham, author of Among the Bears. Meet Ben's bears, Squirty, Yoda and Houdini. Visit Squirty in her den with newborn cubs and experience their lives through the lens of Ben's camera. In a dramatic close encounter, meet Squirty's mate, a found one hundred pound male.

Bear Man is the story of Ben Kilham's controversial methods of black bear behavioral research and rehabilitation.

Plaza I

Saturday November 7 2009

7:00 - 8:00 AM
Plaza I

Continental Breakfast

8:00 - 9:20 AM

Polar Bear Workshop
Moderator: Bill Winhall

Noninvasive Fecal Hormone Monitoring for Assessing Reproductive Activity and Diagnosing Pregnancy in the Polar Bear (*Ursus maritimus*)
Terri L. Roth, Katherine M. MacKinnon and Monica A. Stoops

The Polar Bear Sustainability Alliance: Animal Care Professionals Driving Global Conservation Efforts
Bill Winhall

Results of Milk Composition From Free Ranging Polar Bears (*Ursus maritimus*) in Svalbard, Norway
Gail E. Hedberg, Andrew Derocher, Magnus Andersen, Quinton R. Rogers, Ed DePeters, Bo Lonnerdal, Lisa Mazzero, Russell W. Chesney, and Bruce Hollis

Effects of Targeting Enrichment to Stimulate Wild Behavior Patterns in Captive Polar Bears (*Ursus maritimus*): Implications for Well Being
Karen J. Cain, Susanne Miller, Leslie Cornick, Carl Tobin and David Scheel

9:20 - 9:40 AM

Coffee and Stretch

9:40 - 11:20 AM
Plaza I

Andean Bears Workshop
Moderator: Robyn Appleton

Wild Spectacled Bear (*Tremarctos ornatus*) Behavior in Low-Lying Desert Habitat In North-Western Peru - How Spectacled Bears Use Their Environment
Robyn Appleton, Javier G. Vallejos and Karen V. Noyce

Andean Bear (*Tremarctos ornatus*) Outreach - Latin America: Keeper Conservation Efforts Through Behavioral Enrichment
David Morales

Ursidae Contraception
Brigitte Mercier and Sally Boutelle

A Social Networking Website for Bear Rehabilitators
Iris Mazurek, Neil D'Cruze and Victor Watkins

Spray Foam Cleaning Procedure for Animal Care Areas
Steve Delmonico

Saturday November 7 2009 - Continued

12:00 - 12:15 PM	Meet Buses
12:15 - 1:00 PM	In Route to San Francisco Zoo Sponsor: B&E Solutions
1:00 - 2:00 PM Great Hall	Smiling Bears - A Zookeeper Explores the Behavior and Emotional Life of Bears Else Poulsen
2:00 - 4:00 PM Great Hall Patio	Bear Grotto Tour
2:00 - 3:00 PM Animal Resource Center	Animal Resource Center Open House
2:30 PM Lion House	African Lion Training Demonstration
3:00 PM Lion House	Spray Foam Cleaning Demonstration Steve Delmonico
4:00 PM Giraffe Barn	Giraffe Feeding
5:30 - 7:00 PM Great Hall	Dinner and Silent Auction: Host San Francisco Zoo Welcome Announcement Tanya Peterson - Executive Director, President
7:00 PM	Board Buses
7:30 - 8:00 PM	In Route to Crowne Plaza Hotel
8:00 - 10:00 PM Plaza Foyer	Poster Display
8:00 - 9:00 PM	Concurrent Discussion Groups
Bayside I	Problem Solving Session - Behavior Gail Laule Sponsor: Active Environments
Bayside II	Problem Solving Session - Ask The Vet Heather Bacon and Brigette Mercier Sponsor: Animals Asia
Plaza I	Grizzlies Among Glaciers - DVD and Q&A Steve Stringham Sponsor: Bear Viewing Association

Saturday November 7 2009 - Continued

9:00 - 10:00 PM	Concurrent Discussion Groups
Bayside I	Problem Solving Session - Behavior Gail Laule Sponsor: Active Environments
Bayside II	Problem Solving Session - Human Resources Judy Willard Sponsor: JLW Consulting
Plaza I	Bear Man DVD and Q&A Ben Kilham Sponsor: Benkilham.com

NON-INVASIVE FECAL HORMONE MONITORING FOR ACCESSING REPRODUCTIVE ACTIVITY AND DIAGNOSING PREGNANCY IN THE POLAR BEAR (*Ursus maritimus*)

TERRI L. ROTH, KATHERINE M. MACKINNON and MONICA A. STOOPS

The reproductive performance of captive polar bears has been poor with few bears producing cubs and high neonatal mortality experienced by cubs that are born. A method for confirming the occurrence of reproductive events (estrus and ovulation) and for diagnosing pregnancy could be a very valuable tool for animal care staff who need to know the reproductive status of their bears so that the appropriate care and management can be implemented. Such information is also essential for population managers responsible for making breeding recommendations and transferring animals among facilities to improve genetic diversity. The hypothesis that noninvasive fecal hormone monitoring can be used as a tool for documenting reproductive events and diagnosing pregnancy in the polar bear is being tested in this study. Fecal samples were collected thrice weekly from 13 female polar bears at 9 zoos in the United States and Canada over a 12 month period. Samples were stored and shipped frozen to CREW where they were thawed, dried, extracted and analyzed by enzyme immunoassay for androgen and pregnanediol glucuronide (PdG) metabolite. Mating behavior was recorded by keepers throughout the breeding season. Androgen metabolite concentrations in fecal samples spiked whenever mating was observed, and bears with consistently low androgen values were never observed mating. These results indicate that the androgen metabolite assay is a valid method for documenting estrus and confirming ovarian follicular activity in the polar bear. The PdG pattern also proved to be informative but more difficult to accurately interpret. Seven bears were diagnosed not pregnant, and none of these bears produced cubs. Of the 6 remaining bears diagnosed “possibly pregnant”, only two produced cubs. These results suggest that PdG data alone may not provide definitive information for distinguishing pseudopregnancy from true pregnancy in polar bears. However, by integrating the results from both hormone assays, additional clues have been noted and potentially will prove helpful in our effort to diagnose true pregnancy in this species. Supplementary data are being collected in 2009 from 23 bears at 16 zoos. Although this study was conducted on captive polar bears, being completely noninvasive, the technologies established have tremendous potential for studying reproductive function in wild populations.

BIOGRAPHICAL NOTES

Dr. Terri Roth is the VP of Conservation and Science and the Director of the Center for Conservation and Research of Endangered Wildlife (CREW) at the Cincinnati Zoo & Botanical Garden.

For details of projects and publications

Mail: Center for Conservation and Research of Endangered Wildlife (CREW), Cincinnati Zoo & Botanical Garden, 3400 Vine St., Cincinnati, OH 45220
Telephone: 513-569-8220
Email: terri.roth@cincinnatizoo.org

THE POLAR BEAR SUSTAINABILITY ALLIANCE: ANIMAL CARE PROFESSIONALS DRIVING GLOBAL CONSERVATION EFFORTS

BILL WINHALL

The Polar Bear Sustainability Alliance (PBSA) is an ad hoc group focusing on polar bear conservation concerns. PBSA members and advisors collectively represent a wide range of professional expertise brought together by Polar Bears International (PBI), and led by zoological professionals. Alliance members represent NGOs, resource extraction companies, wildlife managers, and field biologists all collaborating on developing strategies to conserve the polar bear at this critical time.

Over the last decade, PBI has developed a reputation as a nimble, apolitical organization dedicated to the conservation of the polar bear by bringing together stakeholders from all perspectives and facilitating discussion and understanding. The PBSA is a natural extension of this spirit of collaboration. Our focus is in three major areas: contingency planning around compromised bears (orphaned, injured, oiled), capacity building for human/polar bear conflict mitigation efforts and developing a list of research priorities that can inform management of the species in a rapidly warming Arctic. This presentation will describe how wildlife biologists advised PBI to convene a task force of zoo professionals to develop contingency plans for compromised bears and other emerging issues because of predicted loss of habitat from climate change. The zoo community is one example because of its leadership in this conservation arena due to a unique skill set Opportunities for involvement by interested individuals and organizations will be outlined.

Although the outlook is grim for polar bears in light of predicted climate warming trends, zoo professionals are leading the effort to respond, proactively, to the situation as it develops. By facilitating cooperation between the parties, we are marshalling resources, increasing communication and consolidating similar efforts into a single, powerful force for change.

BIOGRAPHICAL NOTES

Bill has over 31 years of marine mammal experience utilizing his knowledge of husbandry, training, enrichment, rescue, rehabilitation and release programs for a variety of marine mammals. For the last twelve years he has managed the *Wild Arctic* attraction at SeaWorld in San Diego. He developed and is responsible for the husbandry, training and enrichment programs for the polar bears as well as the other marine mammals at the *Wild Arctic*. Bill has given numerous oral presentations and published articles on enrichment, training, neonatal care of marine mammals, socialization and exhibit design for polar bears.

For the last eight years he has been a member of the Advisory Council for Polar Bear International and more recently an active member of Polar Bear Sustainability Alliance. Past AZA Bear TAG Steering Committee Member and current Institutional Representative. He holds a Bachelor of Arts in Biological Science (Marine Biology) and a Master of Science in Counseling: Marriage, Family Child Counseling.

For details of projects and publications

Mail: SeaWorld Wild Arctic, 500 SeaWorld Drive San Diego, CA 92109
Telephone: 619 226-3857
Fax: 619 226-3951
Email: william.winhall@seaworld.com

PRELIMINARY RESULTS OF MILK COMPOSITION FROM FREE-RANGING POLAR BEARS (*Ursus maritimus*) IN SVALBARD NORWAY

GAIL E. HEDBERG, ANDREW DEROCHER, MAGNUS ANDERSEN, QUINTON R. ROGERS, ED DePETERS, BO LONNERDAL, LISA MAZZERO, RUSSELL W. CHESNEY and BRUCE HOLLIS

To improve the success rate for captive hand-rearing of polar bear cubs, milk formulas must be developed with the proper nutrient and energy content to meet the requirements of the growing cubs. To achieve this goal, more data on milk composition from early and mid-lactation of polar bears is needed. The purpose of this study was to obtain information on the composition of total protein, fat and carbohydrate as well as specific composition of fatty acid, amino acid and fat soluble vitamins in the milk of free-ranging polar bears.

Originally, the early data for maternal milk composition of polar bears were used to formulate hand-rearing formulas for polar bear cubs in captivity. Unfortunately these early studies did not provide a comprehensive analysis of polar bear milk composition. Improved analytical methods now available allow improved accuracy for measuring chemical constituents in milk.

As climate change becomes a concern for polar bears the need for captive rearing of polar bears may become an important conservation and management option. Successful polar bear ecology requires attention to nutritional requirements of the newborn.

BIOGRAPHICAL NOTES

Gail Hedberg, RVT has been a registered veterinary technician at the San Francisco Zoo since 1981. Her job has included but has not been limited to assisting with anesthesia, surgical nursing, radiography, clinical pathology, pharmacy inventory and various treatments throughout the zoo. Her clinical laboratory skills in microbiology and parasitology have provided the foundation for a full spectrum “in-house” lab. She is responsible for the RVT training programs, maintains many preventive health care programs, and is well versed with the daily operations of the zoo hospital and quarantine facility.

As a neonatal care specialist, Gail is a well known international consultant for hand rearing. In the summer of 2004, she was the team leader for the giant panda cub-raising program and facilities for Zoo Atlanta. She supervised, provided protocols for the giant panda neonatal care program. “When people ask what type of animals have you raised?” It is easier to list the animals that she hasn’t raised” A 2008 trip to China was a career highlight when she presented a PowerPoint discussion on infant mammal IgG protocols to the veterinary and senior staff of the Chengdu Research Base for Giant Panda .

Gail has published her work in both peer review journals and has written the chapter for hand-rearing polar bears and felids in the book titled *Hand Rearing Wild and Domestic Mammals.* She is Vice-President of the Bear Care Group. Her most recent publication in Zoo Animal Nutrition IV, *Hedberg et.al 2009* set the foundation for this polar bear milk study. Her next project is developing a hand rearing summit in late 2010.

For details of projects and publications

Mail: San Francisco Zoological Garden, One Zoo Rd., San Francisco, CA 94132
Telephone: 415-753-7078, Fax: 415- 681-2039
Email: gailh@sfzoo.org

EFFECTS OF TARGETING ENRICHMENT TO STIMULATE WILD BEHAVIOR PATTERNS IN CAPTIVE POLAR BEARS (*Ursus maritimus*): IMPLICATIONS FOR WELL-BEING

KAREN J. CAIN, SUSANNE MILLER, LESLIE CORNICK, CARL TOBIN and DAVID SCHEEL

Species-specific wild behaviors, sequenced to achieve an end goal, are frequently suppressed in captivity due to a lack of stimulation. The result is abnormal captive behaviors such as pacing and increased aggression, probable indicators of poor wellbeing. Activity budgets of wild polar bears (*Ursus maritimus*) were compared to 2 captive adult polar bears (male/female) to discover if wild behaviors were missing from the captive bears' behavioral repertoire. Digging day beds for resting was absent. The hypothesis: introduction of gravel day beds would target and stimulate the release of the wild polar behavior patterns of digging day beds in the captive polar bears, resulting in their decreased pacing. Two removable 2.44 m x 3.66 m x 0.30 m log containers were placed in the bears' enclosure, and filled with gravel similar to that used for summer beds by wild polar bears on Alaska's northern barrier islands. Twelve weeks of observational data collection was divided into 4 sessions with 2 control periods (beds absent) and 2 treatment periods (beds present) to assess 12 behaviors across 2 seasons. The importance of the results of this 2-bear study to captive polar bear management, is that targeting enrichment (gravel beds) to stimulate one behavior (digging day beds) resulted in 1) significantly decreased pacing and aggression in the male 2) significantly increased affiliative behavior in both bears 3) increased play with other enrichment objects 4) no habituation to the beds. Importantly, as pacing declined, affiliative and play behaviors, cited as indicators of improved wellbeing, increased.

BIOGRAPHICAL NOTES

KAREN J. CAIN was a docent at the Woodland Park Zoo and a volunteer at the Alaska Zoo. After attending the 2005 International Conference on Environmental Enrichment, she implemented enrichment programs at the Alaska Zoo. In her master's thesis, she successfully stimulated wild polar bear (*Ursus maritimus*) behavior patterns, absent in 2 captive polar bears, to decrease pacing and aggression and promotes wellbeing by increasing affiliative and play behaviors in the 2 captive bears.

For details of projects and publications

Mail: 8511 Solar Dr., Anchorage AK 99507
Telephone: 907-346-2620
Email: kjc@alaska.net

WILD SPECTACLED BEAR (*Tremarctos Ornatus*) BEHAVIOR IN LOW-LYING DESERT HABITAT IN NORTH-WESTERN PERU - HOW SPECTACLED BEARS USE THEIR ENVIRONMENT

ROBYN D. APPLETON, JAVIER G. VALLEJOS and KAREN V. NOYCE

The relatively open terrain of Peru's dry forest provides excellent visibility throughout the dry season, and the concentration of bear activity around small dispersed water holes provide a unique and perhaps unparalleled opportunity to observe the spectacled bear in its natural habitat. Unique facial markings and human-tolerant behavior of some bears that we discovered in this area make it possible to identify, and thus monitor, individual bears during visual observations. A twenty month study using remote cameras and direct observations enabled us to identify 32 individual bears six of which were cubs and also discover the first female spectacled bear in her den with an approximately 30 day old cub. Observation data was collected on maternal care and the unique habitat use by females and cubs when they first leave their den sites to feed on passallo trees perched on small ledges across rock cliffs up to 500 meter high. Other data collected and recorded through photographs and video footage includes building of day and night beds, solitary play behavior, feeding behavior, social interactions at shared food sites and water holes, movements across extreme rock landscapes, and survival strategies in an extreme hot and dry environment. This observation data collected on wild spectacled bears will increase our basic knowledge on their needs in the wild and will help caregivers from zoos and rehabilitation facilities meet their basic needs and improve the quality of life for spectacled bears in captivity.

BIOGRAPHICAL NOTES

Robyn Appleton: Founder and research director for the spectacled bear conservation society- Peru (SBC), a Canadian registered non-profit. Through scientific research, environmental education, and community outreach SBC was established in 2007 to ensure the conservation of the spectacled bear in the equatorial dry forest of northern Peru. Robyn holds a double honors degree in wildlife management and culture geography and a professional masters degree from Simon Fraser University's' department of Resource and Environmental Management, specializing in spatial landscape and black bear ecology. Particular questions from Robyn's current research on spectacled bear ecology and behavior will be presented in her doctoral thesis in applied conservation biology and is the first behavioral study to have been conducted on wild spectacled bears. Robyn has presented these findings around the world at international conferences such as the IBA conference in Monterrey Mexico where she won the award for best presentation. More recent presentations were at the symposium on Andean Bears, Lima, Peru and for the Society for Conservation Biology, Beijing, China

For details of projects and publications

Mail: Spectacled Bear Conservation Society- Peru, Squamish, British Columbia Canada
Telephone (Canada) 778-855-2670 (Peru) 51-74-699870
Email: robyn@specdtacledbearconservationsociety.com
www.spectacledbearconservationsociety.com

ANDEAN BEAR (*Tremarctos ornatus*) OUTREACH - LATIN AMERICA: KEEPER CONSERVATION EFFORTS THROUGH BEHAVIORAL ENRICHMENT

DAVID MORALES

The Andean Bear *(Tremarctos ornatus)* Out-Reach Program in Latin America is a conservation based keeper program concentrating on behavioral enrichment and husbandry training. Since 2004 the program has enhanced captive management practices in Venezuela, Colombia, Argentina, Ecuador, Peru, and Panama. David Morales has worked in and or advised for nearly 20 zoos housing Andean bears in Latin America. A multi-media presentation will describe this project in Latin American zoos, emphasizing zookeeper professionalism through enrichment and training. A wide range of zoos in Latin America have demonstrated successful advancements in implementing captive studies using enrichment and training, as well as exhibit and holding den design., Detailed enrichment results include a natural history approach with four enrichment methods applied in every zoo housing Andean bears. Olfactory, nesting, food based, and exhibit enhancements are four methods that have produced instant behavioral results, and set a foundation for successful enrichment programs. Husbandry training results in Latin America have produced basic and some advanced behaviors such as tactile, weight, and medical behaviors for injections, and treatments. The program is supported by the Latin American Association of Zoos and Aquariums (ALPZA) which has fostered the expansion throughout Latin America. A working program agenda is to increase keeper conservation efforts for Andean bears through enrichment and training in Latin America.

BIOGRAPHICAL NOTES

For the last 20 years, David Morales has been a WCS employee and for the last 15 years a keeper for Queens Zoo. He has specialized in enrichment and training programs for Andean bears and cougars. Enrichment projects include two WCS *in situ / ex situ* collaborations with Andean bears and cougars. A keeper out-reach program was developed from these collaborations in 2004, and has expanded to six countries throughout Latin America, and a few national facilities. In November of 2008 he received a scholarship to attend the 2nd International Symposium on the Andean Bear as one of four selected workshop panelist. The workshop was entitled “Exhibit design, enrichment, husbandry, and health care of ex situ populations”. To date the out-reach program has been displayed for nearly 300 participants from 50 zoological facilities between Latin America, Europe, and the US.

For details of projects and publications

Mail: WCS Queens Zoo, 53-51 111th Street, Flushing, NY, 11368
Telephone: 718-271-1500
E-mail:dmorales@wcs.org, dmoso@msn.com

URSIDAE CONTRACEPTION

BRIGETTE MERCIER and SALLY BOUTELLE

Reproduction and contraception are ongoing topics of discussion for wildlife, aquarium and zoological communities. Contraception is one strategy to help ensure responsible breeding programs. This maintains genetic diversity, prevents inbreeding and controls wildlife populations. When choosing the appropriate contraceptive method, many factors are taken into consideration. Some of these include reproductive physiology of the animal, age, gender, reproductive status, and any medical complications. Each product is decided upon by looking at the reversibility of the method, product safety, efficacy, duration, and the delivery system. New options have emerged that provide reliable contraceptive methods. The AZA Wildlife Contraceptive Center (www.stlzoo.org/contraception) maintains a current database of the contraceptive methods used in captive animal species by collecting yearly survey reports on contraception. Permanent sterilization, Gonadotropin Releasing Hormone (GnRH) Agonists (such as deslorelin implants), progestin contraceptives (e.g. melengestrol acetate implants and Depo-Provera®) and Porcine Zona Pellucida (PZP) vaccines have been used in ursidae. A general description of these methods, with recommendations, cautions and current findings in bears, will be discussed in this presentation.

.

BIOGRAPHICAL NOTES

Brigitte obtained her degree in Veterinary Medicine at the Université de Montréal with a concentration in zoological and wildlife medicine. She practiced as a staff veterinarian at the Québec Zoo & Aquarium (Canada) and at the Granby Zoo (Canada), then as head veterinarian at the Cheyenne Mountain Zoo in Colorado. Besides bears and reproduction, her other main areas of interest include nutrition (she was supportive executive for the Nutrition Advisory and Research Group of the Canadian Association of Zoos and Aquariums for the last three years), physiotherapy (she was a physical therapist prior to becoming a veterinarian), anesthesia & analgesia (she co-wrote articles on these topics), animal welfare and emergency preparedness & rescue.

For details of projects and publications

Mail: 995 Trudeau, Saint-Laurent, Qc, H4N 2B8, Canada
Email brimercier@hotmail.com

A SOCIAL NETWORKING WEBSITE FOR BEAR REHABILITATORS

IRIS MAZUREK, NEIL D'CRUZE and VICTOR WATKINS

Due to the nature of the bear cub rehabilitation and release, centers are often located in relatively remote areas. The intensity of the work, restricted staffing, long hours, and international locations complicate the process for easy and constant information exchange between these experts. www.Bearcubrelease.org is a virtual, fun and easy-to-use communication platform which enables bear rehabbers to interact with each other and keep updated on the latest developments in the field. This website allows rehabbers to form a virtual community and facilitate sharing knowledge, opinions and expertise on a regular basis. This application enables each user (rehabber) to upload pictures and material, as well as post events, updates and further information about their work. The goal is to be as intuitive as possible. Users can send and receive e-mails as well as participate in multi-user discussions through a discussion board with counters parts around the world. Joining this virtual community is free. The World Society for the Protection of Animals (WSPA) hopes this social networking application will become a central hub for networking, sharing and increase expertise between bear cub rehab-releasers.

BIOGRAPHICAL NOTES

The World Society for the Protection of Animals is an international animal welfare charity with a head office in London (UK) and 13 offices around the world. Improving animal welfare internationally through building a united animal welfare movement has proven to be successful. The WSPA has a long standing history of working on bear issues in many countries. After specializing in captive bear ethology at the Sorbonne (Paris, France), Iris went on to do an MSc in Science Communication (Imperial College London, UK) where she developed the skills to use communication tools to promote scientific knowledge. Iris has worked the fields of environment and animal charity, museum exhibition and TV documentary film production. Since joining the WSPA, she has worked on a variety of issues affecting the welfare of bears in Europe, Asia, North and South America. As a Wildlife Programmes Manager, she is in charge of designing and overseeing programmes on bear cub rehabilitation and release, and it's implications on human wildlife conflict.

For details of projects and publications

Mail: World Society for the Protection of Animals (WSPA- International), London, UK
Telephone +445875012
Cell: +447810366172
Email: irismazurek@wspa-international.org

SPRAY FOAM CLEANING PROCEDURE FOR ANIMAL CARE AREAS

STEVE DELMONICO

Historically, captive animal care facilities have adopted or inherited animal exhibit cleaning guidelines without serious evaluation. Products are often used full strength even though the manufacturers label states it should be diluted. One example is using full strength Bleach instead of one ounce (30ml) per gallon (3.78L)

Animal caretakers spend countless hours trying to deep clean surfaces with little or no satisfaction. This is because of penetrating oils, urine and feces i.e. organic material absorbing into porous surfaces. Other staff may be using inappropriate cleaning products or unaware of the potential risks to themselves and to the animals in their care.

The San Francisco Zoos animal care division has undergone a training program as well as product evaluation to improve the efficiency and staff time devoted to daily cleaning of animal exhibit areas. Keepers were asked to fill out a questionnaire to better understand the current procedures and to assist in developing new training procedures. This audit was extremely beneficial as it provided the necessary detailed descriptions and information needed for retraining the experienced keeper as well as standardizing the work practices for the new hires.

The food service industry has developed effective degreasing cleaners that are very effective on cage surfaces and floors. These food grade products are safe around animals. The San Francisco Zoo is using a method that actually creates foam that is applied to surfaces and allowed to soak for 30 min. Keepers are very pleased with the results and comment that little elbow grease is needed for satisfactory results. Once surfaces are clean, disinfectants can be applied and allowed to soak for 10 minutes. This new technique is time saving as well as cost effective for the zoo.

The zoos commissary department maintains an adequate inventory of cleaning products and disinfectants approved by the veterinary department.

This presentation will outline the important elements of this training program.

Products: Foam Up Degreaser, Action-D Disinfectants, Hydro Foam Unit

BIOGRAPHICAL NOTES

Steve Delmonico has been a facility supplies consultant for 19 years. His primary interest is in health care and as an education specialist focuses on infection control. He has been working with the San Francisco Zoo for the last 17 years

For details of projects and publications

Mail: Unisource Facility Supplies, 4225 Hacienda Dr., Pleasanton Ca. 94588
Telephone: 650-207-6541
Email: steve.delmonico@unisourcelink.com

Sunday November 8 2009

8:00 - 9:00 AM Plaza I	Continental Breakfast
9:00 - 11:20 AM Plaza I	Asia Bear Workshop Moderator: Jill Robinson
	Lessons Learned - Managing the Husbandry of Abused Asian Bears at Sanctuaries in China and Vietnam Jill Robinson
	Korean Bear Bile Farming Gina Moon and John Walker
	Integrating Asiatic Black Bears (*Ursus thibetanus*) Into Social Groups at Animals Asia Bear Sanctuaries Nicola Field
	Veterinary Management of Bile Farmed Bears Heather Bacon
	What to Expect when Expecting: How the National Zoo Ensured the Successful Birth of a Sloth Bear (*Melursus ursinus*) Tracey Barnes and Mindy Babitz
	From Weaning To Moving Out: Helping a Sloth Bear Cub (*Melursus ursinus)* Poor Coping Skills Mindy Babitz
11:20 - 11:40 AM	Coffee and Stretch
11:40 - 12:40 Plaza I	Hey Quit Poking Me - Bear Blood Draw Training Jason Pratte
1:00 - 2:00 PM Plaza I	Farewell Lunch

Sunday November 8 2009 - continued

2:00 - 5:00 PM
Plaza I

American Black Bear and Brown Bear Workshop
Moderator: John Beecham

Best Management Practices for Rehabilitation and Release of Orphaned Bear Cubs
John Beecham, Annad Ramanathan, Sergey Pazhetnov, and Victor Watkins

British Columbia's Pilot Grizzly Bear Rehabilitation Project
Angelika Langden and Ruth Fitzell

A Post-Release Study of Rehabilitated Grizzly Bears (Ursus arctos horribilis) in Lillooet, British Columbia
Ryan Barnett

Handling and Human Exposure as Factors in the Rehabilitation of Orphaned and Injured Black Bear Cubs (*Ursus americanus*)
Meghann Cant, David Fraser, and John Beecham

3:20 - 3:40 PM

Coffee and Stretch

Behavior Based Husbandry for Winter Denning: A Practical Application at Fortress of the Bear, Sitka, Alaska
Christine Fenwick

When Bears Whisper, Do you Listen? Roles of Mutual Trust and Respect During Close Encounters with Wild Bruins
Stephen Stringham

Black Bear Rehabilitation, Release and Research - Success in New Jersey, the Most Densely Populated State in the USA
Tracy Leaver

Introducing the North American Bear Center
Donna Andrews

6:00 - 7:00 PM

Bear Care Group Board Meeting

LESSONS LEARNED - MANAGING THE HUSBANDRY OF ABUSED ASIAN BEARS AT SANCTUARIES IN CHINA AND VIETNAM

JILL ROBINSON

The Animals Asia Foundation (AAF) is a non-governmental organisation, founded by Jill Robinson MBE, whose primary mission is to end the practice of farming bears for bile extraction in China and Vietnam (www.animalsasia.org).

A wild, intelligent, destructive and remarkably mischievous species, the Asiatic black bear is probably one of the most challenging species to manage in captive situations in the world. The problem is compounded a thousand fold when the species is tortured both physically and mentally on bear farms across Asia before arriving at a place of freedom and safety, where their rescuers promise to care for them - for life. Managing a variety of ages, characters and problems (and that's just the staff) - this presentation discusses what has worked, where could we improve and how, for the most part, the bears themselves have been the best teachers.

BIOGRAPHICAL NOTES

Born in the UK, Jill Robinson arrived in Hong Kong in 1985 and spent the next 12 years working in Asia as a Consultant for the International Fund for Animal Welfare. Repeatedly faced with scenes of widespread animal cruelty, Jill decided to introduce the concept of 'animal welfare through people welfare' and founded "Dog" in Hong Kong in 1991 - the first animal therapy program of its kind in Asia. Today, over 300 dogs and their dedicated volunteers make regular visits to hospitals, disabled centers, schools and elderly homes in 6 countries across Asia, spreading warmth and love to people in need, whilst promoting companion animals as our friends and helpers. In 1993 a chance visit to a bear farm in southern China changed Jill life. Exposing the plight of endangered Asiatic Black Bears cruelly farmed, and milked, for their bile, and learning how easily bear bile could be replaced by herbs and synthetics, Jill embarked on a promise to end the practice once and for all. In 1998 she founded the Animals Asia Foundation and in July 2000 she and the Animals Asia team signed an historic agreement with the Chinese authorities which would rescue 500 farmed bears and work towards the final elimination of bear farming.

Today, the "China Bear Rescue" has seen the rescue of over 200 bears in China and the start of a new rescue centre for 200 farmed bears in Vietnam. Animals Asia's Bear Sanctuary programs are spearheading far-reaching community, education and welfare programs which benefit animals and people alike. Jill is a former member of the Hong Kong government "Animal Welfare Advisory Group" and Honorary Advisor to the Ocean Park Conservation Foundation, Hong Kong

For details of projects and publications

Mail: P.O. Box 374, General Post Office, Hong Kong
Telephone: 852-2791-2225
Fax: 852-2791-2320
Email: jrobinson@animalsasia.org

MOON BEARS IN SOUTH KOREA - TIME FOR CHANGE

GINA MOON and JOHN WALKER

In Korea, there are only 16 moon bears in the wild with an estimated 1600 in captivity. This is ironic as according to legend the mother of the first Korean was a bear. Moonbears.org was established in 2007 to save farmed bears in Korea and to raise the awareness of Koreans about the negative impacts of consuming bear bile and on the welfare of this rare specie. This organization has worked closely with local organizations such as Green Korea and internationally with Animals Asia Foundation. Moonbears.org continues to raise awareness with the Korean government to ban the farming policy and to set up bear sanctuaries, establish education, and surveillance programs with commercial airlines, international airport customs, and zoos to improve the quality of life and to stop illegal trade of bear products between China, Vietnam and Korea. Moonbears.org believes that resolution of this issue requires strong government action and fund raising to help to develop sanctuaries, and education programs, which are respectful and sensitive to Korean culture.

BIOGRAPHICAL NOTES

Gina Moon Walker is the Founder of www.Moonbears.org. She is the author of the articles on the moonbears.org Website homepage. She has co-authored several articles, and has helped produce several documentaries on bear bile farming. She also leads all of the meetings with the Korean affiliates, and is one of the few activists to have visited both the Chengdu sanctuary and Korean bear farms. In addition, she collaborated in the publication of a children's book titled "Ura's World", which was published this in May 2009 to help raise public awareness amongst young people about moon bears. Before becoming an active conservationist, she worked for 22 years in the airline industry. She currently resides in Hong Kong, Seoul and Sydney, but the bulk of her work is done in Korea, her native country.

John Walker (Co-Founder) is Australian, but has lived and worked in Korea for the last 10 years. He is a senior investment banker with previous experience in Australia's governmental affairs. His company is the largest foreign investment bank in Korea. In 1999, he was made a Member of the Order of Australia for his contribution to economic reform, and for the design of the transportation plan for the Sydney 2000 Olympic bid. In 2005, he received a Presidential Citation from the President of Korea for being a model foreign investor. In 2009, John published a children's book, which has become very popular in Korea, and has now been released in Hong Kong; who's central character is a moon bear cub named Ura.

For details of projects and publications

Mail: PO Box 167 SaiKung Kowloon, Hong Kong
Telephone: 852- 903 706 12
Email: g.moon@moonbears.org
www.moonbears.org

INTEGRATING ASIATIC BLACK BEARS (*Ursus thibetanus*) INTO SOCIAL GROUPS AT ANIMALS ASIA BEAR SANCTUARIES

NICOLA FIELD

At Animals Asia Foundation's bear sanctuaries in China and Vietnam, our goal is to provide our rescued bears with a safe, comfortable and stimulating environment. Our facility allows these bears to extend their lives, free of the fear and pain associated with their previous lives on bile farms.

Among the groups of bears we manage, a large number are physically challenged - blind, or missing limbs, claws and teeth. We have successfully integrated all the bears into groups. In managing Asiatic black bears *(Ursus thibetanus)*, we consider a complexity of issues to meet the behavioral and veterinary needs. Having rescued over 280 bears, we now manage this naturally occurring solitary species, in large social groups sometimes up to 21 individuals.

This has been achieved through a carefully planned integration process and with much patience. We consider many factors including a bears' characters, sex, ages, enclosure sizes, feeding and veterinary requirements along with group dynamics and disabilities.

Since the opening of the China sanctuary in 2000, integrating bears into groups is part of the bears' rehabilitation and husbandry. For the last decade, our team has learned about integrating, not only bears, but bears with special needs. We believe that by managing our bears in social groups, we are enhancing the quality of their lives at our sanctuaries, and a similar approach in managing bears could be adapted for use with other species of bear in captivity. This presentation will talk about the methods adopted by Animals Asia in integrating bears, lessons learned and the planning process when integrating bears.

BIOGRAPHICAL NOTES

Nicola Field is the Senior Bear Manager at Animals Asia Foundation's Moon Bear Rescue Centre, China, where she been working for three years. She has an MSc in Wildlife Biology & Conservation. Nicola worked for nearly 10 years as a keeper in the UK, taking care of a variety of species, including North American black bears. She spent two years in education in the UK working as an animal-care assessor. She has also spent time working in Uganda and Vietnam as a researcher on conservation projects. Nicola has overseen a number of bear integrations since working at Animals Asia's China sanctuary.

For details of projects and publications

Mail: Animals Asia Foundation, Hong Kong Head Office GPO 374, Hong Kong
Telephone: 852-2791 2225
Fax: 852-2791 2329
Email: nfield@animalsasia.org

VETERINARY MANAGEMENT OF BILE FARMED BEARS

HEATHER BACON

Across China, over 7000 bears languish in body-sized cages. Bile is extracted from their gall bladders through crude fistulas or via unsanitary catheters for sale as a component of traditional medicine, or as an additive in other ancillary products such as soap, toothpaste and wine. Extensive medical and husbandry strategies will be summarized outlining the challenges for caring for geriatric as well as physically and emotionally compromised bears after rescue from bile farms. This paper will discuss the multiple pathologies recorded in this bear population, both in live bears and through post mortem examination. Multiple pathologies not previously recorded in the literature in other bear populations have been noted within this population (neoplasias, ocular pathology, and dilated cardiomyopathy). Additionally, comparatively high levels of hepatobiliary neoplasia are recorded within this population, with significant degenerative joint disease and dental disease. The occurrence of these medical issues are more commonly recorded in this population than in other captive bear populations, likely as a direct consequence of their use in bile production. The veterinary expertise developed in this population of severely disabled bears may also be applied to the management of captive bears in other collections.

BIOGRAPHICAL NOTES

Heather graduated from Liverpool University, UK with a degree in Conservation Medicine before graduating from the University of Bristol, UK with her Veterinary degree. After working with domestic, zoo and wildlife species in the UK and Africa, Heather joined Animals Asia to directly contribute to the health and welfare of the bears rescued from bile farms.

As Veterinary Director, Heather oversees veterinary and animal care staff in China and Vietnam. She is developing research projects highlighting the problems caused by bear farming and the human health implications of bear bile consumption.

For details of projects and publications

Mail: Veterinary Director, Animals Asia Foundation
Sichuan-Longqiao Black bear rescue centre, Longqiao, Xin Du District, Chengdu, 610505, China.
Email: hbacon@animalsasia.org

WHAT TO EXPECT WHEN EXPECTING: HOW THE NATIONAL ZOO ENSURED THE SUCCESSFUL BIRTH OF A SLOTH BEAR (*Melursus ursinus*)

TRACEY BARNES and MINDY BABITZ

In late December 2004, a sloth bear *(Melursus ursinus)* at the Smithsonian National Zoological Park (NZP) surprised animal-care staff by giving birth to a singleton cub. Over the years the ten-year-old mother had bred with no success and was presumed infertile. The four day old cub did not survive and the post-mortem findings were inconclusive. Knowing that the female was reproductively active, animal caretakers were proactive in outlining a detailed birth plan to increase the chances of a successful parturition. Zoo husbandry guidelines for pregnancy, parturition and the neonatal period were non existent for this species. The best resources turned out to be the two zoos where each sloth bear had been born the previous season. Animal-care staff at the Little Rock and Woodland Park zoos graciously entertained questions about their experiences and, with the information they collected, NZP staff successfully "MacGyvered" a 30-year-old holding area into an acceptable cubbing den. This effort paid off when, in January 2006, a male cub was born, survived, and has been paired with a mate. Through the two births, NZP keepers learned much about preparing for cubs as well as what to expect from an infant bear. It is the hope that by sharing this information, other zoos will benefit with an increased knowledge base to help ensure the success of their breeding programs.

BIOGRAPHICAL NOTES

Mindy Babitz is a senior animal keeper at the Smithsonian's National Zoological Park where she has worked since 1998. She has worked with primates, big cats, bears, hoofstock, and a variety of small carnivores. Since the opening of Asia Trial, Mindy has been primarily responsible for a variety of Asian carnivores including the sloth bears. She is currently the National Zoo's institutional representative to the Sloth Bear SSP. Mindy has a background in animal cognition, completing a BA from the University of Virginia and PhD from the University of St. Andrews in Psychology.

For details of projects and publications

Mail: Smithsonian's National Zoological Park, Washington, DC
Telephone: 202-633-4381, Fax: 202-633-8727
Email: babitzm@si.edu

WEANING TO MOVING OUT - HELPING A SLOTH BEAR CUB (*Melursus ursinus*) WITH POOR COPING SKILLS

MINDY BABITZ

Weaning is often one of the most stressful times in a captive born cub's life. Keepers at National Zoo spent a year working closely with a singleton sloth bear that developed a stereotypy during his transition into adulthood. The cub was housed with his first-time mom and had no other social companions. Two other adult bears were housed in adjacent enclosures. Instances of dramatic behavior including anorexia, depression, lethargy and temper tantrums were seen in the year leading up to and after the final weaning and separation from his mom. Several factors may have contributed to this bear's poor adjustment to the separation: genetic predisposition, being a singleton, sudden and aggressive rejection from the female after she was implanted with the GnRH agonist deslorelin, and physical separation from her before the cub was mentally ready.

In an effort to keep the female and 2.5 year old cub together through breeding season the female was implanted with deslorelin, considered one of the safest contraceptives for use in carnivores with no known contraindications for lactating females. Deslorelin suppresses the reproductive system after an initial stimulation of it. To prevent early ovulation which can sometimes occur, the female was given the recommended supplemental progestin treatment (Megestrol acetate). Six days after implantation the female began exhibiting extreme aggression towards the cub; a decision was made to separate them before he was severely injured. We attribute this sudden aggression towards and rejection of the cub to an early ovulation stimulated by the implant. Attempts to reunite them over the following weeks were unsuccessful. Within weeks the cub developed a severe stereotypy and an intensive program of enrichment, training, and social companionship was implemented in an effort to stop it. Eventually the cub became more comfortable spending longer periods of time alone, and developed the needed skills for his breeding loan to another zoo the following year.

BIOGRAPHICAL NOTES

Mindy Babitz is a senior animal keeper at the Smithsonian's National Zoological Park. She has experience with primates, big cats, bears, hoof stock, and a variety of small carnivores. Since the opening of Asia Trial, her primary responsibility is caring for a variety of Asian carnivores including the sloth bears. She is currently the National Zoo's institutional representative to the Sloth Bear SSP.

For details of projects and publications

Mail: Smithsonian's National Zoological Park, Washington, DC
Telephone: 202-633-4381, Fax: 202-633-8727
Email: babitzm@si.edu

"HEY QUIT POKING ME!" OR BEAR BLOOD DRAW TRAINING

JASON PRATTE

Presenter will discuss the benefits of training bears for voluntary blood draws. The positive impact of this behavior on research, rehabilitation and ongoing husbandry/collection management will be described. Bear morphology differs greatly between various species, and presents a challenge in how to train for blood collection. The variability in species and possible approaches to training bears this behavior will be outlined. The session will discuss practical step-by-step approaches to training this behavior, including: accompanying/leading behaviors, reward schedules, trainer/animal safety and exhibit/environmental modification.

A focus study will be presented on successful giant panda blood draw training. Use of a blood sleeve and its construction/implementation will be discussed, along with the steps taken and subsequent results. The sleeve method and its generalized use in other species of comparable physiology will be discussed, and contrasted with methods to train and elicit the same behavior in bear species that do not possess similar limb dexterity. Q & A addressed throughout presentation, and resources/contact information provided to delegates seeking future assistance or information.

BIOGRAPHICAL NOTES

JASON (JAY) PRATTE is currently working as Lead Keeper for the Program Animals Department at Zoo Atlanta. He has worked as a keeper and animal/bear caregiver for over seventeen years, and this experience covers zoos, game farms, and animal training in the film industry. He moved to Atlanta and spent four years working specifically with giant pandas in research, husbandry and training. This rounded out the bear species he has worked with, and he now has experience with all eight extant bear species in captive management facilities. Jay collaborated with the Chengdu Research Base of Giant Panda Breeding in China to teach training to both pandas and caregivers. He has also been active for several years on a national basis as a member of the AAZK, Inc. Behavioral Husbandry Committee (previously the Animal Training Committee), and is currently on the Board of Directors for the Bear Care Group. He has published several papers on captive animal husbandry/management, and is column co-editor of "Training Tales" in the monthly AAZK, Inc. Forum journal. Jay co-authored "Spatial Memory Recall in the Giant Panda (*Ailuropoda melanoleuca*) with Bonnie Perdue *et al*, recently published in Vol. 123 of the Journal of Comparative Psychology, 2009.Currently working on his Masters degree in Zoo and Aquarium Leadership, he is always open to discussions regarding bear (and animals in general) care, husbandry and especially training.

For details of projects and publications

Mail: Zoo Atlanta, Program Animals, 800 Cherokee Ave SW, Atlanta, GA 30315
Telephone: 404-788-4788
Email: jpratte@zooatlanta.org

BEST MANAGEMENT PRACTICES FOR REHABILIATION AND RELEASE OF ORPHANED BEAR CUBS

JOHN BEECHAM, ANAND RAMANATHAN, SERGEY PAZHETNOV and VICTOR WATKINS

For more than three decades, biologists and rehabilitators in the United States and Canada have been involved in releasing orphaned American black bear cubs into occupied bear habitat. Techniques used ranged from fostering very young cubs to lactating female bears in their winter dens to pen-raising the cubs and releasing them when they were considered self-reliant and capable of surviving on their own. Considerable experience and expertise in bear rehabilitation now exists in many other countries. In May 2007, experienced wildlife rehabilitators and management authorities met to discuss rehabilitation methods, release, and monitoring strategies for returning orphaned bear cubs to the wild. The primary goal was discuss guidelines for best management practices for bear rehabilitation and release programs. The workshop consisted of four technical sessions related to rehabilitation issues and a fifth session on bear welfare, conservation, and education. An attempt was made to identify the “Best Practices” for bear rehabilitation efforts. This proved to be a difficult task because of differences among geographical regions and species. Generally, the participants agreed that the rehabilitation process should be outcome oriented, regardless of differences in approaches to rehabilitation. However, during each session a variety of generalizations were agreed upon regarding the rehabilitation process. These consensus items were listed as “Best Practices”, with qualifications in many cases. “Best Practices” were identified during the technical sessions for the following categories: 1) Criteria for Accepting Cubs into Rehabilitation; 2) Critical Components of the Care and Rehabilitation of Orphaned Bear Cubs; 3) Criteria for Making Decisions about the Suitability of Bears for Release; and 4) Release and Post-Release Monitoring of Bears.

BIOGRAPHICAL NOTES

John has been involved in bear research and management since 1972. He completed his Ph.D. (Population characteristics, denning, and growth patterns of black bears in Idaho) at the University of Montana in 1980. He is a past president of the International Association for Bear Research and Management (IBA) and has also served that organization has a Council member, associate editor, newsletter editor and currently chairs the IUCN-Bear Specialist Group’s Human-Bear Conflict Expert Team. John has published numerous scientific papers on bear ecology and bear rehabilitation methods, and co-authored, with Jeff Rohlman, a book entitled *A Shadow in the Forest - Idaho's Black Bear* that was published in 1994. John has been involved in rehabilitation and release of over 150 orphaned black bears in Idaho and recently completed a publication entitled *Orphan Bear Cubs - Rehabilitation and Release Guidelines.* He continues to work as a consultant on efforts to release orphan bears back to the wild in the U.S., Canada, Russia and Romania. John recently co-chaired an international workshop in Russia on rehabilitation and release methods for orphan bear cubs, and is currently involved in raising and releasing orphaned bears cubs in Idaho and Romania.

For details of projects and publications

Mail: 2723 N Lakeharbor Ln, Boise Idaho 83703 USA
Email: john.beecham@gmail.com

BRITISH COLUMBIA'S PILOT GRIZZLY BEAR REHABILITATION PROJECT

ANGELIKA LANGDEN and RUTH FITZELL

Healthy grizzly bear cubs are orphaned for several reasons including poaching, human-bear conflicts, vehicle collisions and human encroachment on habitat. Traditionally the Government of British Columbia has euthanized these animals or placed them in zoos. In 2007 the Government sanctioned a pilot rehabilitation project which allows these orphaned animals to be raised in a shelter in the northern part of the province. The pilot grizzly bear rehabilitation project brings orphaned bears into human care until they can be released back to the wild. One of the goals of this project was to document the requirements needed to successfully raise grizzly bears in a short-term captive setting so that they can be released. This talk will discuss the methods used to care for the four grizzly bears since the first animal arrived in June 2007 including capture methods, housing, nutrition, veterinary care and social interaction. The first two years emphasized important animal care standards that should be implemented for grizzlies. Pairing the bears decreased the tendency to focus on their human caretakers (including the pairing of grizzlies and blacks if necessary). Limiting the number of caretakers to one or two as well as providing a secluded enclosure helped with reducing stress. Diarrhea was a serious medical concern in these grizzly bear cubs and required aggressive monitoring.

BIOGRAPHICAL NOTES

.

Sharing their experiences with the animals is a vital part of Angelika's and Peter's life and each year brings more invitations to speak about their experiences in the field. With a permit that provides a mandate for not only rehabilitation of animals but also public education and research into animal behavior, Angelika and Peter conduct study projects in conjunction with the Northern University of British Columbia.

In 2007, Angelika traveled to Russia in order to share their experiences with bear cubs at the *International Bear Rehabilitation and Release Workshop* hosted at the IFAW Bear Rehabilitation Centre in Tver Region. In the same year both her and Peter attended the *43rd Annual North American Moose Conference* at the University of Northern BC in Prince George as a guest speaker. This resulted them to be mentors of the first ever official moose rehab project in Idaho in 2007, which gave 2 moose calves a second chance at life.

In 2007 NLWS also laid the foundation for the first ever official Grizzly rehab project, which successfully released 2 cubs in the spring of 2008 and 2009. The rearing and post release monitoring of these cubs has given them insights to some interesting facts about young grizzly bears.

For details of projects and publications

Mail: 17366 Telkwa High Rd, Smithers BC, V0J 2N7 Canada
Telephone: 250-847-5101
Email: info@wildlifeshelter.com

A POST - RELEASE STUDY OF REHABILITATED GRIZZLY BEARS (*Ursus arctos horribilis*) IN LILLOOET, BRITISH COLUMBIA

RYAN BARNETT

This study was primarily concerned with evaluating whether two rehabilitated grizzly bears could adapt back to the wild. The behavior, diet, and movement of the rehabilitated grizzly bears *(Ursus arctos horribilis)* were studied while in captivity and once released in Lillooet, British Columbia. Stereotypic behaviors were observed to be mild in both bears while in captivity. The bears were habituated to their handlers but showed a marked avoidance to unknown human individuals. Upon being released, the bears were found to demonstrate a level of learning and adaptation to their new environment. The bears were also found to successfully forage on wild foods they had never been exposed to before and to shift their diets with the phenologic progression of the available fruits. The main foods consumed were Saskatoon (*Amelanchier alnifolia*) berries, sedges/grasses (*Cyperaceae /Poaceae*), and ants of the genus, *Formica*. In addition to dietary flexibility, we noted a level of learning associated with choosing the bed sites. The number of beds per bed sites decreased from an average of two per site to one within a single week. The locations of the bed sites changed from exposed open hillsides to sites that most often maximized shade and concealment. The movement of that rehabilitated bear showed a tremendous dispersal of 109.6 km from the release site within two weeks. This dispersal was unprecedented and unique as the bear travelled such long distances for a yearly grizzly bear. We compared the ethogram, diet patterns, diet selection, and bed site location with two rehabilitated bears from the previous year (2008) and also with known preferences of grizzly bears in the wild.

BIOGRAPHICAL NOTES

Ryan M. Barnett is an ecologist, conservationist and explorer. He became fascinated by bears while working in Yellowstone National Park as a wrangler. His passion for wildlife rehabilitation and conservation was fully awakened after serving a year as an anti-poacher in Sumatra, Indonesia. He studied ecology and environmental sustainability at the MSc level while attending the University of Aberdeen in northern Scotland. His thesis was written on post-release grizzly bears in British Columbia, Canada. He was awarded his Masters of Science degree with commendation in 2009 and is now actively pursuing his next step.

For details of projects and publications

Mail: University of Aberdeen, King's College Aberdeen AB24 3FX,
Telephone+1 (231) 929-8103
Email: Ryan.Barnett.07@aberdeen.ac.uk

HANDLING AND HUMAN EXPOSURE AS FACTORS IN THE REHABILITATION OF ORPHANED AND INJURED BLACK BEAR CUBS (*Ursus americanus*)

MEGHANN CANT, DAVID FRASER and JOHN BEECHAM

Historically, government wildlife agencies are cautious in allowing rehabilitation of orphaned and injured black bear cubs (*Ursus americanus*). There is concern that exposure to humans during the rehabilitation process may increase the likelihood of bears becoming nuisances once released. Previous research suggests that their genetic predisposition to emigrate and lead relatively solitary lives may limit the effects of habituation to humans. Clearly, there is a need to identify successful methods of rehabilitation to determine whether this is a viable option for black bears in North America. A survey was sent out to North American rehabilitation centers (8 in Canada and 17 in the United States) to obtain detailed information on how cubs are raised and released. Preliminary results of the multi-institution, multi-year study suggest that black bear rehabilitators are well aware of the risks associated with handling and human exposure. Most rehabilitators take great care to minimize contact. In the future, government wildlife agencies may be more open to supporting black bear rehabilitation and release.

BIOGRAPHICAL NOTES

Meghann Cant graduated with a B.S. degree in Agroecology from the University of British Columbia. Soon after, she began working as an animal care supervisor at Critter Care Wildlife Society (481 216th Street, Langley, BC, V2Z 1R6, Canada). This inspired Meghann to pursue a Masters degree in the Animal Welfare Program. She is being supervised by Dr. David Fraser, a renowned animal welfare expert, along with bear biologist Dr. John Beecham. Meghann believes the research will provide vital information for wildlife rehabilitators and government.

For details of projects and publications

Mail: Animal Welfare Program, Univ. of British Columbia, 2357 Main Mall, Vancouver, British Columbia, V6T 1Z4, Canada
Telephone: 604-822-5715
Email: mbcant@yahoo.com

BEHAVIOR-BASED HUSBANDRY FOR WINTER DENNING - A PRACTICAL APPLICATION AT FORTRESS OF THE BEAR, SITKA, ALASKA

CHRISTINE FENWICK

Behaviors were closely monitored for two, two-year old, male brown bear *(Ursus arctos)* cubs at Fortress of the Bear in Sitka, Alaska during the fall 2008, winter 2008, and spring 2009. Denning behaviors became evident in early November with changes in food consumption, and activity periods. Food consumption decreased from 14,000 kilocalories per day per bear in September to 4,100 kilocalories per day per bear in November. Killisnoo and Chaik weighed 200 and 225 kilograms respectively in September. Daylight hours and daily temperatures decreased in November; however the fall was atypically warm by 2 to 7 degrees Celsius. Diet consumption reached a low of 1,696 kilocalories per day per bear in late December. Each bear exhibited its own unique behavioral response to the changes in the captive environment. Keeper routines changed in response to changes in bear behavior. Visitor attendance decreased, and other disturbances were also reduced. In the deepest part of winter, the bears were still eating, defecating, and urinating. The cubs had decreased activity for parts of the day, and were spending 18 to 20 hours in the den. Food consumption and activity levels returned to normal with the increase in daylight hours and temperatures of March and April. Most influential on their behavior, was the dynamic relationship between the two cubs. Although allowed to feed to satiation during the hyperphagia stage of late summer, they may not have had enough fat on them for winter denning. As cubs, their bodies continued to grow through the winter as they lost fat and gained length and height, emerging from the den 1.5cm taller than when they entered. There were also uncontrollable outside disturbances, and there may have been other factors affecting their denning behavior. The bears were fed according to their consumptive needs, given denning space and denning materials, and keeper interactions with the bears were changed in response to the changes in the bears' behaviors

BIOGRAPHICAL NOTES

Christine is the Bear Manager at a newly opened brown bear rescue and education center called Fortress of the Bear, Sitka, Alaska. She has a BS degree in Zoology from Washington State University, and a professional certificate in Zoo Keeping from Cat Tales Zoological Center. Christine has been working with large carnivores for the past 7 years, and has a passion for bears. Christine grew up in Seattle Washington, and her career as a keeper has allowed her the opportunity to live in Idaho, Oregon, and now Alaska. She has worked at a variety of facilities including Wildlife Safari, an AZA zoo in Oregon and prior to transferring to Alaska. She has done field work in Ecuador radio tracking Andean bears through the cloud forest, and strives to work with all bear species as her career continues. Christine worked with Else Poulsen in the past, coordinating brown bear introductions at Wildlife Safari, and presented that work at the 2007 BIERSZ Symposium

For details of projects and publications

Mail: Fortress of the Bear, PO Box 2337 Sitka, AK 99835
Telephone: 541-965-2180
Fax: 907-747-3032
Email: christine@fortressofthebear.org

WHEN BEARS WHISPER, DO YOU LISTEN? ROLES OF MUTUAL TRUST AND RESPECT DURING CLOSE ENCOUNTERS WITH WILD BRUINS

STEPHEN STRINGHAM

For animal caretakers and researchers there are obvious advantages to having animals not merely trust you, but cooperate with you. Social bonding between human and animal is also essential to interspecies rapport. Unfortunately, however widely accepted habituation and socialization may be for captive wildlife, these relationships are often bitterly opposed by managers of free-ranging wildlife - sometimes with good reason. Each year, humans are seriously injured or killed by wild animals, including bears. This could not occur if the animals never had close encounters with people. So a common management tactic is to deter actions by the public that increase likelihood of encounters. Not only are people advised to avoid potentially dangerous animals, but those animals which do not vigorously avoid humans are often labeled as "bold" or "aggressive." There is widespread opposition to releasing bears from captivity into the wild if these animals have become habituated. There is also opposition to raising orphans in wild conditions so that the youngsters can learn to fend for themselves once they become fully independent. However, contrary to common assumptions by wildlife managers, there *are* methods by which so-called habituation can actually reduce risk of injury by a bear. Understanding these methods is critical to facilitating coexistence between humans and large-bodied wild mammals, and thus for conserving at-risk populations that live near or among people. Basic to success is better understanding body language and psychology. This presentation summarizes the author's decades of experience with wild bears and other large-bodied wildlife.

BIOGRAPHICAL NOTES

Stephen F. Stringham began his career as a marine ecologist, and then turned to studying bears and ungulates in coastal ecosystems. He researched communication, aggression, and mother-offspring relations in wild Alaskan moose while rearing orphaned calves. He did similar studies on black bears (recounted in his book *Beauty Within the Beast*). He has researched roles of adult males in the social relations, population dynamics and ecology of European ungulates and North American grizzly/brown bears. While fostering conservation of Yellowstone grizzlies, he authored *Smokey and Mirrors: The War Between Science & Pseudoscience in Grizzly Bear Conservation*. His other books are *Bear Viewing in Alaska* (2007), the *Alaska Magnum Bear Safety Manual* (2008), *When Bears Whisper, Do You Listen?* (2009), *Ghost Grizzlies and Other Rare Bruins* (2010); *Bear Aggression* (2010) and *The Language of Bears* (2011). His next book projects include *Grizzlies Among Glaciers* summarizing his findings on behavior and ecology of Alaska's coastal bruins, and *Becoming Bear*: *Seeing Nature Through the eyes of Western and Indigenous Sciences*. Stringham is founding Director of the Bear Viewing Association and President of WildWatch LLC, a business whose activities include scientific research and consulting on environmental impact issues.

For details of projects and publications

Mail: Bear Viewing Association, 39200 Alma Ave., Soldotna, AK 99669
Telephone: 907-260-9059
Cell: 907-394-6125
Email: gobearviewing@hotmail.com

BLACK BEAR REHABILITATION, RELEASE AND RESEARCH - SUCCESS IN NEW JERSEY, THE MOST DENSELY POPULATED STATE IN THE USA

TRACEY LEAVER

Woodlands Wildlife Refuge has rehabilitated and released 38 bears since 1995. It has been an interesting and on-going journey taking place in the most densely human populated state in the USA. With the help of the New Jersey Division of Fish and Wildlife's Black Bear Research Program we have had the opportunity to track the success of our released bears.

Our rehabilitation program has progressed by incorporating some, but ignoring other, more accepted methods. We hope by sharing our techniques, our stories and our statistics, that black bear rehabilitation can become more widely accepted and possible. The statistics include both long term tracking for released bears and their offspring - showing multi-generational success. We feel strongly that if this can be a successful program in New Jersey than it can be elsewhere.

BIOGRAPHICAL NOTES

Tracey Leaver: Founder and current Executive Director of Woodlands Wildlife Refuge, Inc. Woodlands is a 501c3 organization dedicated to the care and release of orphaned and injured wildlife and educating the public about NJ's wildlife since 1986. Tracy is a New Jersey permitted wildlife rehabilitator and holds the following permits: Rehabilitation permit, Captive Game permit for Education Animals, Scientific Holding permits for both Exotic and Non-game as well as potentially dangerous species. USDA Aphis Animal Care exhibitors permit for Education Animals. In 1995 Tracy began the first black bear rehabilitation program in New Jersey. As founder of the New Jersey Association of Wildlife Rehabilitators Tracy has served as a Board member, President, Vice President and is currently serving as Secretary. She also served 6 years on the Board of Directors of the National Wildlife Rehabilitators Association. Tracy gives numerous presentations on wildlife presentation topics.

For details of projects and publications

Mail: Woodlands Wildlife Refuge, Inc. PO Box 5046, Pittstown, NJ, USA
Telephone: 908-730-8300 Ext. 5
Cell: 908-310-1442
Email: wildlife@eclipse.net
www.woodlandswildlife.org

INTRODUCING THE NORTH AMERICAN BEAR CENTER

DONNA ANDREWS

The North American Bear Center is in Ely, Minnesota, next to the Boundary Waters Wilderness Canoe Area. We are a Non-profit organization that receives no state or federal funding. The educational goal of the Bear Center is to replace myths about bears with balanced and factual information through video footage, live bears, and research data. The videos of wild black bears and brown bears featured at the Bear Center let people learn from the bears themselves. Two of our most successful programs are Bear Enrichment and Bear Language. The main thing that can help people get over their fear of bears, is learning to interpret bear bluster in terms of what the bears fear rather than our own fear, learning that behaviors we sometimes interpret as threatening are really expressions of our own apprehension.

This presentation will showcase the three resident black bears and follow their progress from arrival in 2007 and their exploration within their new enclosure.

BIOGRAPHICAL NOTES

Donna Andrews is past President of the Bear Interest Group (B.I.G.) a non-profit organization, working with the state wildlife agencies, to educate about bears. She lobbies for the ethical treatment of bears, and promotes sustainable bear population management. She managed the Wildlife Research Institute Bear Courses with Dr. Lynn Rogers (Bear Biologist & Bear Behaviorist), teaching bear behavior, vocalizations, social interactions, and bear sign. Donna attends and participates in state wide round table meetings for bear management with the Department of Natural Resources. She currently is Managing Director and Bear Curator for the North American Bear Center.

For details of projects and publications

Mail: Donna Geode Andrews, Managing Director/Bear Curator, 1926 Highway 169, Ely MN. 55731 USA Telephone: 218-365-7879
Cell: 763-229-0570
Fax: 218-365-7333
Email: curator@bear.org; director@bear.org

2009 Poster Sessions Presentations

Chronic, Progressive Hair Loss Among Captive Andean Bears (*Tremarctos ornatus*) in North America.
Gaylene Thomas, Russ Van Horn, Jacob Shanks, Meg Sutherland-Smith, Megan Owen and Hali Anderson

Integrated Roles of Wild Vs. Captive Studies of Bear Behavior.
Stephen Stringham

Identifying Motivational Factors Underlying Stereotypic Pacing in a Female Malayan Sun Bear (*Helarctos malayanus*).
Joan Rog and Kristen Lukas

Sloth Bear (*Melursus ursinus*) Enrichment and Training at Smithsonian's National Zoo. Mindy Babitz

A Keeper's Point of View of Deslorelin Contraception Use with 0.2 Sloth Bears (*Melursus ursinus*). Mindy Babitz

An Investigation of Sloth Bear (*Melursus ursinus*) Cub Development.
Mindy Babitz and Tracey Barnes

POSTER PRESENTATION: CHRONIC, PROGRESSIVE HAIR LOSS AMONG ANDEAN BEARS (*Tremarctos Ornatus*) IN NORTH AMERICA

GAYLENE THOMAS, RUSS VAN HORN, JACOB SHANKS, MEG SUTHERLAND-SMITH, MEGAN OWEN and HALI ANDERSON

Several Andean bears in captivity have developed a chronic, progressive hair loss and skin condition. A female Andean bear at the San Diego Zoo has this condition. Despite multiple diagnostic procedures and treatments, her clinical signs have progressed over the last ten years. A two part survey was developed to seek data on husbandry risk factors and medical information with the objective of characterizing this recurring condition. The online surveys were sent to known zoos in North America that house Andean bears. We have collected husbandry data for 26 Andean bears. The veterinary data has not been included in the initial analysis due to a technical problem with the online survey. Six of the 26 bears (23.1%) identified in the husbandry survey currently have chronic skin conditions. One of the six affected bears is a male and is the only case of a chronic skin disorder without hair loss. We used logistic regression analyses to construct a model explaining the occurrence of chronic progressive hair loss. Based on this model we concluded that the bears most likely to have chronic hair loss in our sample group are females housed with males. We hypothesize that chronic hair loss in captive Andean bears may be the result of endocrine abnormalities caused by social housing of a typically solitary species. Husbandry and veterinary data received from additional surveys will be included in our final analysis. We believe this condition warrants further investigation, including the gathering of endocrine data. .

BIOGRAPHICAL NOTES

Hali Anderson began her career as a zookeeper in 1996 at Omaha's Henry Doorly Zoo. The last 7 years have been spent at the San Diego Zoo where she has worked with an amazing collection of both mammals and birds. Her bear experience includes taking care of Polar Bears, Sun Bears, Andean Bears and Brown Bears. Currently, she is the primary keeper for 1.1 Andean and 3.0 Brown Bears. Although she finds all animals incredible to work with, she especially enjoys carnivores and has a special interest in bears as she loves the challenge of working with their intelligence, inquisitiveness, seasonal changes, unique personalities and spirits.

For details of projects and publications

Mail: San Diego Zoo - Collection Husbandry Science, San Diego, CA 92112-0551 USA
Telephone: 619-231-1515 ext 50
Email: halieden44@yahoo.com

POSTER PRESENTATION: INTEGRATED ROLES OF WILD VS. CAPTIVE STUDIES OF BEAR BEHAVIOR

STEPHEN F. STRINGHAM

Behavioral research in the wild needs to be more closely integrated with that in captivity. Captive studies alone suffer from lack of environmental and social context. The significance of some behavior is revealed only in the wild. Captive animals may have no opportunity to learn many natural behaviors including species-typical communication. Worse, captivity generates behavioral artifacts that would never occur in the wild, where they might be maladaptive. By contrast, wild studies suffer from limited continuity with the same individuals, and often from having to observe animals from so far away that subtle behaviors cannot be perceived, much less recorded. Wild studies offer less opportunity for some kinds of experimentation. Mid-way between those two methods of study is hand-rearing animals in wild conditions as one prepares them for self-sufficiency. Although I have employed all three methods in my research on moose (*Alces alces*), grizzly/brown bears (*Ursus arctos*), and black bears (*Ursus americanus*), focusing on wild studies has left me with a wealth of well-founded hypotheses and questions that cannot be fully resolved without additional captive studies. This poster presents a sample of these hypotheses and questions in hopes of inspiring bear care professionals to help us resolve them.

BIOGRAPHICAL NOTES

Stephen F. Stringham began his career as a marine ecologist, and then turned to studying bears and ungulates in coastal ecosystems. He researched communication, aggression, and mother-offspring relations in wild Alaskan moose while rearing orphaned calves. He did similar studies on black bears (recounted in his book *Beauty Within the Beast*). He has researched roles of adult males in the social relations, population dynamics and ecology of European ungulates and North American grizzly/brown bears. While fostering conservation of Yellowstone grizzlies, he authored *Smokey and Mirrors: The War Between Science & Pseudoscience in Grizzly Bear Conservation*. His other books are *Bear Viewing in Alaska* (2007), the *Alaska Magnum Bear Safety Manual* (2008), *When Bears Whisper, Do You Listen?* (2009), *Ghost Grizzlies and Other Rare Bruins* (2010); *Bear Aggression* (2010) and *The Language of Bears* (2011). His next book projects include *Grizzlies Among Glaciers* summarizing his findings on behavior and ecology of Alaska's coastal bruins, and *Becoming Bear*: *Seeing Nature Through the eyes of Western and Indigenous Sciences*. Stringham is founding Director of the Bear Viewing Association and President of WildWatch LLC, a business whose activities include scientific research and consulting on environmental impact issues.

For details of projects and publications

Mail: Bear Viewing Association, 39200 Alma Ave., Soldotna, AK 99669
Telephone: 907-260-9059
Cell 907-394-6125
Email gobearviewing@hotmail.com

POSTER PRESENTATION: IDENTIFYING MOTIVATIONAL FACTORS UNDERLYING STEREOTYPIC PACING IN A FEMALE MALAYAN SUN BEAR (*Helarctos malayanus*)

JOAN ROG and KRISTEN LUKAS

Stereotypic pacing in captive bears is well known, however the basis or reason for the behavior is less understood. The goal of this study was to identify the motivational factor or factors that underlie the stereotypic pacing behavior of a female Malayan sun bear. The focal female shared exhibit space with 1.1 adult sun bears. Therefore, in addition to stereotypic pacing, activity patterns for each bear and social interactions were also recorded. A total of 368 hours of data were collected between June and November 2005, and the months of April, June and August of 2006. Two data collection methods were employed. Data were collected for stereotypic pacing and social interactions by continuous focal observations, whereas individual activities were recorded by instantaneous scan sampling at 10 minutes intervals over a period of 4-7 hours each observation day. For correlation purposes hourly observations were recorded for the zoo visitor crowd size, noise level near the exhibit area and weather conditions.

Results from the 2005 data indicate that each bear engaged in a dominant activity, pacing for the focal female, long periods of inactivity for the second female, and the male spent a significant amount of time out of view. Pacing bouts occurred in one location with a strong connection between the onset of a bout and the male walking out of view. A high percentage of antagonism (85%) was also recorded between the two females. In 2006, the females were separated and several exhibit alternatives and enrichment variations were put in place. Subsequent observations noted a marked reduction in pacing. Additional data are being analyzed. Upon completion we will be better able to comment on motivations and what measures brought about this favorable change in behavior.

BIOGRAPHICAL NOTES

Joan is a research volunteer at the Cleveland Metroparks Zoo. She is a graduate of Baldwin-Wallace College in Berea, Ohio earning a Bachelor of Science degree in Biology with Masters Credits in Zoo Biology and Management from Oklahoma State University. Her volunteer work in research includes data collection for a multi zoo study of Sun Bear reproductive behavior and biology, Blanding's turtle basking behavior and conducted research on the stereotypic pacing of a female Sun Bear. Work in education includes, on grounds interpretative programs, docent mentoring and the development of background resources and workshops to support interpretive programs. She has attended numerous conferences on bear research, management and husbandry, and is a member of The International Association for Bear Research and Management, The American Association of Zoo Keepers, The American Institute of Biological Sciences, and The Wildlife Society.

For details of projects and publications

Mail: 2951 Plum Creek Pkwy, Medina OH 44256 USA
Telephone: 330-722-1105
Email: Joanrog@aol.com

POSTER PRESENTATION: SLOTH BEAR (*Melursus ursinus*) ENRICHMENT AND TRAINING AT SMITHSONIAN'S NATIONAL ZOO

MINDY BABITZ

Bears are highly intelligent animals that require a great deal of mental stimulation in captivity. At the National Zoo's Asia Trail the sloth bears are provided with a variety of enrichment options. Some of the enrichment options along with the materials used is presented. Many of these activities can be done inexpensively with materials we already have on hand or can easily collect from staff and volunteers. Other activities make use of the pre-fabricated enrichment items sold online through companies like Boomer Ball and Otto Environmental. A video shows our bears interacting with a variety of enrichment. The sloth bears are also trained a variety of behaviors as part of their enrichment program, as well as for husbandry reasons. The video shows some of the behaviors we train our sloth bears.

POSTER PRESENTATION: A KEEPER'S POINT OF VIEW OF DESLORELIN CONTRACEPTION USE WITH 0.2 SLOTH BEARS (*Melursus ursinus*)

MINDY BABITZ

According to the AZA Wildlife Contraception Center, Gonadotropin Hormone Agonists (GnRH Agonists) such as deslorelin (Suprelorin) implants are considered the safest reversible contraceptives for use in carnivores. Unfortunately, dosages and duration of efficacy are not well established for all species. Using this contraceptive method with two of our female sloth bears, we learned that side effects may vary greatly between individuals. Out 10 year-old female, who has been on this implant for a couple years, has not exhibited any effects other than weight gain. Our 13 year old female, who was implanted for the first time, exhibited major mood swings along with sudden weight gain. It is unknown whether the side effects seen can be correlated with the implant, its dosage or may simply be the result of variation individual response.

POSTER PRESENTATION: AN INVESTIGATION OF SLOTH BEAR (*Melursus ursinus*) CUB DEVELOPMENT

MINDY BABITZ and TRACEY BARNES

Limited information is reported about sloth bear cub development in the wild or in captivity. After the successful birth of our sloth bear cub we developed a behavior study to improve documentation of cub development over time. The study began with the cub's debut on exhibit at 4 months of age and continued until he was 18 months of age, with a 4 month gap during his move and acclimation to a new exhibit. A group of behavior watchers recorded his activities for 6 hours each day using instantaneous scan sampling. A few behaviors were also recorded each time they occurred, such as the cub falling from a tree or other structure. The data was analyzed for trends showing the cub's development over time. As expected, an increase was seen in the amount of time spent foraging and eating over the first 5 months of the study. A decrease was seen in physical contact with mom over the same period, with riding on mom's back only occurring during the first 2 months of the study. There was also a decrease in falling from trees or other structures. Unfortunately, the study did not reveal much more about cub development due to a major factor interfering with data collection - places in the exhibits where the bears could not be viewed. As a result, a correlation was found between behavior and weather; the bears spent most of their time out of view when it was hot or rainy. Although the study did not result in all of the information we were looking for, we gained valuable information to assist us in setting up future studies. In the future we plan to conduct observations in off-exhibit areas where the bears are more easily viewable.

BIOGRAPHICAL NOTES

Mindy Babitz is a senior animal keeper at the Smithsonian's National Zoological Park where she has worked since 1998. She has experience with primates, big cats, bears, hoof stock, and a variety of small carnivores. Since the opening of Asia Trial, her primary responsibility is caring for a variety of Asian carnivores including the sloth bears. She is currently the National Zoo's institutional representative to the Sloth Bear SSP.

Tracey Barnes is a senior animal keeper at the Smithsonian's National Zoological Park where she has worked since 1994. Throughout her 15 years at the zoo, she has been involved with the care of 4 bear species. Tracey is the National Zoo's Bear TAG institutional representative as well as the zoo's institutional representative to the Spectacled Bear SSP.

For details of projects and publications

Mailing Address: Smithsonian's National Zoological Park, Washington, DC
Telephone: 202-633-4381
Fax: 202-633-8727
Email: babitzm@si.edu, barnestl@si.edu

Our sincere appreciation to Polar Bears International
for sponsoring the production of these proceedings.

2009 CONFERENCE EVALUATION FORM

Thank you for your attendance. Your feedback is extremely important. Please complete this evaluation form by circling your response and return it to a conference staff member.

Scale
1) Strongly Disagree or Poor 2) Disagree or Fair 3) Neutral
4) Agree or Good 5) Strongly Agree or Excellent

Pre-Arrival					
Registration was simple, fast and efficient	1	2	3	4	5
Payment options/policies were clear and fair	1	2	3	4	5
Advertising/on-line information was adequate	1	2	3	4	5
Responsiveness of conference staff to questions	1	2	3	4	5
Comments					
Arrival					
Check-in procedure was simple, fast and efficient	1	2	3	4	5
Registration materials were informative	1	2	3	4	5
Comments					
Conference Location/Facility					
Accessibility of location	1	2	3	4	5
Size of facility	1	2	3	4	5
Hotel accommodations/guest rooms	1	2	3	4	5
Cost of the lodging were reasonable	1	2	3	4	5
Comments					
Lectures					
Educational content	1	2	3	4	5
Handouts/take home materials	1	2	3	4	5
Time for Q & A/Discussion	1	2	3	4	5
I learned something new/helpful/useful	1	2	3	4	5
Comments					
Conference Speakers/Presenters					
Knowledge of subject matter	1	2	3	4	5
Quality of presentation/delivery	1	2	3	4	5
Use of audio/visual equipment	1	2	3	4	5
Responsiveness to questions	1	2	3	4	5
Comments					

Enrichment Workshop	1	2	3	4	5
Training Workshop	1	2	3	4	5
Comments					

Social Activities

There was sufficient time to meet other delegates	1	2	3	4	5
Conference encouraged social interaction/networking	1	2	3	4	5
Friday morning opening “Egg Breaker” yielded new friends	1	2	3	4	5
Comments					

Food

Meals Provided	1	2	3	4	5
Snack Breaks (Saturday, Sunday)	1	2	3	4	5
Comments					

Overall Conference

The schedule was full and there was plenty to do	1	2	3	4	5
There was ample downtime/breaks	1	2	3	4	5
Conference staff was helpful and responsive	1	2	3	4	5
The cost with respect to the experience was worth it	1	2	3	4	5
I feel my attendance was worthwhile	1	2	3	4	5
I would attend future conferences	1	2	3	4	5
I would recommend future conferences to others	1	2	3	4	5
Comments					

Is there anything you would like to see at future conference that was not included in this year’s conference? Please list.

How much extra might you be willing to spend in registration fees?

Any additional comments/suggestions/constructive criticisms? Please let us know.

Name (optional)
Please mail completed form to:
Bear Care Group , c/o Gail Hedberg, San Francisco Zoo Hospital, One Zoo Road, San Francisco, CA 94132